

DOCUMENT RESUME

ED 473 783

SP 041 388

AUTHOR Garvin, Patty, Ed.

TITLE Developing Knowledgeable Teachers: A Framework for Standards-Based Teacher Education Supported by Institutional Collaboration. The STEP Reports.

INSTITUTION American Association of Colleges for Teacher Education, Washington, DC.; Council for Basic Education, Washington, DC.

SPONS AGENCY Carnegie Corp. of New York, NY.

ISBN ISBN-0-89333-194-5

PUB DATE 2003-00-00

NOTE 334p.; Volume 1, Number 2.

AVAILABLE FROM AACTE Publications, 1307 New York Avenue, N.W., Suite 300, Washington, DC 20005-4701 (\$15). Tel: 202-293-2450; Fax: 202-457-8095; Web site: <http://www.aacte.org>.

PUB TYPE Collected Works - General (020) -- Tests/Questionnaires (160)

EDRS PRICE EDRS Price MF01/PC14 Plus Postage.

DESCRIPTORS Academic Achievement; *Academic Standards; Change Strategies; Educational Change; Elementary Secondary Education; Graduate Study; Higher Education; Instructional Leadership; Interdisciplinary Approach; Knowledge Level; Participative Decision Making; *Preservice Teacher Education; Program Development; Program Evaluation; Shared Resources and Services; State Standards; Teacher Certification; *Teacher Collaboration; Teacher Competencies

IDENTIFIERS Ball State University IN; Coppin State College MD; Johns Hopkins University MD; Kentucky; Maryland; Subject Content Knowledge; University of Delaware; University of Georgia; University of Indianapolis IN

ABSTRACT

This collection of papers describes the process of creating a standards-based teacher education program through strong collaboration among arts and science, education, and P-12 faculty members and administrators. The Standards-based Teacher Education Project (STEP) was designed to help teacher education programs ensure that their graduates know their subjects, how to teach their subjects, and how to assess student learning, all with the purpose of ensuring that P-12 students meet standards. Part 1 is "Getting Started: The Process Step by Step" (Patty Garvin). Part 2, "STEP Basics: Standards, Alignment, Assessment, and Collaboration," includes "A Context for Change: The Evolution of STEP" (Carol E. Smith); "STEP Basics at the University of Georgia" (Michael Padilla and Mark Faust); "Reviewing STEP at Coppin State College" (Elinor C. Santor, Leontye Lewis, Genevieve Knight, Wyatt Coger, Thaddaus Phillips, and Geraldine Waters); "Leadership for Change at the University of Indianapolis" (E. Lynne Weisenbach); and "Developing a Standards-based Program at Ball State University" (Thomas S. Schroeder). Part 3, "STEP as a Catalyst for Change in Teacher Preparation," includes "Moving Beyond Rhetoric to Policy Implementation" (Emerson J. Elliot); "A Framework for Change" (Diana W. Rigden); and "How Administrators Can Bring About Change" (Ronald J. Henry). Part 4, "STEP Variations: Negotiating Change and Addressing Campus Needs," includes "Assessing Knowledge in a Graduate Program" (Sue E. Small); "Do Undergraduate Candidates Know the Content They Will Teach?" (Carol Vukelich); "Developing Structures for Shared

**Reproductions supplied by EDRS are the best that can be made
from the original document.**

Responsibility" (Wynn Egginton); "Dealing with Leadership and Personnel Changes: Keeping the Vision" (Kathy Simons); "Making the Most of External and Campus Resources" (Sam Evans); and "STANDARDS and STEP...Reforming a Teacher Education Program" (Curtis Martin). Part 5, "The View from Beyond the Campus," includes "STEP's Role in Georgia's Statewide P-16 Initiative" (Dorothy Zinsmeister) and "Maryland's Participation and STEP's Relationship" (Virginia Pilato). A section on national perspectives includes "You CAN Get There from Here...Navigating Student Success" (Kent Siedel) and "Stepping Back from STEP: What Have We Learned about the Process?" (Nancy Adelman). The 24 appendixes comprise the bulk of the report. Some of the materials included in the appendixes are: Guidelines for Standards-Based Teacher Education Project; University of Georgia Standards Mapping and Alignment Process; University of Georgia STEP Student Teacher Survey; Sample Pages from Ball State University Curriculum Mapping Tool for Aligning Standards and Performance Artifacts to Courses; and Example of Johns Hopkins University Candidate Work for Certification in Secondary English. (Contains 12 tables and 1 figure.) (SM)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 473 783

STEP



STANDARDS-BASED TEACHER
EDUCATION PROJECT

Developing Knowledgeable Teachers

A Framework for Standards-Based Teacher Education
Supported by Institutional Collaboration

The STEP Reports
Volume 1, Number 2

PERMISSION TO REPRODUCE AND
DISSEMINATE THIS MATERIAL HAS
BEEN GRANTED BY

D. Imig

EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 473 783

STEP is a collaborative project of the Council for Basic Education
and the American Association of Colleges for Teacher Education.



BEST COPY AVAILABLE

The STEP Process

Standards-based Teacher Education Project (STEP)[™]



YEAR ONE

1. Establish a Faculty Task Force on Teacher Preparation for P-12 Standards comprised of faculty and deans from the Colleges of Arts and Sciences and Education, faculty from two-year colleges, and P-12 faculty.
2. The Task Force conducts a campus-wide analysis of the teacher preparation program within the framework of P-12 academic content standards and teacher licensure standards. The analysis will include the requirements, curriculum, courses, field experiences, and assessments of the teacher preparation program.



YEAR TWO

1. The Faculty Task Force and its subcommittees propose changes to the teacher preparation program in terms of requirements, courses, field experiences, and assessments in both the College of Arts and Sciences and the College of Education.
2. The teacher preparation program defines new assessment strategies by which faculty from the Arts and Sciences and Education can determine how well candidates are educated and prepared for teaching careers.



YEAR THREE

1. The Faculty Task Force and/or teacher preparation program conducts a formal assessment to determine how effective proposed changes have been in terms of strengthening the content knowledge and content pedagogy skills of graduating teachers.
2. The Faculty Task Force conducts an inventory of instructional strategies to identify teaching models on campus and to encourage faculty to strengthen their own pedagogy.
3. Faculty develop research projects that involve Arts and Sciences, Education, and P-12 faculty to determine candidate knowledge and skills through transcript analysis, portfolio presentation, P-12 student learning gains, etc.
4. The Faculty Task Force and/or teacher preparation program creates an exit or graduation process that ensures candidate content knowledge and skill at teaching the content to a variety of students.

Standards-based Teacher Education Project (STEP)[™]

**DEVELOPING KNOWLEDGEABLE TEACHERS:
A Framework for Standards-based Teacher Education
Supported by Institutional Collaboration**

Patty Garvin, Editor
Associate Coordinator
Standards-based Teacher Education Project
American Association of Colleges for Teacher Education



Standards-based Teacher Education Project (STEP)[™] is a trademark service of the Council for Basic Education and the American Association of Colleges for Teacher Education

*Developing Knowledgeable Teachers: A Framework for Standards-based Teacher Education
Supported by Institutional Collaboration* may be ordered from:

AACTE Publications
1307 New York Avenue, NW Suite 300
Washington, DC 20005
Tel: 202/293-2450 Fax: 202/457-8095
Website: www.aacte.org

Single copy: \$15.00

Copyright 2003 Standards-based Teacher Education Project (STEP)TM

ISBN: 0-89333-194-5

TABLE OF CONTENTS

List of figures and tables	5
Foreword	6
<i>David G. Imig, President, American Association of Colleges for Teacher Education and Raymond “Buzz” Bartlett, President, Council for Basic Education</i>	
Acknowledgements	8
How To Use This Report	11
I. Getting Started: The Process Step by Step	16
<i>Patty Garvin, American Association of Colleges for Teacher Education</i>	
II. STEP Basics: Standards, Alignment, Assessment, and Collaboration	
A Context for Change: The Evolution of STEP	38
<i>Carol E. Smith, American Association of Colleges for Teacher Education</i>	
STEP Basics at the University of Georgia	45
<i>Michael Padilla and Mark Faust, University of Georgia</i>	
Reviewing STEP at Coppin State College	54
<i>Elinor C. Santor, Leontye Lewis, Genevieve Knight, Wyatt Coger, Thaddaus Phillips, and Geraldine Waters, Coppin State College</i>	
Leadership for Change at the University of Indianapolis	66
<i>E. Lynne Weisenbach, University of Indianapolis</i>	
Developing a Standards-based Program at Ball State University	73
<i>Thomas S. Schroeder, Ball State University</i>	

III. STEP as a Catalyst for Change in Teacher Preparation

Moving Beyond Rhetoric to Policy Implementation	82
<i>Emerson J. Elliott, National Council for Accreditation of Teacher Education</i>	
A Framework for Change	85
<i>Diana W. Rigden, Council for Basic Education</i>	
How Administrators Can Bring About Change	92
<i>Ronald J. Henry, Georgia State University</i>	

IV. STEP Variations: Negotiating Change and Addressing Campus Needs

Assessing Knowledge in a Graduate Program	98
<i>Sue E. Small, Johns Hopkins University/University of Maryland Baltimore County</i>	
Do Undergraduate Candidates Know the Content They Will Teach?	102
<i>Carol Vukelich, University of Delaware</i>	
Developing Structures for Shared Responsibility	110
<i>Wynn Egginton, University of Louisville</i>	
Dealing With Leadership and Personnel Changes: Keeping the Vision	113
<i>Kathy Simons, Valdosta State University</i>	
Making the Most of External and Campus Resources.....	116
<i>Sam Evans, Western Kentucky University</i>	
STANDARDS and STEP... Reforming a Teacher Education Program	124
<i>Curtis Martin, Fort Valley State University/Paine College</i>	

V. The View From Beyond the Campus

State Perspectives

STEP's Role in Georgia's Statewide P-16 Initiative	130
<i>Dorothy Zinsmeister, Board of Regents of the University System of Georgia</i>	

Maryland’s Participation and STEP’s Relationship
 With Maryland Reform Initiatives 134
Virginia Pilato, Maryland State Department of Education

National Perspectives

You CAN Get There From Here ... Navigating to Student Success 136
Kent Seidel, Alliance for Curriculum Reform

Stepping Back from STEP: What Have We Learned About the Process? 139
Nancy Adelman, SRI International, Inc.

Appendixes

A STEP campus teams, state education agencies, and Working Group members 144

B Guidelines for the Standards-based Teacher Education Project 171

C Examples of national and state P-12 student, teacher licensing, and
 teacher education standards 178

D Comparison of University of Delaware Conceptual Framework, State of Delaware
 Teacher Standards, and National Middle School Association Standards 186

E International Reading Association/National Council of Teachers of
 English Standards for English/Language Arts and University of
 Georgia course matrix 188

F Kentucky Core Content for Assessment and University of Louisville
 Elementary and Middle School Science matrices 190

G Georgia State University Teacher Education Environment in Math and Science
 (TEEMS) standards-based portfolio guidelines 192

H University of Georgia standards mapping and alignment process 199

I University of Georgia STEP Task Force next steps for standards
 mapping and alignment 201

J Aligning UGA course requirements for teacher preparation programs
 to academic content standards (arts and sciences faculty form) 202

K Aligning UGA course requirements for teacher preparation programs to academic content standards (education faculty form) 205

L University of Georgia STEP student teacher survey 208

M University of Georgia STEP teacher response form 211

N University of Georgia STEP tasks for review of standards 213

O University of Georgia GSTEP curriculum team arts and sciences appointment letter 214

P Council of Colleges of Arts and Sciences Resolution on Teacher Education 216

Q Sample pages from Ball State University curriculum mapping tool for aligning standards and performance artifacts to courses 217

R Ball State University draft decision points documents 226

S Ball State University overview of Learning Assessment Model (LAM) 229

T Excerpts from Ball State University student teaching portfolio guide and evaluation instrument 242

U Johns Hopkins University candidate self-assessment of content knowledge and expertise in English 279

V Example of Johns Hopkins University candidate work for certification in secondary English 288

W University of Delaware candidate self-assessment in Language Arts 314

X University of Louisville proposal for assignment and responsibilities of arts and sciences and education faculty liaisons 322

List of Figures and Tables

Figure

3.1 The steps that support P-12 learning and assessment	90
---------------------------------------------------------------	----

Tables

1.1 Essential questions to consider during the Institutional Analysis	19
1.2 Assessment matrix	25
1.3 Evidence of teacher candidate quality	32
1.4 Standards-based Teacher Education Project: Goals, activities, and products	33
2.1 Alignment of outcomes and INTASC principles	59
2.2 Meeting standards across the major	60
2.3 Course mapping and performance-based activities	61
2.4 Mathematics and Computer Science Department activities	63
2.5 Strategies for success	68
4.1 Standards used by content areas	100
4.2 Rubric for assessing candidate performance(s)	104
4.3 Candidate self-assessment preliminary survey in mathematics	107
Index	326

FOREWORD

Education policy today, both federal and state, mandates a variety of steps intended to guarantee that all students are taught by knowledgeable and skilled teachers. The cornerstone of current federal education policy, the No Child Left Behind Act, requires a “highly qualified” teacher in every classroom by 2005. Indeed, research has identified the quality of a child’s teacher as the single most important influence on that child’s achievement. This insistence on teacher quality is directly linked to the learning expectations defined by P-12 academic content standards. To achieve this national mandate, teachers must master the knowledge of their disciplines and the instructional skills to ensure that their students become successful learners within the framework of P-12 standards.

The Council for Basic Education (CBE) and the American Association of Colleges for Teacher Education (AACTE) created the Standards-based Teacher Education Project (STEP)[™] in 1996 to strengthen the preparation of new teachers. Since then, faculty members from colleges of education and colleges of arts and sciences at 25 colleges and universities in five states have participated in STEP. Their experiences and the lessons learned in undertaking this demanding work have refined the STEP process of employing academic content standards as tools to improve the requirements, curriculum, courses, and assessment of teacher preparation. The multiple approaches developed by the STEP campuses offer exemplary models to states and other institutions seeking to improve the quality of their new teachers.

STEP is based on three principles:

1. Teachers must know the subjects they are teaching.
2. Teachers must know how to teach students to learn at high levels.
3. Teachers must know how to monitor and assess how well students are learning.

Colleges and universities participating in STEP improve their teacher education programs and procedures to ensure that new teachers graduate with knowledge, skills, and abilities consistent with these principles.

We are pleased with what STEP campuses have accomplished thus far. *Focusing on the content preparation of elementary, middle, and high school teachers*, they have integrated P-12 academic standards into teacher education programs by changing requirements, courses, and assessments so as to ensure that new teachers learn the subjects they will teach sufficiently well to guide their P-12 students toward the achievement of academic content standards. STEP campuses have *strengthened collaboration* among faculty members across the campus and *created partnerships* between higher education and P-12 schools, as well as between 4-year institutions and 2-year colleges. STEP has helped campuses *create multiple assessments that judge*

teacher quality in terms of standards-based teaching and learning and determine how well teachers are prepared to promote student learning.

The success of the STEP project is due in no small part to the leadership of Diana W. Rigden of CBE and Carol Smith of AACTE. Through their work, including the formation of a partnership between the two organizations, STEP has become a strong voice for systematic and thoughtful reform in teacher education.

This new publication, *Developing Knowledgeable Teachers*, outlines the STEP process for campus and state leaders and provides case study models of STEP implementation on a variety of campuses. We hope it will be helpful to members of the education and policy community as we continue to work toward the common goal of ensuring that every child has a knowledgeable and skilled teacher in the classroom.

David G. Imig
President and Chief Executive Officer
American Association of Colleges
for Teacher Education

Raymond V. "Buzz" Bartlett
President and Chief Executive Officer
Council for Basic Education

ACKNOWLEDGEMENTS

The inspiration for this report began with the observation by STEP's external evaluators, SRI International, Inc., that "enough experience has probably been gained about technical assistance and guidance needed on a variety of campuses to begin to think about a STEP manual about STEP implementation that can be given to states and campuses that are just signing on." We are grateful to SRI for suggesting that we share what has been learned through this initiative beyond the core group of states and campuses. We also want to give special acknowledgement to the Carnegie Corporation of New York, which challenged STEP with SRI's suggestion and provided funding to research, write, and publish *Developing Knowledgeable Teachers*.

Special thanks go to the faculty members of the institutions that participated in STEP for sharing their ideas, models, false starts, and successes, all of which have helped shape the initiative and this report. STEP benefited greatly from the partnerships among campuses, public schools, and community colleges that were formed and strengthened through the initiative. This collaboration would not have been possible without the support of administrative leaders from institutions of higher education and from schools. Space permits us to feature only a few examples of the innovative work underway on all the STEP campuses. We extend our appreciation to all who have contributed to the excellence of this undertaking, whether or not their stories are included in this report.

STEP is indebted to Mary Diez of Alverno College for the initial recommendation that the Council for Basic Education (CBE) and the American Association of Colleges for Teacher Education (AACTE) join forces to bring their different viewpoints on education to the initiative. The leadership of AACTE President David G. Imig, CBE President Raymond "Buzz" Bartlett, and CBE past-President Christopher T. Cross has been essential to the success of that collaboration and, in turn, to the success of the project.

Guidance from STEP Working Group members and state agency representatives in Indiana, Maryland, Kentucky, and Georgia has made a valued contribution to STEP. Their insights have added greater perspective to the discussion of the role of teacher preparation in education reform. We are grateful to Karen Collias for her work on the first STEP report, *A Report on STEP and Its Pilot Program in Georgia*, on which *Developing Knowledgeable Teachers* is built. She was also instrumental in the early stages of development for this report.

We are thankful for the generous support that made possible the creation of STEP and its beginnings as a pilot project in Georgia, including grants from the Chase Manhattan Bank Foundation, Chevron USA, Exxon Education Foundation, GE Fund, Hewlett-Packard Company Foundation, Honeywell Foundation, JC Penney Co., Inc., MetLife Foundation, Westinghouse Foundation, the AT&T Foundation, and the Texaco Foundation. In addition to the Carnegie Corporation of New York, the Ford Foundation, the MetLife Foundation,

ACKNOWLEDGEMENTS

the Rockefeller Foundation, Atlantic Philanthropies, the Jacob and Hilda Blaustein Foundation, the UPS Foundation, the University System of Georgia, and the Maryland State Department of Education supported the expansion of the STEP initiative.

I am particularly grateful for the support of STEP co-directors Carol Smith and Diana Rigden in creating this report. Their shared vision of STEP and “style and substance” comments were a tremendous help. Sara Joy Lebowitz of CBE and Kristin McCabe of AACTE were also extremely generous in lending their expertise to this report.

*Patty Garvin
Washington, D.C.
January 2003*

HOW TO USE THIS REPORT

This report, *Developing Knowledgeable Teachers: A Framework for Standards-based Teacher Education Supported by Institutional Collaboration*, is intended to describe the process of creating a standards-based teacher education program through strong collaboration among arts and science, education, and P-12 faculty members and administrators. STEP is a creative effort, and no single example or set of instructions will provide a suitable model for every institution. STEP is unique to each campus and evolves as the participants evaluate their programs and needs.

A wealth of information and expertise is synthesized in these pages. We urge our readers to approach this report as they would a buffet, sampling freely from different sections and articles in search of the guidance and resources most appropriate for their circumstances and interests. Our authors examine the STEP process from various perspectives; most offer first-hand accounts depicting the evolution of STEP on their campuses. Although not intended to be a “how-to” manual, the report includes advice, frameworks and forms, and concrete examples that may be helpful to anyone concerned with teacher preparation, whether or not they are currently engaged in a STEP process.

The Standards-based Teacher Education Project (STEP)TM was designed to help teacher education programs ensure that their graduates know their subjects, know how to teach their subjects, and know how to assess student learning, all with the purpose of ensuring that their P-12 students meet standards. The experiences of STEP campuses have shown that, particularly in the first year, there are common steps essential to success in subsequent years. *Section I, Getting Started: The Process Step by Step*, introduces the underlying structure of STEP. It describes the early stages and structures for implementing STEP and looks at how institutions can individualize later stages to suit campus needs.

Section II: STEP Basics features the process and the structure as several campuses have adopted them. An essay by Carol E. Smith of the American Association of Colleges for Teacher Education opens this section, discussing the historical context from which STEP emerged, and the contextual frame within which STEP operates. She observes that, recognizing the nature of change and the breadth of the issues to be addressed, the planners of STEP saw the need for campuses to create a self-sustaining process that would endure beyond the funding for STEP.

Next, this section moves to campus participants, whose essays delve deeply into discussions of accountability, task forces, standards mapping and alignment, assessment, collaboration, course and program redesign, and change, among other topics. Our contributors from the University of Georgia, Michael Padilla and Mark Faust, focus closely on shared accountability and standards alignment and mapping. The authors from Coppin State College discuss how, by emphasizing standards-based assessment of candidates, the campus was able to move all as-

pects of teacher education to a standards-based system. E. Lynne Weisenbach of the University of Indianapolis looks at how the deans of arts and sciences and education collaborated to bring together their two faculties to complete the Institutional Analysis and redesign the curriculum. Thomas S. Schroeder from Ball State University reviews how state education reforms influenced the redesign process and how the campus developed and introduced new assessments.

Achieving the core goals of STEP requires change, whether through a total revamping of the teacher education program or by transforming the way that people view and use existing institutional structures. *Section III: STEP as a Catalyst for Change in Teacher Preparation* provides ideas for using STEP as a framework for seeing and sustaining the changes required by national and state accountability measures designed to improve teacher quality. Emerson J. Elliott of the National Council for Accreditation of Teacher Education observes that STEP is a “tested process” for developing standards-based teacher education, one that guides faculty members through the difficult steps of the process while not being overly prescriptive, respecting the differences among institutions. In her essay, Diana W. Rigden of the Council for Basic Education provides campuses with ideas about how to use STEP as a framework for sustaining the changes required by national and state accountability measures intended to improve teacher quality. She presents an eight-step graphic outlining the process through which an institution may align its teacher preparation program to the expectations of academic content and teacher licensure standards. Ron Henry of Georgia State University reviews ways that university administrators can support change, such as an institutional redefinition of scholarship to include elements of the change process.

Section IV: STEP Variations gives examples of institutions adapting the STEP model in order to negotiate change and address the particular needs of their campuses. Sue E. Small describes the discovery at Johns Hopkins University that their M.A.T. candidates arrived with varied academic backgrounds and that a 1- to 2-year program was not always sufficient to compensate for missing knowledge. Through STEP, the university developed a self-assessment instrument and individualized professional development plans for candidates to follow during the program and into their professional careers. Carol Vukelich reports how the University of Delaware tailored the Hopkins instrument to their 4-year undergraduate teacher preparation programs to enable teacher candidates to assess their knowledge. Wynn Egginton from the University of Louisville writes about how STEP has led to a proposal to set up “a corps of faculty liaisons” in both education and arts and sciences who would take responsibility for regular communication and coordination of curriculum, recruitment, admission, retention, and other issues related to teacher education. Kathy Simons of Valdosta State University discusses how STEP successfully weathered major changes in university personnel and leadership. Sam Evans explains how Western Kentucky University explored innovative sources of financial support, drawing upon existing programs, reallocating funds, and identifying new funding sources, all leading to beneficial partnerships in support of STEP goals. According to Curtis Martin, STEP became part of a larger reform at Fort Valley State University that created a new teacher education program focused on meeting standards and determined to address the achievement gaps of its teacher candidates.

Section V: The View From Beyond the Campus offers the perspectives of state education officials and national leaders. These accounts provide a broader context for STEP and may be useful for introducing the initiative to university leaders and state policy makers, in particular. Kent Seidel of the Alliance for Curriculum Reform praises STEP for “charting new approaches” to teacher preparation that are “bringing content and pedagogy together in rich, integrated, and innovative ways.” Nancy Adelman of SRI International, Inc., which has served as formative evaluator for STEP from the beginning, considers the five years of experience with STEP and concludes that STEP is a “fine way” for institutions to evaluate the quality of their teacher preparation programs and remedy any problems identified.

Lastly, the report concludes with many pages of appendices. These are a rich resource, including forms, surveys, guidelines, and tools, which may serve as useful models for other programs.

As Dr. Rigden points out, STEP is a collaborative effort among the faculty members at an institution; among institutions of higher education, P-12 schools, and state departments of education; as well as among participating institutions across the country. Contacting current STEP institutions to learn about their work and to discuss reform strategies strengthens the change process. Participants find that the exchange of ideas is one of the initiative’s most beneficial aspects. Appendix A lists the STEP campus teams and contact information for those who have agreed to answer questions about STEP.

STEP’s ultimate goal is to produce teachers who can help school children meet and exceed academic standards. *Developing Knowledgeable Teachers* is an excellent and versatile tool, to get the conversation started about standards-based education, and to gather in the different parties who must work together toward the same goals of high-quality teaching and learning.

*Patty Garvin, Editor and
Associate Coordinator for STEP,
American Association of Colleges for Teacher Education*

I. Getting Started: The Process Step By Step

GETTING STARTED: THE PROCESS STEP BY STEP

*Patty Garvin, Associate Coordinator for STEP,
American Association of Colleges for Teacher Education*

STEP Basics: First Year Work

Accountability I: Baseline

The Accountability Context for STEP

The influences present when STEP was established have now become a reality for teacher education programs across the country. Data collected under Title II of the federal Higher Education Act are publicly available, as well as the data collected by many states. Standards established by learned societies are increasingly outcomes-oriented, and the National Council for Accreditation of Teacher Education (NCATE) is using performance-based standards for accreditation reviews. Institutions in the five original STEP states face accountability mandates that require addressing teacher licensure pass rates, program completion rates, and impact on P-12 student learning.

The State of Delaware has introduced teacher standards, administrator standards, and student academic content standards. The state's education reform program includes testing based on the student standards for English language arts, mathematics, science, and social studies for grades 3, 5, 8, and 10. Schools and districts are held accountable for student progress based on the results of these assessments. The Kentucky Education Reform Act of 1990 revamped that state's education system in the areas of finance, governance, and curriculum. Recently, the state has turned its attention to teacher preparation, requiring teacher education programs to produce graduates capable of helping students succeed in a standards-based environment.

Closely tied to STEP in the State of Georgia are the Georgia P-16 Initiative's Teacher Quality Plan, and the Principles and Action for the Preparation of Educators for the Schools established by the Board of Regents of the University System of Georgia. The goals of the P-16 initiative are to create a seamless education system from preschool through postsecondary

education and to prepare teachers who are able to help students reach high standards. The Teacher Quality Plan's three priorities are: "reducing qualified teacher shortages and turnover, reforming state teacher certification requirements, and strengthening accountability for teacher preparation by higher education and the public schools" (2001). Principle 2 of the Board of Regents' 10 Principles guarantees that the "University System will 'take back' any teacher within the first 2 years after graduation (if) a school district ...determines the teacher's performance is less than effective." If necessary, the graduating institution is required to provide additional, individualized training at no cost to the employing school or teacher (Board of Regents, 2001).

In an effort to transform teacher education into a performance-based preparation and licensure system, Indiana institutions are required to develop unit assessment systems based on Interstate New Teacher Assessment and Support Consortium (INTASC) principles and Indiana Professional Standards Board (IPSB) content and developmental level standards. The IPSB has set "criteria for unit assessment systems" which make institutions accountable for, among other factors: involving stakeholders in the development of the assessment system; using a range of performance-based assessment strategies; and providing data on program quality, unit operations, and candidate performance.

Beginning in 2004, all institutions in Maryland with teacher education programs and enrollments of more than 2,000 are required to obtain NCATE accreditation. In addition, under its *Redesign of Teacher Education*, the state has linked program approval to four components of teacher preparation: strong academic background, including academic majors for secondary teachers; extensive school-based professional preparation in internships and professional development schools (PDS); standards-based performance assessment; and linkage to K-12 priorities (Maryland State Department of Education, 1999).

Institutional Analysis as the First Step in Accountability

How an institution addresses accountability issues, such as those required by its state, is an essential part of program design. Early in their work, the STEP institutions conducted in-depth analyses of their teacher preparation programs focusing on assessment of how candidates demonstrate content and pedagogical knowledge. Campuses developed outlines of the strengths and weaknesses of their programs. They drew up work plans for STEP that addressed institution-specific issues in the teacher preparation programs and proposed strategies for change.

The first step an institution takes toward addressing accountability is an Institutional Analysis. STEP defines this as an analysis of the policies and practices that characterize a college or university's teacher preparation program in light of national, state, and local P-12 academic standards and teacher licensure standards. To help institutions begin the process of self-evaluation, STEP staff provided guidelines for reports focused on two essential questions:

- How does the program develop, ensure, and assess the *content knowledge* of teachers to support K-12 standards?
- How does the program develop, ensure, and assess the *pedagogical skills* of teachers to support K-12 standards?

Appendix B, *Guidelines for the Standards-based Teacher Education Project*, provides an example of the guiding questions given to institutions at the beginning of their participation in the project. Underlying the essential questions are four basic accountability questions:

1. Where are you starting from (baseline data, information and analysis of current practice such as the percent of courses aligned with P-12 standards)?
2. What are the short-term goals (STEP) and the longer-term goals (for instance, program alignment with state standards) of your work?
3. What combination of process and outcome variables/indicators will allow your institution to track progress toward meeting both short-term and long-term goals? (Responses to this question may include the structure or planning for an institutional system to track data, including the kind of assessment plan related to NCATE standards.)
4. How will you make the variables/indicators you select serve your own needs as well as the requirements of external funders or monitors? (Along with state and NCATE requirements, this could also include Title II reporting requirements and other kinds of data collection and evaluation requirements—including regional accreditation reports on student outcomes and institutional requirements.)

The Institutional Analysis leads to the development of a work plan and serves as a basis for defining an assessment system for the program. Areas of strength and weakness will be evident and areas where changes are necessary for alignment with standards will be documented. The self-assessment should help the institution answer:

- What kind of a data and/or tracking system would be most credible in terms of providing appropriate and adequate information?
- With reference to the actual data assembled on those factors, what conclusions can be drawn about progress being made toward meeting the STEP goals?

Essential questions to consider during the Institutional Analysis are listed in Table 1.1.

Table 1.1. Essential Questions to Consider During the Institutional Analysis.

1.	What requirements exist for freshmen entering the institution?
2.	What are the prerequisites for entry into the teacher preparation program?
3.	What are the characteristics of the teacher preparation programs (number of candidates, graduation rates, hiring rates, licensure rates, tenure in teaching careers, etc.)?
4.	What are program requirements for teacher candidates (for example, P-2; 3-5; 4-8; and 9-12 licensure requirements)?
5.	What kinds of content pedagogy opportunities are offered teacher candidates? How are discipline-based faculty involved?
6.	What discipline-based courses are offered to teacher candidates, and how appropriate are they in light of P-12 standards?
7.	In what ways have P-12 standards already been incorporated into the teacher preparation program?
8.	What programmatic relations exist between arts and sciences and education in teacher preparation?
9.	From the graduates' perspective, what are the strengths and weaknesses of their classroom preparation?
10.	How are teacher candidates assessed in terms of content knowledge, content pedagogy, instructional knowledge and skills, and assessment knowledge and skills?
11.	What resources are in place to ensure appropriate education and support for teacher candidates who do not initially meet standards?
12.	What alternate programs are offered for teacher candidates?
13.	What are the programmatic characteristics of the teacher preparation program (strong disciplinary preparation, standards linked with curriculum, courses in disciplines linked with methods, courses in disciplines linked with courses in assessments, preparation for incorporating technology as a tool in instruction and assessment)?
14.	Does the teacher preparation program work with districts to track entry, retention, and success of graduates? Are these data used to improve programs?
15.	What support is in place for new teachers in their first and second years of teaching?
16.	How does the data on P-12 student achievement in core subject areas reflect on teacher preparation?
17.	How are faculty rewarded for standards-based teacher preparation work?

Faculty Task Force on Teacher Preparation

A task force at each institution conducted the Institutional Analysis, and served as the leadership for the entire project. STEP defines a task force to include faculty members from the schools of arts and sciences and education as well as P-12 practitioners. The task force is based in the office of the provost or vice president for academic affairs and chaired by a senior faculty leader who has received release-time to oversee this work. Ideally the task force leaders will be the deans of education and arts and sciences with task force membership evenly divided between the two schools. Some institutions have also included representatives from community colleges on their task forces. A large percentage of Coppin State College's teacher candidates begin their studies at Baltimore City Community College (BCCC). BCCC's Coordinator of Early Childhood, Special, and Teacher Education Programs has been an integral part of Coppin's team: serving as a leader, attending state and national STEP meetings, and presenting the team's work to broader audiences.

*Significant change must occur in the roles played by
university faculty and administration*

High-level institutional leadership is essential in ensuring the involvement of faculty members. Deans and department chairs have served as project co-directors on several STEP campuses. The deans of education and liberal arts at the University of Indianapolis were task force co-leaders. They were able to form a strong partnership and took on equal responsibility for such tasks as writing regular project reports. Tangible rewards for faculty participation also demonstrate institutional commitment to STEP. Institutions have offered such simple rewards as food and gift certificates. A few campuses have redefined tenure and promotion policies to reflect a new emphasis on collaboration and work in P-12 schools for both education and arts and sciences faculty. Institutions have modified reward systems to acknowledge the diverse activities included in teaching, learning, service, and scholarship in which faculty engage as they collaborate across campus and with P-12 faculty. At one institution, the dean of arts and sciences requested that requirements for tenure and promotion include participation in collaborative efforts with the college of education, in P-12 schools, in research on educational pedagogy, and in grants that assist teacher training and support.

On most STEP campuses, the task force formed discipline subcommittees, although some institutions have organized task force work by licensure areas. These subcommittees, consisting of representatives from all faculties, are charged with identifying standards, analyzing current programs, mapping and aligning standards and courses offered, and recommending changes. Task forces found they were more productive when this work was accomplished during retreats or on-campus conferences organized specifically for STEP work.

Often the first obstacle that task force members face is to understand the academic and professional language and culture of the other members. Recognition of these differences is fundamental to the task force's success and to STEP itself if collaboration is to become the norm

(Collias, 2000, p. 15-17). Making the Institutional Analysis a team effort gives faculty the opportunity to understand each other's discipline-specific language and culture.

Communication across campus is a key element of success, and the STEP task force should establish ways to share its work. Although regular meetings are important, the substance of discussion at those meetings matters most: the role of standards in teacher preparation; the strengths and weaknesses of requirements, courses, and assessments; strategies for collecting and analyzing data to demonstrate candidate knowledge and skills; recommendations for course modification or new courses; and so forth. Because the task force may recommend far-reaching changes, members need to have the authority to communicate to all levels of the institution. In an earlier attempt to form a cross-campus teacher education committee, a STEP campus had found that departmental representatives were not entirely successful in relaying information back to department chairs. To avoid this problem when the institution joined STEP, the project leaders invited arts and sciences department chairs to join the task force. Although in many cases faculty members eventually made up the work teams, the official connection of the chairs to the project was established and their interest maintained. STEP work thus becomes integral to the day-to-day operation of the institution and an ongoing process in which all stakeholders are aware and involved. Some institutions have found it beneficial to rotate members off and add new members to the task force as the stages of the project are completed, to broaden the number of faculty stakeholders.

The communication structure also should include teacher candidates as well as university and P-12 personnel not serving on the task force. Because everyone involved in teacher education will be affected by the task force's work, the entire community should be aware of what is being discussed before the changes are implemented. Morehead State University has compiled a database of all stakeholders in P-12 and teacher education in their service area. Coppin State College has kept partner schools involved by inviting representatives to monthly STEP meetings and STEP workshops, as well as by disseminating minutes, agendas, and newsletters. Campus task force members often give mini-presentations at department, general faculty, and quarterly chairs meetings.

STEP encourages faculty to identify areas within teacher preparation that, when considered in light of standards, will need to change. As the focus of teacher education shifts from the university to results in the P-12 classroom, not only will new courses, requirements, and assessments be necessary, but modification of structures as well. Significant change must occur in the roles played by university faculty and administration, 2-year college and P-12 school faculty and administration, and, of course, teacher candidates. Some faculty will welcome these changes and others resist them. The STEP task force must prepare itself to introduce STEP goals to a wide range of faculty and administrators and to keep them informed and involved. Task forces will have to work within the procedures and bureaucracy of their own institutions as they begin to identify and implement change.

Standards Mapping and Teacher Education Program Alignment

Once the task force has analyzed the current status of teacher education programs, they begin to look at how requirements, courses, and assessments align with the standards for which teacher candidates and the institution will be accountable. Mapping standards helps the task force identify the key ideas behind each standard, recognize common elements, and focus program goals. Working with the various standards can be overwhelming. Teacher candidates will be responsible for knowing the state's P-12 academic content standards, but they should also be familiar with the standards developed by the national discipline organizations to ensure that they have a greater understanding of the subjects they will be teaching. The task force will also need to consider national accreditation standards and INTASC principles, especially if the institution is nationally accredited or located in an INTASC state. The state's standards for teacher candidates and teacher education programs also have to be incorporated into the revised programs. Appendix C contains examples from the National Council of Teachers of Mathematics' (NCTM) P-12 standards, Georgia's Quality Core Curriculum P-12 standards, INTASC teacher licensure standards, and NCATE institutional standards. The task force will have to decide on a "base" set of standards upon which to build a standards matrix (Blackwell, 2002). State and institutional requirements, as well as the answers to the Institutional Analysis questions, help identify which standards to use. The base standards are listed and then compared to another set of standards, which in turn are compared to another set, to create the matrix. For example, the University of Delaware used its school of education's conceptual framework for teacher education as the basis for comparing state teacher standards and national middle school teacher standards (see Appendix D). The matrices will clarify which directions the institution should be taking with its teacher education programs. Other institutions have used this exercise to redefine the educational unit's conceptual framework and mission.

At the program level, discipline or licensure area subcommittees conduct an inventory of courses and align them with content-area standards. These subcommittees develop matrices listing each standard and identifying where the curriculum gives students the opportunity to learn the necessary content. Appendix E shows the University of Georgia's matrix for English/Language Arts, which maps the International Reading Association/National Council of Teachers of English Standards for English Language Arts and the opportunities to learn the content and pedagogy in courses offered by both the College of Education and the College of Arts and Sciences. Developing matrices will also show what is not covered in the curriculum. The University of Louisville's matrices for Kentucky Core Content for Assessment in elementary and middle school science note that although the teacher preparation program covers the standards, the specific courses are not always required of teacher candidates in the certification area, nor do they always provide sufficient coverage of the topic (see Appendix F). After this examination, faculty recognized that they might have to revise their assessments to ensure that the outcomes the standards are intended to produce are not just taught by the program, but actually learned by its candidates.

The standards mapping and alignment exercise should be done early in the STEP process with the joint involvement of education and arts and sciences faculty. Besides providing an important foundation for future work, the exercise gives faculty members a better understanding of

STEP goals, an awareness of standards, and some ownership of future recommendations. Arts and sciences faculty are particularly important in aligning the discipline standards to general education and subject area requirements. Studying the discipline standards became a form of professional development for many arts and sciences faculty who were often unfamiliar with the teacher education standards developed by their professional organizations.

The complementary tasks of Institutional Analysis and standards alignment constitute a lengthy process. Depending on the size and complexity of their teacher education programs, STEP campuses took eight months to a calendar year to complete this work. The initial year of STEP was similar for most institutions and followed the path described above. After the institutions determined their baseline, however, their paths varied.

Variations on the Basics: Second and Third Year Work

Accountability II: Measuring Success

Assessment in Standards-Based Education

Because outcomes drive standards-based education, assessment of what is learned is fundamental. Courses and programs, at the outset, explicitly state goals and forms of assessment required of teacher candidates. Assessments are intended to help candidates reach goals rather than to weed out those who have not reached them. According to the American Federation of Teachers, “in a standards-based system, the primary purpose of assessment is to ensure that all students have the knowledge and skills they need to succeed at the next level and to trigger assistance for those who would otherwise fall through the cracks” (“Making Standards Matter,” 2001, p. 48). Because of their formative nature, these assessments are conducted at critical points throughout the teacher education program. Institutions may find it useful to organize a subcommittee to focus on alignment of curriculum and assessments in general, or alignment with the Praxis licensure tests in particular. Important questions to consider are: How do the education programs assess content knowledge beyond Praxis scores and grade point averages? What content knowledge and pedagogical knowledge and skills will be assessed? And most importantly, what is “good enough” to be an adequately prepared teacher?

The groundwork for establishing standards-based assessments is conducted during the first year of STEP through the Institutional Analysis, which examines and evaluates current practice, and through standards mapping and alignment, which determine the changes that should

be instituted. Assessments are further developed and refined to meet the needs of individual campuses during the project's second and third years. Answering the basic STEP questions: "How does the program develop, ensure, and assess the *content knowledge* of teachers to support P-12 standards?" and "How does the program develop, ensure, and assess the *pedagogical skills* of teachers to support P-12 standards?" requires assessment of several domains by arts and sciences and education. Not only does an assessment system evaluate the knowledge and skills of teacher candidates, but also the effectiveness of the preparation programs. One STEP campus, St. Mary's College of Maryland, developed a matrix, shown in Table 1.2, to create an overall picture of assessment practices college-wide: what is assessed, who assesses it, and how it is assessed.

STEP campuses have instituted new assessments to determine a candidate's content and pedagogy skills and knowledge at different program stages. Along with grade point averages and Praxis scores, STEP institutions use portfolios. In its second year, the University of Louisville articulated standards for content and pedagogy and began developing performance-based assessments of content knowledge for both entering and exiting M.A.T. candidates.

Georgia State University's Teacher Education Environment in Math and Science (TEEMS) program, a masters-level alternate preparation program, uses portfolios to evaluate candidates' progress against the INTASC principles. At the beginning of the program, candidates are given the same information about the portfolio that the evaluators will receive. The portfolio development matrix aligns the INTASC principles, notes the sections of the portfolio that should address each principle, and offers examples of evidence of successful performances. All portfolios are evaluated using a single rubric based on clearly defined criteria (see Appendix G). Originally designed for math and science programs, the model has also been adopted by social sciences and language arts teacher education programs. The TEEMS program illustrates the value of including multiple forms of assessment to capture what candidates know and are able to do.

Arts and Sciences Faculty Assessment of Teacher Candidates

The important role of arts and sciences faculty in STEP is especially evident in the assessment of candidate content knowledge, particularly in determining what should be assessed. During the first year of STEP, faculty review curricula in light of standards. As the program develops new assessments, arts and sciences faculty help identify the essential knowledge, represented by the various standards in each discipline, which college-level students of that discipline should acquire. Their expertise in content knowledge evaluation is critical at several points: prior to entry into the teacher education program, prior to and during practice teaching, and before licensure and graduation.

Since their Master of Arts in Teaching (M.A.T.) candidates come with a wide variety of educational and professional backgrounds, the task force at Johns Hopkins University has found that candidates have an equally wide variety of gaps in knowledge. The arts and sciences faculty helped develop a self-evaluation tool to identify these gaps. The University of Dela-

Table 1.2. Assessment Matrix

DOMAIN ASSESSED

ASSESSOR

ASSESSOR	Student Learning	Faculty Teaching	Faculty Other	Curriculum	Alumni	Facilities	Residence Life	Global
Student	SMP ¹ Survey Exit Survey NSSE ² Scholars portfolios	SMP Survey Exit Survey NSSE Ed Studies portfolios anecdotal student letters ICES ³	Awards Exit (access) NSSE: relationships, accessibility anecdotal student letters	SMP Survey Exit Survey NSSE Ed Studies portfolios externship survey internal survey	Alumni	QOL ⁴ Exit Survey Dean's Chats	QOL NSSE	graduation rate retention rate employment rate Career Services Phone Survey
Faculty	entrance tests mid-term deficiencies recommendation letters grades, juries, exhibitions Ed Studies portfolios Scholars portfolios	self-reports tenure promotion awards	self-studies awards	self-studies SMP Survey Curriculum Comm. Ed Studies portfolios	departmental follow-ups	self-studies		graduation rate retention rate employment rate
Administration	portfolio sorting	tenure promotion merit awards	tenure promotion merit awards Endowed Chairs internal reports	program reviews Exit survey NSSE	Alumni Office records	library internal assessment	QOL	graduation rate retention rate employment rate
Alumni	Alumni Surveys (1, 5, 10) testimonials	Alumni Surveys (1, 5, 10) testimonials	Alumni Surveys (1, 5, 10)	Alumni Surveys (1, 5, 10) advising accessibility?	Alumni Surveys (1, 5, 10)	Alumni Surveys (1, 5, 10)	Alumni Surveys (1, 5, 10) (campus residences)	graduation rate retention rate employment rate post-graduation "success"
External	discipline exams: psych, chem.- MFAT, biol, educ, others employer feedback portfolio sorting	Middle States program reviews tenure awards letters of recommendation promotion	grants program reviews publications awards letters of recommendation	Middle States program reviews GRE et al employer feedback portfolio sorting externship survey	Middle States	Middle States program reviews	Police reports National publications e.g., Princeton Review	graduation rate retention rate employment rate national ranking

¹ SMP – St. Mary's Project, ² NSSE – National Survey of Student Engagement, ³ ICES – Instructor and Course Evaluation System, ⁴ QOL – Quality of Life Survey
Developed by Laraine M. Glidden and the Ad Hoc Committee on Assessment, St. Mary's College of Maryland, May 3, 2001

ware has adapted the assessment tool to its undergraduate program. The University of Louisville has created the position of Arts and Sciences and Education Faculty Liaison in academic departments with a large number of teacher candidates. Faculty liaisons assist with recruiting and advising teacher candidates, serve as the contact point between arts and sciences and education faculties, and assess candidate content knowledge. The experiences of these three institutions in developing and using these assessment methods are covered in more detail in Sections III and IV.

At Armstrong Atlantic State University, arts and sciences faculty teach content-based pedagogy courses in social studies, English, mathematics, and sciences. In addition, they are working with education faculty to develop assessments to measure content knowledge beyond Praxis II and course work. Because candidates at McDaniel College (formerly Western Maryland College) major in a content area and not in teacher education, there was already considerable cooperation on content knowledge assessment between the arts and sciences and education faculties. However, the task force saw a need to develop more structured connections. Among other strategies, faculty members from the arts and sciences disciplines are now members of the panels that interview candidates prior to student teaching. For example, a faculty member from the English department would participate in interviewing an English major.

An earlier examination of programs at Morehead State University noted that arts and sciences faculty should observe student teaching, not only to ensure that the student teacher is delivering correct and current knowledge, but also to allow subject-area faculty to act as mentors and debrief candidates after their classroom experiences. A major focus for the Morehead State STEP task force as it entered its third year was to form content area teams to create assessments for the student teacher semester and to explore other means of assessment such as exit interviews, surveys, and work samples. The teams consist of student teaching supervisors, cooperating P-12 teachers, and university faculty. Although STEP campuses are eager to include arts and sciences faculty members in the observation and assessment of clinical experiences, many are still working through institutional issues such as release time and course credit for these activities.

Arts and sciences faculty on many STEP campuses have become involved in the assessment of the portfolios required of candidates before they graduate from the teacher preparation program. As is pointed out in Section III, arts and sciences faculty at the University of Indianapolis have found that their evaluation of content knowledge is an important part of the overall assessment of candidates' readiness to teach.

Education Faculty Assessment of Teacher Candidates

Traditionally, members of the education faculty have assessed the content knowledge and pedagogical skills of teacher candidates. STEP campuses have based these assessments on standards. Georgia State University, for example, chose to use the INTASC Principles as the framework for initial teacher preparation. Building on Principle 1 (“a professional educator understands the content of the discipline and is able teach it to school children”), the math

subcommittee developed a mathematics journal assessment tool. Using National Council of Teachers of Mathematics (NCTM) standards to articulate what teachers are expected to know and be able to demonstrate, the assessment asks candidates to reflect on the importance of mathematics teaching and to demonstrate their mathematics knowledge through journal entries. Candidates are required to write a chapter for each mathematics-related course they take. Some of the elements included in the chapters are: what they expect from each course, how it will help them better understand state P-12 standards, and how it has contributed to their development as a math teacher. The candidates self-assess their performance based on NCTM principles.

Ball State University assesses the candidate's ability to develop standards-based learning activities and to teach the subject based on standards. The university produced the *Evaluation of Student Teachers Guidebook* to give both faculty and candidates a common framework for evaluating teaching performance (2000, Ball State University). The *Guidebook* sets four levels of performance—distinguished, proficient, basic, and unsatisfactory—for each element of the INTASC principles. The student teacher is evaluated each week over the length of the assignment. Evaluators are expected to justify, based on the rubric, the performance level they assign. An excerpt from the *Guidebook* is included in Section III.

Valdosta State University charged its discipline subcommittees with developing content standards, benchmarks, and performance standards using Praxis, the state's Quality Core Curriculum (QCC), and standards developed by professional organizations. They developed benchmarks at the P-5 (early childhood), 4-8 (middle grades), and 9-12 (secondary) certification levels for each standard. The subcommittees then aligned courses and benchmarks. As a result, they are able to evaluate a candidate's performances as distinguished, proficient, basic, or unsatisfactory at the appropriate certification level.

Although institutions have developed new forms of assessment to gauge content and pedagogical knowledge and skills, the Praxis licensure test is still an essential tool and often the only assessment recognized by the public and policy makers. Many STEP institutions have integrated the goal of improving Praxis scores into their programs. Georgia College and State University is aligning the teacher preparation curriculum and the Praxis exam. Mount Saint Mary's College is analyzing Praxis in relation to its standards and programs. Coppin State College and Baltimore City Community College have signed an agreement to use Praxis I as the exit-from-program assessment for BCCC and entry into program for Coppin State. Once at Coppin, candidates have access to a Praxis support network, which includes workshops (many taught by arts and sciences faculty) and a hotline. Ball State University has developed Praxis workshops for content area faculty members in the disciplines, and many campuses offer faculty the opportunity to take Praxis II content tests.

Assessment of P-12 Learning

With the stated goal of ensuring that the teachers they prepare have the knowledge and skills to help students reach P-12 standards, STEP has encouraged institutions to look at how P-12 student learning is assessed. Documenting a positive impact on student learning by teacher candidates and graduates has become a requirement of many states and accrediting organizations. Institutions are faced with assessing something which they have little or no experience measuring and over which they have little influence. A typical student teacher will only have contact with P-12 students for a few hours in a week. Both student teachers and graduates will be working with children who have had many different learning experiences before arriving in their classrooms. In both cases, institutions are faced with the difficulty of designing assessments that accurately evaluate the impact of an individual teacher on a student's learning.

Most STEP campuses are in the early stages of assessing the impact of candidates on P-12 student learning. The campuses have started by focusing on ensuring that candidates can effectively evaluate the progress of their students and reflect on their teaching practices. Georgia State University formed the "Impacts Committee" to develop ways of evaluating teacher impact on student learning. The committee based its work on INTASC Principle 8 ("the ability to use formal and informal assessments to evaluate and ensure continuous development of the learner") to develop a model of continuous improvement that includes planning, teaching, assessing, and reflecting. The committee developed a rubric to evaluate each part of the cycle at advanced proficient, proficient, and partially proficient levels. At the end of the teacher preparation program, candidates are given the rubric and asked to submit a work sample of a 1- to 2-week lesson plan, which is evaluated on the criteria. Each teacher is expected to submit another work sample at the end of the first 2 years of teaching for evaluation against the same rubric.

As a member of the Renaissance Partnership for Improving Teacher Quality Project, Western Kentucky University has, along with other partnership institutions and schools, developed the Renaissance Teacher Work Sample (TWS) to assess teacher candidates' knowledge and skills. Under this form of assessment candidates create a teaching unit, based on state or district content standards, for their student teaching experience. The candidates also develop assessments to measure P-12 student performance before, during, and after the unit. The candidates then analyze their own work to see where they were successful and where they need to improve. The goal of TWS is to teach candidates how to show, through compelling evidence, that they are able to help students learn. How STEP and TWS are integrated at Western Kentucky is discussed in Section III.

Assessment of Programs Through an Assessment System

As teacher education programs are implementing changes recommended by their Institutional Analysis and alignment activities, they are also continually evaluating the program's effectiveness through a unit assessment system. NCATE defines an assessment system as "a comprehensive and integrated set of evaluation measures that provides information for use in

monitoring candidate performance and managing and improving unit operations and programs for the preparation of professional teachers” (*Professional Standards*, 2002, p. 52). In terms of STEP, the assessment system helps to ensure teacher candidate knowledge, instructional skills, and a positive impact on student learning.

When looking at the alignment of programs to standards, the task force is mindful of external reviews such as the state review for institution approval and teacher certification and those of accrediting organizations. The reviewers will expect to see documentation that the teacher education program is collecting *and using* data to make improvements. NCATE requires that by 2005 all accredited institutions have a fully developed assessment system in place. States are also evaluating teacher education programs based on their ability to use an assessment system effectively. STEP institutions, like others, have been faced with increasing accountability requirements from external entities. They have found it useful to frame these requirements as internal improvement measures that will be reviewed externally, rather than as an additional burden imposed by regulators.

The basic elements of an assessment system are usually defined during the first year of STEP work. The refinement of the system takes place during the second and third years. By their second year of STEP, all the Georgia Southern University teacher education programs had begun to implement a performance-based assessment system. Assessment of content knowledge was the first element introduced, with assessment of impact on P-12 student learning added later. Arts and sciences and education faculty will collectively review and revise the system.

As they began their second and third years, STEP campuses were asked to address the following questions to help them consider what elements to include in an assessment system:

- What multiple sources of data are proving to be the most useful in helping candidates meet standards?
- What data does the program have, in terms of preparing candidates, to link both instructional planning and assessment of learning with P-12 standards?
- How will you judge the teacher candidate’s impact on student learning?

After its curriculum audit, Morehead State University found that the university already maintained much of the candidate data required for an assessment system; no one, however, was using the data for ongoing candidate assessment or program evaluation. Faculty members are now creating a method for consistent collection and use of this data. Morehead’s experience is not unique; most institutions find that they are already collecting much of the information needed. Sources of information for an assessment system include: indicators of candidate progress in content and pedagogical knowledge and skill at various stages, information from external sources (such as state licensing exams), and employer reports and state program reviews. After identifying the elements of the assessment system, the campus must establish a process for collecting the information on a regular basis, analyzing the data in a timely man-

ner, and integrating the results of the analysis into program improvement plans (Professional Standards, 2002, pp. 21-24).

Many STEP institutions have added program assessment components to their candidate assessments. At Georgia State University, teacher candidates review their math journals at the end of their studies and suggest changes to the program, such as course sequencing. In addition to a self-assessment of their performance, candidates evaluate each course based on the NCTM principles and standards. The final section of the math journal is a questionnaire that asks the candidate how well the program prepared him or her to enter the classroom. This is an exceptional combination of candidate and program assessment and will yield rich information for those preparing teachers in mathematics. Most institutions have developed surveys of candidates and recent graduates which ask how their education met their needs during student teaching and in the first years of employment, but few conduct an evaluation of content preparation in such depth.

STEP has developed a chart (Table 1.3) to help institutions identify evidence of teacher candidate quality related to P-12 standards and learning, which could be integrated into an assessment system.

Assessment of Progress Toward STEP Goals

When they began the project, institutions were asked to produce a work plan for the three years of STEP. At the end of each academic year, they wrote reports on their progress in reaching the goals they had set for themselves and the revisions they proposed for their plan in the coming year. In response to these reports, STEP staff posed questions to help guide institutions in thinking about the goals of STEP, such as:

- By what strategies are arts and sciences faculty engaged in helping to develop, implement, and judge performance assessment of teacher candidates' content knowledge and ability to meet teaching standards?
- What strategies will strengthen the teacher preparation program through standards-based work between the university and the P-12 community? Between the university and 2-year colleges?
- How will arts and sciences and education faculty incorporate P-12 content standards as part of the new assessment system to ensure that graduating teachers can help their students meet standards?
- What effective strategies have been adopted to measure teacher candidate progress on INTASC Standard 1 (content knowledge)? What strategies are in place to support candidates if they fail to meet this standard?

- Has the university introduced incentives to encourage arts and sciences faculty to become involved in clinical experiences of candidates?
- By what means will the revised curricula be judged as to their effectiveness in preparing future teachers?
- As the new programs are implemented, how will faculty judge the quality of teacher candidates graduating from the programs?

After all the current institutions had participated in STEP for at least one year, they were asked to provide artifacts of their work as well as their end-of-year reports, including assessment tools, descriptions of redesigned courses, and plans for new assessment systems. The summer conference and semiannual state meetings are also forums for institutions to reflect on their progress.

Although STEP will vary from institution to institution, there are some commonalities to the process. The STEP Goals, Activities, and Products chart (Table 1.4) provides a brief overview of the project expectations for institutions during the 3-year period. The four basic accountability questions, listed on page 18, offer another means for institutions to determine their progress.

Recommending and Institutionalizing Change

During the second year of STEP, task forces begin to recommend and implement changes to requirements, courses, assessments, and programs. After they have finished the comparison of standards and programs, subcommittees report their findings to the full task force and send recommendations for curriculum change to the appropriate institutional body. Georgia State University's science subcommittee compared the curriculum for initial preparation of middle school science teachers with the state middle school science curriculum standards, reasoning that that was the minimum proficiency for teachers. Finding gaps, the subcommittee recommended the development of an integrated science sequence that would address certification requirements, Board of Regents recommendations, and the curriculum content defined by national standards. A STEP team member from science education met with the dean of arts and sciences to enlist his support and cooperation. The dean then met with the biology, chemistry, geology, and physics and astronomy department chairs to discuss who would teach the course and its sequencing. The provost and the deans of arts and sciences and education worked together on faculty load and course credit issues. The new four-semester course was launched in the fall of 2001 under the leadership of three members of the science faculty from the College of Arts and Sciences and a science education faculty member from the College of Education.

In the third year, STEP task forces begin to recommend changes that affect teacher education at the institutional level. These might include new general education requirements for teacher

Table 1.3. Evidence of Teacher Candidate Quality

Inputs of the Program	<ul style="list-style-type: none"> • What is the evidence that course content is aligned with the content teachers need related to P-12 standards? • What is the evidence that the clinical and field experiences are aligned with P-12 standards? • What is the evidence that general education requirements and teacher education curricula are designed and integrated to ensure teachers' content knowledge that relates to P-12 standards? • What is the evidence that the program helps candidates learn to assess the performance of their students on P-12 standards, as well as to make appropriate changes in instruction? • What is the evidence that assessments track candidates' content knowledge from entry to the teacher education program through recommendation for licensure? What is the evidence that these assessments align with requirements of P-12 standards? • What opportunities does the institution provide for candidates to strengthen content knowledge when assessments indicate that areas essential for P-12 standards are not adequate? • What is the evidence that arts and sciences and education faculty share responsibility for the teacher preparation program? What is the evidence that the program ensures that faculty are sufficiently familiar with the P-12 standards?
Performance of Candidates	<ul style="list-style-type: none"> • What evidence do candidates provide, and at what points in the program, concerning their mastery of content and content pedagogical knowledge? • How is candidate evidence concerning content knowledge related to P-12 standards? • How does the candidates' performance evidence demonstrate that P-12 standards are an essential component of the classroom experience? • What performance evidence do candidates assemble concerning their ability to assess student learning in the context of P-12 standards? • What does candidate performance evidence show about the capacity of the program to help candidates improve in the ability to help students reach P-12 standards? • How does the program use candidate performance evidence to improve its effectiveness in the context of P-12 standards?
Results with Students	<ul style="list-style-type: none"> • What evidence is each candidate required to provide, and at what points in the program, concerning his or her ability to help students learn in order to meet the P-12 standards? • What evidence is each candidate required to provide that he or she is able to help students from all groups achieve P-12 standards? • What is the evidence that candidates integrate results from their own classroom-based assessments with results from school, district, or state tests? How do candidates relate these tests to their understanding of P-12 standards? • By what strategies do candidates plan to continue to improve their ability to help all students reach P-12 standards?

Developed by STEP.

Table 1.4. Standards-based Teacher Education Project: Goals, Activities, and Products
Year One of STEP Work

Goals	Action	Products
<p>Establish an academic mission for teacher education that ensures that graduating teachers have the knowledge and skills to teach their students to reach P-12 standards.</p> <p>Review and judge the requirements, courses, and expectations of teacher preparation in light of P-12 academic standards and teacher licensure standards to determine how well the program develops, ensures, and assesses teachers' content knowledge and pedagogical skills to support P-12 standards.</p>	<ol style="list-style-type: none"> 1. Establish Faculty Task Force on Teacher Preparation for P-12 Standards comprising arts and sciences, education, and P-12 faculty. 2. Meet with Task Force leaders across the state to discuss STEP goals in the context of state policy and reforms. 3. Conduct campus analysis of teacher preparation program focused on assessment of how candidates demonstrate content and pedagogic knowledge. 4. Meet with campus Task Force leaders across the state to share progress and conduct work. 5. Attend STEP summer conference to learn from others' progress, to understand issues, and to conduct work. 	<ol style="list-style-type: none"> 1. Contact list of full-time faculty, led by senior tenured member and supported by academic vice president. 2. Institutional Analysis outlining what was revealed about program strengths and weaknesses in terms of candidates' content knowledge and content pedagogy. 3. Work plan to address institution-specific issues in the teacher preparation program and propose an assessment strategy. 4. Campus structure created to proceed on implementing work plan.

Year Two of STEP Work

Goals	Action	Products
<p>Design new courses, requirements, field experiences, and assessments within the teacher preparation program to ensure teacher knowledge and instructional skills.</p> <p>Establish accountability systems that provide useful information to arts and sciences and education faculty on teacher knowledge and content pedagogy.</p>	<ol style="list-style-type: none"> 1. Propose changes to the teacher preparation program in terms of courses and requirements in both the college of arts and sciences and the college of education. 2. Define new assessment strategies to determine how well candidates are educated and prepared for teaching careers. 3. Meet with campus Task Force leaders across the state to share progress and conduct work. 4. Attend STEP summer conference to learn from others' progress, to understand issues, and to conduct work. 	<ol style="list-style-type: none"> 1. Based on work plans, campuses will have evidence of changes to: <ul style="list-style-type: none"> standards of entry and exit into the program, general education requirements and courses, strategies to link content and pedagogy through arts and sciences and education faculty collaboration, depth and breadth of education in the major for teacher candidates, campus support system for faculty investment in teaching, content-knowledge requirements and expectations for future elementary teachers. 2. An accountability framework to measure progress and success in meeting STEP goals and aligning STEP with state teacher education policy.

Year Three of STEP Work

Goals	Action	Products
<p>Embed changes into new university systems that include:</p> <p>Routine analysis of course requirements and expectations for teacher candidates in the colleges of arts and sciences and education in light of P-12 and teacher licensure standards;</p> <p>Faculty structure for teacher preparation that shares responsibility and authority between the colleges of arts and sciences and education;</p> <p>In-depth follow-up of graduates in terms of their content knowledge and content pedagogy preparation for teaching with information systemically shared among all faculty and used to revise program;</p> <p>Linked databases between campuses and state departments of education that support analysis of teacher and student performance.</p>	<ol style="list-style-type: none"> 1. Conduct self-assessment to determine how effective proposed changes have been in terms of strengthening the content knowledge and content pedagogy skills of graduating teachers. 2. Conduct an inventory of instructional strategies to identify teaching models on campus. 3. Develop research projects that involve arts and sciences, education, and P-12 faculty to determine candidate knowledge and skills through transcript analysis, student learning gains, etc. 4. Create an exit or graduation process that ensures candidate content knowledge and skill at teaching the content to a variety of students. 5. Meet with Task Force leaders across the state to discuss work plans and share framework for STEP assessment. 6. Attend STEP summer conference to learn from others' progress, to understand issues, and to conduct work. 	<ol style="list-style-type: none"> 1. University incentives support and promote faculty commitment to excellent teaching and to the preparation of P-12 teachers. 2. A new structure of arts and sciences and education faculty is formally responsible for teacher preparation, including hiring and tenure decisions, resource allotment, and curriculum development. 3. The preparation program for middle and high school teachers embeds pedagogy in the disciplines. 4. Campus reports on self-assessment and offers a strategy of multiple assessments (including exams, portfolio, interviews, observations, and evidence of student learning) established for judging the quality of graduating teachers.

candidates, or tenure and promotion considerations for collaborative teaching or for observation of clinical experiences by arts and sciences faculty, for example.

Too often, the changes introduced as part of major reforms last only as long as the funding continues and the original leaders participate. To minimize the fragility of change, institutions are asked to draw up a plan, at the beginning of the third year, to institutionalize standards-based reforms on their campuses for an additional 2 years. Evidence of institutionalization includes documented changes in faculty practice, program structure, and institutional policies that sustain STEP. Task forces are asked to define strategies to support their work beyond the life of the original project. The process of institutionalizing change focuses on:

- embedding changed course requirements and expectations for teacher candidates into the colleges of arts and sciences and education,
- identifying and supporting a cadre of arts and sciences and education faculty responsible for teacher preparation,

- creating university-wide systems for routinely reviewing, analyzing, and improving the effectiveness of teacher preparation programs, and
- creating links between the databases on campuses and those in state departments of education to support analysis of teacher and student performance.

There are a number of ways to reach these goals. A new teacher preparation “unit” jointly managed by the colleges of arts and sciences and education can facilitate changes in requirements and expectations and further program refinements. It will also provide a structure for shared accountability for teacher education by both faculties. Working together, the faculties can incorporate new assessments, based on standards, at critical points in the program to determine content knowledge and pedagogical skill. They can redesign advisement structures to follow the standards-based model and to incorporate the analysis of assessment results. Together they can put into place institutional policies to encourage and reward all faculty members involved in teacher preparation to strengthen their own teaching practices emphasizing pedagogical aspects within the discipline. In addition to results from the new standards-based assessments, the university-wide assessment system could include in-depth follow-up studies of recent graduates. Campuses could gather information to improve teacher preparation by expanding the types of information gathered on these surveys, and by changing the way the information is discovered, analyzed, and used by both faculties. The P-16 education structure could be strengthened through links with state departments of education to analyze P-12 student data in terms of what is available and what needs to be available in order for campuses to make wise decisions about teacher preparation programs.

References

- Blackwell, P. (2002, January). *Using standards and alignment for program redesign*. Paper presented at the conference NCATE: Continuing Accreditation and Beyond, Washington, DC.
- Board of Regents of the University System of Georgia. (2001). *Regents' principles and actions for the preparation of educators for the schools*. Retrieved January 2, 2002, from http://www.usg.edu/p16/tq/principles_rev.html
- Collias, K.A. (2000). *A report on step and its pilot program in Georgia*. Washington, DC: Council for Basic Education.
- Georgia's Teacher Quality Plan. (2001, Summer). *Georgia P-16 initiative update*, p. 3.
- Making Standards Matter, 2001. (2001, Winter). *American Educator*, pp. 30-33, 47-48.
- Maryland State Department of Education, Program Approval Branch. (1999). *Redesign of teacher education major components*. Retrieved January 30, 2002, from http://www.msde.state.md.us/paab/redesign_teacher_ed.htm
- Professional standards for the accreditation of schools, colleges, and departments of education. (2002 ed.). Washington, DC: National Council for Accreditation of Teacher Education.

II. STEP Basics: Standards, Alignment, Assessment, and Collaboration

A CONTEXT FOR CHANGE: THE EVOLUTION OF STEP

*Carol E. Smith, STEP Co-Director and Vice President,
American Association of Colleges for Teacher Education*

Context for STEP

Standards-based accountability, the dominant mantra through more than 10 years of major American education reform, now serves as the ubiquitous and implicit backdrop for dialogue at every level of policy and practice concerning the improvement of schooling and teacher preparation. The remarkable and concentrated movement to develop standards that would define what P-12 students should know and be able to do has resulted not only in a huge array of expectations for students, but has also created new dynamics between teacher education programs and the schooling in elementary, middle, and secondary classrooms.

Prior to the recent standards movement, educators commonly talked about creating bridges across the divide separating P-12 classrooms and the higher education institutions in which many teachers are prepared. Both arenas have traditionally been separate worlds, each with its own standards. In the early 1990s, the far-reaching implications of P-12 standards, developed by almost two dozen national organizations in discipline-based specialties, began to compel urgent questions that implied new conceptions of P-16 standards:

- How could teacher preparation programs ensure that teachers themselves had mastered the kinds of content knowledge outlined in standards for the P-12 subjects they would teach?
- How do P-12 expectations relate to the postsecondary curriculum through which teacher candidates complete their preparation?
- How does the substance of teacher licensure examinations relate to the expectations for related content-areas of the P-12 curriculum?
- How do prospective teachers gain knowledge and understanding of the standards for which they and their students will be held accountable?

These questions were the impetus for discussions that began several years ago between representatives of the Council for Basic Education (CBE) and the American Association of Colleges for Teacher Education (AACTE). These two distinctly different organizations have traditionally found it difficult to find consensus across the “content versus pedagogy” divide in perceptions about teacher preparation. As CBE and AACTE staff and members engaged in

debates about the nature of the content knowledge expected of P-12 students, both organizations recognized the increasing pressure on teacher preparation programs to demonstrate their relevance to the standards that state after state was enacting for its schools and students. The two organizations were able to reach across their traditional differences in order to form a unique partnership.

A couple of key agreements emerged as essential areas of common ground. Representatives of both organizations believed that teachers and faculty members should be well enough grounded in the academic and pedagogical foundations of their teaching disciplines to make good decisions about how to provide effective instruction to P-12 students. Members of both groups held a common respect for the emphasis in recent teacher education literature on pedagogical content knowledge as essential to effective teaching in any particular academic subject.

With an advisory group of key educational leaders and policy makers from national and state organizations (Appendix A), CBE and AACTE staff worked to shape a project that would help teacher education programs address the challenges of P-12 standards. The advisory group helped to outline the project in a series of meetings. At one point in the discussion, an advisory group member commented, “You know, we are now at the point in defining this project where the conversations at our table really belong to the higher education and P-12 faculty who ultimately have to solve these issues.” This framed the starting point for STEP, the Standards-based Teacher Education Project: an effort to provide resources to help educators at all levels (higher education faculty, P-12 practitioners, and others) take on for themselves the self-education and assessment tasks necessary to find their way toward new partnerships.

Basic Facts About STEP

The Standards-based Teacher Education Project (STEP)TM supports colleges and universities as they transform their teacher education programs to:

- Produce academically strong teachers who demonstrate their ability to bring students to grade-level learning;
- Rely on strong collaboration between arts and sciences and education faculties and between higher education and P-12 schools; and
- Align the courses, requirements, and expectations of the teacher preparation program with P-12 and teacher licensure standards.

STEP helps teacher education programs link their design and content more closely to the P-12 standards for which their teacher candidates will be accountable. The project also has, as a secondary objective, to facilitate collaboration of arts and sciences faculty members with their teacher education colleagues.

STEP began operation in 1997, and since then has worked directly with institutions in five states. In most states, STEP established connections with relevant state education agencies,

professional standards boards, and other groups that have a direct impact upon the requirements for preparation of new teachers. STEP has also developed links to P-16 organizations within states and to national P-16 networks such as the Education Trust.

Activities in STEP begin with a request for proposals that solicits applications from individual institutions. The applications are evaluated based on eight criteria:

1. vision of standards-based teacher education program,
2. institutional capacity,
3. campus goals for improving the content knowledge of teacher candidates,
4. preliminary plan for an institutional analysis,
5. assessment strategies to determine teacher candidates' content knowledge and content pedagogy,
6. anticipated use of STEP resources,
7. letter of commitment from campus and P-12 administrators, and
8. list of task force members.

STEP then awards nominal grants to a small number of institutions in each state. The institutions work individually to form collaborative task forces, including faculty members from both education and arts and sciences, in order to address the STEP goals. STEP national staff and representatives from SRI International, Inc. (the project's evaluators) observe work, review reports, and provide feedback to institutions. Meetings are held each semester to bring together all institutions in each state or region, and an annual conference has allowed institutions from all participating states to share their experiences and resources.

Context for Understanding This Guide

In compiling information and models for this guide, we obviously have in mind that others who are contemplating similar work may find some use in our experiences and the understandings we have gained. For others to enter the contextual frame in which we operated, it will help to share very basic assumptions about the work that STEP took on:

1. New teachers must clearly understand P-12 expectations, and therefore need preparation programs closely aligned to the standards that articulate P-12 learning goals in particular content areas.

2. Faculty members in teacher preparation programs need an in-depth understanding of P-12 standards and the implications of those standards for the preparation of teacher candidates.
3. Engaging with and understanding P-12 standards must be a collaboration that joins teacher education with arts and sciences faculty members, because both groups are responsible for significant elements of a new teacher's preparation for licensure and practice.

Although these assumptions may seem self-evident, they are so basic to STEP's work that others starting their own work may find it useful to begin with dialogue about these principles. These assumptions embody one of the most productive but also one of the most challenging tensions of the STEP initiative: focus on the standards and on the learning of P-12 students was the primary goal of STEP, but the collaboration between education and arts and sciences faculty members was so crucial to effective work that this secondary goal sometimes became almost an end in itself.

As the importance of cross-faculty collaboration continued to become more evident throughout the project, we learned that sharpening the focus on assessment of learning outcomes—for both candidates and their future P-12 students—was a helpful way to keep eyes trained toward the primary goal, while still engaging all faculty members. Assessment was an area in which both education and liberal arts faculty members needed to share perspectives, approaches, and new learning.

Arts and sciences faculty members who began examining P-12 standards in the content areas found their preconceptions sometimes validated and sometimes challenged. In general, faculty members were pleasantly surprised at the level of expectation articulated across the P-12 content areas; they saw potential for improving the quality of higher education course work if students actually completed secondary studies exhibiting the level of knowledge and ability expressed in these standards. Faculty members sometimes disagreed with particular areas of the standards and expressed interest in being involved with future revisions. Some arts and sciences faculty members discovered that their colleagues had been leaders in development of P-12 standards; because such activity is often not a priority for promotion or tenure recognition, it may be invisible within the institution until an activity such as STEP highlights it. Faculty members also discovered that the match between P-12 curricular areas and higher education curriculum was not always easy; sciences and social studies were the most prominent examples of this challenge. Sometimes separate fields that make up a discipline taught as specializations in higher education are combined into a single subject in P-12 schools. (For example, history, sociology, geography, economics, and political science are routinely combined as "social studies" in the P-12 curriculum.) Even when content areas are separated in the P-12 curriculum, it may be mistakenly assumed that a teacher's knowledge of one area is transferable to another within the discipline, with the result that new teachers lack essential preparation in specific areas of the discipline that they may be assigned to teach. (This assumption is common in the physical sciences and mathematics. Principals often assign a teacher who majored in chemistry, classes in physics, earth sciences, and mathematics even though the teacher had no specific training in these disciplines.) Across all of the STEP institutions, a

common discovery among arts and sciences faculty members, and a common source of frustration for them, was the extensive accountability structure that accompanies teacher education and teaching at the P-12 level. The “standards-assessment-accountability” phenomenon occasioned some of the liveliest conversations within and across faculties and institutions in the STEP initiative.

National staff initiated STEP work expecting variation in the degree and manner in which teacher preparation programs at different institutions would address project goals. Our experiences with the institutions bore out this expectation. The variations in program responses are directly relevant to another basic ingredient for successfully undertaking standards work: the flexibility needed by faculty members to accommodate very different institutional resources (structures, materials, and finances). State education agencies, institutions, individual faculty members, and teachers interested in using this framework will find that addressing basic supports *before* the project begins facilitates the work. One of the most critical elements of support apparent in the following sections is continuity of leadership. Frequent changes in administrative leadership within institutions and natural shifts in faculty assignments mean that collaborative task forces must deliberately plan to sustain leadership and continuity by building the capacity of the group rather than relying solely upon individuals.

How the Design of STEP Evolved

The Role of NCTAF

During the time that CBE and AACTE were developing STEP’s framework, the National Commission on Teaching and America’s Future (NCTAF) had just issued its report, *What Matters Most: Teaching for America’s Future* (1996). STEP staff found this report a useful context for our focus on standards and on improving the education of all students, not just those who have traditionally succeeded in school. We also found the organization of NCTAF’s “partner state network” to be helpful in a number of ways. First, it helped identify states making the kind of comprehensive standards-based commitment that would support teacher preparation institutions undertaking STEP activities. The NCTAF national network also promoted a state-by-state inventory exercise that helped provide self-assessment and guidance as states identified needed changes. This model helped shape our thinking about where to begin STEP work within each institution. In addition, the NCTAF network provided informational resources, contacts, and meetings that offered opportunities to exchange ideas with others engaged in similar work.

We began the STEP initiative by identifying NCTAF network states with which to initiate conversations. These conversations began in different places on the state education policy configuration: in Georgia, for example, it began with the Board of Regents. In some states, STEP began conversations with the state’s professional standards board and, in others, with the state department of education. While the standards-focused STEP work diverged in its

specifics from the comprehensive state policy perspective that NCTAF took, our project remained consistent with that organization's goal of developing better articulation between standards that define P-12 learning goals and the preparation of teachers. Representatives of NCTAF and its partner states have been active participants in the national working group that advises the STEP initiative.

Envisioning the Process of Change

Both CBE and AACTE brought to this project significant experience with direct support for educational change. CBE has for some years advised and supported professional development in states, districts, and schools working to integrate standards into P-12 curricula and teaching. AACTE has considerable experience in providing technical assistance to teacher education institutions preparing for accreditation or undertaking other areas of program improvement. Although the two associations brought very different perspectives on traditional teacher

Assessment was an area in which both education and liberal arts faculty members needed to share perspectives, approaches, and new learning.

education programs, both viewed standards-based learning as an essential focus for future development of teacher preparation.

Neither organization had to be persuaded as to the truth of the adage that "change is a process, not an event." This perspective very directly influenced the activities that STEP undertook with institutions. Our earliest planning emphasized that we should pursue both "product" and "process" results to demonstrate the project's success. Well aware that the three years of STEP support would only be enough to provide a sound start, we encouraged faculty to meet specific goals related to the standards work while also creating a self-sustaining process that could outlive the specific changes in curricula, program, or other institutional structures resulting from the first iteration of STEP work. We knew that the standards themselves would undergo periodic revisions, as would the assessments that apply to P-12 students, teacher education programs, and teacher candidates. These changes would, in turn, require constant revisions in the standards base for teacher preparation programs, updating of faculty members, and new decisions about program design and content. We also knew that participants and leaders would change, necessitating an ongoing process of engaging new faculty members and teachers.

One of the thinkers who helped us understand this process was Gene E. Hall, whose research and experience with the change process in education gave voice to undercurrents that would otherwise have remained felt but unarticulated as STEP progressed. Gene contributed to STEP planning and conferences and reminded us of the distinctions between innovation and

implementation as we witnessed the stress of faculty members, subjected to continual demands for new accountabilities, even before implementation of the last round of change.

Readers of this report will find evidence of both dimensions of change—innovation and implementation—reflected here. The many examples of resources and tools developed by STEP institutions are balanced by comments from participants who reflect, not only on the challenges of arriving at these products, but also on the new experiences that accompany implementation. Beyond the “transportable wisdom” conveyed, these reflections emphasize the essential role of self-reflection in helping faculty analyze and understand the process of identifying and facilitating change.

There is one additional area of understanding reinforced by our experience in STEP, which may be helpful to those who use this report. That is the balance between the direct adoption of STEP models and their more indirect use as a prompt to create one’s own process for developing a new model. In many instances, the tools, examples, and templates provided can save others the time and effort involved in creating the original product. In other instances, however, much of the value of the product is in the very process required to produce it. This is particularly true with regard to the collaborative engagement with P-12 standards of faculty members from across an institution. As they engage in identifying, reviewing, understanding, analyzing, and making decisions about standards, it is absolutely imperative that they undertake this work, with their P-12 colleagues, from the ground up. What they will learn through this process is what STEP is all about.

STEP BASICS AT THE UNIVERSITY OF GEORGIA

Michael Padilla, Associate Dean for Educator Partnerships, University of Georgia
Mark Faust, Language Education Professor, College of Education, University of Georgia

Accountability

In 1998, the University of Georgia (UGA) College of Education was awarded a Standards-based Teacher Education Project (STEP)TM grant from the Council for Basic Education (CBE) and the American Association of Colleges for Teacher Education (AACTE) to improve teacher education in partnership with arts and sciences faculty and public school teachers. Even before becoming a STEP pilot site, UGA was building connections to institutional, state, and national accountability efforts, some mandated, some self-initiated. First, the Deans' Forum was created, an intra-institutional think tank across the colleges of arts and sciences and education designed to advance the idea of partnership and accountability in teacher education reform. Next, UGA received a seed grant from the state to form the Northeast Georgia P-16 Initiative, an expanded partnership that focused on improving P-12 academic success for all students. Soon after the P-16 Initiative was created, University System of Georgia Board of Regents Vice Chancellor Dr. Jan Kettlewell encouraged UGA to compete for a STEP grant as a natural extension of work already underway in the state. This integration of work to support STEP efforts has allowed us, over 6 years, to secure additional funds and resources and to help ensure institutionalization.

In October 2000, UGA and two other Georgia postsecondary institutions were awarded a U.S. Department of Education Teacher Quality Enhancement Program grant in the amount of \$6.5 million for 5 years. The Georgia Systemic Teacher Education Program (GSTEP) is a collaborative partnership with Albany State University and Valdosta State University that will result in the systemic reform of teacher education. GSTEP focuses on reinventing teacher education as a continuous and integrated 6-year experience from entry into the university through the first 2 years of teaching, with an emphasis on preparing graduates to bring all P-12 learners to high levels of achievement. The smaller STEP funding acted as a seed grant, providing GSTEP with both a curriculum analysis process and opportunities for faculty professional development. These alignments bolster commitment and involvement of faculty and provide institutional support for STEP activities.

STEP/GSTEP consciously articulates its alignment with the following standards and principles issued by state agencies and organizations: the Georgia Board of Regents' Teacher Quality Enhancement Plan and Principles for the Preparation of Educators, INTASC (Interstate New Teacher Assessment and Support Commission) standards, NCATE (National Council for Accreditation of Teacher Education), re-accreditation, Professional Standards Commission accreditation, and Governor Roy Barnes' "A+" school reform bill. Through all these connections, UGA faculty are building to promote sustainability and institutionalization.

Partners in STEP/GSTEP continually reach out to their colleagues to extend the network. In fact, expanding our curriculum and alignment work is considered one of the biggest challenges at UGA: the colleges of education and arts and sciences are at opposite ends of a large campus and the lack of collaboration in the past is a barrier that is requiring purposeful and thoughtful effort to overcome. Deans and associate deans of the colleges as well as superintendents and key personnel in our partner school districts have been critical to our success and continue to be the best promotion for this work.

The History and Evolution of the STEP Task Force

The deans of the Franklin College of Arts and Sciences and the College of Education at UGA initiated a Deans' Forum in 1997, in an unprecedented intra-institutional collaboration, to facilitate the interaction among faculty of both colleges and to focus on the improvement of teaching and learning. The Forum is sanctioned and supported by the provost and vice president for academic affairs and sustained and co-administered by the deans. The Forum is a means to support dialog and inquiry into issues such as the nature and scope of the scholarship of teaching, institutional accountability in teacher preparation, and the nature and quality of course instruction and curriculum design.

The Forum membership was originally selected from a group of respected faculty leaders in both colleges with common interests in the future of higher education as it related to state and national agendas. Twenty faculty members attended a 2-day retreat to discuss the creation and focus of the Deans' Forum. Issues discussed included 1) potential forms of collaboration among the faculty members of the two colleges, 2) improving the knowledge and practice of teaching at the university, and 3) possible incentives for accomplishments in exceptional teaching. This group continues to meet at least twice yearly as a Forum, and more frequently in small group work, to influence the direction of the academy.

Members rotate off after a three-year term and new members apply or are invited to serve. This process engages more faculty members and broadens the base of understanding in both colleges of shared accountability in teacher education and overall reform in higher education. Membership in the Forum is balanced equally between the two colleges.

The Deans' Forum became a way to link ongoing and new initiatives systematically. The Forum assessed the needs and resources of P-16 education through its involvement with the Northeast Georgia P-16 Council, a collaboration among arts and sciences and education faculty and P-12 teachers to reform teacher education and, ultimately, to improve P-12 student academic achievement. The Northeast Georgia P-16 Council counted six local school districts among its partners. Classroom teachers, principals, and administrators represented these districts on committees and in discussions about preparing better teachers. Deans' Forum members associated with P-16 took part in the conversations with these teacher educators and administrators.

One of the first positions taken by the Deans' Forum was that "College of Education, Arts and Sciences, and P-12 teachers share responsibility for teacher education and are responsible for collaboration within programs." To connect our teacher education reform efforts, a proposal was submitted to CBE and AACTE for a STEP grant. A subgroup of volunteers from the Deans' Forum and P-12 teachers from the P-16 Council became the STEP Task Force, charged with oversight of STEP activities on the UGA campus.

Standards Mapping and Alignment

To establish the framework for the STEP process, an institutional analysis of the requirements and characteristics of the College of Education's teacher education programs was prepared in the fall of 1997. The STEP Task Force held its first meeting in November 1997 to review this analysis and prepare a work plan for the first year. Materials used to guide this work are included in Appendices H and I. The Task Force was able to see clearly the strengths of the teacher education programs: how exemplary teacher preparation programs were critical to the success of the college's mission, how the perspectives of first-year graduates confirmed a strong content and pedagogical base, and how the prerequisites for entry into teacher education programs assured the development of high-quality professionals. The analysis also allowed the Task Force to find weaknesses and gaps, typically programmatic or departmental, partly due to the college's governance philosophy of decentralized departmental control.

The Task Force agreed that the teacher education programs were strong in content and pedagogy preparation, that teacher candidates were learning to teach to the national and professional organizations' P-12 content standards, that assessment courses were related to methods courses, and that the curriculum provided preparation for incorporating technology into instruction and assessment. Obvious weaknesses included programmatic relationships with faculty members in the College of Arts and Sciences and the need for more preparation of teacher candidates in classroom and student behavior management (a finding of the beginning teacher survey). Methodological complexity resulted in limited data that linked teacher candidate preparation with either the improvement of P-12 student learning or the retention and success of graduates in their teaching careers.

In consideration of the breadth and depth of study that would be required for our next task of standards mapping, the team decided to focus initially on the four core subject areas of English/language arts, mathematics, science, and social studies in grades 7-12. The team viewed these areas and grade levels as the most critical to align with UGA undergraduate requirements. The core subject areas would be used to calculate a student's grade point average, which partially determines acceptance into UGA. Including the 7th and 8th grades in the scope of our STEP work acknowledged that, during these developmental times, students make life and career choices that affect the rest of their lives.

The STEP summer conference in 1998 gave the team the next opportunity to focus on standards alignment and mapping. The official STEP Task Force was enlarged to include faculty members and teacher educators in the selected core areas. We invited teachers who super-

vised student teachers and were familiar with the university's course offerings. The Task Force split into discipline-specific subcommittees composed of arts and sciences faculty, education faculty, and teachers. They had been asked to bring to the STEP conference standards documents from their disciplines that their department or faculty members had agreed were appropriate for the STEP work.

Subcommittees began their work by reviewing the standards documents and identifying a set of standards with which to work. Additional resource materials that were considered necessary in the alignment exercise included Georgia's Quality Core Curriculum (QCC), sample questions from the high school exit exams, Praxis exam sample questions, and other professional and regional P-16 standards documents. Team members were asked to review the documents and reach consensus as to what should be expected of prospective teachers in terms of content and pedagogical knowledge.

The question of which courses addressed what standards shaped the next exercise. The four subcommittees matched the course content in education and arts and sciences against national P-12 standards, producing a table that displayed the alignment in the course work for an entire program of study. In the standards alignment process, as well as in the rich discussions that arose during the exercise, team members identified redundancy, weaknesses, and gaps in opportunities to learn the standards in programs of study. Through dialog, all the subcommittees agreed that, to continue the study of how to modify or integrate arts and sciences and education courses in order to meet the needs of prospective teachers, we needed to engage more arts and sciences and education faculty active in the Deans' Forum and more practicing teachers.

A long-term plan was outlined to consider three issues related to the *quality* of teacher preparation at UGA raised by all four subcommittees:

- 1) **Opportunity:** Does the university provide courses where students can learn the content and pedagogy defined in the national standards? Is there an appropriate opportunity for prospective teachers to learn content and pedagogy in their courses related to the standards identified for the four curriculum areas (English/language arts, mathematics, sciences, and social science)?
- 2) **Accessibility:** Are the students taking advantage of the available courses in their programs of study (that is, relevant courses), and what is the nature and quality of instruction in these courses?
- 3) **Effectiveness:** To what extent are the preparation programs effective in preparing teachers to teach to the standards in school settings and bring students in grades 7-12 to high levels of achievement?

The discipline-based subcommittees prepared and presented to the January 1999 Deans' Forum meeting written reports that included tables and matrices, accomplishments, and suggested next steps. College of Education faculty members who possessed expertise in standards-based teacher preparation were invited to attend and to speak to the Forum, which

discussed issues raised concerning teacher preparation and suggested subsequent involvement and direction.

The matrices were mailed to selected faculty members in both colleges to reach broader consensus among a larger audience. Faculty members were asked to react to the matrix with regard to whether or not the content specified in the standards was covered in the listed courses. Although curriculum and course content change with each professor and each semester, the intended outcome of this exercise was an accurate matrix. Assessment forms, intended for the convenience of the faculty, were developed to capture the data. The forms in Appendices J and K were sent to arts and sciences and education faculty, respectively.

The Northeast Georgia P-16 Council hosted a two-day meeting around this time and agreed to review the matrices for the STEP Task Force. In addition to arts and sciences and education faculty and P-12 teachers and superintendents, members of the P-16 Council include faculty members from 2-year colleges, business partners, community members, and parents. Members were asked to confirm the content that students in grades 7-12 should know and what they should be able to do in order to achieve academic success. The STEP Task Force revised the matrices using the feedback from the assessments and discussed a number of issues raised by the reviewer recommendations, including: changes in university structures related to teacher preparation; new assessments that linked to P-12 standards for entry and exit; new advisement structures for teacher candidates; and modeling effective teaching on campus.

In 2000, STEP activity continued to address the first two STEP goals: to provide the *opportunity* for prospective teachers to learn the content and pedagogy related to P-12 standards, and to *ensure* that prospective teachers take the *relevant courses*. Participants expanded their work to a third goal: to assess the effectiveness of preparation programs in preparing high-quality teachers. The STEP Task Force members also continued to share with their colleagues the meaning and importance of shared accountability in teacher education.

In response to these STEP Task Force recommendations, in early 2000, survey and focus group data were collected to begin to document the success of the STEP work and to build on the baseline data provided by the Institutional Analysis. Published programs of study were reviewed and compared with the transcripts of seniors who had just completed student teaching to determine actual course-taking patterns. Teacher candidates were interviewed about their perceptions of their teacher education programs. Were the key courses available? Did they, as student teachers, have the opportunity to incorporate the P-12 standards into their instruction? A small group of teachers, selected from among P-16 partner school supervisors of UGA student teachers, were invited to a lunch meeting to confirm the emphasis that their instruction placed on standards. In another effort to widen shared accountability, these teachers were asked to invite two or three of their colleagues to complete the survey. Appendices L, M, and N include the instruments used to collect information from student teachers and classroom teachers.

In October 2000, 3 years of STEP work was brought into the newly successful GSTEP grant. The \$6.5 million USDOE grant has provided additional resources for STEP. STEP funds now pay to expand and deepen activities not funded by GSTEP. The STEP Task Force discipline committees were renamed “GSTEP curriculum teams” and the number of teams

increased to include middle grades and early childhood education. Curriculum teams recruited additional faculty members from the colleges of arts and sciences and education and additional teachers from the partner school districts. Teams renewed their commitment to shared accountability for teacher education. They were provided with financial incentives and signed formal contracts tied to one-year work plans (Appendix O).

In 2001, the curriculum teams began discussing changes to programs and curriculum to strengthen teacher preparation. Teams also began to identify and pilot collaborative initiatives. For example, one curriculum team has discussed creating a pedagogical content course for preservice teachers who would take a content course, above entry level, and, at the same time, a 1- to-2-hour education seminar in which he or she would develop teaching activities related to the content learned in the other course.

GSTEP/STEP is emerging as a vehicle for improving teacher education at UGA, and STEP is the main proponent of adding P-12 student learning as a focus for our teacher education programs. The solid groundwork, carefully prepared, of the STEP Task Force's initially successful collaborative work jump-started the standards alignment for the GSTEP grant. STEP at UGA is now poised for the next steps of helping teacher candidates design effective instruction and classroom assessment and evaluate their ability to bring all learners to high levels of achievement.

Course and Program Redesign

The four core subject area curriculum teams—English/language arts, sciences, mathematics, and social sciences—are now completing their first full year of work. Over the past year, five new teams have been added—fine arts, middle grades, early childhood, foreign languages, and occupational studies—bringing the total to nine.

The chairpersons of the nine curriculum committees meet monthly to discuss ideas and issues related to their work. Although each team works autonomously to develop and carry out a yearlong work plan, the current initiatives fall into one of three overarching elements:

- Continuing standards mapping and alignment
- Collaborations to improve teacher education (CITE)
- Documentation and assessment of outcomes

Each of these elements will be discussed in turn with respect to their potential to support future proposals for course and program modification.

Some curriculum teams (English, for example) have completed the initial stage of standards mapping and alignment. Others (occupational studies, for example) are just beginning. Still others (social sciences, for example) have made continued emphasis on standards mapping and alignment a major feature of their work plans. Recommendations currently being considered by curriculum teams include: modifying prerequisite experiences and courses, modifying syllabi for required courses, and redefining required and recommended co-curricular and extracurricular experiences. Discussion of this last category focuses upon improving the extent and quality of field work within the teacher education program.

The next phase of the standards mapping and alignment project will come about with the finalization of the “GSTEP Resource Framework.” When complete, this framework will provide beginning and experienced teachers with an overarching map of principles and standards for teaching and learning. (The content standards endorsed by the curriculum teams, as part of the ongoing STEP work, will be embedded within this larger document.) In addition to statements of guiding principles and standards, the GSTEP Resource Framework will offer an array of indicators and rubrics to guide individual teachers seeking to improve their practice. GSTEP curriculum teams are charged with shaping the interface between the overall framework and the specific configurations of individual teacher education programs.

In addition to continuing standards mapping and alignment, GSTEP curriculum teams are currently developing “collaborations to improve teacher education,” or “CITE” projects, beginning with a working relationship among themselves. We think it is important to underscore the challenges produced by the simple fact that the curriculum teams comprise members representing domains that historically have worked in isolation from each other. Bringing people together from the College of Education, the College of Arts and Sciences, and P-12 schools has been a monumental “cross-cultural” undertaking. Potential conflicts related to different status, workloads, values, and personalities all come into play as curriculum teams lay the groundwork for future accomplishments. In addition, teams have had to confront institutional barriers to collaboration. For example, the university reward structure is not conducive to the level of commitment to “service” required by this work. Another example is the inflexibility of P-12 teacher schedules, which makes the logistics of any collaboration a huge hurdle.

Despite these and other challenges, the curriculum teams have already embarked on promising collaborative ventures such as:

- “paired course” arrangements (professors from different departments teach parallel courses),
- joint research projects to collect new data related to program design and student performance,
- new channels of communication between and among teacher candidates and their advisors,
- co-teaching “freshman seminars,” and

- collaborations between university students and students in P-12 schools.

As these and other ventures yet to be developed take shape, the GSTEP initiative will begin to have an impact, not only on the quality of teacher preparation, but also the quality of teaching and learning in P-12 schools that come under its sphere of influence.

Assessment

To begin with, we want to point out that GSTEP constituents acknowledge the competing discourses embedded in current debates about how best to improve teacher education in Georgia and across the nation. In the broadest sense, we understand these debates to revolve around calls for reform that alternately emphasize “professionalization” of the teaching force and “deregulation” of teacher licensing. Rather than choosing to stand on one side or the other of this “great divide,” the GSTEP initiative is moving toward a stance that incorporates aspects of both positions. The centerpiece of this effort will be the GSTEP Resource Framework, which is intended to supplement national and local content standards by embedding them within a broad-based and well-developed vision of what counts as exemplary teaching. This framework will serve as an important point of reference, both for evaluating the success of projects sponsored by GSTEP and for assessing the impact of those projects on teacher education and student learning in P-12 schools.

Curriculum teams are actively contributing to the development of the resource framework as part of their year-one and year-two work plans. Eventually, the standards mapping and alignment conducted earlier for the STEP initiative will be completely folded into the final version of the resource framework. The end result will be a document that all program areas can use as the basis for modifying and improving the way teacher candidates are evaluated for licensure. The resource framework is also intended to serve as a tool for the professional development of teachers who are already licensed and working in the field. In this way, the work of GSTEP curriculum teams focuses on enhancing “professionalism.”

The resource framework, however, also disengages the evaluation of teachers and teacher candidates from program-specific course work and other requirements. Pathways to licensure and professional development within and across different programs and different settings are likely to become more flexible and individualized, because locally developed assessments are keyed to the resource framework. In this way, the work of GSTEP curriculum teams is responsive to the agenda favored by those who support the “deregulation” of teacher certification.

Although this work is still in progress, curriculum teams are using the resource framework to link their documentation and evaluation of GSTEP initiatives with college-wide efforts to develop program assessments more “data-driven” than in the past. For example, all programs are seeking to create more systematic alignment between student work—such as papers, projects, and portfolios—and the standards set forth in the resource framework. A specific example is the electronic database under construction by science education faculty. Eventually, students

will submit required work electronically in forms that provide direct evidence for their activities and achievements.

One result of folding work initially sponsored by STEP into GSTEP has been to delay the original schedule for making specific program modifications and developing new assessments. Nevertheless, great progress is evident as the nine curriculum teams coordinate their efforts in light of standards set forth by the GSTEP Resource Framework. In addition, GSTEP has created a separate assessment team to coordinate evaluation of the project as a whole, including the standards work carried out by the curriculum teams.

The authors gratefully acknowledge Dr. Edward Pajak, Dr. Donald Schneider, and Dr. Sally Hudson-Ross for their leadership and for providing portions of the work included in this article.

REVIEWING STEP AT COPPIN STATE COLLEGE

Wyatt Coger, Coordinator of Field Services and Assistant Professor of Curriculum and Instruction; Genevieve Knight, Professor, Mathematics and Computer Science; Leontye Lewis, Chair, Department of Curriculum and Instruction; Thaddaus Phillips, Chair, Department of Special Education; Elinor C. Santor, Professor, Department of Adult and General Education; and Geraldine Waters, Chairperson, Department of Adult and General Education and STEP Chair, Coppin State College

The introduction of the Standards-based Teacher Education Project (STEP)TM to Coppin State College has resulted in greater communication across campus, better coordination of the curriculum, active participation of many faculty members, and tangible change in the teacher preparation program. Reviewing the impact of STEP, the dean of arts and sciences noted that, “The initiatives of STEP have been successful on several fronts,” and have produced “a ripple effect from the incorporation of standards of learned societies [which] has facilitated other in-house evaluations and related accreditations.”

The conceptual framework that is the foundation of the Coppin State College teacher education program, “The Teacher as a Reflective Facilitator of Learning,” emphasizes creating a climate that stimulates students to be active participants in their own learning. The teacher candidate brings knowledge of content, students, and teaching techniques to the educational setting; encourages students to assume responsibility for their learning; and initiates instructional activities that promote student learning through interaction with materials, technology, peers, and the teacher. Reflecting on the classroom experience, the teacher candidate can apply knowledge of the content, the students, and alternate teaching strategies to adjust his or her teaching to the needs of learners.

In this way, the teacher acts as a reflective facilitator of learning, not merely as one who imparts knowledge. A Coppin teacher candidate will also become a Systematic Planner, an Effective Communicator, an Instructional Leader, a Reflective Decision Maker, and an Evolving Professional. This conceptual framework also reflects INTASC principles, National Council for Accreditation of Teacher Education (NCATE) standards, the Maryland Essential Dimensions of Teaching, and P-12 academic content standards. It is a working document designed to provide direction for the teacher preparation program.

Because STEP continues to be an impetus for incorporating standards and assessment measures into the instructional program, “The STEP program can be a model to prepare all of the graduates of Coppin State College,” observed the chairperson of the Department of Adult and General Education. “It takes an entire college to prepare a teacher.”

Reflections by the Chair of the Coppin State College STEP Initiative

For the past 3 1/2 years, Coppin State College's teacher education program has flourished with the support of the Standards-based Teacher Education Project. The introduction of STEP at Coppin State College has had far-reaching ramifications. What started as an initiative to invigorate and reform teacher education has become a model for the institutionalization of standards-based program change.

It was fortuitous that the beginning of the STEP Initiative on the campus coincided with several other events. The STEP process was invaluable in preparing for our successful NCATE accreditation. The self-study we conducted prior to the NCATE visit reinforced the importance of standards, subject matter content, and performance-based assessment. Our STEP collaboration with arts and sciences facilitated the incorporation of academic discipline standards, approved by learned societies, into content courses. The Maryland Essential Dimensions of Teaching standards also emphasize the need to align teacher preparation with P-12 and INTASC standards, and stress the value of Professional Development School partnerships. This emphasis reinforced our focus on ensuring that teacher candidates have in-school clinical experiences and supervised practice in teaching.

Instituting the Praxis I basic skills requirements helped Coppin State's arts and sciences departments increase concentration on math and writing skills. Strengthening the requirements for admission to teacher education was an added impetus for our collaboration with Baltimore City Community College, which has led to an articulation agreement and the awarding of the Associate Arts in Teaching degree to candidates who are successful on Praxis I. Arts and sciences and education division faculty have developed modules, workshops, and seminars to help candidates prepare for Praxis I and Praxis II.

The center of the Coppin State STEP initiative is the Task Force, brought together by the vice president for academic affairs. Representing a rich cross section of the faculty and administration from arts and sciences and from education, and strategically including community college and public school partners, the Task Force is the working arm of STEP. The Task Force provided leadership in conceptualizing and implementing the STEP goals by initiating needed policy changes and helping to institute curriculum redesign. Task Force members were instrumental in communicating the importance of standards and the plans and progress of STEP. They brought the faculty into STEP through faculty meetings, workshops, inter-departmental chats, and their service as symposia leaders and keynote speakers. Task Force members also sponsored panel discussions that featured our public school and community college partners. STEP faculty also worked with other groups to align goals with standards and infuse standards into courses.

Major accomplishments include the following program changes:

- Entry and exit requirements for teacher candidates that ensure adequate knowledge of content and demonstrated competencies in facilitating student learning;

- Content knowledge preparation of teacher candidates through discipline-based coursework, required general education courses, and subject major and concentration courses;
- Pedagogical preparation of teacher candidates, including conceptualizing, communicating, and demonstrating proficiency in school settings; and
- Assessments of teacher candidates that ensure adequate knowledge of content and the ability to teach the content.

Although STEP was designed to be a 3-year initiative, funding was extended for a 4th year because of the quality of Coppin's efforts during the first 3 years. The 4th year of implementation focused on institutionalizing the principles of STEP into the total fabric of the teacher education program. Revised syllabi are addressing P-12 standards, faculty members are infusing technology into the curriculum, and instructional modules are helping teacher candidates to attain success on Praxis I and II.

Assessing Teacher Candidates Using Standards- and Performance-based Outcomes

The redesign of Coppin State College's teacher preparation program encompasses all aspects of the teacher candidate's progress from admission to becoming a successful professional—a "Reflective Facilitator of Learning." Coppin's program emphasizes intensive, guided experiences for teacher candidates in diverse urban and suburban classrooms, in conjunction with a sequence of professional course work that draws on current educational thought and research. Preparation in the academic disciplines provides a strong foundation, while studies in education offer knowledge of human development and practical ways to apply knowledge and skills so as to enhance the learning of P-12 students. The program also emphasizes the habits of critical reflection and learning from practice, and tailors instruction to the strengths and needs of individual teacher candidates.

The teacher preparation program now rests on three premises: (1) the quality of a teacher preparation program should be solidly linked to national content standards and pedagogical principles; (2) teacher candidate assessments should focus on what a teacher candidate *knows and is able to do*; and (3) faculty from both the divisions of education and the arts and sciences should share a common vision and mission for improving teacher preparation. Taking these premises as a guide, teacher candidate assessment emerges as a primary element for improving the quality of teacher practice. Teacher graduates must have the content knowledge and the pedagogical skills to support P-12 standards. A standards- and performance-based system for assessing candidates will use multiple indicators to measure their learning and performance.

The Coppin State College Teacher Education Program has radically changed how it prepares future teachers and how it evaluates and reports on the effectiveness of its programs and its graduates in light of new federal accountability requirements and new standards for beginning teachers. Our new performance-based program meets state and national standards and

is closely aligned with Coppin State College's unique mission and purpose. Teacher candidates demonstrate knowledge, skills, and dispositions focusing on what they can do and how they apply knowledge.

An assessment system based on a coherent set of standards with multiple performance-based measures reveals *what a teacher candidate knows and is able to do*. Assessment uses both direct and indirect measures of learning and multiple evaluators (for example, faculty, current students, employers). Multiple assessment measures give each teacher candidate frequent feedback about how he or she thinks, solves problems, analyzes, and applies knowledge. The assessment information helps candidates reflect more deeply upon their performance. Thus, multiple standards-based assessments enable teacher candidates to understand how they learn, to evaluate their performance, and to modify their teaching and learning practices in order to improve their performance.

The redesigned Coppin State College system assesses teacher candidates in three phases that correspond to the natural checkpoints for a candidate's progress through a professional teacher preparation program: 1) entrance to teacher education, 2) enrollment in methods courses, and 3) entrance into the teaching profession (graduation and initial certification). Specific criteria and readiness measures are in place for each transition phase. Periodic progress evaluations provide information for both the candidate and the advisor. In-course evaluations ensure that teacher candidates are meeting criteria for content knowledge and mastering performance standards.

The Coppin faculty devoted more than 3 years to conceptualizing, designing, and implementing the new assessment system for teacher candidates. STEP's goals guided the creation of the performance assessment system, which is an integral component of the redesigned teacher preparation program. The *Teacher Candidate Performance-based Assessment Manual* was developed as a guide for candidates and advisors to help them identify goals, outcomes, criteria, portfolio strategies, performance indicators, assessment measures, and an Individual Professional Growth Plan. The manual organizes information related to assessment according to the phases of a candidate's progress from admission to beginning teacher. Coppin's next step is to computerize the assessment system to help systematize performance measures and develop multipurpose data report forms.

The Division of Education governing bodies, including representatives from the Division of Arts and Sciences, are working to establish a continual cycle of review for the teacher preparation program to ensure that the performance-based content standards and other requirements are implemented and updated. These regular reviews will also examine assessment plans and practices to verify that requirements have, in fact, been met.

The Coppin State College assessment model grew out of four basic accountability questions from the Standards-based Teacher Education Project:

- Where are we starting from?
- What are our goals—short and long term?

- What processes, outcomes, indicators, or measures will allow us to track progress toward our goals?
- How can we make the outcomes and indicators meet both the needs of Coppin and external requirements?

The STEP Institutional Analysis, completed in the initial year, quantitatively and qualitatively described the teacher education program and the progress of our teacher candidates. Its results demonstrated that our information about candidate proficiency was inadequate at all stages of the teacher's preparation. What was needed at each step was a comprehensive assessment system related to standards and performance-based measures, as called for by both NCATE and STEP. Assessment strategies tied to performance measures were required to provide information to candidates, advisors, and instructors, and to meet the requirements of both campus and external agencies for assessment-based information.

Our immediate goal was to apply NCATE standards to our teacher preparation program. This would require revising our conceptual framework; emphasizing subject matter (largely the responsibility of arts and sciences departments); incorporating P-12 student learning standards; and developing a performance-based assessment plan. We aligned outcomes describing the Coppin teacher graduate with INTASC principles, which correspond with P-12 standards. The INTASC principles were also infused into course syllabi. Strengthening basic skills (tested by Praxis I) and content knowledge (tested by Praxis II) required the collaboration of faculty members from many disciplines, already integral to the STEP Task Force. We revised content courses to meet the standards of learned societies. We introduced computer-assisted practice to reinforce basic skills and help provisional candidates meet strengthened entrance requirements.

Standards Mapping and Alignment

Faculty members from the divisions of education and arts and sciences have worked to embed performance standards into content and pedagogy in teacher education. The Division of Education implemented performance standards for each of its programs, creating standards and criteria for candidate portfolios that were based on the five outcomes defined in the conceptual framework. Table 2.1 depicts the alignment of the five outcomes in the conceptual framework and the ten INTASC principles.

The next step in the process was to review each course syllabus against the INTASC principles and the conceptual framework outcomes with indicators reflecting teacher knowledge, skills, and dispositions. This review identified concepts, processes, and skills that were missing or underdeveloped if teacher candidates were to meet the five outcomes. Each faculty member was expected to integrate standards and standards-based outcomes into each syllabus, including performance-based activities and assessment strategies. The faculty also mapped the concepts taught in each course with the standards incorporated, and submitted revised syllabi to

Table 2.1. Alignment of Outcomes and INTASC Principles

Conceptual Framework Outcomes	Interstate New Teacher Assessment and Support Consortium (INTASC)
Systematic Planner	Principle #2: Student Learning Principle #3: Diverse Learners Principle #4: Instructional Strategies Principle #5: Learning Environment Principle #7: Planning Instruction
Effective Communicator	Principle #6: Communication Principle #10: Collaboration, Ethics, and Relationships
Instructional Leader	Principle #1: Subject Matter Principle #3: Diverse Learners Principle #4: Instructional Strategies Principle #5: Learning Environment Principle #6: Communication Principle #7: Planning Instruction Principle #8: Assessment
Reflective Decision Maker	Principle #1: Subject Matter Principle #4: Instructional Strategies Principle #8: Assessment
Evolving Professional	Principle #9: Reflections and Professional Development Principle #10: Collaboration, Ethics, and Relationships

the chairpersons for review. Table 2.2 depicts the alignment of the INTASC principles across one program in the Department of Curriculum and Instruction.

Table 2.3 illustrates one method used to collect feedback from candidates.

The redesign of teacher education programs requires that faculty members both understand and participate in the revitalization. Within departments, chairs and program coordinators provided information to the faculty and sought their contributions throughout the alignment process. Faculty from both divisions met to consider and concur on changes. The Task Force members also reviewed these and other documents aligned to standards, including the *Teacher Candidate Performance-based Assessment System Manual*.

This process of aligning and mapping standards is time consuming. Establishing a forum through which faculty members could share ideas and seek advice was essential to accomplishing our objectives in a cooperative and timely manner. Strong collaboration between the divisions of education and arts and sciences was instrumental in facilitating the changes necessary to enable Coppin State to graduate teacher candidates who are “reflective facilitators of learning.”

Table 2.2. Meeting Standards Across the Major

ELED COURSES IN MAJOR	INTASC Principles									
	1	2	3	4	5	6	7	8	9	10
ELED 301: Curriculum, Planning, and Management	X	X	X				X			
ELED 302: Math Methods		X	X	X	X	X	X	X	X	
ELED 303: Reading Methods	X	X	X	X	X	X	X	X		
ELED 304: Language Arts Methods		X	X	X	X	X	X	X	X	X
ELED 305: Science Methods		X	X	X	X	X	X	X	X	X
ELED 306: Social Studies Methods		X	X	X	X	X	X	X	X	X
ELED 307: Art and Music Methods	X	X	X	X	X	X	X	X	X	
ELED 412: Student Teaching	X	X	X	X	X	X	X	X	X	X

Standards in Mathematics

Building on Coppin's commitment to align course content and professional standards, the Mathematics and Computer Science Department revised its program to accommodate the performance outcomes stipulated by state and national standards (see Table 2.4).

The final draft of the long-range plan reflects the objectives and outcomes of the assessment system as described in the Coppin State College conceptual framework. The mathematics education team is collecting data and other feedback from all stakeholders. The team's efforts will contribute to the value-added philosophy of the Coppin teacher education program.

Table 2.3. Course Mapping and Performance-Based Activities

“Teacher as a Reflective Facilitator of Learning”

Our conceptual framework outcomes are identified below. The indicators that address each outcome are also listed. These indicators have been aligned with the INTASC principles. Please indicate the course/s in which you met each indicator and cite the performance-based activity that you believe addressed that indicator.

Outcomes & Indicators	Courses	Assignments
Systematic Planner		
Makes curriculum decisions		
Incorporates research		
Designs lessons		
Selects instructional materials		
Organizes classroom		
Diagnoses learner needs		
Assesses learner outcomes		
Incorporates grade-appropriate standards		
Instructional Leader		
Applies learning theories		
Evaluates progress		
Incorporates educational resources		
Demonstrates mastery of knowledge		
Respects cultural differences		
Manages classroom		
Motivates learners		
Conducts action research		
Initiates new instructional approaches		

Table 2.3. continued

Effective Communicator		
Models good speaking, listening, and writing skills		
Writes legibly		
Uses nonverbal cues		
Presents information clearly and concisely		
Utilizes variety of approaches to communicate with students		
Works effectively in instructional teams		
Utilizes variety of approaches to communicate with parents		
Evolving Professional		
Monitors self-growth		
Exhibits creativity		
Keeps current		
Develops philosophy		
Maintains membership in professional organizations		
Participates in Professional Development Schools initiatives		
Incorporates technology to facilitate learning		
Reflective Decision Maker		
Personalizes decision making		
Plans innovative methods of teaching		
Reflects on daily teaching practices		
Engages learners in self-analysis		
Creates an environment that is conducive to learning		
Develops decision making matrices reflecting standards and curriculum emphasis		

Table 2.4. Mathematics and Computer Science Department Activities

Goals	Enhance the Student's Conceptual Understanding of Collegiate and School Mathematics. Increase the Praxis Series pass rate.
Methods	Align the Department's Goals and Objectives with National, State, and Local Standards and the Praxis I and II Content Knowledge Base.
	Revise: Course sequence to be more compatible with the Teacher Education Check point / gates Assessment System; Syllabi to reflect mathematics content, mathematics pedagogy, and technology; and Scope of performance-based on-going Formative and Summative Assessment activities.
	Enhance Stakeholders' input.
	Develop Faculty Teams DRAFT STEP Document – Mathematics.
	Design and Conduct Praxis Student Pilot Workshops.
	Hold Weekly (2) Praxis Mathematics Content Seminar.
	Strengthen A&S/Education connections.
	Develop Support Documents, i.e., "How to Read a Mathematics Textbook"
People	Involve Mathematics and Computer Science Faculty and Instructional Staff, Director of Education Technology Lab, Teacher Education Candidates, and Students preparing for Praxis I.
Actions	Revise or Develop Mathematics Syllabi: Mathematics for Teachers Courses – Done General Mathematics Courses taken by Teacher Education Student in Progress Create Long Range Plan - In Final Draft Form. Enhance Activities with Praxis Committee, STEP, TEC, and PDS Advisory Council. Hold Praxis Mathematics Content Workshops – Saturdays. Enhance communication with chairs and advisors in other departments. Upgrade cognitive, meta-cognitive, and constructivist approaches to learning and teaching mathematics.
Comment	The ultimate outcome is a certified reflective teacher who has a conceptual understanding of school mathematics and is able to implement the mathematics curriculum in a technology setting that will impact student achievement.

Professional Development Schools

Through Professional Development Schools (PDS), Coppin State College has developed collaborative partnerships with public schools in Baltimore City and in Baltimore and Howard counties. A PDS is a collaboratively planned and implemented partnership for the academic and clinical preparation of teacher candidates and the continuous professional development of faculty members in both the school system and the college. The focus of the PDS partnership is improved student performance through research-based teaching and learning.

Because of the STEP emphasis on standards, Coppin has made its PDS partnerships an added way of disseminating standards-based concepts. Teacher candidates participate in Profes-

sional Development Schools in at least three different phases of their teacher preparation. Beginning candidates spend scheduled time in a PDS as clinical observers with specific assignments from classes such as educational psychology. In phase two, teacher candidates participate in the “methods block” where they learn and practice teaching methods and techniques—how to teach students in early childhood, elementary, and special education. Candidates observe and work with children in classroom settings, getting to know students and applying methods in all subject areas. These same candidates rotate to “classroom block,” working with qualified, experienced teachers who allow them opportunities to practice teaching strategies. The following semester, the candidates continue as student teachers, when possible, with the same classroom teachers.

These senior candidates in a supervised environment apply knowledge of students, content, and methods to facilitate student learning. In-service teachers learn new skills to become more competent as reflective facilitators of student learning. Thus, pre-service and in-service teachers and their students benefit from this collaboration between the college and the public school.

NCATE and the Maryland State Department of Education (MSDE) have developed standards and stages of development for PDS partnerships. Coppin and its PDS schools are working to meet these standards. For example, Coppin is developing training programs to improve student skills and coordinating utilization plans for computer labs. Coppin faculty are visiting other professional development schools and sharing ideas.

Conclusion

The STEP initiative promoted positive change at Coppin State College in several key areas:

- Collaborative groups in arts and sciences and in education revised syllabi to reflect infusion of learned society and P-12 standards. (Fourteen faculty members submitted revised syllabi in English, biology, math, chemistry, special education, reading, history, and social studies.)
- The articulation agreement with Baltimore City Community College was confirmed, and a seamless model for transitioning students from BCCC to Coppin is now in place. Candidates will now be required to pass Praxis I as an entrance requirement.
- The revised course, “Enhancing Test Performance,” links the computerized “Diagnostic-Learning Plus” to successful course completion.
- The PDS and collaborating high schools have demonstrated continued commitment to the STEP initiative, especially through the principals.

- The STEP Spring Symposia were highly successful. The excellent cross section of students, faculty, administrators, and CBE staff representation made for a rich exchange. (STEP funds supported Task Force attendance at the conference.)

Coppin is implementing the performance assessment model and has completed the Teacher Candidate Performance-based Assessment Manual. By institutionalizing the STEP philosophy, Coppin has made it our model for teacher education, ensuring that STEP's impact will continue far beyond the end of the initiative.

LEADERSHIP FOR CHANGE AT THE UNIVERSITY OF INDIANAPOLIS

E. Lynne Weisenbach, Dean, School of Education, University of Indianapolis

The University of Indianapolis is an independent university with an enrollment of about 4,000 students. Both graduate and undergraduate programs are offered. The university admits about 50 percent first generation college students and is situated in an urban environment. There has been increased university-wide emphasis on accountability within the last few years, with professional preparation programs providing leadership, given their history with accreditation.

The University of Indianapolis became part of the STEP project in 1999. At that time, there existed a Teacher Education Committee (TEC), comprising interested and involved faculty members from departments within the College of Arts and Sciences (CAS) and the School of Education (SOE), who met monthly. STEP's guidelines recommended that an institutional analysis be led by departmental chairs and recommended that the respective deans chair the process. The TEC was therefore reconstituted with the deans of CAS and SOE as co-chairs with shared responsibility for the task. The dean of the College of Arts and Sciences requested that the chairs of those departments involved in the preparation of teachers serve on the new committee. In addition, a chair of teacher education and two teacher education faculty positions were created. This new configuration was extremely important, for although it could be criticized as "top down," in reality it placed accountability for the preparation of teachers with the university's academic leadership.

The STEP Committee faced multiple agendas. Although the "deliverable" was the Institutional Analysis, there was also a steep learning curve. Specifically, arts and sciences faculty members needed to learn educational "jargon," and those in teacher education needed to use less jargon. Acronyms (NCATE, AACTE, IPSB, and so forth) were particularly troublesome. In addition to vocabulary, there were deeper issues of accountability. How committed were we to preparing teachers who would have deep knowledge of their subjects and strong pedagogical skills? Was one subject more important than the other? Indiana, as was the case for many states, had just approved new and higher standards for teachers. Although these new standards were based on those developed by national organizations such as the National Council of Teachers of Mathematics and the National Council of Teachers of English, and higher education had had a role in preparing the new standards, faculty members expressed strong skepticism about being told what to cover in a preparation program. Finally, the issue of academic freedom was raised. As part of the Institutional Analysis, we would have to show when and how courses addressed academic content standards. In effect, this step would mandate at least some of the content courses must cover. This issue was not new to representatives from professional programs, but many faculty members in the arts and sciences were deeply concerned about creating curriculum outlines.

Throughout this process, the dean of the College of Arts and Sciences and the dean of the School of Education worked closely together. They attended an NCATE/AACTE (National Council for Accreditation of Teacher Education/American Association of Colleges for Teacher Education) Continuing Accreditation workshop together, which was extremely helpful in expanding their understanding. The workshop placed the work at hand in a national context; this process was not simply the result of an overzealous teacher education program creating unnecessary change.

In addition, participation in STEP was clearly invaluable. The twice-a-year regional meetings (including Kentucky and Indiana campuses) further enriched the conversation and understanding. The regional STEP meetings, which included faculty members from participating campuses, were primarily conversations among the campuses. Because attending these meetings was less costly than traveling to Washington, D.C., more faculty members could be involved. The size of the regional gatherings was also helpful; representatives of six campuses from two states constituted a group whose size encouraged rich dialogue. As time has passed we have come to know each other's work, and thus the questions and sharing have become richer. The STEP conveners were invaluable; their thought-provoking questions moved faculty to new levels. The conferences helped faculty members to see the importance of the work, to gain the notion that "we are not alone," and to understand that shared responsibility and accountability are critical in teacher preparation.

In addition, the University of Indianapolis has made good use of the annual STEP conferences in Washington, D.C. The timing of the conferences in early June is excellent, because it does not conflict with classes, and most faculty members have not yet left for the summer.

Thus, the STEP Committee has run along parallel tracks. Engaged in the "doing" of the analysis and later the creation of a new curriculum, the committee has, *throughout the process*, also paid deliberate attention to learning about P-12 education and research-informed teacher preparation. Without this attention to learning, it is doubtful that the analysis would have become anything more than a document on a shelf. It is crucial that our work has been grounded in two beliefs: that P-12 education is critically important and that the university is a responsible party. For many faculty members, "what's in it for me" is a real question. The two deans, cognizant of this issue, viewed answers to the question as a priority in the early years. The answer for one person might be that he or she was the parent of a child in school. For someone else, the answer might reside in the quality of applicants to the university's programs. For others, the answer was a belief in the importance of education to our nation's democracy. Whatever the answer, it was important that we kept the question in our minds and in our discussions. Particular publications shared with the STEP Committee were important. The 1999 report from the American Council on Education, *To Touch the Future*, is often referred to. We also reviewed the November 2001 "Resolution on Teacher Education" from the Council of Colleges of Arts and Sciences (see Appendix P).

It is a significant strategy that the STEP Committee has actively involved faculty at every step. When faculty members attended STEP regional and national meetings, they were always asked to report back to the STEP Committee. In addition, they were encouraged to share information gleaned from other conferences and meetings.

Progress among our departments was uneven. Some departments—especially those involved in the creation of the state standards and those with a history of working with schools—moved forward quickly. Others were not so eager and needed motivation. We used two techniques. First, departments that requested individual assistance, as they conducted the analysis, received it. Second, we asked particular departments to share their work with the STEP Committee. The product was not always “completed,” but hearing and seeing such accomplishments often motivated other departments.

Notably, departments did find important gaps. For example, the English Department’s Shakespeare course was an elective, yet Indiana’s new high school English standards required it. Were we prepared to accept this responsibility? As departments shared such examples, other departments saw the value in the analysis and became far more willing to be engaged. Table 2.5 lists other ways that we found to encourage involvement in STEP.

Table 2.5. Strategies for Success

- It’s a learning curve. You are a teacher. Some things need to be repeated ... and repeated ...
- Food works. Use it. Brownies work wonders.
- Top down and bottom up. Both are necessary ingredients for change.
- Praise works wonders. Yours AND praise from the president and/or provost.
- Showcasing also works wonders. Let those “out front” share their work.
- Any change process goes through dips. Anticipate them.
- Education faculty members (and deans!) need to remember that collaboration goes both ways. Be willing to let go.
- P-12 colleagues can and should be powerful partners in the process.
- Meetings need to be focused. Measure your results and share regularly so that faculty members and students can see progress.
- To the degree possible, connect with other institutions engaged in this work.

The STEP Committee “assigned” the Institutional Analysis to be conducted by work groups within the academic departments. The STEP Committee provided guidelines but allowed departments a great deal of freedom regarding how they conducted and presented their work. Most departments, but not all, used a grid structure to synthesize their findings. To conduct their work, the departments were instructed to use the Indiana P-12 state proficiencies for their discipline, the Indiana Professional Standards Board (IPSB) standards for content area preparation, and the INTASC (Interstate Teacher Assessment and Support Consortium) principles. In retrospect, providing a template might have been helpful.

At the same time that the academic departments were engaged in analysis, so too was the Department of Teacher Education. The teacher educators focused on two areas: teacher preparation overall and the elementary education program. Creating the background to conduct the analysis and the analysis itself together took an academic year.

During the second year we drew upon the findings of the analysis to create a new teacher preparation program, both at the elementary and secondary levels. Faculty members continued to learn about P-12 education and research on teacher preparation, even as they created a scope and sequence for the new programs. Running parallel with this work was the development of the Unit Assessment System (UAS). The Department of Teacher Education, with significant input for CAS and P-12 colleagues, was creating a system that would meet Indiana’s UAS requirements and NCATE’s requirements. Faculty members from arts and sciences participated in entrance to program assessments and scored exit from program portfolios. Faculty members from CAS noted that their assessment of the portfolios, in terms of the content knowledge reflected, was critical, and they became actively engaged in the process. They also learned more about different forms of assessment and the critical role that they play in forming future teachers’ views about assessment.

The true day of reckoning came when the content and pedagogy teams met to determine course changes in education foundations, discipline requirements, and pedagogy. As one might predict, the analysis revealed gaps, and the easiest solution would have been to recommend creating courses. Brady (2000) notes that “there has been very little dialogue focusing on fundamental curricular issues—little debate about what new knowledge belongs in the curriculum ... little debate about whether or not the traditional disciplines are the best organizers of knowledge, and little debate about the appropriateness of the arbitrary boundaries that separate fields of study” (p. 649).

Debate certainly occurred at the full-day retreat at the end of the second year to develop curriculum revisions for the teacher education program. We met at an off-campus site in an attempt to choose neutral ground for what was bound to be a day of confrontation. The two deans had reviewed the analyses and departmental recommendations for course additions, changes, and modifications. Ultimately, the deans agreed that the goal would be that both groups (CAS and the Department of Teacher Education) would work within the existing credit hour structure. It was hoped that such a ground rule would engage faculty members in a discussion about how courses could be dual-planned, some courses eliminated, and so forth. There were clear obstacles, and without the thoughtful and ongoing work of the prior 2 years, it is doubtful that compromise would have been achieved. The primary obstacle, of course,

was how to prepare an 18-year-old, in 4 years, to meet the demands and challenges of teaching in P-12 schools.

Additionally, there was thoughtful discussion about “standardization” and the commitment of the University of Indianapolis to broadening candidates’ education beyond narrow preparation to teach. Indeed, the university’s philosophy stresses the “development of the total person, including the intellectual, physical, moral, and spiritual.” In most cases, discussion focused on what was best for candidates and the children they would serve; when discussion moved out of that arena, the chairs quickly brought it back. Keeping the focus on student learning was essential.

The 2001 report *Teacher Preparation Research: Current Knowledge, Gaps, and Recommendations* demonstrated that the debates that occurred were not unique to the University of Indianapolis. One report finding is that, contrary to the popular belief that more study of subject matter is always best, some research indicates that teachers acquire subject knowledge from various sources, including pedagogical courses and field-based activities.

It is crucial that our work has been grounded in two beliefs: that P-12 education is critically important and that the university is a responsible party.

In the end, with many compromises, those at the retreat agreed to recommend a set of curricular revisions. The recommendations were sent to the university’s curriculum council, which passed them and recognized that a university-wide effort had been responsible for the proposed revisions.

In the third year, we have focused on phase-in/implementation of the curricular revisions as well as refinement of the unit assessment system and development of standards-based performance assessments in the content areas. Significant personnel change also occurred in the past year, with the retirement of the provost and the promotion of the dean of arts and sciences. The provost had staunchly supported teacher education, having once taught high school himself. The dean’s promotion to associate provost gave her oversight of institutional assessment, in which role she recognizes how important a part the teacher education program will continue to play in assessment of student learning. The new dean of arts and sciences served on the STEP Committee, easing that transition. Nevertheless, so much institutional change does affect the rate of progress.

Worthy of note are other initiatives that link to the work of the STEP Committee and teacher preparation overall. An education professor with expertise in sciences and 7-12 teaching experience collaborated with a chemistry professor to redesign and team-teach a chemistry-physics course during the fall 2000 semester. The course teaches majors in elementary education science concepts and methods, through a problem-based approach that uses scientific methods of inquiry. Another team from education and chemistry taught this course in 2001.

Another example directly of team-teaching resulted from the curriculum redesign. Faculty members from the music department wanted full control of the introductory course for music education majors, EDUC 100, Explorations in Education. Faculty members from the teacher education department were deeply concerned about turning over the course, since it includes field experiences in diverse settings, instruction in standards and assessment, and a “big picture” view of education. The faculty of both departments, after much discussion, agreed to team-teach and develop a new version of the course to meet the needs of both departments. The new course was team-taught in spring 2002. As noted previously, faculty members from CAS and teacher education, along with P-12 colleagues, are deeply concerned about assessment. The STEP Committee and others from CAS and teacher education regularly analyze and share information about student performance on assessments of content knowledge, such as the Praxis exams, as well as departmental performance assessments (for example, the English major portfolio).

In addition, the development of a student assessment database will further enhance collaboration among units. All faculty members involved in teacher preparation contributed to the design of the database. One copy of the database program has been purchased for each department. The system is designed to interface with the university’s system, so that all faculty members with appropriate authorization can access student assessment data such as entrance-to-program data, mid-point assessments, assessments of knowledge, Praxis scores, and so forth. The program is also designed to include information concerning student values, attitudes, and ethics. The STEP Committee is currently working on policy issues related to the database, but it holds great promise for ensuring communication across departments as well as for aggregating data in new ways that will provide information for program improvement.

Through many avenues, we carry out our fundamental assumption that the university should be connected with P-12 schools. The Social Foundations of Education course, taken in the candidate’s third year, examines the different kinds of reasoning and evidence used in policy debates on the means and ends of education. Students are taught to evaluate arguments and evidence for assumptions. They write editorials, some of which have been published, on an education issue of personal interest. A Read Across America Day event at Indianapolis Public School #34, an urban elementary school with a high percentage of at-risk students, provided the opportunity for 25 candidates and faculty members to read and discuss books with children. A grant proposal, written by the Student Education Association, provided funding to purchase books for the school. The departments of biology and chemistry sponsor an annual statewide science fair, which is judged by science and science education majors. Faculty members from the departments of mathematics and teacher education collaborate with teachers from the Metropolitan School District of Perry Township on Saturday Academy, an innovative professional development program for teachers designed to improve the mathematics and science achievement of their students. Preservice teachers also participate in this program. Faculty members from English, mathematics, chemistry, physics, and biology have collaborated with secondary teachers and other university faculty members from colleges in the Indianapolis area in Project SEAM, a 5-year cooperative effort to narrow gaps between secondary teaching and university teaching. Additionally, faculty members from Spanish, the sciences, mathematics, and English have worked both independently and as teams with P-12 teachers

and teacher education department faculty members to teach students in grades 2-8 at the Greyhound Explorers Academic Summer Camp, held on campus and coordinated by faculty members in teacher education. Although not a complete list, this summary demonstrates the university-wide involvement in, and commitment to, P-12 education. It is our conviction that working together provides new ways of understanding and thinking about the issues involved in preparing teachers of the highest quality.

The changes that have occurred in the last 3 years are significant and sometimes overwhelming. The curriculum has been completely revised. We are implementing performance-based assessments and working to improve sharing of information in order to base future program changes on data rather than intuition. In August 2001, the university received a \$15 million grant from the Lilly Endowment to create the Center of Excellence in Leadership of Learning. The Endowment's staff made it clear that they selected the University of Indianapolis because of its history of active collaboration with P-12 educators and potential to influence P-12 schooling.

The challenges facing teacher education are significant both for their complexity and their importance. Heifetz (1994, p. 15) argues that leadership is "mobilizing people to tackle tough problems." STEP has helped us create a framework for thinking about tough issues. It has involved significant change, and change is not easy. Change demands leadership at all levels. It demands producing the "capacity to seek, critically assess, and selectively incorporate new ideas and practices—all the time, inside the organization as well as outside it" (Fullan, 2001, p. 44). Change and the leadership of change involve continuing to broaden one's knowledge, building and maintaining relationships, and striving for excellence. Children in our schools deserve nothing less from us.

References

- American Council on Education. (1999). *To touch the future: Transforming the way teachers are taught*. Washington, DC: Author.
- Brady, M. (2000). The standards juggernaut. *Phi Delta Kappan*, 81, 648-651.
- Fullan, M. (2001). *Leadership in a culture of change*. San Francisco, CA: Jossey-Bass.
- Heifetz, R. (1994). *Leadership without easy answers*. Cambridge, MA: Harvard University Press.
- Wilson, S.M., Floden, R.E., & Ferrini-Mundy, J. (2001). *Teacher preparation research: Current knowledge, gaps, and recommendations*. Seattle: University of Washington Center for the Study of Teaching and Policy.

DEVELOPING A STANDARDS-BASED PROGRAM AT BALL STATE UNIVERSITY

Thomas S. Schroeder, Associate Dean, Teachers College, Ball State University

Accountability

Participation in STEP at Ball State University took place within a broad context of accountability. Under mandate from the Indiana Professional Standards Board (IPSB), all institutions in Indiana were charged with developing a new standards-based performance assessment system for preservice teachers by June 1, 2002. This system is designed around 19 approved sets of content standards and 4 sets of developmental standards prepared by IPSB. (See <http://www.in.gov/psb/future> to view the standards and the new licensure framework.) Beginning in fall 2002, candidates entering teacher preparation programs at Ball State must be assessed according to the content and developmental standards for the teaching license they plan to receive. These Indiana standards for teachers are designed to be compatible with the INTASC (Interstate New Teacher Assessment and Support Consortium) standards, but are much more detailed in terms of specific indicators of knowledge, performance, and dispositions (values, attitudes, and professional ethics).

Concurrent with these developments, the Indiana Department of Education, with major guidance from the Governor's Roundtable, has issued revised standards for P-12 student performance in Indiana schools. New sets of revised P-12 standards continue to be announced as they become available. (See <http://www.doe.state.in.us/standards> to view these Indiana academic standards.) Part of our goal as a teacher preparation institution is to help our students understand these standards and be able to teach students to meet them.

Thus, we have been engaged with standards at two levels: (a) standards for teachers and (b) standards for P-12 students. Given the high stakes of licensure reform, we have made our top priority the redesign of our teacher education programs around the IPSB standards. Put succinctly, we have focused our primary attention over the past 5 years on standards for teachers, and it is within this context that we gave attention to P-12 standards. The pressure to meet the demands of IPSB mandates, without additional staff or reduced workloads in other areas, has meant that we directed our STEP work primarily toward supporting the reform of our teacher education programs to meet the new licensure rules.

The associate dean of the Teachers College took the lead in preparing the Institutional Analysis, with the assistance of STEP task force members. The analysis helped us visualize our current status, with regard to the changes we were mandated to undertake, and was especially useful in identifying areas in which we had no existing data or structures upon which to build the reform. Short-term goals were to identify key stakeholders in the reform and measure awareness of teacher and student standards.

Throughout, activities associated with STEP—such as sponsorship of forums and discussions, and the presentation of a workshop on Praxis II—have been intimately related to the reform of teacher preparation and licensing required by our state standards board and to activities related to our Title II (Higher Education Act) Teacher Quality Enhancement grant. Thus, indicators of success in STEP are tied to progress overall in developing our unit assessment system. Some examples would include (a) approval of a “decision points document” to track candidate progress, (b) development of a rubric-driven student teaching assessment protocol, and (c) mapping of curriculum to IPSB standards. Many elements of reform are still in progress, including a new system for tracking, assessing, and supporting graduates of our programs. A pilot of the new graduate survey is currently under way.

Task Force

Because STEP activities are so closely related to other major teacher education reforms on our campus, it was determined that the STEP task force be integrated into these efforts rather than become a separate bureaucratic entity. Initially, we used an existing group, the Teacher Education Performance Assessment Steering Committee (TEPASC) to serve as the STEP task force. TEPASC is an advisory group that includes representatives from all six colleges involved in teacher education on our campus, ensuring representation of arts and sciences faculty members. Leadership of TEPASC comes from the Office of the Dean of Teachers College with the support of the provost.

As our work has progressed, a somewhat smaller group has evolved as the primary instrument of STEP activities. This group includes representatives from the elementary and secondary education departments in Teachers College, representatives from three different departments in the College of Sciences and Humanities, and representatives from the offices of the dean in both colleges. Service in this group is voluntary. The group works as a “committee of the whole,” and has no subgroups.

Because the work of STEP is virtually indistinguishable from the broader work of reform on our campus, the task force is not a highly visible separate entity. Many on the campus may not even be aware of the specific contribution STEP makes to our work. The flexibility to integrate STEP into preexisting institutional initiatives is one of the most appreciated aspects of our participation. It does make it difficult, however, to isolate specific STEP contributions and outcomes.

Standards Mapping and Alignment

Standards for Teachers

A major part of building our unit assessment system has been to map the IPSB standards for teachers onto our curriculum. When the process began, each licensure area studied the IPSB standards and proposed program changes to accommodate them. The process followed in each licensure area included a web-based procedure that allowed designated faculty to complete the work on-line and store results immediately. All standards and their performance indicators were loaded into the system. Three basic steps were followed:

1. A standards set was selected. All the standards in that set appeared, along with the performance indicators associated with each standard. The user read through the indicators. If the user determined that a particular indicator was important for a beginning teacher, he or she selected it.
2. When the user selected an indicator, the program directed the user to select a course (or courses) in which that indicator would be assessed. Results were immediately stored, producing a listing of performance indicators organized by the course(s) in which they would be assessed.
3. The user was then given a list of artifact types (provided by the IPSB). The user selected and described an artifact, and then selected the indicators to be associated with that artifact. Other artifacts were selected until all indicators were identified with a performance artifact in which they would be embedded.

This process allows for in-depth examination of the way that standards, performance indicators, and artifacts are designated for each course to be taken by candidates. All final results are stored and accessible for analysis. Thus, as the process is completed, it will become possible to examine each licensure area program and determine which indicators are covered, and where and how they are assessed.

Use of the program requires password access. A sample of the initial portions of the process is found in Appendix Q. Pop-up menus allow the notation of courses that address the indicators. These notations can then be mapped to artifacts in later worksheets. The result is a description of the types of assessment artifacts each course utilizes, keyed to the performance indicators that each artifact assesses.

P-12 Standards. Aligning the Indiana P-12 academic standards to teacher preparation courses is not part of the IPSB mandate. Nevertheless, the reform of teacher preparation programs

has paid attention to these standards. An informal survey of program area directors indicates the following:

- The Indiana academic standards are addressed in courses. In most cases, reference to the standards is part of the course syllabus.
- Candidates generally are expected to locate and obtain copies of the standards. In some cases, the standards are distributed as part of course materials.
- Candidates are required to do a variety of things with the standards, including (a) relate standards to course materials, (b) prepare lessons specifically related to the standards, and (c) design assessment specifically related to the standards.
- Candidates' knowledge and use of standards is assessed in a variety of ways, including (a) examinations that cover knowledge of standards, (b) analysis of how standards are

The flexibility to integrate STEP into preexisting institutional initiatives is one of the most appreciated aspects of our participation.

addressed in lessons prepared for the class, and (c) observation of how standards are integrated into direct teaching experiences with P-12 students.

Assessment

Assessment of candidates takes place at two levels. The first is the assessment of specific IPSB content and developmental standards. Faculty members in the disciplines spent more than a year determining how and where specific content standards should be assessed. Course instructors will be responsible for collecting performance artifacts and assessing them, utilizing their own rubrics. Course grades will reflect performance assessment results.

At the institutional level, all teacher education candidates will be assessed at a series of “decision points” by a variety of formative and summative assessments, including GPA, Praxis tests, portfolios, and content-specific performance tasks. (See the draft Decision Points document in Appendix R for details.) The Decision Points document represents a substantial increase in rigor with regard to admission, retention, and completion requirements for teacher education candidates.

Candidates who do not initially meet standards or pass assessments will be given formative feedback and the opportunity to try again. It is hoped that clear information in the introductory course will make students well aware of the requirements and well prepared to meet

assessment challenges at each step of the process. An internal proposal has been submitted to secure a state-of-the-art support system for candidates taking Praxis I.

We are in the beginning stages of developing a process for assessing candidate impact on student learning. As part of our Title II grant, under the leadership of three faculty members, the Learning Assessment Module (LAM) model is being developed. An initial conception of the LAM is provided in Appendix S. A significant feature of the LAM is that it is tied closely to the Indiana P-12 academic standards.

Although none of the assessment instruments has been developed exclusively through STEP, it played a significant role in the course mapping and decision points development through its focus on P-12 standards and its sponsorship of forums, discussions, and group meetings.

Course and Program Redesign

Changes mandated by the IPSB reform of teacher licensure have led to course and program revisions across the entire spectrum of teacher education programs. These changes are too numerous and too specific to academic subjects to catalog with clarity in this report. Some of the major themes and directions are as follows:

- The specific licensure areas have been designated as the locus of change. Part of the IPSB reform was to reduce the number of licensure areas. For example, IPSB mandated three licenses in science—life science, physical science, and earth/space science—replacing the previous system of licensing in chemistry, physics, biology, and so forth. In addition, the IPSB eliminated endorsements or teaching minors entirely. This reform has meant that, in nearly every licensure area, faculty members have had to redesign curriculum to meet the demands of the new licensure framework. Thus, the licensure area groups have become significant in program change. Every licensure program has engaged in substantial curriculum change.
- Each licensure area has engaged in a process that we call curriculum mapping, which leads to fundamental redesign of course structures. (A brief description of the process is found in the “Standards Mapping and Alignment” section above.) Information entered into the system (performance indicators and the performance artifacts used to assess them) will automatically be downloaded into standard NCATE course syllabi forms for each course.
- Every teacher education candidate is now required to take an introductory course that will present the IPSB standards, the INTASC standards, and the Indiana Academic Standards related to various licensure areas. That course will also introduce candidates to institutional expectations with regard to dispositions (values, attitudes, and professional ethics), and they will begin to develop an electronic portfolio.

- In addition to assessment within courses, licensure areas will periodically assess candidates to measure competence in specific areas of knowledge. These assessments, along with portfolio assessments, come at three different “decision points” within the professional preparation program. The inclusion of such high-stakes assessments tied to content knowledge and performance is an important feature of our new program.
- Every candidate will maintain an electronic portfolio throughout his or her professional preparation program. The portfolio, designed around the INTASC standards, will offer a continually renewed source of information and assessment with regard to candidate performance.
- Candidates will also execute a “professional growth plan” as part of their preparation program. This activity, detailing the pursuit of experiences related to professional education but not explicitly included in the curriculum, is designed to launch candidates on a path of continuous lifelong learning and professional growth.

This process of curriculum and program redesign has occurred over the past 4 years. It has involved hundreds of stakeholders (more than 44 separate stakeholder groups). The motivation for these changes is, of course, the mandate of the Indiana Professional Standards Board to submit a Unit Assessment System (UAS) by June 30, 2002. The natural obstacles to such change are many, including: (a) the “mismatch” between the notion of a standards-based performance assessment system and the traditional academic structure based on courses and credit hours, (b) the traditional disengagement of arts and sciences faculty members from professional education issues, (c) the sheer complexity of making change in an institution with many programs, students, and stakeholders, (d) an institutional bureaucracy that involves six colleges, each with its own governance structure, in professional education, e) the usual resistance to government-mandated change, (f) the tremendous increase in workload these changes demand, (g) the need for top-down support from senior administration, and other obstacles.

Our experience has generally been very positive in meeting these challenges and dealing with these obstacles. A primary factor is self-interest, namely, that we cannot continue preparing teachers unless we meet the new IPSB requirements. Beyond this, however, are several factors central to our progress:

- College deans have been very supportive and helpful. For example, the dean of the College of Sciences and Humanities established a “task force” on teacher education early on. More than 60 faculty members from the college have worked on teacher education reform for the past 3 years. The dean’s leadership and his consistent expectations of the faculty are key to our progress.
- The dean of Teachers College has been extremely proactive and an excellent communicator, especially with the other deans. They all appear to feel part of the effort, rather than unwilling targets of it.

- The dean of Teachers College has worked very closely with our president, provost, and other senior staff. He has presented our challenges and opportunities to them and kept them informed along the way. This has been critical.
- By far the most important factor is resources. Funding from STEP and the Title II Teacher Quality Enhancement grant are the most important elements in launching and sustaining this effort. Without this support, it would have been difficult or impossible to enlist and sustain the cooperation and support of so many faculty members and colleagues in the professional education community.
- The existence of our PDS (Professional Development Schools) network helped secure feedback and support from P-12 stakeholders. Because of the special relationship with PDS personnel, we are often able to get information and reactions to ideas quicker and more easily than otherwise.
- Consistent and open involvement of the Teacher Education Committee (TEC), the main governance body associated with teacher education across the campus, has also been critically important. Reform issues have consistently been brought to TEC for consideration and adoption or approval, thus insuring legitimacy for actions taken.

Resulting Changes

As a result of STEP and teacher education reform in general, a variety of changes are occurring on our campus:

- Teaching is becoming more standards-based. In order to make the required changes in our curriculum and assessment procedures, faculty members had to study the IPSB standards. This led to their rethinking the knowledge, performances, and dispositions that students should come away with from our classes. Consequently, they began focusing on these matters in courses.
- There is a new focus on academic content. One result of faculty members studying the IPSB standards has been rich and serious discussion about what knowledge teachers really need. Faculty members have not always agreed with the IPSB. An important part of this conversation has involved the Indiana academic standards for P-12 students. Faculty members have likewise examined and debated these standards, an extremely healthy exercise.
- There is more collaboration across disciplines in different ways. The new definition of licensure in social studies, for example, led to dialogue across departments that had not communicated before. At another level, faculty members in subject areas and faculty members in pedagogy from the Teachers College are finding new ways to

collaborate. For example, faculty members from one discipline have supervised student teachers in that discipline. More work in this area is anticipated.

- Assessment procedures are changing dramatically. Faculty members across the campus are learning about performance assessment, developing assessments and rubrics, and experimenting with new assessment procedures in their classes. In some cases, those initially skeptical have become enthusiastic supporters of performance assessment. We believe that this activity is strengthening the type and quality of instruction offered in our classes.

At this time, these reforms have not produced fundamental changes in institutional structure or policy with regard to matters such as promotion, tenure, or compensation. We may speculate that such changes will occur, but they will be slow in coming:

It is also too early to tell what impact these reforms will have on candidates. The first group will matriculate under the new program in the fall of 2002. However, many aspects of our work have already touched the practice of our candidates, such as the adoption of a new student teaching evaluation instrument, which has led to a much more thorough and accessible demonstration of performance abilities (see Appendix T for excerpts). Many classroom teachers report using the instrument to help them evaluate their own professional practice.

Summary

Over the past 4 years, our campus has engaged in a huge effort to transform our teacher education program into a standards-based performance assessment system. Without the support of STEP and other funding sources, this effort would have been extremely difficult, if not impossible. We have achieved new levels of collaboration and discussion across disciplines and colleges that have elevated the importance of teacher preparation on our campus. Yet, in many ways, our work has just begun.

III. STEP as a Catalyst for Change in Teacher Preparation

MOVING BEYOND RHETORIC TO POLICY IMPLEMENTATION

*Emerson J. Elliott, Director, Program Standards Development Project,
National Council for Accreditation of Teacher Education*

One of the most over worked terms in American education is *reform*. Each level of government insists that schools “be improved,” presumably so that student learning will be more effective and that achievement will rise. The reform rhetoric has persisted and become increasingly insistent, especially since the National Commission on Excellence in Education released its 1983 report, *A Nation at Risk*. In soaring language, the report made a case that the nation’s schools were performing poorly, that students were not learning enough, that higher standards should be set for achievement, and that policy leaders must be held accountable for results.

Both the federal government and the states have responded to the commission’s challenge and, remarkably, these national and state efforts have accumulated over time with each new effort building upon previous ones. We have raised high school course requirements and conducted more teacher training. Both states and specialty organizations (such as the National Council of Teachers of Mathematics and the Council for Exceptional Children) have developed standards. These were initially written to describe what P-12 students should know and be able to do, but often have also featured assessments that could appropriately be used to determine what students have learned. These standards for students have led, as well, to standards for teachers. Sometimes written by specialty organizations, and usually written by states for licensure purposes, teacher standards are purposefully designed to assure that teachers are equipped to teach the content of the student standards effectively (that is, so that students learn). And now the No Child Left Behind Act of 2001 carries these initiatives another step, mandating state testing for all students in grades 3 through 8 and national comparisons through the National Assessment for Educational Progress.

These two decades of evolving policies and practices in education have devised, and rely upon, a strategy for leveraging change. That strategy, in brief, is to write explicit standards—essentially policy statements that define appropriate knowledge and skills—and then determine whether the standards have been achieved by conducting assessments. The strategy may be applied to students, with P-12 standards and state assessments of student learning in relation to those standards. *Education Week* (“Quality Counts 2002”) reports that 49 states now have such student standards: 48 states have multiple-choice assessments in one or more subject areas and grades, 34 have assessments requiring short responses, and 46 states require writing assessments in English. The strategy is also applied to teachers in the form of standards for teacher education and licensing that are prepared by states or by specialty organizations affiliated with the National Council for Accreditation of Teacher Education. Assessments take the form of state licensure tests or become evidence for performance-based accreditation of teacher education colleges or departments.

This standards- and assessments-based strategy guides the day-to-day practice of teaching, to be sure, but in fact it creates an extraordinary challenge for classroom teachers, school leaders, and teacher education faculty. The challenge is to increase P-12 student achievement and to prepare teacher candidates for standards-based teaching that will be judged by how well *their students* learn.

This is just the point where the Standards-based Teacher Education Project (STEP)[™] intervenes. Each campus STEP springs from the P-12 student standards established in its own state, and it directly addresses the tough questions of how to ensure that teacher candidates have the content knowledge and the pedagogical skills to support those standards. The STEP initiative has created a template to encourage collaboration among arts and sciences faculty members, education faculty members, and P-12 teachers in the core disciplines. The committees formed for this collaboration are guided through the Institutional Analysis, consisting of “essential questions.” The first of these is, “How does the program develop, ensure, and assess teachers’ content knowledge to support P-12 standards?” The second is, “How does

*STEP has moved far beyond the rhetoric of
“standards-based teacher education.”*

the program develop, ensure, and assess teachers’ pedagogical skills to support P-12 standards?” The STEP template goes on to walk the committee through underlying questions about course requirements, course content, teacher preparation program characteristics, pedagogy opportunities offered to candidates, involvement of discipline-based faculty, assessments of content knowledge, content pedagogy, instructional knowledge and skills, and assessment knowledge and skills.

Wisely, the STEP initiative’s leaders have imposed very few prescriptions on the ways that each institution should design and implement standards-based teacher preparation. But what they have prescribed is absolutely crucial. At each institution, arts and sciences faculty members must participate alongside education faculty members, of course, but in addition, institutional leaders at the level of provost or vice president for academic affairs must also be involved. The long-standing divisions across the faculty must be knitted together if teacher candidates are to achieve thorough understanding of their chosen subjects. Achieving that goal requires the commitment and participation of officers who have wider institutional responsibilities encompassing arts and sciences as well as teacher education. The report from STEP’s evaluator, SRI International, Inc., has made a critical observation about this role:

“The nature of STEP’s agenda tends to emphasize “uncomfortable” issues for higher education—issues such as institution-wide responsibility for the preparation of teachers, institution-wide concerns about the assessment of undergraduates, and the relationship between higher education and P-12 education. These are not new issues, but they are persistent ones.”

SRI International has been involved with the project since its beginning. SRI researchers have visited campuses, attended STEP conferences, reviewed documents, and talked with scores of individuals. I have selected a few of their observations on the implementation of STEP to

highlight. I note these as evidence that STEP has moved far beyond the rhetoric of “standards-based teacher education” to guide faculty and institutional leaders through very real and tough problems in teacher education today. Consider the following:

- *On the use of data and development of assessments*—The evaluator noted that many faculty members “simply are unfamiliar with using data as an analytic tool.” However, the federal Title II (Higher Education Act of 1998) reporting requirements have served as a driving force to make faculty members more data-oriented. But SRI found that the STEP program has played an essential role: “Without STEP assistance and feedback, many campuses would have floundered in their attempts to grasp the essential meaning of standards-based reform of teacher preparation as it is now embodied in federal and state policies.” An observation the evaluator made on one campus, that “everybody needs training in alternative assessment methods,” would probably be appropriate for most faculty members as well as most teacher candidates everywhere.

- *On bringing arts and sciences together with education*—Aligning teacher preparation curriculum with a state’s P-12 content standards proved to be an effective strategy for bringing together the differing perspectives of faculty members from education and arts and sciences. The evaluator’s report characterized their divergent views as reflecting “the priority on knowledge for knowledge’s sake that permeates arts and sciences versus the vocational orientation (read pedagogical knowledge) that dominates teacher education.” Yet knowledge of both is necessary for competent teaching. Arts and sciences faculty members frequently express concerns about academic freedom in a standards-based system. As the SRI report observes, these faculty members may think that “standards mean ‘standardization,’” or that standards might “dumb down” the college preparatory curriculum, or even that the modeling of instructional approaches, sometimes called for in P-12 standards, might jeopardize “student ratings of their courses.” Not mincing words, SRI goes on to say, “An important issue is the systemic assessment of content knowledge for all postsecondary students—not just obvious teacher candidates.”

STEP has provided both a rationale and a means for addressing such concerns over time. The evaluator reports that, “here and there,” systemic changes have come about. For example, institutions have hired new faculty members to bridge the divide by bringing “strong disciplinary backgrounds but also . . . research interest in how a discipline is taught and learned.” Or another example, some institutions have arts and sciences faculty members working alongside education “faculty and mentor teachers to co-supervise student teachers/interns/provisional teachers” in practice teaching situations. The faculty members who educate our teachers can look to STEP for *a tested process* to develop standards-based teacher education. The next step in STEP is up to them.

References

Quality Counts 2002. (2002, January 10). *Education Week*, 21(17), 74-75.

A FRAMEWORK FOR CHANGE

Diana W. Rigden, STEP Co-Director and Vice President, Council for Basic Education

The basic premise for the Standards-based Teacher Education Project (STEP)[™] is that because standards and accountability measures have dramatically changed the world of elementary, middle, and secondary schooling, the college and university-based programs that produce teachers need to change just as dramatically. P-12 academic content standards in core subject areas establish the bar across which every student is expected to pass. States have already created, or are in the process of creating, assessments that will determine how well students meet these standards. States are holding teachers, schools, and districts accountable for how well students meet standards.

The Standards-based Teacher Education Project (STEP)[™] was developed to help colleges and universities produce new teachers with the content knowledge and the instructional skills to ensure that their students learn what they need in order to meet standards. The potential success of STEP rests on three equal strands: (a) learning expectations as defined by standards; (b) strong collaboration between arts and sciences and education faculty members and between higher education and P-12 schools; and (c) both external and internal accountability measures.

- *P-12 and teacher licensure standards.* STEP introduces faculty members from colleges of arts and sciences and education to P-12 academic content standards, discipline-based standards, NCATE (National Council for Accreditation of Teacher Education) program standards, and INTASC (Interstate New Teacher Assessment and Support Consortium) teacher licensure standards. STEP expects faculty members to use these standards as a framework to review, analyze, and redesign each aspect of a teacher preparation program from general education courses through graduation.
- *Arts and sciences and education collaboration.* STEP is centered on the belief that, to improve a teacher candidate's knowledge of the disciplines, faculty members from the college of arts and sciences must be integrally involved in the teacher preparation program. Arts and sciences faculty members must help define requirements, develop courses and assessments, and monitor the progress of future teachers. STEP seeks to insert knowledge of the disciplines deeply into the substance of teacher education. It suggests that pedagogy be studied in light of academic content, that student learning be assessed in terms of academic content, and that teacher candidates' reflections on their desire to become teachers and their progress toward meeting that goal be considered in light of the learning objectives they have for their students in their subjects.
- *Program accountability.* Colleges and universities face specific challenges to their au-

tonomy from an increasing number of state and federal accountability requirements for the quality of the teachers they produce. For the survival of college and university-based teacher preparation programs, they must be able to demonstrate that teachers graduating from their programs have considerable “value-added” that is not available to those teachers entering the classroom without such preparation.

The STEP Framework in Practice

These three components are essential to implementing the STEP process for change. Using P-12 and teacher licensure standards, arts and sciences and education faculty—with colleagues from the P-12 schools and 2-year “feeder institutions”—review the current teacher preparation program and analyze its ability to produce teachers who know their subjects and know how to teach their subjects so that their students will, in turn, meet standards. Following this review and analysis, faculty members plan strategies to improve the program so that it becomes more effective in producing knowledgeable and skilled teachers. They follow university procedures to implement changes in requirements, courses, field experiences, and program assessments. As STEP is institutionalized on the campus, they will begin to assess the changes they have made to determine if, in fact, they are graduating teachers of higher quality than they were before STEP. With information from this program assessment and taking into account new standards and assessments, they begin the process again.

What STEP Asks Campuses To Do

The Standards-based Teacher Education Project (STEP)[™] has deliberately tried to frame its goals around the expectations established by state policymakers, national accreditation agencies, and the teacher licensure process defined by both the Praxis tests of the Educational Testing Service (ETS) and the licensure principles developed by the Interstate New Teacher Assessment and Support Consortium (INTASC). By so doing, STEP hopes to serve as a means by which campuses can meet these accountability measures.

STEP actually establishes requirements for a campus’s participation in STEP as soon as it applies to join. STEP selects campuses that have provided the following evidence:

- the deans and faculties from the colleges of arts and sciences and education are interested in working together and ready to build on common activities already under way;
- the proposed STEP work is supported by the provost or academic vice president and is recognized as important by the president (letters of support from both the provost and the president are required in the application); and
- the campus is ready to consider making significant changes to all aspects of its teacher preparation program, from recruitment to graduation.

STEP also requires campuses, once selected, to participate in various activities designed to support and document the STEP process.

Written reports

STEP supports campuses for 3 years, during which it expects both formal and informal evidence of the work undertaken. Each year, the campus offers a written plan of the activities to be accomplished and short reports, in the winter and the summer, on progress toward meeting STEP goals.

State and regional meetings

Twice a year, STEP coordinators meet by state or region with STEP staff to share the experiences and activities of their campus task forces. These state or regional meetings offer faculty the opportunity to discuss ideas and issues that have surfaced as a result of the campus work. (For example, how do STEP task forces help faculty understand standards and align program elements to the expectations of standards? Or how does the task force strengthen and expand collaborative relationships across campus or between higher education and P-12 schools? Or how does the task force encourage the development of more effective assessment strategies to determine if the campus is producing knowledgeable, skilled teachers for standards-based schools?)

Primary documents

Many of the campuses began by submitting summary reports of their activities. STEP staff learned to ask campuses to include “raw” data—minutes of task force meetings, course syllabi, assessment rubrics, hiring procedures and advertisements, new campus policies, and so forth—that exemplified the changes being described and demonstrated what was occurring. This resulted in reports that were very informative to the staff, as well as examples of specific approaches that could be shared across campuses.

Evidence of results

While STEP promotes the development of new assessment systems to determine the improved quality of teachers graduating from the program, campuses engaged in the initiative have measured their progress in terms of how well they have achieved the “enabling activities” that are necessary to forming the basis of a standards-based program:

- How well administrators—provost, president, and deans—are engaged in improving teacher preparation;
- How well faculty work collaboratively across campus and with P-12 colleagues;
- How well P-12 academic content standards and teacher licensure standards have been used to “map” the teacher preparation program, including general education courses and academic majors; and
- How well the improved teacher preparation program has responded to problems identified through the standards-mapping exercise.

Most STEP campuses have not yet tackled any assessment that would tell them whether these enabling activities have produced better teachers or if those teachers have improved student learning. STEP is developing an evaluation framework by which campuses can collect and analyze data to assess candidate content knowledge, teaching skills, and ability to improve student learning. Through STEP, faculty have been encouraged to establish baseline data for evaluations and to develop methods by which candidates can demonstrate their content knowledge, their broad knowledge of core subjects, and performance-assessment evidence of instructional skills. These assessments need to be designed to provide evidence that teacher candidates are able to improve students’ academic achievement.

How STEP Provides Feedback and Supports Campus Work

STEP staff members interact with campus project coordinators formally through state and regional meetings, site visits, and written responses to reports, and informally through e-mail communication and telephone conversations. SRI International, Inc., the STEP evaluator, participates in all report reviews, state and regional meetings, and conducts additional site visits on campus.

Through these interactions, the staff gain a fairly detailed understanding of how the STEP initiative is playing out on individual campuses and what kinds of support would be most beneficial to the work. Among the aspects of STEP that project staff observe and reflect upon are the appropriateness of the work plan, the apparent willingness and ability of the faculty to undertake the work STEP expects, the strength of campus leadership in supporting and directing the work of STEP, and the effectiveness of the strategy to measure progress in meeting STEP goals.

STEP provides feedback to participating campuses most directly in written responses to the winter and spring reports that describe campus activities and progress. Frequently, STEP staff members ask a series of questions to guide campuses to extend their thinking or activities to address STEP goals more directly. These written responses are intended to help shape STEP Task Force work on campus. They also serve as the basis for agenda topics at state and regional meetings.

Conversations around these agenda items also lead to invitations to the STEP Summer Conference to speakers who can provide new research on a topic or extend faculty understanding around an issue. For example, John Bransford, coauthor of *How People Learn: Brain, Mind, Experience, and School* (1999) was invited as the opening keynote speaker at a STEP Summer Conference because faculty wanted to learn about current research related to improving teacher preparation. Dr. Bransford was subsequently invited to speak with faculty on a number of STEP campuses. In another instance, a STEP Summer Conference featured an afternoon session on the Praxis II teacher licensure test facilitated by the Educational Testing Service, offering faculty the opportunity to take sample Praxis II tests in English/language arts, mathematics, science, social studies, and elementary education. The Praxis session was included because faculty members on STEP teams were struggling to understand what graduating teachers were expected to know in their fields in preparation for teaching. In the year following the conference, ETS was invited to meet with faculty on several STEP campuses.

In addition to the twice-a-year meetings within a state or region, STEP provides participating campuses the opportunity to learn from others and share what they are accomplishing with campuses outside their state by pairing them for sessions during the STEP Summer Conference. STEP staff also invite faculty from STEP campuses to present sessions at national conferences or meetings hosted by other organizations (including the Education Trust, AACTE, the National Commission on Teaching and America's Future, INTASC, the Renaissance Group, and others).

Several times a year STEP staff members provide campuses with information on current research studies and publications through e-mail and state and regional meetings. It has provided copies of national standards in core subject areas for campus teams to review during national conferences and, on occasion, has purchased copies of reports on issues related to STEP to distribute to conference participants.

The 25 campuses that have participated in the STEP initiative have found it valuable because, within its broad framework, STEP allows each campus the flexibility to adapt the process to its culture. STEP staff members serve as "critical friends" who both support campus work and encourage continual review and improvement. In addition, the experience of sharing ideas among a group of campuses engaged in similar work leads faculty to adapt some of the ideas and innovations developed by other campuses.

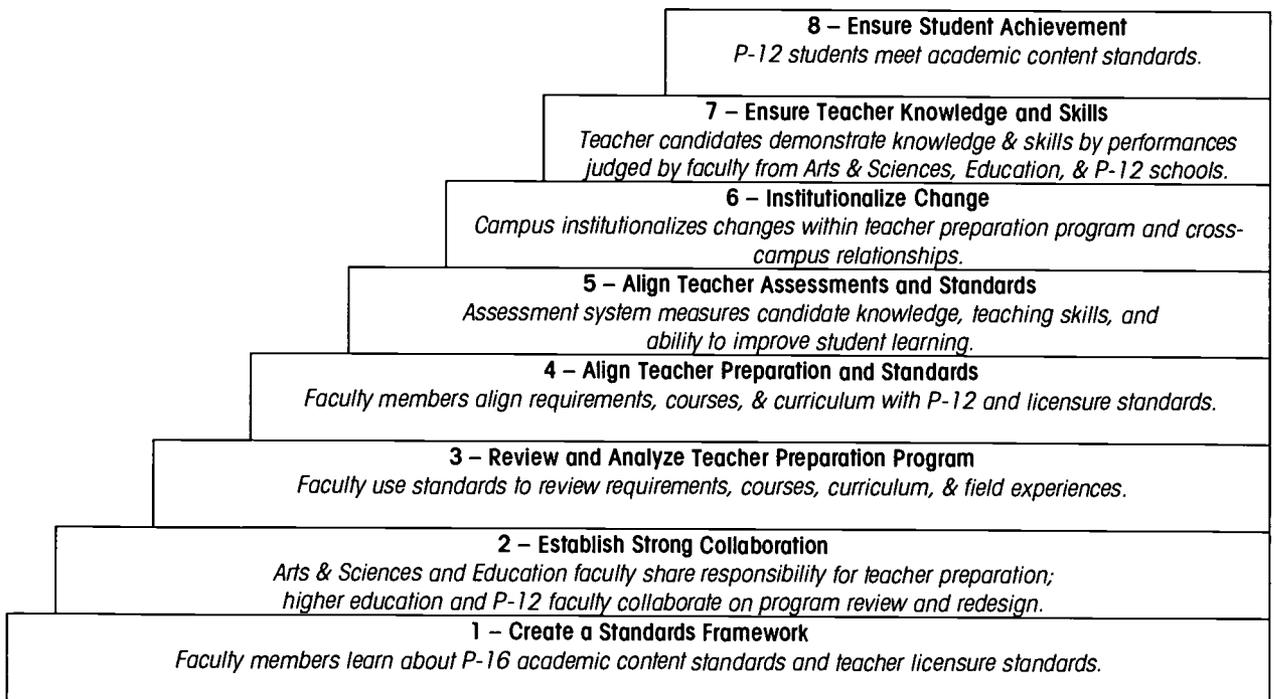
How Others Can Adapt STEP on Their Campuses

The Standards-based Teacher Education Project (STEP)[™] can be envisioned as a graphic of eight steps that support P-12 learning and assessment (Figure 3.1). In theory, any campus can undertake these eight steps and align its teacher preparation program to the learning expectations of academic content standards and teacher licensure standards. It can build strong collaboration between the colleges of arts and sciences and education and between the 4-year institution and P-12 schools and 2-year institutions. It can also establish a performance-based

assessment system that will ensure that candidates graduate with the content knowledge and pedagogical skills they need in order to teach their students to meet standards.

The STEP goals are not original and, because they are closely aligned to state and national policies to improve teacher quality, they do not impose new expectations on campuses. There are examples of campuses not participating in the Standards-based Teacher Education Project (STEP)[™] that have undertaken aspects of this work through the Project 30 Alliance (now called the Arts and Sciences/Teacher Education Collaboration) and the Center for Educational Renewal. (In fact, one STEP campus, Valdosta State University, had engaged in STEP work for 2 years before formally joining the STEP initiative in Georgia.) However, few campuses can sustain this kind of program redesign without the support and encouragement of external advisors and colleagues engaged in similar work. It may be that formal project accountability tied to small grants is necessary to keep the attention of faculty focused on reviewing and changing elements of the program with an eye to graduating teachers of higher quality.

Figure 3.1. The Steps That Support P-12 Learning and Assessment



References

Bransford, John D., Brown, Ann L., and Cocking, Rodney R. (Eds.). (1999). *How people learn: Brain, mind, experience, and school*. Committee on the Developments in the Science of Learning, Commission on Behavioral and Social Sciences and Education, National Research Council. Washington, DC: National Academy Press.

HOW ADMINISTRATORS CAN BRING ABOUT CHANGE

Ronald J. Henry, Provost, Georgia State University

Issues Raised by STEP on Campus

An initial issue that STEP raised on campus was the sufficiency or insufficiency of the coverage of academic content in the early childhood, middle school, and secondary teacher preparation programs. Task forces in four disciplinary areas, consisting of faculty members from arts and sciences and education, performed analyses of the content courses and program requirements compared with the voluntary academic standards for P-12 delineated by our local Metropolitan Atlanta P-16 Council.¹ Many courses were redesigned, or new ones created, as a result of recommendations from these task forces.

A more difficult set of issues was how to link content and pedagogy effectively. Or, what is the concordance among the teaching methods and strategies used in the content courses, those used in the pedagogy courses, and those that teacher candidates are taught to use to teach content to their P-12 pupils? There are at least three issues embedded in this question, and finding solutions presents ongoing challenges under three headings: introductory courses, integration of content and pedagogy, and teachers as arts and sciences majors.

Introductory courses

Redesign of freshman and sophomore level core disciplinary courses needs considerable work. Because arts and sciences faculty members are role models for future teachers, the way that they deliver college courses has an impact on teacher candidates. Thus, if we want to develop teachers to teach in standards-based schools, we need to provide multiple examples of standards-based education in college. A place to focus is on the introductory disciplinary courses where all teacher candidates, especially those in elementary and middle school education, obtain their knowledge of the major themes, big ideas, and organizing concepts of a field.² How can we redesign introductory courses so that they are learner-centered and involve active learning? All students will benefit from redesign of introductory courses, not just potential teachers.

Integration of content and pedagogy

One example of a successful, but expensive, solution is our development of a four-semester integrated science sequence for prospective middle school teachers.³ This sequence teaches astronomy, biology, chemistry, geology, physics, and weather. The sequence is built around an applied theme of “science in and around your home.” The theme serves two important functions: first, to make the relevance of science to the students’ daily lives unmistakable, and second, to provide an alternative structure and context in which to integrate the science content. It is “expensive” because two or more faculty members team-teach each class.

Teachers as arts and sciences majors

We should recognize that preparing teachers as arts and science majors does not necessarily prepare them to be effective P-12 teachers—the correlation between number of content courses and teacher effectiveness is unclear.⁴ Do we need to design special courses that link content and pedagogy for a particular discipline and provide opportunities to learn about assessment strategies for that discipline?

As we moved into the later years of STEP, some of these questions drove us deeper into the issues. Although not initially raised by STEP, an important shift in emphasis, driven by the University System of Georgia, was made from “inputs” to teacher performance to results. “Inputs” are the required courses and field experiences. Teacher performance refers to a candidate’s having demonstrated that he or she understands material well enough to teach it, by performing well on Praxis II and course-related assessments as well as the use of educational strategies observed in teaching practice. Results refer to the candidate’s demonstrated ability to improve learning for all pupils.

Our initial alignment of course content and P-12 standards improved our inputs, but this step is not sufficient to ensure that what prospective teachers know is adequate. The content knowledge of teachers must be of sufficient depth to enable them to help students from diverse backgrounds to high levels of achievement. Concordance of content and pedagogy is still a work in progress, but together with strong field experiences, it should lead to an assurance of teacher performance. However, it is another large step to demonstrate that all pupils in a classroom have learned and understood the material. More important will be the use of feedback when pupils have not understood, so that teachers can make modifications to bring all pupils to a higher level of understanding.

How will we judge the teacher candidate’s impact on student learning? Our model is based on a cycle of teaching and learning that includes planning, teaching, assessing, and reflecting as the basic acts. These acts do not occur in any specific order, and each part of the model influences the other parts. The model is built around meeting INTASC (Interstate Teacher Assessment and Support Consortium) standards.⁵ Performances related to each component of the cycle are measured through production of a teacher work sample⁶ and subsequent assessment based on the rubric.

When STEP was started in 1997 at Georgia State University, we already had in place part of one structural element advocated by STEP. Since 1993 we have had a formal structure called the Professional Education Faculty (PEF), consisting of education and arts and sciences faculty members, which is responsible for educator preparation programs at the undergraduate and master's levels. The operational arm of this body is the Professional Education Council (PEC) and its standing committees. However, recognizing that change initially requires a subset of committed faculty, we set up separate disciplinary task forces to work on program alignment with P-12 standards. These faculty members were strongly supported by the provost and the deans. In some cases release time was provided, in others, some summer support. We continue to fund faculty members from arts and sciences and education to discuss issues in depth at retreats. Faculty load, course credit assignment for team-taught courses, and legiti-

If we want to develop teachers to teach in standards-based schools, we need to provide multiple examples of standards-based education in college.

mate use of experimental courses in approved programs are areas that continue to require administrative support and encouragement.

After three years of work with STEP, we moved into the institutionalization phase. Issues included sustaining collaboration between faculty members in arts and sciences and education, and between university and P-12 faculty. We recognize that there are differences between the cultures of arts and sciences and education and their understanding of key concepts, language, and definitions. There are also differences between the cultures of postsecondary education and elementary and secondary education. In addition, because many of our students transfer from other colleges, we have needed to strengthen collaboration with faculty members from 2-year transfer institutions and engage them in our efforts to align courses and curricula. In 2000, we broadened participation in PEF to include teachers and administrators from our local school systems. In 2001, we added to some of the PEC standing committees faculty members from the 2-year college that sends us the most students. Another institutionalization issue is continuous program improvement. STEP has made us aware of the need for a permanent structure. In light of this, we developed two standing committees of PEC: the Content Knowledge Committee and Assessment Committee. The Content Knowledge Committee is charged with working on integrating content, pedagogy, and technology knowledge in teacher education programs and making policy recommendations to the PEF regarding ways to assess the content knowledge of teacher candidates. Although content knowledge cannot be separated from pedagogical knowledge and pedagogical content knowledge, it is important to have particular processes for systematically asking questions such as "What content knowledge?" and "How much content knowledge?" The Assessment Committee will make policy recommendations to the PEF regarding assessing the impact of teaching by candidates and recent graduates on P-12 student learning. It will also

recommend ways to link assessment to program outcomes, including developing processes for collecting and analyzing data.

Leadership recognizes that the reward system in the university should be modified to acknowledge various activities in teaching, learning, service, and scholarship as we collaborate more closely with P-12 schools. Administrators can help bring about and support change by working with faculty leaders to redefine scholarship to include elements of the change process. Work in P-16, standards-based reform, teacher education programs, and public schools can all involve scholarship, provided that faculty members subject their findings to scrutiny through the normal mechanism of peer review. An example of a profound scholarly question is, "What knowledge is essential for effective teaching?" The challenge is to gain general acceptance by the faculty and institutionalization of broadened definitions of scholarship, and then to use these definitions in promotion and tenure reviews, annual reviews, post-tenure reviews, and merit salary adjustments.

Administrators can also bring about and support change by linking the STEP work with other systemic initiatives. In order to meet the educational needs of an increasingly diverse population of students, faculty members must think not only about what they teach but also about how they teach. Our institution must document improvements in student learning and the pedagogies responsible for those improvements. Our Center for Teaching & Learning,⁷ through initiatives such as Campus Conversations of the Carnegie Academy for the Scholarship of Teaching & Learning,⁸ is one such vehicle. Initiatives such as the Quality Undergraduate Education (QUE)² project provide reforms that complement STEP.

Footnotes

¹ <http://education.gsu.edu/p16/>

² <http://www.gsu.edu/que>

³ <http://scied.gsu.edu/Hanna/nsci/>

⁴ Wilson, S. M., Floden, R. E., and Ferrini-Mundy, J. (2001). *Teacher preparation research: Current knowledge, gaps, and recommendations*. Center for the Study of Teaching and Policy (Document R-01-3).

⁵ <http://www.ccsso.org/intascst.html>

⁶ Schalock, D., Schalock, M., and Girod, G. (1997). *Oregon's Teacher Effectiveness Work Sample Methodology: Rationale and Background*. In J. Millman (Ed.), *Grading teachers, grading schools: Is student achievement a valid evaluation measure?* Newbury Park: Corwin.

⁷ <http://www.gsu.edu/~wwwctl>

⁸ <http://www.carnegiefoundation.org/CASTL/highered/conversations.htm>

IV. STEP Variations: Negotiating Change and Addressing Campus Needs

ASSESSING KNOWLEDGE IN A GRADUATE PROGRAM

Sue E. Small, Director of Professional Development Schools, Education Department, University of Maryland Baltimore County (Formerly Coordinator, Master of Arts in Teaching, School of Professional Studies in Business and Education, Johns Hopkins University)

The Graduate Division of Education at Johns Hopkins University (JHU) offers a Master of Arts in Teaching program for candidates who have a strong undergraduate or graduate background in either the liberal arts or in an academic field appropriate for their intended area of certification. All candidates entering the program have earned at least a bachelor's degree. There is no undergraduate program in education at JHU.

The Master of Arts in Teaching (M.A.T.) is a 39-credit, state-approved graduate program leading to initial certification for teaching in Maryland. There are several options for completing the M.A.T. program. These options include FlexMAT (Flexibly Scheduled Master of Arts in Teaching), SIMAT (School Immersion Master of Arts in Teaching), and ProMAT (Professional Immersion Master of Arts in Teaching). Applicants for the Master of Arts in Teaching program must meet the general requirements for admission to the School of Professional Studies in Business and Education. These requirements include: a formal application, resume, essay, official transcripts from postsecondary institutions attended, and the application fee. Prior academic achievement must reflect a 3.0 or better undergraduate grade point average (GPA). In addition, evidence of satisfactory writing and communication skills is required.

Advising is an early part of the admission process. Each candidate meets with an education faculty advisor to review the applicant's transcript to determine the relevance of his or her liberal arts background to the intended area of certification. Thus, prior to admission, gaps in content knowledge are identified. Taking the state certification requirements as a basis, the faculty advisor and candidate review all transcripts, any experience that might be equivalent to formal course work, complete the supplemental content requirements worksheet, and develop an academic program plan. The academic program plan, signed by both the candidate and the advisor, is the formal statement of all requirements for completion of the M.A.T. degree.

An advisory board for the M.A.T., including JHU arts and sciences faculty members, content specialists from local school systems, program graduates, and education faculty members, worked together to develop the supplemental content requirements and to make recommendations for change. Content knowledge assessment was primarily determined through the transcript review upon a candidate's entry to the program, the results of Praxis II, and performance assessment in classrooms by supervising teachers, university supervisors, course instructors, and program coordinators. In addition, portfolio assessment based on the Interstate New Teacher Assessment and Support Consortium (INTASC) standards, especially

INTASC Principle One, is an exit requirement for the program. Awareness of and alignment with standards, including P-12 content standards, is consistently part of the JHU M.A.T. program. Not only are the P-12 content standards specifically addressed in course work and assessment, but the new structures resulting from the Title II Higher Education Act grant and the Standards-based Teacher Education Project (STEP)TM grant have helped to create variations on the basics of content knowledge assessment and to focus additional attention to the deep integration of content standards and knowledge into every dimension of the program.

*The faculty determined that a self-assessment tool
would be consistent with the goal of teachers becoming
more knowledgeable and more reflective
practitioners.*

The Excellence in Teacher Education Institute (ETEI) and an Electronic Learning Community (ELC) were established as proposed in the STEP and Title II grants. Since the creation of the ETEI in February 2000, when nine arts and sciences faculty members and doctoral students and five education faculty members and doctoral students were identified as ETEI faculty, the group has evolved to include university supervisors, seasoned Baltimore public school teachers, and student support services personnel. The group identified the tools and processes then used for content knowledge assessment as targets for collaboration and institutional restructuring within the university.

The first task of the STEP/ETEI faculty was to conduct an Institutional Analysis by reviewing campus practices and policies that influenced the content knowledge of new teachers. The faculty members collected and reviewed documents related to the M.A.T. admission process, including JHU requirements for admission, academic program plan advising materials, national content standards, state core learning goals, school system or local education agency requirements for teachers, national pedagogical standards (INTASC), and Praxis II requirements. Initially, the STEP/ETEI faculty all met together to review the documents and to map and align the content standards of each discipline with the P-12 requirements and the M.A.T. pedagogical standards. They scheduled and held school visits.

The magnitude of the task seemed overwhelming and consumed a great deal of time. However, it was agreed that JHU needed another method to assess content knowledge. ETEI/STEP faculty members decided to: (a) align the content standards, (b) involve the candidates more intimately in the assessment process, and (c) affirm the multiple measures approach to assessment that was already used to assess content knowledge. A dilemma arose in determining how to apply the mapping and alignment of standards to the next step of engaging arts and sciences and education faculty members as well as students in the assessment process.

After arts and sciences faculty members and doctoral students studied the content standards of the learned societies and the content requirements for P-12 school students, they applied their own deep knowledge of their respective disciplines to develop a “profile of the ideal teacher” in that discipline. Throughout these deliberations, the ETEI/STEP faculty met within their disciplines, listing the knowledge that each teacher in that discipline should have. At the same time, education faculty members were discussing how to use the anticipated content knowledge profile of the ideal teacher. The STEP/ETEI faculty again deliberated and determined that a self-assessment tool, which actively engaged candidates in the content assessment process, would be consistent with the goal of teachers becoming more knowledgeable and more reflective practitioners.

Table 4.1 . Standards Used by Content Areas

Content Area	Learned Society
English	National Council of Teachers of English
Social Studies	National Council for the Social Studies
Geography	National Geographic Society Standards
Mathematics	National Council of Teachers of Mathematics
Science	National Science Teachers Association and American Association for the Advancement of Science - Project 2061

The self-assessment tools are based on the standards specific to each discipline. For example, as shown in Table 4.1, the standards used for the content assessment in English were those developed by the National Council of Teachers of English (NCTE). The Core Learning Goals of the State of Maryland, which correspond closely to the local school system’s P-12 content standards, were also used in the development of the self-assessment tools. The self-assessment tool in English is included in Appendix U.

In addition to designing the content-based assessment tools, arts and sciences and education faculty members collaborated to develop a process for administering the self-assessment within the context of a team-taught course, Special Topics in Secondary Education. These courses were designed to require increased rigor and currency in academic knowledge. During the spring 2001 semester, arts and sciences faculty members in English, mathematics, social studies, biology, and physics/chemistry taught special topics courses in each discipline. The courses continued to be team-taught during the spring 2002 semester, with one major change: the two science courses were combined so that all science candidates met together.

During the special topics courses, the standards-based self-assessment is administered to each candidate. The course syllabus describes the assessment in that discipline, and it is linked to a reflective essay to be completed by the candidate. After completing the essay, each candidate prepares an academic content development plan. That plan proposes a research project in an area that the self-assessment and the development plan identify as a weakness in the candidate's knowledge. Lesson plans to apply the new knowledge also are course requirements. Faculty members from arts and sciences and education are involved to assist individual candidates throughout these processes of self-assessment, reflection, planning, research, and lesson planning. They assess gaps in content knowledge and provide direction to address the candidate's needs. (See Appendix V for an example of the work of a candidate for certification in secondary English.)

As part of the special topics course, faculty members review the self-assessments, reflective essays, and content development plans to consider their validity against the candidate's performance in class. Faculty members provide feedback to the candidate in writing or an advising conference or both. Next, faculty members evaluate the results of each candidate's research and its application in lesson plans, using criteria consistent with that of graduate programs. Finally, the candidate includes his or her content development plan in the exit portfolio, which documents INTASC Principle One.

Finally, faculty members from arts and sciences and from education work together during the portfolio review process to evaluate the effectiveness of content development plans prepared by candidates. The university is considering a recommendation to require content development plans as part of the professional development plan that each candidate must submit.

Implementation of the STEP process is ever evolving, and today's new variation may look very different tomorrow.

DO UNDERGRADUATE CANDIDATES KNOW THE CONTENT THEY WILL TEACH?

Carol Vukelich, Hammonds Chair in Teacher Education and Director of the Delaware Center of Teacher Education, University of Delaware

The University of Delaware (UD) offers ten initial certification programs at the baccalaureate level. This article describes how the faculty members of one of these programs, the Elementary Teacher Education (ETE) Program, borrowed and adapted a form developed by Johns Hopkins University (JHU) faculty members to gather information about the perceptions that JHU master's candidates held about their own content knowledge. By adapting this form, UD faculty members hope to gather information that will answer the question: How well do our candidates know what they will be required to teach? Before describing how UD has adapted the JHU form, however, I will describe how ETE faculty members had, historically, ensured that candidates possessed content knowledge, as well as the frustrating procedures attempted to determine where the general education component of the program exposed candidates to specific knowledge.

UD was instrumental in the creation of Project 30, a reform begun in the 1980s with the goal of redesigning teacher education programs by integrating the liberal arts and education curricula. For Project 30, the university chose to start with the ETE (Elementary Teacher Education Program), because its graduates' thorough knowledge of what they will teach is essential to the future success of their students. As a result, ETE faculty members instituted several procedures aimed at the content knowledge of candidates, long before UD joined the Standards-based Teacher Education Project (STEP)TM.

First, the faculty members had studied the links between the state P-12 academic content standards and the general studies courses ETE candidates are required to take. For example, because the English/language arts content standards require students to construct meaning from written texts and to link self to society and culture through texts, candidates must complete a literature course requiring these interpretive skills. Because these same standards also mandate that students be able to write in three discourse categories, candidates must complete a course that requires them to write thesis-centered essays, mainly in response to texts, in the same three discourse categories.

Secondly, ETE faculty members had designed criteria that candidates would have to meet to continue in the program. Faculty members use cumulative grade point averages in the required general studies courses to assess how well candidates know the content of the elementary school core curriculum (English/language arts, mathematics, science, and social studies). To continue in the program beyond the sophomore year, candidates are required to demonstrate a satisfactory grade point average in these courses.

Thirdly, the ETE faculty decided to require that candidates pass Praxis I in reading, math, and writing, with “pass” defined as scoring at or above the State of Delaware’s cut scores. These early steps demonstrate that faculty members believe a good elementary school teacher must know the subjects he or she will teach.

In addition to these requirements, ETE faculty members also aligned their pedagogical content knowledge courses and assessment procedures with state and national P-12 student aca-

*UD’s participation in STEP alerted faculty members
to a new source for information—
the candidates themselves.*

demically standards. For example, the texts that candidates write are often evaluated against the criteria defined in the state’s English Language Arts P-12 Student Content Standard One. From the junior year through student teaching, candidates also develop lesson plans and units linked to state and national student standards in each of the core content areas. The content that candidates know, reflected in these plans and how they subsequently teach them, is assessed. Rubrics and other instruments, developed to score the performance of candidates both before and during student teaching, examine both the content knowledge and the pedagogical content knowledge of candidates (see Table 4.2 for a sample rubric).

Although the faculty had attended to the content knowledge required of candidates, they knew little about the knowledge that candidates actually possessed. The faculty decided to collect the required general studies course syllabi from their arts and sciences colleagues and to map the content of these courses onto the state and national student standards. Presumably, these analyses would identify the “missing links” between the content addressed in the required courses and the P-12 student content standards, and thus clarify the content knowledge that ETE candidates should have.

This task proved enormously challenging. It was difficult to obtain copies of all the general studies course syllabi. Even those obtained often lacked the detail needed for mapping. It proved difficult to schedule the lengthy appointments needed with some general education faculty members to map the content of these courses onto the student standards. After 4 months of false starts, the faculty members decided that they needed another procedure to gather information about the content knowledge of candidates.

Table 4.2. Rubric for Assessing Candidate Performance(s)

Criteria	Exemplary	Acceptable	Unacceptable
Goals	The goals are clearly stated and are based on student assessment data. A strong rationale is provided for the importance of the goals based on a schema for literacy learning and teaching, and state and national standards. Objectives are appropriately differentiated for individual students.	The goals are stated and are based on some student assessment data. A rationale is provided for the importance of the goals based on his/her understandings of literacy learning and teaching, and state and national standards. Some attention to individual students' needs is evident in the objective statements.	Goals are stated and are linked to state standards. If a rationale for the importance of the goals is provided, the candidate's understanding of literacy learning and teaching is undeveloped and/or confusing. Objectives are stated, but not differentiated for individual students.
Content Knowledge	Accurate and current content, reflective of knowledge of the discipline, is shared. Content is aligned with the goals/standards and exemplifies the traits and behaviors of expert readers and writers.	Most content shared is accurate and current, reflective of knowledge of the discipline. Content is somewhat aligned with the goals/standards and/or content is somewhat representative of the traits and behaviors of expert readers and writers.	The content shared is often not accurate or is not reflective of current knowledge in the discipline. Content is not aligned with the goals/standards and/or content is not representative of the traits and behaviors of expert readers and writers.
Pedagogical Knowledge	The instructional plan includes learning activities that are aligned with the goals and student characteristics and needs. When appropriate, technology is integrated into the teaching and learning. Instruction is adapted to accommodate student needs and individual differences, is based on research-based methods, aims to teach specific skills and strategies within the context of meaningful tasks, provides opportunities for high levels of student interaction, and draws from or links to resources outside the classroom, when appropriate. The goals and their importance are communicated to the students.	The instructional plan includes learning activities that are mostly aligned with the goals and student characteristics and needs. When appropriate, technology is integrated into the teaching and learning. Instruction is somewhat adapted to accommodate student needs and individual differences, is based mostly on research-based methods, aims to teach specific skills and strategies within the content of somewhat meaningful tasks, provides opportunities for some student interaction, and draws somewhat from or links to resources outside the classroom, when appropriate.	The instructional plan includes learning activities that are not aligned with the goals and/or student characteristics and needs. Technology is not integrated into the teaching and learning, when appropriate, or is integrated in superficial inappropriate ways. Instruction is not at all or minimally adapted to accommodate student needs and individual differences. The research base for the methods used is questionable. The methods used aim to teach specific skills within the context of tasks that provide for little to no student interaction. There is none to little evidence of links to resources outside the classroom.
Assessment	The assessment procedures use research-based multiple assessment procedures that are consistent with a research-based view of literacy teaching and learning. The assessment evidences sensitivity to the context, including school and grade-level demands, student background, and classroom organization. The assessment chosen determines each student's interest, skills and strategies, prior knowledge, and disposition or attitude toward reading, writing or speaking. Interpretations of these data are made in order to understand the diversity of the students' needs within this context. Conclusions are drawn about the diversity of students based on the data gathered.	The assessment procedures use more than one measure. The measures are consistent with the view of literacy teaching and learning set forth in the course; the candidate exhibits some ability to explain this link. The assessment evidences sensitivity to school and grade-level demands, student background, and classroom organization. The assessment chosen determines each student's skills and strategies, and prior knowledge. Interpretations of these data are made in order to understand the students' needs. Conclusions are drawn about the diversity of students based on the data gathered.	The assessment procedure uses one measure. The link with a research-based view of literacy learning is questionable. The assessment evidences sensitivity to school and grade-level demands and classroom organization. The assessment chosen determines each student's skills. Interpretation of the data is made in order to judge pre knowledge for post instruction knowledge comparisons.

DO UNDERGRADUATE CANDIDATES KNOW THE CONTENT THEY WILL TEACH?

<p>Analysis of Student Work</p>	<p>The candidate establishes specific criteria relevant to and appropriate for the purposes for instruction, thoroughly describes student learning, and completely and thoroughly evaluates strengths of student work in light of designated criteria. Sufficient relevant data from student work and student interaction appear to be used to describe and/or initiate further instruction/evaluation.</p>	<p>The candidate establishes some criteria appropriate for the purposes for instruction and accurately describes student learning, adequately evaluates strengths of student work in light of designated criteria. Accurate data appears to be used to describe and/or initiate further instruction/evaluation.</p>	<p>The candidate establishes limited criteria appropriate for the purposes of instruction. The candidate minimally describes student learning and sketchily evaluates strengths of student work in light of designated criteria. Little or no data appears to be used to describe and/or initiate further instruction/evaluation.</p>
<p>Reflection</p>	<p>The candidate views teaching as "problematic," questioning how instruction better tuned to the context and to each learner's needs and interests could be offered. The candidate weighs competing viewpoints and comes to rational instruction decisions, evidencing deep thinking about the learning event by going beyond personal history and experiences to help make sense of the new information and by justifying choices/decisions by critiquing and reasoning. The candidate carefully examines beliefs and biases and challenges these with new data from the experience. The candidate questions taken-for-granted actions and thinks critically by seeking to address the extent to which teaching practices foster equitable conditions of learning and have an impact on the social justices that often inhibit student learning. The candidate uses experience to inform new personal teaching goals, concepts, and behaviors.</p>	<p>The candidate questions how instruction better tuned to each learner's interests could be offered. The candidate weighs personal viewpoints against others encountered and may come to rational instruction decisions. The candidate evidences thinking about the learning event, using personal history and experiences and course knowledge. The candidate demonstrates an awareness of personal beliefs and biases using new data from experiences and uses experiences to inform new personal teaching goals, concepts, and behaviors.</p>	<p>The candidate judges instruction as acceptable to learner's needs or interests. The candidate evidences minimal thinking about the learning event, using personal history and experiences as the lens through which to view teaching and learning. The candidate evidences little questioning of actions, and use of experiences to inform new personal teaching goals, concepts, and behavior.</p>
<p>Professionalism</p>	<p>The candidate clearly organizes relevant information. The development of ideas is thorough and the conclusions are supported with data. The candidate effectively integrates data from a variety of assessment instruments and sources. The word choice reflects a professional tone. The writing evidences no errors in mechanics and usage.</p>	<p>The candidate's use of organization, development, support of conclusions, and word choice are generally adequate to communicate, but revision in one or more of these areas would strengthen clarity. The writing may evidence a few errors in mechanics and usage that do not affect clarity.</p>	<p>The report communicates basic information, but lacks clarity because of a problem with organization, development, support of conclusions, and/or word choice. The report may have errors in mechanics and usage that affect clarity.</p>

UD's participation in STEP alerted faculty members to a new source for information—the candidates themselves. Through STEP, the ETE faculty learned that the JHU faculty had developed a self-assessment form that enabled candidates to detail their perceptions of the strengths and weaknesses of their own knowledge. Modifying JHU's instrument might offer the perfect solution to what had seemed an insurmountable problem.

Which standards should be used: State or national? ETE faculty members first decided that, because elementary candidates must be knowledgeable in English/language arts, mathematics, social studies, and science, we should assess their knowledge of the student standards in each of these disciplines. Faculty members began to construct the UD ETE candidate content knowledge self-assessment form by comparing the Delaware state content standards with the national standards. The work evidenced the strong links between these two sets of standards. For example, Delaware's student English Language Arts Content Standard One reads: "Students will use written and oral English appropriate for various purposes and audiences." The National Council of Teachers of English/International Reading Association standards that link to this state standard read: "Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes" and "students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information)." Faculty members determined that, across all the core content areas, there was sufficient overlap between the state and national standards for us to create the candidate self-assessment form based on the state standards. Faculty members also reasoned that because the candidates would be eligible for certification in grades K-8, they should know the state's standards, the content that they would be responsible for teaching. Therefore, faculty members decided to create the self-assessment form using the Delaware K-8 student content standards for each of the four core content areas.

Shortly after faculty members began work on the form, questions arose about the value of assessing a candidate's knowledge at the broad level of standards. Reconsidering, faculty members agreed to focus on the "benchmark" performance indicators for the third, fifth, and eighth grades). These indicators were used to create the final version of the content knowledge self-assessment form for candidates. Sample items from the mathematics self-assessment form appear in Table 4.3. The full set of questions for language arts is included in Appendix W.

Table 4.3. Candidate Self-Assessment Preliminary Survey in Mathematics

Standards-based Teacher Education Project
Candidate Self-Assessment Preliminary Survey

Introduction

Task:

Go to the survey by clicking the button at the bottom of this page. Then do the following:

For each topic click the button that best applies to your current content knowledge and expertise (see the rating scale below). When you have completed all topics, click the FINISH button at the bottom of the survey.

All topics must be answered before a final submission will be accepted. If you do not have time to complete the survey, click the SAVE button at the bottom of the survey. Your current answers will be saved. You can return at a later time to complete the survey. You will be notified if an error has occurred when you submit your survey. Please check to make sure that the survey has been submitted successfully.

Hints:

There are more than 250 topics in this survey. If done conscientiously, the survey could take quite a bit of time to complete. To prevent loss of data that might occur because of computer (or other) errors, occasionally use the SAVE button at the bottom to save the current state of your answers. You then can easily re-enter the survey and continue from where you saved. If you think you have finished all topics but continually get a message that some topics have been overlooked, use the SAVE button to save your current answers. When you re-enter the survey, completed topics will be numbered in red, enabling you to find easily any topics left unanswered.

Problems:

If you have any problems completing the survey or if you have any suggestions on how to make the survey better, please contact Gary Feurer at feurer@udel.edu

Rating Scale (This is also given at the top of the survey):

For each topic listed in the assessment, rate your knowledge and confidence using the following scale:

- 0 = I have not yet built any knowledge of this content area.
- 1 = I have limited knowledge on this topic.
- 2 = I am familiar with this content area, but may lack some breadth or depth.
- 3 = I have strong knowledge of this content area.
- 4 = I feel competent to teach this topic.

Sample Standard and Performance Indicators:

Mathematics

Mathematics Standard One:

Students will develop their ability to solve problems by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication, and connections. [Solve Problems]

T 1 I know how to solve problems by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate my own problems; to formulate solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication, and connections.

0. 1. 2. 3. 4.

T 2 I know how to develop and apply strategies to solve problems.

0. 1. 2. 3. 4.

T 3 I know how to use mathematical notation and language to explain and defend my thinking.

0. 1. 2. 3. 4.

T 4 I know how to make and test conjectures in a variety of mathematical situations.

0. 1. 2. 3. 4.

T 5 I know how to evaluate the reasonableness of the solution in the context of the original situation.

0. 1. 2. 3. 4.

Once the self-assessment form was developed, attention turned to when and in what course or courses the candidates should complete the form. Faculty members considered requiring its completion between the sophomore and junior years, when candidates are reviewed for continuation in the program. As the discussion progressed, faculty members suggested that candidates complete the form twice: first, when they arrive as freshmen, to determine how well prepared candidates believe themselves to be, and secondly, when they apply for student teaching, to indicate how their general studies courses may have enhanced their content knowledge. As freshmen, candidates would rate their knowledge on a 0-4 scale, with 0 indicating, "I have not yet built any knowledge of this area," and 4 indicating, "I feel competent to teach this topic." Applying for admission to student teaching, candidates would rate their knowledge on the same scale and indicate which university course, if any, developed this knowledge.

Faculty members quickly raised questions about data storage (the program admits approximately 400 ETE candidates each year) and ease of retrieval for comparing candidate knowledge between the two assessment periods. The answer seemed to reside in technology. The Office of Educational Technology (OET) responded to the call for support, reformatted the form, and placed it on the web.

Faculty members piloted the form in fall 2001. Candidates generally rated their knowledge base very high. Because the variability of the responses confirmed what ETE faculty members have discovered about the strengths and weaknesses of candidate knowledge, the ETE faculty has decided to continue using the instrument. For example, ETE candidates judge themselves as deficient in knowledge about economics in the social studies core area; faculty members agree with this assessment.

These data will serve as one measure of the content knowledge of candidates, in addition to the measures described at the beginning of this article. Faculty members will also see which university courses help candidates develop the knowledge specified in the standards and performance indicators. Because the form is web-based, storage and aggregation of the information is relatively easy.

Although this article has focused on the work of the ETE faculty, faculty members from other programs are considering the form as an addition to the data they already gather about their candidates' content knowledge. Certainly, collecting these data is only the beginning of the process of considering course and program revisions based upon data.

Obviously, the University of Delaware's participation in STEP has benefited our faculty members, staff, and candidates (although candidates do complain about another task to complete). We extend our thanks to our JHU colleagues for their willingness to share their ideas and allow us to borrow their solution to a mutual problem.

DEVELOPING STRUCTURES FOR SHARED RESPONSIBILITY

*Wynn Egginton, Co-Director, Nystand Center of Excellence in Education,
University of Louisville*

Why STEP?

The University of Louisville was interested in joining the STEP initiative because STEP validates and supports curriculum articulation and alignment, preschool through graduate study, in support of teacher education and student learning. At the time that STEP was recruiting campuses into the program, a national and statewide concern about teacher quality was rising to a crescendo. A number of new reports, including a research synthesis from Kati Haycock of the Education Trust (1998), argued that teachers do make a difference and those who are well-prepared in their content fields make a bigger difference for students who are living in poverty.

Although Kentucky has teacher standards, they are general and have not led teacher preparation institutions to work with P-12 partners on issues of articulation and alignment. The university's leadership, however, had long felt a need for greater articulation, as evidenced by the Transitional Years Project, a cooperative effort between arts and sciences and education carried out in the late 1990s. Under this project, P-12 teachers and university faculty members met together to talk about teaching within their disciplines. Some participants observed each other's classes. This project enriched awareness and discussion among the participants about transition from high school to college, but it did not have a systemic impact on university programs. Thus, when STEP was described at a meeting of the Kentucky Education Professional Standards Board in 1999, representatives from both the College of Education and Human Development and the College of Arts and Sciences saw an opportunity to work in cooperation with other institutions of higher education in the state and in neighboring states to accomplish the goals of the Transitional Years Project, and more.

For teacher education candidates at the University of Louisville, curricular articulation involves analysis of undergraduate education, largely within the College of Arts and Sciences, as well as the graduate teacher education programs within the College of Education and Human Development. The fact that our teacher education programs are primarily graduate has meant that we have had to work harder to communicate between the two colleges. In addition, we had never conducted an analysis of state teacher standards, performance standards for P-12 students, national content area standards, INTASC (Interstate New Teacher Assessment and Support Consortium) standards (which correlate very closely with our state teacher standards), and NCATE (National Council for Accreditation of Teacher Education) standards. Participating in STEP helped us organize this work efficiently. We received support from the university leadership, in particular from the provost and the deans of education and arts and

sciences, and from our school district partners. We believe that being part of a multistate project funded by CBE (Council for Basic Education) and AACTE (American Association of Colleges for Teacher Education) prompted key players to give more importance to the analysis than if we had simply organized the work locally. As a result of the analysis, we have changed courses and programs at the university, both in the College of Education and Human Development and in the College of Arts and Sciences, and we have held meetings with the Kentucky Department of Education to discuss discrepancies between P-12 expectations and curricula and the university's programs.

During our recent NCATE review, STEP was a prominent feature of our evidence for collaboration and assessment. Members of the NCATE team met with faculty members active in the STEP initiative and were particularly impressed that we had instituted changes in college curricula to support better alignment with P-12 standards and with the expectations of the Praxis II exams. The deans of education and arts and sciences have approved a proposal, which was implemented in fall 2002, that will institutionalize the cooperation and communication enhanced over the last 3 years through STEP. The proposal establishes faculty liaisons in each college, teamed by discipline, who will work together to coordinate recruitment and advising for teacher education candidates and keep each other informed about curricular issues. STEP has also supported the system-wide implementation of lesson study, a collaborative process through which teachers examine and improve their practice, in the Jefferson County Public Schools. This initiative enables us to participate in an ongoing conversation about teaching that involves P-12 teachers and administrators, faculty members from different units of the university, and our teacher education candidates.

How Does STEP Work With Other Policies?

STEP has contributed to improving the alignment of university policies that govern teacher education, helping faculty members in the colleges of education and arts and sciences align their policies, and creating the opportunity to establish sorely needed institution-wide policies. Policies adjusted to ensure better coordination include: automation of transcript review for previously approved course work, changed grading and assessment practices (the result of individual faculty members having seen negative Praxis II results for their students who had earned Bs), curriculum changes, and a proposal to establish a corps of faculty liaisons in both arts and sciences and in education who would take responsibility for regular communication about, and coordination of, curriculum, recruitment, admission, retention, and other issues related to teacher education.

We have found it especially difficult to coordinate an M.A.T. program that is basically disconnected from the undergraduate experience. STEP has helped to identify the breakdowns in communication that have resulted and the areas that we need to address. For example, we have discovered, through the communication between units that STEP has prompted, that aspects of program design assumed to be dictated by the other unit are not actually required by either. We are therefore beginning a comprehensive study of our M.A.T. programs, discipline by discipline, to make sure that faculty from both education and arts and sciences en-

dorse the prerequisites, and that undergraduate majors in arts and sciences are aligned with the most recent actions of the Kentucky Education Professional Standards Board.

How Was STEP Supported, Including Financially?

Faculty members have committed their time to STEP without compensation, and in so doing, provided its primary financial support. We have connected many STEP meetings and events, such as the institutes on Transition to College, to other programs within the College of Arts and Sciences or the College of Education and Human Development or to other externally funded programs, such as the Jefferson County Public Schools' Lesson Study project. Because the work of STEP touches on issues that are a priority for the university provost, she has committed to funding the faculty liaison proposal (see Appendix X).

The STEP initiatives are well received on campus and in the Jefferson County Public Schools because they have the commitment of the university at the highest levels. The faculty liaison proposal institutionalizes the importance of the work and gives recognition to the faculty members who are working to improve recruitment, advising, tracking, and assessment of teacher education candidates.

References

Haycock, K. (1998). *Good Teaching Matters: How Well-Qualified Teachers Can Close the Gap. Thinking About K-16*. Washington, DC: Education Trust.

DEALING WITH LEADERSHIP AND PERSONNEL CHANGES: KEEPING THE VISION

*Kathy Simons, Assistant Professor, Department of Mathematics and Computer Science,
Valdosta State University*

Just before joining STEP, the Valdosta State University (VSU) College of Education redesigned its programs of study to satisfy University System of Georgia requirements. In fall 1998, the university, along with every institution of the university system, switched from the quarter system to the semester system. The vice president of academic affairs charged every department of VSU with studying their degree programs and urged them to do more than merely convert traditional 5-quarter-hour courses to 3-semester-hour courses. Planning for the conversion took more than a year, as each department looked critically at its programs and course work.

Committees for language arts, mathematics, social studies, and science were already in place, with representation from both the College of Education and the College of Arts and Sciences. They were asked to play a large role, working across college lines, in redesigning the degree programs.

While the work of semester conversion proceeded, the Board of Regents of the University System of Georgia was formulating new policies for teacher preparation. These policies were adopted as the 1998 *Principles for the Preparation of Educators for the Schools*, and they required teacher education programs to undergo another revision by fall 2000. In order to accomplish this task, the VSU deans of education and arts and sciences charged the subcommittees with studying the national and local standards of their disciplines and deciding “what every VSU teacher candidate should know and be able to do.” They were asked to write content standards based on their findings and to design programs of study that would incorporate these standards. The departments within the College of Education were given a similar charge as they designed the professional components of their degree programs. This work not only necessitated redesigning courses, but developing new courses as well. During this process, VSU joined STEP.

Any long-term project that involves many people will see some personnel changes. Faculty members leave, or the demands of their work on the faculty may no longer allow them the flexibility to serve on a committee. However, Valdosta State experienced very significant administrative changes. The vice president of academic affairs and the dean of the College of Arts and Sciences each resigned to take positions elsewhere. The dean of the College of Education resigned for a position on the state’s professional standards commission, and the president of the institution announced his retirement.

So how was Valdosta State able to continue its STEP work and accomplish its stated goals?

First of all, we were fortunate that the people selected to serve as interim deans and as interim vice-president of academic affairs were well aware of STEP, both nationally and at VSU. They were quick to show their support for the work of the discipline committees and other committees charged with improving teacher preparation. They have continued to provide the direction necessary for all the committees to accomplish their tasks.

The more faculty members involved in a project, the smaller the impact when someone leaves.

Secondly, other key personnel have not changed. Of critical importance is the P-16 Coordinator for South Georgia. The coordinator, a Valdosta State faculty member, is the driving force behind several teacher education projects. Leadership by key system-level personnel in the Board of Regents office has also remained constant. These individuals have certainly contributed to the success of our STEP work.

Thirdly, VSU is not only committed to standards-based education for teacher candidates, but supports other standards-based projects as well, such as the Quality Undergraduate Education (QUE) and Performance Assessment for Colleges and Technical Schools (PACTS). Several faculty members have participated in more than one of these projects. QUE is a national project that is establishing standards for undergraduate student learning in the disciplines of biology, chemistry, English, history, mathematics, and physics. PACTS is a performance-based system designed to ensure that all students who graduate from high school are prepared for either entry into postsecondary education or into the work force. Essential to the project was the development of standards for exit from high school in language arts, mathematics, sciences, social sciences, second languages, and fine/performing arts. The project also developed standards for level 14—exit from a technical college, 2-year college, or completion of the core at a 4-year institution.

These projects have offered many opportunities for faculty members throughout the university to be involved in standards-based education. The more faculty members involved in a project, the smaller the impact when someone leaves.

At times the discipline committees had functioned with a chair chosen by the two deans. In the last 2 years, however, the committees returned to a previous structure of two co-chairs, one from each college. Several faculty members have served at least 2 years as a chair or co-chair. Even when committee leadership has changed, however, a strong chain of continuity has remained. Other members usually continue to serve when one assumes the position of chair. Anyone applauding the success of STEP at VSU must highly commend these committee chairs for their work.

Typically, any project requires a lot of communication to succeed. The STEP coordinator must communicate frequently with the co-chairs of each committee, and the co-chairs must

in turn communicate frequently with each of their members. Sometimes the communication is necessary to relay specific information, but sometimes it is simply a guise to draw attention to the work and an indirect reminder: "Don't forget about STEP. Don't let your assigned task get lost in the mounds of paperwork on your desk!"

We used periodic workshops to focus the committees on specific tasks and provide them time to meet and work. These workshops usually began with a general session of all the committees. Individual committee breakout sessions followed. The STEP coordinator would also periodically hold meetings with the co-chairs.

Faculty members involved with STEP have attended many state and national professional conferences, which have proven to be a valuable means of communicating national ideas and trends to STEP participants. VSU faculty members presented at some of these meetings and held workshops related to STEP.

There is one particular committee at VSU, the Teacher Education Council, which meets regularly for an exchange of ideas between the College of Education, College of Arts and Sciences, and the P-12 public school faculty. Co-chairs of the discipline committees are members of this council.

In addition, the university president and vice president for academic affairs have always participated in as many meetings and functions as their schedules allow. They have been quick to praise the work accomplished by the committees and, on occasion, specific individuals.

This past year, the STEP work at Valdosta State was incorporated into a larger project that also seeks to improve teacher quality. The University of Georgia, Albany State University, and Valdosta State University were funded by the United States Department of Education for the Georgia Systemic Teacher Education Program (GSTEP). GSTEP is working to develop a teacher preparation program that will be a seamless model from the freshmen year through a 2-year induction period after graduation. Its goals also include preparing teacher candidates and beginning teachers to bring all learners to high levels of achievement. The discipline committees have been charged with creating assessment pieces to ensure our teacher candidates meet the standards. Thus, the STEP work at VSU continues.

MAKING THE MOST OF EXTERNAL AND CAMPUS RESOURCES

*Sam Evans, Associate Dean for Administration and Graduate Studies,
College of Education and Behavioral Sciences, Western Kentucky University*

Western Kentucky University's participation in the Standards-based Teacher Education Project (STEP)[™] provided an opportunity to align the university's teacher education program with Kentucky's Core Content for Assessment, in the effort to ensure that teacher candidates are prepared to facilitate student learning at high levels based on Kentucky's P-12 Academic Standards. The STEP initiatives were aligned with Western's Title II Higher Education Act Teacher Quality Enhancement project and with the BellSouth Reinventing Schools of Teacher Education initiative. Together, these initiatives helped build the foundation to garner additional monies that would enhance the capacity of Western's graduates to provide a quality education to all their students.

Use of STEP Funding

Western launched STEP with the strong support of the president, provost, and college deans. A senior professor in the Department of English directed the program in collaboration with the associate dean of the College of Education and Behavioral Sciences. A steering committee was identified and included administrators and faculty members from both the colleges of arts and sciences and teacher education, as well as teachers and administrators from the public schools.

The steering committee established six subcommittees, one for each of the six core content areas developed through a collaborative effort of teachers, administrators, and higher education faculty by the Kentucky Department of Education. These subcommittees, which included arts and sciences faculty members, teacher educators, teachers, administrators, and candidates, reviewed all general education and teacher preparation courses to ensure that candidates would have the opportunity to acquire both the content background and pedagogy skills to facilitate learning of all students. To assist faculty members in this review process, the university purchased copies of Kentucky's Core Content for Assessment and Program of Studies for all departments and provided extra copies upon request to individual faculty members. The review led to program revisions and provided the stimulus for additional initiatives at the university.

The program reviews were structured around the six assessment areas stipulated by Kentucky's Core Content for Assessment: language arts, mathematics, arts and humanities, science, social studies, and vocational and practical arts. Specific examples of reviews are as follows:

Family and Consumer Sciences Education

The review of the Family and Consumer Sciences Education preparation program began with a focus group of four practicing teachers, two of whom graduated from Western, two of whom did not, which considered the knowledge and skills required in the field. Their discussions focused on the Kentucky Core Content for Assessment and current practice in Western's preparation program. The subcommittee reviewed the focus group findings against the program of study and course syllabi, identifying strengths and weaknesses.

Changes in the program were subsequently initiated. The subcommittee identified design concepts as one area of weakness and, to strengthen the curriculum, recommended revisions in the interior design program. In addition, the Family and Consumer Sciences Education program removed elective options and added three required courses, including a marketing course taught by another college.

Mathematics

The mathematics subcommittee included classroom teachers as well as arts and sciences and teacher education faculty members. According to the subcommittee chair, the value of the review process included "classroom teachers validating what we are doing" and "teachers appreciate being asked" to help evaluate the program. The process also provided an opportunity for education faculty members without expertise in mathematics to understand what the program taught and its relationship to the Kentucky Core Content for Assessment.

This review led to programmatic change, including the substitution of an applied statistics course for theoretical probability in the mathematics program that prepares for certification in grades 8-12. Substituting this course aligned the preparation program more closely with what is taught in high school. The mathematics review also resulted in the development of new prerequisite courses specifically for teacher candidates in the elementary education program.

Physics

To foster greater emphasis on pedagogy within the Department of Physics and Astronomy, a nationally recognized science educator was brought to campus to present a colloquium to faculty members from that department and from education, to give a public lecture, and to facilitate a workshop on understanding physics. The presentations centered around the Constructing Physics Understanding (CPU) project at San Diego State University, a modular curriculum in which students create, test, and refine scientific theories through a carefully sequenced series of experiments, powerful simulators, and discussion. The CPU curriculum was specifically designed for preservice teacher candidates, to improve their understanding of the scientific process, to improve their confidence studying science, and to model a hands-on approach to teaching science.

The presentations raised awareness regarding the appropriateness of lower level physics courses for non-physics majors, and the possibility of restructuring some courses to be more interactive by featuring computer simulations and real-time physics. There is some interest currently in making some physics classes test sites for software associated with the CPU project.

Funds also support school visits by arts and sciences faculty members to help them understand the role and circumstances of a classroom teacher.

Praxis II

As part of the program review, the subcommittees also reviewed the Praxis II assessments to determine how well our programs aligned. (Individual Praxis II assessments identify the categories to be covered and the approximate percentage of the examination devoted to each.) Consultants from Educational Testing Service presented two workshops for arts and sciences and teacher education faculty and professional staff members. Approximately 100 people participated, representing all content disciplines and teacher preparation programs. Although Western teacher candidates have scored very well on the Praxis II tests, faculty members are exploring other means to document the content knowledge of candidates.

Additional funds are expanding this STEP initiative to encourage faculty members to take the appropriate Praxis II in their disciplines. Faculty members are reimbursed for the cost of the test and given a professional development stipend. The obvious value of this initiative is to enlighten faculty members about the content assessed by Praxis II. It is even more valuable, however, for them to understand and integrate into their instruction the thinking processes that teacher candidates must acquire to succeed. Many faculty members from across campus have enrolled to take the test. Although most are from departments that offer programs leading to certification, others are from disciplines that provide courses for the general studies component of teacher education degree programs.

Use of Existing Funding to Support STEP

Recreating Schools of Education Initiative

Enhancing partnerships between teacher educators and public schools and arts and sciences faculty members was central to the BellSouth Recreating Schools of Education initiative. Western offered two blocks of three professional education courses in a public school setting, to strengthen the elementary education program. Teacher educators exchanged roles with classroom teachers: classroom teachers taught sections of professional education courses, and teacher educators taught elementary students, improving their understanding of current class-

room practice. The secondary education program has begun to adopt reforms now in place in the elementary education program, increasing the involvement of teacher candidates and teacher education faculty members in high school classroom settings. Teacher performance and content standards were integral components of the initiative.

Electronic Portfolios

Under the BellSouth Recreating Schools of Education initiative, Western began development of an electronic portfolio as an accountability measure. The process expanded, however, through the implementation of STEP and the subsequent infusion of university and Title II Teacher Quality Enhancement funds. The goal of the electronic portfolio process is to provide a system to track candidate performance, to show candidate development over time, to allow candidates to experience state-of-the-art technology, and to provide a convenient portfolio format for candidates when they complete the teacher education program. The portfolio consists of “critical performances” developed by faculty members from the various programs within the teacher education unit. Performances are aligned with Kentucky’s New Teacher Standards, the standards within the Renaissance Teacher Work Sample, and, subsequently, with the Kentucky Core Content for Assessment for P-12 students. Currently, only those performances associated with professional education course work are included within the system. Several arts and sciences disciplines have expressed an interest in developing performances aligned with discipline content. The music and English departments began developing critical performances during summer 2002, with implementation in fall 2002. Both departments were actively involved in STEP, and faculty members requested that their candidates be involved in performances specific to disciplines.

Title II: Teacher Quality Enhancement Initiative

The major initiative at Western Kentucky University that complements and enhances the work of the STEP initiative is the development of the Renaissance Teacher Work Sample, a partnership among 11 institutions from 10 states and their respective partner schools. The goal is for teacher candidates to use the Renaissance Teacher Work Sample to provide credible evidence of their ability to facilitate learning for all students. The initiative is built upon the following principles, integral to the Renaissance Group:

1. Teacher education is an all-campus responsibility.
2. University faculty and practitioners are related professionals who share the responsibility for the initial preparation of teachers.
3. The initial preparation of teachers is integrated throughout the student’s university

experience and includes general education, in-depth subject matter preparation, and both general and content-specific preparation in teaching methodology.

4. The education of teachers incorporates extensive and sequenced field and clinical experiences in diverse settings.
5. Teachers are prepared to be effective in a variety of contexts. Effective learner outcomes characterize the program to educate teachers.
6. The continuing professional development of teachers and other education personnel is the shared responsibility of the individual, the university faculty, and other education professionals.
7. The university prepares teachers to employ technology and interactive strategies to promote student learning appropriately.

To implement both the Renaissance Group principles and the work sample process, we have had to shift focus to learning instead of teaching, and directly connect this shift to all program components. The foundation for this paradigm shift was built by the STEP review of the teacher preparation program in terms of the Kentucky Core Content for Assessment and Praxis II. Another aspect of the Renaissance Teacher Work Sample initiative is the presence of mentoring teams, consisting of arts and sciences and teacher education faculty members and school practitioners, who will facilitate both the paradigm shift and the subsequent documentation. The mentoring teams will help teacher candidates design and implement highly effective units of instruction in specific content areas, and then assess the learning progress of their students. Specific information about this initiative can be found at <<http://fp.uni.edu/itq>>.

Efforts to Secure Additional Funding to Further STEP Initiatives

An overwhelming challenge facing teacher education programs is to connect all elements of the program so as to create a cohesive unit including arts and sciences faculty, teacher educators, and classroom teachers and school administrators. Western believes that, by providing the connection through partnerships that involve all constituents, we will ensure the quality of teachers and the instruction they provide. At Western Kentucky University, the education of teachers is a university-wide endeavor aligned with the goals of the Council on Postsecondary Education (CPE), the coordinating council for change and reform in Kentucky's postsecondary system. Western's alignment and its initiatives in teacher education enabled the University to secure additional funding from the CPE Action Agenda Fund to support teacher quality/teacher education initiatives in recruitment and retention, improvement of teacher preparation and teacher quality, and capacity building of schools and practitioners in Western's service area. Teacher quality/teacher education initiatives are directly related to and enhanced by the goals of STEP and aligned with the Renaissance Group principles. Specific projects initiated by arts and sciences faculty members and funded through Action Agenda include:

1. Arts and Humanities Institute for P-12 Art Specialists,
2. Summer Workshops for P-12 Spanish Teachers,
3. The Literature Project: A Weeklong Summer Institute for 7th-12th Grade Teachers,
4. Pedagogy Speakers/Consultants for Faculty Development and Secondary Teacher Training,
5. Enhancing the Chemical Knowledge of Teachers and Providing Support for Classroom Activities for Chemistry Teachers,
6. Basic Principles of Finance & Investments - Workshop for High School Teachers,
7. American and World History Consultants,
8. A Model Physical Education Curriculum, and
9. From Hell to Heaven: In the Footsteps of Dante and Virgil: A Three-week Summer Teacher Academy in Values Clarification Through the Study of Classical Literature.

Although these initiatives serve practicing teachers, their impact directly relates to Western's undergraduate teacher preparation program. As Western moves into field-based middle and secondary school preparation programs, practitioners who have strengthened their capacity in the content and methodology of their disciplines will model effective instruction for Western's teacher candidates.

To strengthen the connection between the university and local schools, Action Agenda funds also support school visits by arts and sciences faculty members to help them understand the role and circumstances of a classroom teacher. Faculty members are expected to listen, watch, and learn, not to offer assistance. We view these visits as vital to improving and aligning our teacher preparation programs with the Kentucky Core Content for Assessment in P-12 schools. By developing a greater understanding of the P-12 classroom context, Western faculty members will have a stronger foundation upon which to build our teacher preparation and professional development programs.

Although not unique to Western or originating with STEP, Western's STEP initiatives have nevertheless renewed partnership efforts and made teacher preparation truly university-wide. One specific example of a new partnership funded by Action Agenda is an initiative by faculty members in the Family and Consumer Sciences Education program. A faculty member who participated in STEP initiated this proposal in response to the curriculum review findings in order to connect the teacher preparation program with the world of practice. Funding provides opportunities for teachers in their first year and teachers new to Kentucky to work with master teachers in the discipline, and to attend five meetings with faculty members and teacher

candidates, three in classroom settings. This funding also provided a small stipend for the host school and monies to purchase a CD burner, enabling the project director to provide information electronically in a format that participants could take back to their home schools.

In addition to partnerships formed on campus, the ties between Western and the public schools have been strengthened.

The Department of Physics and Astronomy provides another example of how STEP has fostered interest in acquiring external funding to enhance teacher education. As a result of the STEP-funded workshops, faculty members are seeking funding to develop computer labs to integrate technology into instruction. Such labs would enable faculty members to implement the Constructing Physics Understanding (CPU) model of instruction in a variety of courses that enroll teacher candidates.

Western has also received a Technology Innovation Challenge award, which reaches all departments across the campus. The project has six major goals: (a) to ensure that all graduates of our teacher education program can use technology to increase student achievement; (b) to ensure that all graduates can use technology to assess student learning; (c) to ensure that all university faculty members from both teacher education and the arts and sciences can model effective technology-assisted instruction for prospective teachers; (d) to ensure that electronic portfolios become the primary means of gathering data to evaluate teacher performance; (e) to use technology to show P-12 students that teaching is a good career option; and (f) to set up an electronic clearinghouse that will give teachers and teacher educators throughout the country access to exemplary technology-assisted lesson plans and assessments. To facilitate the achievement of these goals, faculty members from across campus were invited to participate in seminars and to become “technology advocates.” Faculty members who accepted the challenge attended seminars throughout the year and a symposium to showcase the projects they created as technology advocates. These advocates will share their expertise with other faculty members during the coming academic year, and additional faculty members will be trained as advocates. Western staff will begin working with practitioners during the coming year, and in the third year, work specifically with teacher candidates and indirectly with P-12 students. A faculty member from the psychology department initiated this project, and many of the faculty members participating in the project are from arts and sciences. An overview of the project appears at the following website: <<http://www.etrainexpress.com>>.

In addition, the technology project provides mini-grants to faculty members to develop and share exemplary technology-assisted lessons. The mini-grants, available to arts and sciences and teacher education faculty members, require recipients to demonstrate the technology applications they have created and to help colleagues adapt them for their classes.

Involvement of Arts and Sciences Faculty Members

Even before the inception of STEP, arts and sciences faculty members were deeply involved in Western's teacher education program. Many arts and sciences colleagues served on the state-wide committees that developed the Kentucky Program of Studies and the Core Content for Assessment, and the knowledge they gained from these experiences has been invaluable in developing and implementing educational reform at Western. Practicing teachers can enroll in several discipline-based master's degree programs, including the Masters of Business Administration, for purposes of rank change. Although some programs are pure content, all offer an option to deepen pedagogical knowledge. In addition, Western is exploring ways to restructure master's degrees in the sciences to attract teachers using the alternative certification routes available in the Commonwealth.

Partnerships Developed Through the STEP Program

While Western has always prided itself in its university-wide approach to teacher preparation, the STEP initiatives have enhanced this commitment. Developing new initiatives has involved arts and sciences faculty members to a greater degree in the process. In addition to partnerships formed on campus, the ties between Western and the public schools have been strengthened. While some partnerships are formed within the schools, Western is also a member and host of the Green River Regional Educational Cooperative (GRREC), which comprises 28 school districts and Western. Western also houses the Region II Education Services Center, which provides professional development opportunities to districts in the region. Western is partnering with GRREC to develop an alternative route to certification program for special education, middle grades, and secondary teachers, an effort partially funded through a federal Transitions to Teaching award received by GRREC. Arts and sciences faculty members have increased their involvement with the Region II Services Center by participating in summer institutes aligned with academic disciplines, and staff from GRREC and Region II are actively involved in university initiatives.

Most recently, Western has formed a partnership with the Kentucky Education Professional Standards Board to provide mentoring for national board candidates. Supported partially by university funds, Western will mentor candidates seeking national board certification, using arts and sciences faculty members as well as teacher educators as mentors. This initiative builds upon partnerships strengthened through STEP and is aligned with efforts to provide teachers with the knowledge and skills to facilitate the learning of all students.

Partnership development at Western is a continual process furthered through STEP. Insights developed through STEP have spawned new ideas under development with new institutional and external funding. The alignment of our programs with the P-12 Core Content for Assessment has served as a foundation for many of these initiatives and has provided the catalyst for faculty members, working as a unit, to address the needs of our schools to provide a quality education for all students.

STANDARDS AND STEP ... REFORMING TEACHER EDUCATION

*Curtis Martin, Vice-President for Academic Affairs, Paine College
(Formerly Dean, School of Education, Fort Valley State University)*

Far too often we hear of efforts to “close the gap” between the achievement levels of students of different ethnic and racial backgrounds. Differences in performance on teacher licensing examinations have focused attention on educator preparation programs and, in particular, those at the nation’s Historically Black Colleges and Universities (HBCUs). The performance of HBCU candidates on licensing exams has caused many to question the quality of these programs and the teachers they graduate. Although these concerns about quality cannot be substantiated from the classroom performance of teacher graduates from HBCUs, gaps exist and so too does the need to dispel notions about inferior students and inferior preparation.

This paper addresses how a small HBCU in the South, Fort Valley State University, reforming its teacher education program, has undertaken the work of the Standards-based Teacher Education Project (STEP)[™] as one strategy for addressing the success rate issue and continuing its quest for quality in teacher preparation.

The centerpiece of teacher education reform at Fort Valley State University is a standards-based program at the course level. The program is referred to as the Charter Teacher Education Program. Students choosing to matriculate in pursuit of a career in teaching are admitted to teacher education when they first enroll based solely on the high school G.P.A. and the SAT/ACT score. They are admitted to candidacy for teaching upon completion of the freshman and sophomore curricula. The unique features of the program center on:

- All education majors (any field) must complete the core curriculum in the standards-based Charter Program.
- Candidates are given a set of guidelines at the beginning of the course that identifies the standards for knowledge and skills (what the student must know and be able to do) and how their success on these standards will be assessed.
- Candidates may not exit a course or receive a grade until they have met all standards at the proficient level or higher. This rule applies to all teacher education majors as they complete the core requirement of 60 credit hours in arts and sciences. Currently, only early childhood and middle grades teacher candidates complete their entire program (core, professional, and content) based on this standards completion approach. Courses are completed in either the College of Arts and Sciences or the College of Education.

- Candidates who meet all but one of the standards by the end of the semester receive a grade of “IC” and are not required to re-enroll. Instead, the candidate must work with a faculty member in a “one-on-one” arrangement outside of class to meet the stated standard and undergo the required assessment. Failure to meet with the faculty member will change the “IC” to an “IPC” and thus mandate re-enrollment in the course. If the candidate does not re-enroll, the “IPC” will become a grade of “F.” Candidates must complete “IC” grades by mid-term of the following semester and earn a grade of “A” or “B.”
- Candidates who have more than one standard rated “unmet” at the end of the semester receive a grade of “IPC,” and they must re-enroll in the course. Upon re-enrolling, the candidate is required to demonstrate proficiency on all the standards, not merely those noted as deficient. The “IPC” grade merely reflects that the candidate was enrolled in the course; it does not count as a grade and is not reflected in calculating hours earned, hours attempted, or the GPA. If the candidate does not repeat the course and meet the standards, the “IPC” grade is changed to an “F” grade.
- Candidates may enroll for a course three times, but no grade will be given until the standards are met. (The standards remain constant, and candidates are given time to learn and to demonstrate achievement.)
- Any course taken outside of the Charter Program can be submitted for credit in the program. The course will only be accepted if it is validated using charter standards, however. Courses taken at Fort Valley, but not under charter rules and courses, and courses transferred into Fort Valley from other schools, must be validated. The validation process consists first of a period of notification and preparation. Next, a team of two or more faculty members administers the same assessments required of candidates enrolled in charter courses. Failure to meet the “proficient” level on all assessments will result in the candidate having to re-enroll in the course or work in a “student-faculty member pod” to rectify the conditions preventing the candidate from meeting standards. Candidates rated “very deficient” must enroll in the appropriate charter course regardless of the grade received in the course already completed.
- The faculty is neither education nor arts and sciences, but defined as a “special unit” with a mission to strengthen content and pedagogy while committing to self-improvement in these areas and modeling this mission for future educators.

Currently, no charter candidate has yet completed the program and applied for licensure. The plan, as outlined in the original proposal, requires that a panel of experts review a comprehensive portfolio prepared by each applicant for graduation. The panel, consisting of public school teachers, arts and sciences faculty members, education faculty members, and charter faculty members, would review candidate performance on standards for knowledge and skills as well as evidence relative to the dispositions (values, attitudes, and professional ethics) of the candi-

date. The panel would be charged with making recommendations about the worthiness of the candidate for licensure and for entering the profession.

The goals of STEP are consistent with the needs of Fort Valley State University as it embarks on this reform. In short, these needs are:

- To establish a mission of excellence within the unit.
- To analyze the existing program to determine the existence of “gaps” in our efforts to afford teacher candidates opportunities to gain the necessary knowledge and skills to ensure achievement gains for all their students.
- To determine what is necessary to eliminate any gaps and implement the needed modifications.
- To systematize the process for continuous program analysis and evaluation and implement corrective activities as needed.

A basic question asked as we launched the standards-based Charter Program was “What standards?” STEP provided both a direction and a structure that enabled us to articulate “charter standards” and to give meaning to the expectations placed on our students. Immediately upon our acceptance in STEP, the need for aligning courses became obvious.

Because no Charter Program course is taught by any one unit of the institution, STEP meetings immediately had people from all units present and talking. What formerly had resulted in little or no positive action now produced frequent meetings and meaningful retreats attended by faculty members from arts and sciences and from education. The alignment activities revealed major gaps, not only in the knowledge our teacher candidates would need to help P-12 students achieve the standards set nationally and by Georgia’s Quality Core Curriculum, but also in what they were expected to know to pass Praxis II, the teacher licensure examination.

Although STEP provided a purpose and a structure for strengthening the arts and sciences/education relationship, the alignment activities opened channels for emphasizing accountability. In charter and charter-based courses, the integration of standards meant a shared understanding and more importantly, a set of expectations. In the curriculum, as well as in instruction, we avoided “hit-or-miss” instruction and not knowing:

- whether content is taught,
- when content is taught, and
- who is teaching the content.

The assessment component, essential to the Charter Program, resulted in faculty members exhausting tremendous amounts of time developing assessments that were demanding and

yet fair. An arts and sciences faculty member summed up this phase of the work by saying, "This is the most meaningful of all that we have done. This is where the rubber meets the road."

Ironically, the collaboration continued although faculty members were now moving in different directions. In assessing content, faculty members focused on "How do you know they know," whereas those assessing pedagogy asked "How do you know they can use this content

The standards remain constant, and candidates are given time to learn and to demonstrate achievement.

to improve student learning (pedagogy and pedagogical content)," and "How do you know they are making a positive impact on the learning of children?" This final point helped many of our faculty members see the real meaning of teaching and the true value of their efforts as they work with students aspiring to be teachers.

The purposes and goals of STEP are consistent with every educational reform initiative and policy at Fort Valley State University. The charter concept is the driving force behind our reform efforts, but curriculum and teaching are "what matters most." It was obvious that those who conceived the idea of STEP wanted a project that could easily fit with any reform effort. To borrow from an old adage, "All reform must pass through curriculum."

A very significant requirement for fulfilling the STEP goals revolves around assessment. The assessment component enabled us to begin looking at Standards 1 and 2 of the NCATE unit standards at the same time that we were beginning to prepare for our NCATE review. Standard 1 asks for evidence that candidates have the knowledge, skills, and dispositions (values, attitudes, professional ethics) necessary to help all students learn. Standard 2 requires that education units have an assessment system that collects and analyzes applicant, candidate, and graduate performance data to improve the unit and its programs.

Finally, a review of other initiatives engaged in by the education unit finds the work of STEP in perfect alignment for achieving goals we had previously set. The other initiatives with which STEP aligns include partner schools, field experience requirements, and collaborations as well as curriculum and course matters.

A major initiative in which we were engaged was compliance with the Principles for the Preparation of Educators of the Board of Regents of the University System of Georgia. At the heart of these principles is the improvement of teacher education at university system institutions. Again, the STEP work complemented our efforts and defined the path through which many of our activities had to pass to comply.

The support for STEP has come from many sources. Fort Valley State University was initially introduced to the project as a result of involvement in the BellSouth project, "Recreating Colleges of Teacher Education." Since the vice president of academic affairs was involved in that project, we have also enjoyed administrative and financial support.

Arts and sciences faculty members and their dean have also staunchly supported STEP. In fact, the STEP team is 60 percent arts and sciences faculty members and 40 percent education faculty members. The willingness of the leadership of the College of Arts and Sciences to engage in activities to meet STEP goals, and their willingness to support retreat and other travel activities, is further evidence that support for STEP has been strong, and that these efforts will be sustained once the limited funding now received ends.

There is general consensus among Fort Valley faculty members engaged in STEP work that when the goals of STEP are fully met, the project will have made a difference for teacher candidates. This work should be viewed, however, not as an equalizer but rather as a strategy for closing gaps, and as one vehicle for ensuring that our teacher education programs are positioned to prepare teachers who know the subjects they teach and are able to use their pedagogical skills to help all learners achieve at higher levels.

V. The View From Beyond the Campus

STEP'S ROLE IN GEORGIA'S STATEWIDE P-16 INITIATIVE

*Dorothy Zinsmeister, Senior Associate for Academic Affairs,
Board of Regents of the University System of Georgia*

Why STEP in Georgia?

In 1996 in Washington, D.C., at a meeting of the National Commission on Teaching and America's Future (NCTAF), a model for a Standards-based Teacher Education Project (STEP)TM was introduced. Designed to improve campus undergraduate and graduate teacher education programs, the goals of STEP were concise, clear statements of purpose—to ensure that the graduates of teacher education programs in the United States *know their subjects, know how to teach their subjects, and know how to assess student achievement.*

As discussion continued throughout the afternoon, Georgia stepped up and volunteered to be the pilot state for the STEP Initiative. Convinced that this was a project worth pursuing, three University System of Georgia institutions (University of Georgia, Georgia State University, and State University of West Georgia) inaugurated STEP in 1997 and agreed to participate in the project for 3 years. Each institution was asked to identify a STEP coordinator and to develop processes and operating procedures for implementing STEP goals. It was anticipated that the diverse missions and cultures of the three institutions would result in three very different STEP models.

How Does STEP Work With Other Policies?

Why did Georgia volunteer to be the pilot state for STEP? What was occurring in the state of Georgia that made participation in STEP such an attractive option? What strategies and rationales governed the initial foray into the work of STEP? During the same period of time (1996) that the Washington-based Council for Basic Education (CBE) and American Association of Colleges for Teacher Education (AACTE) were creating a model for STEP, the Governor of Georgia was establishing the Georgia P-16 Initiative. This initiative joined together the University System of Georgia, the State Department of Education, the Office of School Readiness, the Professional Standards Commission, and the Department of Technical and Adult Education to work on shared goals. These P-16 partners operated within the framework of the Georgia P-16 Council that reported to the Governor.

In 1996, the P-16 Council targeted teacher quality as a priority. The Teachers and Teacher Education Subcommittee of the council was appointed to develop recommendations for reform of P-16 education in Georgia. Early work of the subcommittee resulted in:

- An overall framework for change in P-16 education,
- Recommendations to increase the availability of alternative teacher preparation programs and to strengthen traditional programs, and
- Recommendations to establish standards for both students and teachers, to enhance teacher preparation and professional development, to put a qualified teacher in every classroom, to encourage and reward knowledge and skills, and to create schools that are genuine learning organizations.

The Board of Regents of the University System of Georgia took immediate action on these recommendations, and in 1998 adopted the *Principles and Actions for the Preparation of Educators for the Schools*, to be phased in at all public universities that prepare teachers by 2002. It is the comprehensive nature of the *Principles* that makes them so powerful, for they address the challenges of teacher recruitment, teacher quality, school leader quality, and the redefinition of educator preparation programs. Particularly relevant to STEP are the requirements for institutions to align their curricula with P-12 academic standards and to assess candidates' ability to help P-12 students learn to a high level with regard to those standards. This bold policy was designed to strengthen all educator preparation programs at the 15 public universities that prepare educators in Georgia.

So, why did Georgia volunteer to be the pilot state for STEP? One reason is that the board's *Principles* provided a framework within which STEP could easily be implemented. A second reason resided in the fact that the goals of STEP are among the major priorities of the *Principles*. Principle #1 "guarantees" the quality of any teacher who graduates from the university system by assuring that graduates have sufficient subject matter knowledge in all areas included on their teaching certificates, and that graduates can demonstrate success in bringing students from diverse cultural, ethnic, international, and socioeconomic groups to high levels of learning. The Georgia institutions piloting STEP reasoned that STEP could help them achieve the goals set out by board policy. Third, the opportunity to collaborate with two such highly regarded national organizations as CBE and AACTE, and to take advantage of the talented STEP leadership in the organizations, was obviously attractive. And last, piloting STEP gave the institutions the luxury of taking risks, of exploring new ways of doing business, and of supporting innovation. STEP and Georgia were poised to move forward at the same time and in the same directions.

How Did Georgia Help Support the Work of STEP?

How could the state help launch its important P-16 work (and STEP work) and provide institutions with resources to move the agenda forward? Over the last 5 years, the University System of Georgia invested heavily in P-16 work. It redirected funds to colleges and universities to support major reforms in the preparation of new teachers, and it supported the P-16 network of regional P-16 councils—a forum for sharing best practices and lessons learned. Concurrently, the university system assumed a leadership role in launching a state teacher quality plan and received multiyear funding from the U.S. Department of Education to sup-

port it. Some of those funds were used to expand the number of Georgia institutions participating in STEP from three to eight, and to provide small multiyear grants to the institutions to support the work of STEP. Funds from the USG Professional Development Special Funding Initiative were earmarked to support faculty development activities that address thorny issues such as standards-based education, teaching in a standards-based environment, and assessment strategies that effectively judge the quality of graduating teachers. A STEP coordinator was also designated, in the university system office, whose role it is to coordinate STEP activities in the state, to offer guidance to the participating STEP institutions, and to serve as a state liaison to the national STEP organizations.

*STEP gave the institutions the luxury of taking risks,
of exploring new ways of doing business, and of
supporting innovation.*

The work of the Board of Regents with institutions was characterized by cooperation and sharing of information. One way the board supported an atmosphere of openness was through regular meetings, creating twice-a-year forums that accomplished several important goals with regard to accountability and exchange of information. At these meetings, the board informed institutions about progress toward the implementation of the *Principles* and the collective movement of the institutions toward meeting them. In turn, the board learned from the institutions about specific approaches they were developing to meet the *Principles*. Institutions were afforded the opportunity to hear from a variety of expert presenters on topics related to the *Principles*. One such topic was assessment of candidates and P-12 learning.

To supplement the presentations, the Board of Regents supported consultants who worked with institutions individually on the Teacher Work Sample (TWS) approach. TWS allows candidates to demonstrate their teaching ability through the assessment of a collection of their course work and documentation of their effectiveness with P-12 students. The development of TWS, or alternative approaches, will help in the effort to collect consistent data on Georgia's teacher preparation programs and P-12 student learning.

Following the standards-based model, the Board of Regents provided institutions with a rubric that clearly spelled out expectations for progress in meeting the *Principles*. In addition to reports submitted to STEP staff, Georgia institutions were required to submit annual reports to the board based on its rubric. Board of Regents staff reviewed each report and provided detailed feedback as to where the institution stood within the rubric framework. As a result, institutions could begin the next year with a clear idea of what they had accomplished to date and what remained to do. The feedback also kept them on a steady track toward meeting goals by giving institutional leaders a structure for faculty discussion and decision making. The comprehensive review of the institutions' reports also provided the Board of Regents with detailed information about the variety of models being developed to meet the *Principles*, challenges that institutions were encountering, and specific data about their progress.

Georgia has worked hard over the past 5 years to achieve the goal of placing a qualified teacher in every classroom. A qualified teacher knows all of the subjects he or she teaches and succeeds in helping students from diverse groups achieve at high levels. We are not there yet. But STEP has helped guide us by asking many important questions, by pointing us in the right directions in pursuit of appropriate if often incomplete answers, and by freely sharing advice and expertise. Georgia's standards-based teacher education programs have been strengthened as a result of participation in STEP.

MARYLAND'S PARTICIPATION AND STEP'S RELATIONSHIP WITH MARYLAND REFORM INITIATIVES

Virginia Pilato, Chief, Program Approval and Assessment Branch, Division of Certification and Accreditation, Maryland State Department of Education

From the beginning of STEP, the Maryland State Department of Education (MSDE) was extremely interested. In the second year of STEP's work with Georgia, the STEP co-directors met with MSDE representatives, who expressed this interest and desire for a partnership. From this meeting with the co-directors, Maryland moved forward to become the second STEP state.

Maryland's interest in STEP originated from the consistency of the STEP vision and procedures with Maryland's teacher education reform policy, widely known as the *Redesign of Teacher Education*, which covers the preparation of new teachers as well as the continuing development of experienced teachers. The four major components of this policy are: strong academic background, linkage with the state's P-12 priorities, school-based preparation and professional development (especially in professional development schools), and performance assessment. STEP addresses these elements and provides procedures and support to campuses as they move forward. The Maryland State Department of Education found STEP to be an ideal set of strategies to assist teacher education campuses in many of the requirements they now face through the *Redesign of Teacher Education*, as well as NCATE (National Council for Accreditation of Teacher Education) accreditation, also required by state law for most Maryland campuses.

How the STEP Initiative Was Supported and the State's Experience With STEP

STEP campuses in Maryland have always received their primary direct support from the STEP national co-directors and their team. Initially, the financial support for Maryland campuses came from STEP funding.

By the second year of Maryland's participation with STEP, campus participation increased from three to eight colleges and universities. This growth was stimulated by the award to the Maryland State Department of Education of a federal Title II Higher Education Act Teacher Quality Enhancement State Grant to assist full implementation of the *Redesign of Teacher Education*. STEP was written into the grant as a partner, expanding funding for STEP in Maryland to include Title II funds. The Maryland State Department of Education has not provided direct campus support as the national project team has done. The state department has, however, provided state recognition to the Maryland STEP campuses for their important

reforms through their participation in STEP. In the relatively new institutional performance criteria that the state now uses for program approval, STEP is cited as a strategy for addressing the "strong academic background" component. Significantly, the Maryland State Department of Education's Title II planning committee included STEP campus leaders. Clearly, the state department sees that STEP teacher education programs grasp the complexity of bringing arts and sciences and education faculty together and have a significant advantage as they marshal campus-wide resources to meet state approval, national accreditation, and Title II requirements.

Maryland State Department of Education's Future Plans for STEP Campuses

In recognition of campus efforts to improve teacher education through STEP, the Maryland State Department of Education is currently seeking additional funding sources for participating campuses. Issues of standards alignment, candidate and teacher performance, continuing professional development for teachers, and program improvement remain as major campus and state concerns. Past and present efforts on STEP campuses, as well as ongoing needs, now prompt the Maryland State Department of Education to seek continued funding and continued partnership with the STEP national project.

YOU CAN GET THERE FROM HERE ... NAVIGATING TO STUDENT SUCCESS

Kent Seidel, Executive Director, Alliance for Curriculum Reform

About a year ago, we held a special event at my retail store in Cincinnati. The guest of honor was Todd Williams, owner of Toad Hollow Winery (and Robin Williams' brother), and we had a full crowd ready to meet him. What we didn't have was our guest of honor. We began the phone calls. Nearly an hour later, our phone rang—a dozen people standing near stopped conversations to listen. Our guest was calling from his cell phone. Driving from Columbus, he had stayed on the wrong interstate and was now approaching downtown Cincinnati, a good bit south of us. I gave directions for turning back to the event then, assured the crowd that it wouldn't be much longer. Fifteen minutes later, another call. To our dismay, our guest had overshot the city entirely, and was now across the river in an area of Kentucky unfamiliar to us. I asked nearby customers and, finding no one who could help, was forced to get everyone's attention. Clanging a glass with a handy utensil, I raised my voice. "Excuse me! Sorry, but it seems that he's in Kentucky somehow... Does anyone know how to get here from there?" Fortunately, one guest was able to help with the navigation. We then talked our guest in, staying on the phone with him for nearly 20 minutes as he made his way to our event.

I have often heard the standards for what P-12 students should know and be able to do referred to as "maps" for student learning. The analogy works, but let's explore it. Standards serve two primary functions in our curriculum. Foremost in today's school reforms, they are a communication device, allowing teachers, students, and parents to understand expectations for student work and to communicate when and how students have met those expectations. The communication function also moves on "up the line" in the form of state standards and accountability requirements (and accompanying test content), which communicate to school administrators and teachers what they are expected to help students achieve. In this way, the standards serve as a more specific set of directions for student learning. *Take basic phonics until you reach full sentences. Partway through problem-solving skills, you'll merge with story problems. Continue until you can see basic algebraic skills ahead....*

We see another key function of standards in the national documents developed by discipline-based groups. These standards map out the territory of a discipline, showing what there is to explore and how one aspect of content relates to others. Many school practitioners have complained that the several sets of national standards are too much to address, but the national groups have simply drawn rather detailed maps of their fields for us to explore. Whether or not it is necessary for every student to explore each content area's "standards map" in full detail is not a subject of debate for this article. However, it is essential that *teachers* firmly grasp the detail and content of the standards maps they use in their teaching.

Maps are funny things. They are contextual—you must know where you are in order to make much use of one. They are also lacking in detail compared to the actual experience—traveling the road itself is quite different and requires considerably more effort than just tracing a finger along a large piece of colorful folded paper. The trip itself is often somewhat disorienting, so that we find ourselves needing to check the map over and over to reassure ourselves that we are still on track.

Returning to our navigation analogy, if standards serve as our map, and we have decided on desired destinations (the communication function), students must now take the actual trip, with teachers by their side as navigators. Here is where pedagogical content knowledge, the “two sides” of teacher skill and knowledge, comes into play. In reviewing the learning research, Bransford et al. (1999) conclude “expert teachers know the structure of their disciplines and this provides them with cognitive roadmaps that guide the assignments they give students, the assessments they use to gauge student progress, and the questions they ask in the give and take of classroom life” (p. xviii). We also know from the learning research (and our experience with maps) that we must meet students where they are—learners can only build on what they have, *with* what they have. Our teachers must not only firmly grasp the content, but must also know where the student is at any given time and be able to offer appropriate direction.

And what if my student traveler cannot travel on the major highways, or is on a bicycle, or is new to the language in which the map is printed?

The research suggests that navigation is a distinctly unique skill necessary to effective teaching, built upon careful education in both content and pedagogical methods. When brilliant experts in a field cannot teach, it is often because they cannot help the students navigate. When caring teachers armed with the latest pedagogical approaches have difficulty helping students achieve high standards, it is often because they don’t know the content map very well.

I do not believe that navigation—pedagogical content knowledge—can be easily taught well at most higher education institutions, given the traditional boundaries of the “College of Education” and the “College of Arts and Sciences.” STEP is making very important strides in helping institutions cross these boundaries, getting content-area experts and education experts to think together about reshaping educational approaches. How can we help our candidates become teachers who are able to help navigate every student to success, regardless of where that student begins on the map? Given what I have seen at our STEP institutions so far, it is clear that the changes needed are not simple or obvious.

The good news is that we have much more to assist us as we chart the territory of teacher education than we had even 10 years ago. The research on teaching and learning has taken great leaps and continues to expand in detail and sophistication. And standards for P-12 student learning have given us a very good start in shaping our map. STEP institutions are taking the lead in facing what our future teachers and administrators must all face with their P-12 students: successful navigation. We must work to define “pedagogical content knowledge” for the teachers of teachers. How can we better organize content and create the experiences, instruction, and support that will help our teacher candidates find their way to be-

coming successful educators, able in turn to guide each of their P-12 students to success? STEP institutions are charting new approaches to preparing and supporting better educators by bringing content and pedagogy together in rich, integrated, and innovative ways.

And for what it's worth, our celebrity special event turned out just fine.

References

Bransford, John D., Brown, Ann L., and Cocking, Rodney R. (Eds.). (1999). *How people learn: Brain, mind, experience, and school*. Committee on the Developments in the Science of Learning, Commission on Behavioral and Social Sciences and Education, National Research Council. Washington, DC: National Academy Press.

STEPPING BACK FROM STEP: WHAT HAVE WE LEARNED ABOUT THE PROCESS?

Nancy Adelman, Associate Director of the Center for Education and Senior Research Associate, SRI International, Inc.

For the past five years, SRI International has been privileged to serve in the role of formative external evaluator for the STEP initiative. In this role, we were asked both to help shape the initiative by raising questions as the work went along and to step back periodically and summarize the evidence of progress and the issues still to be addressed. We are coming now to the end of the evaluation, so it is an appropriate time to reflect on the nature of the STEP process and the value that it has added to the improvement of teacher education on the participating campuses. We do so by posing five key questions and the answers that have emerged from 5 years of work.

Who Should Participate in STEP?

Many—but not all—campuses that prepare teachers would benefit from participation in the STEP process outlined in this guide. In four of the five states that STEP has worked with so far, campuses initially earned the right to participate through a selective proposal review process.¹ This fact is important because the preparation of the proposal serves as a needs assessment for the campus and, for proposal reviewers, as a tool for judging campus readiness to begin the reform of teacher preparation. Even with a proposal process, STEP selected two or three campuses that were not ready, and one eventually dropped out. Campuses were chosen based on (a) their ability to articulate a plan to use P-12 standards as a framework for teacher preparation, (b) their current use of assessments to judge candidate content knowledge and teaching skills and their willingness to develop additional assessment strategies, and (c) their vision of what a standards-based program would look like at their institution. States or higher education systems that consider adopting STEP should bear the campus readiness criterion in mind. Some campuses will benefit from observing what is happening on other campuses before actively engaging in the process. Leaders of individual institutions who use this guide to adopt the STEP process should be reflective about whether groundwork is needed before embarking.

Once a decision to embark on the STEP process has been made, it is absolutely imperative for the campus STEP team to include individuals who (a) are decision makers on the campus and (b) have influence with both arts and sciences and education faculty members. STEP will be more effective with the support, and preferably the active participation, of top-level administrators. In addition, involving one or more representatives from the P-12 sector on the STEP

team will help colleges and universities understand what a P-12 teacher must know and be able to do in a standards-based educational environment, which is STEP's goal.

How Should the STEP Process Begin?

Standards-based reform has been a buzzword in P-12 education for more than a decade. Nearly every state has developed content standards (a framework for P-12 curriculum) and performance standards (assessment of what students know and are able to do). Based on what we have learned through STEP, administrators and faculty members in schools, colleges, and divisions of education (SCDEs) are initially not nearly as familiar with these standards as they should be, and P-12 standards are a foreign language for arts and science faculty. Therefore, as tedious as the task may be, virtually every campus that has participated in the STEP process has found it useful to examine national and state content and performance standards in the disciplines in order to build common understanding and a common vocabulary for talking about how teachers of high quality should be prepared. Beginning with this exercise also engages faculty members in an analysis of any gaps in alignment of P-12 standards with general education requirements and with the requirements of the major that prospective teachers are pursuing. This is not an administrative task that an individual in isolation can do. The best results are obtained when all members of the STEP team engage with the standards. You *have* to do this.

What Comes Next?

The answer to this question is based on the analysis of the standards and the campus context. Suppose the STEP team discovers that the required courses for prospective teachers of middle school social studies do not include any coverage of geography, a core element of the state standards for seventh graders. How can this gap be eliminated? The team will have to decide the best way to proceed. However, as this case shows, having one or two campus-level decision makers on the STEP team will make it easier to influence a department chair who has not been involved with STEP, if necessary.

What Evidence Is There That STEP Makes a Difference to How Well New Teachers Are Prepared?

Evidence is obtained only when the STEP team (a) documents its work, (b) establishes a baseline from which change will be measured, and (c) explores the availability of relevant data on campus and in the state. Through vehicles such as the data reporting requirements of Title II of the Higher Education Act and the new NCATE (National Council for Accreditation of Teacher Education) review requirements, the "system" is pushing teacher educators toward more rigorous self-assessment and public scrutiny of their graduates. Since STEP takes the position that teachers are prepared by both SCDEs and by arts and sciences faculty members, any data or indicators showing either successes or failures are a shared responsibility.

So far, STEP campuses have struggled with the issue of assessing how well teacher candidates are prepared. Everyone agrees that “off the shelf” tests, such as Praxis, tap only a tiny part of what it takes to be a teacher. Current and future STEP campuses will need to continue to explore *systems* for measuring the knowledge, skills, and dispositions (values, attitudes, and professional ethics) of prospective teachers. A single measure will not do.

The ultimate measure of how well teachers are prepared for their profession is the demonstrated learning of the P-12 students whom they teach. In one STEP state, Georgia, the public higher education system is poised to “guarantee” the competence of teacher education graduates. If district or school leaders determine that a teacher is failing to help students learn, the college or university that produced the teacher must fix the problem. However, Georgia is an outlier. Most states and teacher preparation institutions are not making the link between the adequacy of the preparation program and what happens in P-12 classrooms, but public and political pressure to do so is increasing. The STEP process offers campuses an opportunity to think about this eventuality and how they can demonstrate that their programs make a difference in student learning.

Why Should We Undertake the STEP Process?

No doubt STEP sounds like a lot of work—and it is. Do you and your colleagues really need to do this? From our perspective at the national level, the answer to this question is a resounding “Yes.” Whether your campus is aware of it or not, teacher education as a sector of the education system overall is under attack. The critics allege that SCDEs have done a poor job of preparing teachers who can help P-12 students achieve high standards of learning. They assert that anyone with a bachelor’s degree who can pass a test of disciplinary knowledge should be allowed to teach. They disparage pedagogical knowledge and dismiss the importance of dispositions for teaching.²

In this climate, it is simply in the enlightened self-interest of institutions of higher education to evaluate the quality of their teacher preparation programs—including undergraduate general education requirements—and remedy any problems that are identified. The STEP process is a fine way to begin.

Footnotes

¹ In two of the states, funding from Title II of the federal Higher Education Act eventually allowed more than half of the public institutions of higher education to participate.

² To view examples of current critiques leveled at teacher preparation, go to <http://www.nctq.org/>.

Appendixes

**STEP Campus Teams, State Education Agencies, and Working Group
(year indicates project start date)**

DELAWARE

University of Delaware (2000)

Newark, DE 19716

Barbara VanDornick, Associate Director, Delaware Center for Teacher Education,
bvandornick@udel.edu, 302-831-3000

Carol Vukelich, Hammonds Chair in Teacher Education and Director of the Delaware
Center of Teacher Education, vukelich@udel.edu, 302-831-2333

GEORGIA

Armstrong Atlantic University (2000)

Savannah, GA 31419

Carol Andrews, Senior Faculty, Department of Languages, Literature and Philosophy,
School of Arts and Sciences

Gene Barber, Chair, Education Department, Brunswick Center

Paul Beare, Dean, College of Education

Patricia Coberly, Head, Department of Middle, Secondary, and Adult Education

MaryEllen Cosgrove, Head, Department of Early Childhood Education

Evelyn Dandy, STEP Coordinator, Director, Pathways Program

Pat Parsons, Faculty, Department of Early Childhood Education, Brunswick Center

Michael Price, Head, History Department, College of Arts and Sciences

Clark Atlanta University (2000)

Atlanta, GA 30134

Vickie Crawford, Department of History, School of Arts and Sciences

Evelyn Gilliard, Director, Field Experience, School of Education

Evelyn Green-Merritt, Coordinator, Early Childhood Education, School of Education

McIvory Jennings, Coordinator, Secondary Education, Department of Curriculum, School of Education

Phyllis Lawhorn, Department of English, School of Arts and Sciences

Barbara Mason, Coordinator, Middle Grades Education, Department of Curriculum, School of Education

Michelle McNichols, Curriculum Department, School of Education

Itihari Toure, Coordinator, Post-baccalaureate Programs, Department of Curriculum, School of Education

Trevor Turner, Dean, School of Education

Fort Valley State University (1999)

Fort Valley, GA 31010

Juone Brown-Johnson, Technology Professor and Director of Institutional Technology, Department of Curriculum and Instruction, College of Education, brownj3@mail.fvsu.edu, 478-825-6218

Josephine Davis, Professor, Department of Mathematics, College of Arts and Sciences, davisj@mail.fvsu.edu, 478-825-6610

Gholamreza Keihany, Associate Professor, Department of Mathematics, College of Arts and Sciences, keihanyg@mail.fvsu.edu, 478-825-6725

Andrew Lee, Professor, Communication and Speech, Department of Fine Arts, College of Arts and Sciences, leea@mail.fvsu.edu, 478-825-6071

Curtis Martin, Dean, College of Education

George Mbata, Associate Professor, Department of Biology, College of Arts and Sciences

Grady Miles, Associate Professor, Department of Curriculum and Instruction, College of Education

Wonda Miles, Teacher, Dooly Elementary School

John Rhodes, Head, Department of History, College of Arts and Sciences, rhodesj@mail.fvsu.edu, 478-825-6666

Amina Sharif, Professor and Director of Advisement, Department of Mathematics, College of Arts and Sciences, sharifa@mail.fvsu.edu, 478-825-6377

Jonaid Sharif, Charter School Professor, Department of English, College of Arts and Sciences, sharifj@mail.fvsu.edu, 478-825-6974

Kimberly Taylor, Interim Director of Testing, taylork0@mail.fvsu.edu, 478-825-6384

Sonya Thomas, Associate Professor, Department of Curriculum and Instruction, College of Education

Jeraldine Walker, Associate Professor, Department of English, College of Arts and Sciences

Margie Waters, Chair, Education Division, Paine College

Georgia College and State University (2000)

Milledgeville, GA 31061-0490

Janet Fields, Dean, School of Education, jfields@mail.gcsu.edu, 478-445-4546

Trish Klein, Assistant Professor, Middle Grades Education, School of Education, tklein@mail.gcsu.edu, 478-445-2525

Kathleen Martin, Instructor, Political Science, School of Liberal Arts, kmartin@mail.gcsu.edu, 478-445-0969

Beth Rushing, Dean, School of Liberal Arts, brushing@mail.gcsu.edu, 478-445-4441

Georgia Southern University (2000)

Statesboro, GA 30460

David Alley, Professor, Foreign Languages, College of Liberal Arts and Social Sciences, dalley@gasou.edu

Alice Aud, Teacher, Social Science, Screven County Middle School, aliceaud@yahoo.com

Missy Bennett, Instructor, Middle Grades and Secondary Education, College of Education, mbennett@gasou.edu

Cherry Brewton, Assistant Professor, Early Childhood Education and Reading, College of Education, cbrewton@gasou.edu

Tara Britt, Teacher, French, Statesboro High School, tbritt@bulloch.k12.ga.us

Cindy Carter, Teacher, Elementary Education, Nevils Elementary School, ccarter@bulloch.k12.ga.us

Greg Chamblee, Assistant Professor, Middle Grades and Secondary Education, College of Education, gchamblee@gasou.edu

Jan Cross, Teacher, Elementary Education, Sallie Zetterower Elementary School, jcross@bulloch.k12.ga.us

Charles Crouch, Assistant Professor, History, College of Liberal Arts and Social Sciences, chascro@gasou.edu

Patia Crump, Teacher, Math, Southeast Bulloch Middle School, pcrump@bulloch.k12.ga.us

Jim Darrell, Associate Professor, Geology and Geography, College of Science and Technology, jdarrell@gasou.edu

Dabney Edenfield, Teacher, Art, Swainsboro High School

Virginia Everett, Teacher, Math, Southeast Bulloch High School, veverett@bulloch.k12.ga.us

Dan Good, Professor, Geology and Geography, College of Science and Technology, dangood@gasou.edu

Jessica Jarman, Teacher, Math, Effingham County High School, jarman9222@yahoo.com

Becky Knight, Teacher, Language Arts, South Effingham Middle School, bknight@effingham.k12.ga.us

Jim LoBue, Assistant Professor, Chemistry, College of Science and Technology, jlobue@gasou.edu

Nancy Marsh, Teacher, Science, Portal Middle and High School, nmarsh@bulloch.k12.ga.us

Margaret McLaughlin, Associate Professor, Writing and Linguistics, College of Liberal Arts and Social Sciences, mmclaugh@gasou.edu

Enola Mosley, Teacher, English, Statesboro High School, emosley@bulloch.k12.ga.us

Julie Nesmith, Teacher, Elementary Education and Math, Brooklet Elementary School, jnesmith@bulloch.k12.ga.us

Patrick Novotny, Assistant Professor, Political Science, College of Liberal Arts and Social

Sciences, pnovotny@gasou.edu

Linda O'Dowd, Teacher, Science, Southeast Bulloch Middle School,
lodowd@bulloch.k12.ga.us

Phillip Oliver, Teacher, History, Southeast Bulloch High School, sebpho@hotmail.com

Jessica Orvis, Assistant Professor, Chemistry, College of Science and Technology,
jorvis@gasou.edu

John Parrish, Professor, Biology, College of Science and Technology, jparrish@gasou.edu

Don Rakestraw, Professor, History, College of Liberal Arts and Social Sciences,
dastraw@gasou.edu

Jennie Rakestraw, Associate Dean, College of Education, jrakestraw@gasou.edu

Jane Rhodes Hudak, Professor, Art, College of Liberal Arts and Social Sciences,
jhudak@gasou.edu

Morrie Shelkoff, Teacher, Economics and History, South Effingham High School

Debby Smith, Teacher, Art, Todd Grant Elementary School

Jeff Smith, Teacher, Spanish, William James Middle School, jsmith@bulloch.k12.ga.us

Jennifer Smith, Teacher, Elementary Education, Screven County Elementary School,
junipersmith@yahoo.com

Larry Smith, Teacher, Art, Screven County Middle School, lsmith@screven.k12.ga.us

Fran Stephens, Teacher, English, Southeast Bulloch High School,
fstephens@bulloch.k12.ga.us

Robert Stevens, Professor, Middle Grades and Secondary Education, College of Education,
robstev@gasou.edu

David Stone, Professor, Math and Computer Science, College of Science and Technology,
dstone@gasou.edu

Sharon Taylor, Assistant Professor, Math and Computer Science, College of Science and
Technology, taylors@gasou.edu

Caren Town, Associate Professor, Literature and Philosophy, College of Liberal Arts and
Social Sciences, cartow@gasou.edu

Gale Watson, Assistant Professor, Math and Computer Science, College of Science and
Technology, gawatson@gasou.edu

Tony Whiddon, Teacher, Science, Statesboro High School, whiddon@bulloch.com

Diane Zigo, Assistant Professor, Middle Grades and Secondary Education, College of
Education (currently at SUNY)

Georgia State University (1997)

Atlanta, GA 30303-3083

Peggy Albers, Assistant Professor, Middle-Secondary English Education, College of Education

Sunya Collier, Assistant Professor, Early Childhood Social Studies Education, College of Education

Paula Eubanks, Assistant Professor, Art and Design, College of Arts and Sciences

Edi Guyton, STEP Chair and Associate Dean, College of Education

Cookie Hanna, Assistant Professor, Middle-Secondary Science Education, College of Education

Juan Heflin, Assistant Professor, Special Education, College of Education

Ron Henry, Provost and Academic Vice President

Hugh Hudson, Professor, History, College of Arts and Sciences

Olga Jarrett, Associate Professor, Early Childhood Science Education, College of Education

John Lee, Assistant Professor, Middle-Secondary Social Studies Education, College of Education

Valerie Miller, Associate Professor, Math, College of Arts and Sciences

Deborah Najee-Ullah, Associate Professor, Early Childhood Math Education, College of Education

Rod Nave, Associate Professor, Physics and Astronomy, College of Arts and Sciences

Carol Saunders, Assistant Professor, Modern and Classical Languages, College of Arts and Sciences

Laura Smith, Assistant Professor, Early Childhood Math Education, College of Education

Christine Thomas, Assistant Professor, Middle-Secondary Math Education, College of Education

Bonnie Tjeerdsma, Associate Professor, Physical Education, College of Education

Mary Zeigler, Associate Professor, English, College of Arts and Sciences

State University of West Georgia (1997)

Carrollton, GA 30118-4510

Jane Hill, Director of Graduate Studies, Department of English and Philosophy, College of Arts and Sciences

Thomas J. Hynes, Provost and Academic Vice President

Angela Lumpkin, Dean, College of Education

Edith Maxwell, Department of Mathematics, College of Arts and Sciences

Dawn Putney, Assistant Dean, College of Education

Spencer Slattery, Assistant Professor, Department of Chemistry, College of Arts and Sciences

John vonEschenbach, Professor, Curriculum and Instruction, College of Education

University of Georgia (1997)

Athens, GA 30602

Elaine Adams, Associate Professor, Occupational Studies, School of Leadership and Lifelong Learning, jadams@coe.uga.edu

Martha Alexsaht-Snider, Program Area Head, Elementary Education, School of Education, marthaas@coe.uga.edu

Wyatt Anderson, Dean, Franklin College of Arts and Sciences

Roger Bailey, English Department Head, Oconee County High School, rbailey44@aol.com

Sybilla Beckmann-Kazecz, Associate Professor, Mathematics Department, sybilla@math.uga.edu

Paul Blaise, Cedar Shoals High School

Kristin Boudreau, Associate Professor, English Department, boudreau@arches.uga.edu

Sandy Bouldin, Clarke Central High School, smbouldin@earthlink.net

Lynn Bryan, Assistant Professor, Science Education, School of Teacher Education, lbryan@coe.uga.edu

Shanna Burke, Assistant Professor, Special Education, School of Professional Studies, sburke@coe.uga.edu

- Joya Carter, Assistant Professor, Special Education, School of Professional Studies,
jcarter@coe.uga.edu
- Louis Castenell, Dean, College of Education
- Michelle Commeyras, Associate Professor, Reading Education, School of Teacher
Education, michelle@coe.uga.edu
- Thomas C. Cooper, Associate Professor, Language Education, School of Teacher
Education, tcooper@coe.uga.edu
- Marshall Darley, Associate Professor, Biological Sciences Division,
darley@dogwood.botany.uga.edu
- Christy Desmet, Associate Professor, English Department, cdesmet@uga.edu
- Rebecca Enghauser, Assistant Professor, Dance Education, School of Art,
renghaus@coe.uga.edu
- Mark Faust, STEP Director and Associate Professor, Language Education, School of
Teacher Education, mfaust@coe.uga.edu
- Elliot Gootman, Professor, Mathematics Department, gootman@math.uga.edu
- Peg Graham, Associate Professor, Language Education, School of Teacher Education,
pgraham@coe.uga.edu
- Harriett Hair, Music Education, School of Music, hhairmus@uga.edu
- Helen Hall, Professor, Occupational Studies, School of Leadership and Lifelong Learning,
hchall@arches.uga.edu
- Joan K. Hall, Professor, Language Education, School of Teacher Education,
jkhall@arches.uga.edu
- Laurie Hart, Professor, Elementary Education, School of Teacher Education,
lhart@coe.uga.edu
- Anne Hawkins, Grayson High School, anne_hawkins@gwinnett.k12.ga.us
- Christina Healan, Teacher, Jackson County High School, engtchr21@aol.com
- Carole Henry, Associate Professor, Art Education, School of Art, ckhenry@arches.uga.edu
- Frances Hensley, GSTEP Director, College of Education, fhensley@arches.uga.edu
- Andy Herod, Associate Professor, Geography Department, aherod@uga.edu
- John Hoge, Associate Professor, Social Science Education, School of Teacher Education,
jhoge@coe.uga.edu
- April Howard, Principal, West Jackson Middle School, ahoward@jackson.k12.ga.us

Sally Hudson-Ross, STEP Director and Associate Professor, Language Education, School of Teacher Education, saross@coe.uga.edu

Alzeena Johnson, Teacher, Hilsman Middle School

Charles Kutal, Professor, Chemistry Department, ckutal@arches.uga.edu

Richard LaFleur, Professor, Classics Department, rlafleur@arches.uga.edu

Mary Lazzari, Teacher, Timothy Road Elementary School, lazzarim@clarke.k12.ga.us

Marc Lewis, Teacher, Apalachee High School, gobraves_30606@yahoo.com

John Maltese, Associate Professor, Political Science Department, School of Public and International Affairs, jmaltese@uga.edu

Mindy McCage, Teacher, Yargo Elementary School

Clint McCory, Professor, Mathematics Department, clint@math.uga.edu

Diane Morrow, Assistant Professor, History Department, dbmorrow@arches.uga.edu

Steve Oliver, Associate Professor, Science Education, soliver@arches.uga.edu

Nicholas Oppong, Associate Professor, Mathematics Education, School of Teacher Education, noppong@coe.uga.edu

Michael Padilla, STEP Director and Associate Dean for Educator Partnerships, College of Education, mpadilla@coe.uga.edu

Brenda Poss, Cedar Shoals High School, possb@clarke.k12.ga.us

Bill Reeves, Clarke Central High School, drreeves@hotmail.com

Richard Rosch, Teacher, Apalachee High School, rrosch@barrow.k12.ga.us

Brigitte Rossbacher, Assistant Professor, Germanic and Slavic Languages Department, rossbach@arches.uga.edu

Hugh Ruppensburg, STEP Director and Associate Dean, Franklin College of Arts and Sciences, hruppens@franklin.uga.edu

Betsy Rymes, Assistant Professor, Language Education, School of Teacher Education, brymes@coe.uga.edu

Ted Saupe, Associate Professor, Ceramics Department, School of Art, tsaupe@arches.uga.edu

Richard Siegesmund, Assistant Professor, Art Education, School of Art, rsieg@uga.edu

Lisa Stanzi, Teacher, Barrow Elementary School, lstanzi@aol.com

Wanda Stitt-Gohdes, Professor, Occupational Studies, School of Leadership and Lifelong Learning, wlsg@arches.uga.edu

Pamela Taylor, Assistant Professor, Art Education, School of Art, pgtaylor@uga.edu
 Fran Teague, Professor, English Department, fteague@arches.uga.edu
 Carmen Tesser, Professor, Romance Languages Department, carmen@arches.uga.edu
 Sybil Townsend, South Jackson Elementary School, sybilt451@home.com
 Greg Trandel, Associate Professor, Economics Dept., trandel@terry.uga.edu
 Nancy Vandergrift, Outreach Associate, Office of the Associate Dean for Educator Partnerships, College of Education
 Ronald Van Sickle, Professor, Social Science Education, School of Teacher Education, rvansick@coe.uga.edu
 Evelyn Wages, Assistant Principal, Comer Elementary School, ewages@bellsouth.net
 Carolyn Wallace, Associate Professor, Science Education, School of Teacher Education, ckeyes@coe.uga.edu
 Joel C. Walz, Professor, Romance Languages Department, jwalz@uga.edu
 Katharina Wilson, Professor, Comparative Literature Department, katharin@arches.uga.edu
 Patricia S. Wilson, Department Head, Mathematics Education, School of Teacher Education, pwilson@coe.uga.edu
 Melissa Young, Teacher, Brookwood High School, melissa_young@gwinnet.k12.ga.us

Valdosta State University (2000)

Valdosta, GA 31698

Ron Barnette, Professor of Philosophy and Acting Dean, College of Arts and Sciences
 Sarah Bartholomew, Associate Professor of Political Science, College of Arts and Sciences
 Jo Ann Bass, Professor of Early Childhood and Reading Education, College of Education, jafbass@valdosta.edu, 229-333-5625
 Jim Baxter, Professor of Chemistry and Acting Head of Department, College of Arts and Sciences
 David Boyd, Professor of Mathematics and Computer Science, College of Arts and Sciences
 Michael Brooks, Professor of Sociology, Anthropology, and Criminal Justice and Head of Department, College of Arts and Sciences

- Byron Brown, STEP Language Arts Co-Chair, Professor of English, College of Arts and Sciences, bbrown@valdosta.edu, 229-249-4952
- Melanie Byrd, STEP Social Studies Co-Chair, Professor of History, College of Arts and Sciences, mbyrd@valdosta.edu, 229-333-5947
- Richard Carter, Professor of Biology and Curator of the Herbarium, College of Arts and Sciences, rcarter@valdosta.edu, 229-333-5763
- Chuck Cates, Associate Professor of Communication Arts and Head of Department, College of the Arts, ccates@valdosta.edu, 229-333-5820
- Mary Kay Corbitt, STEP Mathematics Co-Chair, Professor of Mathematics and Computer Science, College of Arts and Sciences
- Mary Ellen Dallman, Associate Professor of Early Childhood and Reading Education, College of Education, medallma@valdosta.edu, 229-333-5628
- Brenda Dixey, Professor of Early Childhood and Reading Education, College of Education, bdixey@valdosta.edu, 229-333-5644
- Adele Ducharme, Professor of Middle Grades and Secondary Education and Head of Department, College of Education, ducharme@valdosta.edu, 229-333-7420
- Brian Gerber, STEP Science Co-Chair, Associate Professor of Middle Grades and Secondary Education, College of Education, blgerber@valdosta.edu, 229-333-5353
- Greg Harrell, Assistant Professor of Mathematics and Computer Science, College of Arts and Sciences, gharrell@valdosta.edu, 229-333-5457
- Inez Heath, Professor of Early Childhood and Reading Education, College of Education, iheath@valdosta.edu, 229-333-5610
- David Hedgepeth, Associate Professor of Middle Grades and Secondary Education, College of Education, dhedgepe@valdosta.edu, 229-333-5926
- Pam Hertzog, Professor of Early Childhood and Reading Education, College of Education and South Georgia P-16 Coordinator, phertzog@valdosta.edu, 229-333-5623
- Diane Howard, Instructor of English, College of Arts and Sciences, dhoward@valdosta.edu, 229-333-5946
- Diane Judd, Assistant Professor of Early Childhood and Reading Education, College of Education, djudd@valdosta.edu, 229-333-5630
- Sharon Kinkade, STEP Mathematics Co-Chair, Associate Professor of Middle Grades and Secondary Education, College of Education
- James LaPlant, Associate Professor of Political Science, College of Arts and Sciences, jlplant@valdosta.edu, 229-333-5771
- Martha Leake, Professor of Physics, Astronomy, and Geosciences, College of Arts and

Sciences, mleake@valdosta.edu, 229-333-5756

Michael Noll, Assistant Professor of Physics, Astronomy, and Geosciences, College of Arts and Sciences, mgnoll@valdosta.edu, 229-333-7143

Verilette Parker, Assistant Professor of Early Childhood and Reading Education, College of Education, vaparker@valdosta.edu, 229-333-5929

Chere Peguesse, Assistant Professor of English, College of Arts and Sciences, cpeguess@valdosta.edu, 229-333-7337

Gerald Petrella, Associate Professor of Mathematics and Computer Science, College of Arts and Sciences

Tom Reed, Professor of Special Education and Communication Disorders and Acting Dean, College of Education, treed@valdosta.edu, 229-333-5925

Julie Reffel, Associate Professor of Special Education and Communication Disorders, College of Education, jreffel@valdosta.edu, 229-219-1329

Jay Rickman, Professor of History, College of Arts and Sciences, bjrckma@valdosta.edu, 229-333-5947

Tonja Root, STEP Language Arts Co-Chair, Professor of Early Childhood and Reading Education, College of Education, troot@valdosta.edu, 229-333-5929

Donna Sewell, Associate Professor of English, College of Arts and Sciences, dsewell@valdosta.edu, 229-333-7336

Kathy Simons, STEP Coordinator, Associate Professor of Mathematics and Computer Science, ksimons@valdosta.edu, 229-259-2017

Barbara Stanley, STEP Social Studies Co-Chair, Assistant Professor of Middle Grades and Secondary Education, College of Education

Robbie Strickland, Professor of Middle Grades and Secondary Education, College of Education

Earl Swank, Professor of Middle Grades and Secondary Education and Associate Dean, College of Education

Paul Vincent, Assistant Professor of Physics, Astronomy, and Geosciences, College of Arts and Sciences

Chuck Walsh, Assistant Professor of Middle Grades and Secondary Education, College of Education, cjwalsh@valdosta.edu, 229-333-5645

Lynn Wood, STEP Science Co-Chair, Professor of Chemistry, College of Arts and Sciences, lwood@valdosta.edu, 229-333-5458

Board of Regents of the University System of Georgia

Atlanta, GA 30334

Jan Kettlewell, Associate Vice Chancellor for P-16 Initiatives

Judy Monsaas, P-16 Evaluator

Trish Patterson, Title II Coordinator

Dorothy Zinsmeister, Senior Associate for Academic Affairs

INDIANA

Ball State University (1999)

Muncie, IN 47306

John Barber, Chair Emeritus and Professor, Department of History, College of Sciences and Humanities

Cindy Dome, Assistant Principal, Forest Dale Elementary School

Dan Goffman, Professor, Department of History, College of Sciences and Humanities

Robert Hammersmith, Professor, Department of Biology, College of Sciences and Humanities

Susan M. Johnson, Associate Dean, College of Sciences and Humanities

Melinda Schoenfeldt, Assistant Professor, Department of Elementary Education, Teachers College

Tom S. Schroeder, Associate Dean, Teachers College

Cathy Siebert, Assistant Professor, Department of Educational Studies, Teachers College

Larry Smith, Chair, Department of Elementary Education, Teachers College

Walter Smith, Professor, Department of Biology, College of Sciences and Humanities

Ruth Swetnam, Director, Professional Development School Network

Indiana University Purdue University Indianapolis (1999)

Indianapolis, IN 46202

Trudy Banta, Vice Chancellor, Planning and Instructional Improvement

Beth Berghoff, Chair of Teacher Education, School of Education

Khaula Murthada, Dean, School of Education

Barbara Wilcox, Executive Associate Dean, School of Education

University of Indianapolis (1999)

Indianapolis, IN 46227-3697

Haitham Alkhateeb, Assistant Professor, Mathematics and Computer Sciences, College of Arts and Sciences

David Anderson, Dean, College of Arts and Sciences, anderson@uindy.edu, 317-788-3222

Nadjib Bouzar, Associate Professor and Chair, Mathematics and Computer Science, College of Arts and Sciences

Bev Breitsma, Chair, Teacher Education, School of Education

Dan Briere, Associate Professor and Chair, Modern Languages, College of Arts and Sciences

Joe Burnell, Associate Professor and Chair, Chemistry, College of Arts and Sciences

Billy Catchings, Associate Professor and Chair, Communications, College of Arts and Sciences

Tom Chamberlin, Associate Professor and Chair, Physics and Earth Space Science, College of Arts and Sciences

Darryl Clark, Assistant Professor, Communications, College of Arts and Sciences

Ann Cutler, Assistant Professor, Chemistry, College of Arts and Sciences

JoAnn Domb, Professor and Chair, Music, College of Arts and Sciences

Bruce Gentry, Professor and Chair, English, College of Arts and Sciences

Rick Holigrocki, Assistant Professor, Psychology, College of Arts and Sciences

John Langdon, Professor and Chair, Biology, College of Arts and Sciences

Mary Moore, Associate Provost and Professor of Sociology, College of Arts and Sciences, 317-788-3390

Kathy Moran, Associate Dean, School of Education

Greta Pennell, Associate Professor and Director, Graduate Program in Curriculum and Instruction, School of Education

Jim Pennell, Assistant Professor, Teacher Education, School of Education, Assistant Professor and Chair, Sociology, College of Arts and Sciences

Jim Ream, Associate Professor and Chair, Theatre, College of Arts and Sciences

Dee Schaad, Professor and Chair, Art, College of Arts and Sciences

Larry Sondhaus, Professor and Chair, History, College of Arts and Sciences

Donna Stephenson, Licensing Advisor, School of Education

Ed Wall, Leadership Fellow, Center of Excellence in Leadership of Learning

Lynne Weisenbach, Dean, School of Education, weisenbach@uindy.edu, 317-788-3285

Indiana Professional Standards Board

Indianapolis, IN 46204

Mary Genn Renne, Director, Preservice Education

Marie E. Theobald, Executive Director

KENTUCKY

Morehead State University (1999)

Morehead, KY 40351

Debbie Abell, Associate Vice President for Undergraduate and Graduate Programs, d.abell@moreheadstate.edu, 606-783-2004

Dan Branham, Dean, College of Education, d.branham@moreheadstate.edu, 606-783-2040

Mary Anne Pollock, Coordinator of STEP and Chair of the Department of Elementary, Reading, and Special Education, m.polloc@moreheadstate.edu, 606-783-2598

Mike Seeling, Dean, College of Arts and Sciences

University of Louisville (1999)

Louisville, KY 40292

John Cumbler, Professor, History Department, College of Arts and Sciences,
cumbler@louisville.edu, 502-852-6817

Julia Dietrich, Professor, English Department, College of Arts and Sciences,
j.dietrich@louisville.edu, 502-852-6490

Wynn Egginton, Co-Director, Nystrand Center of Excellence in Education, College of
Education and Human Development, w.egginton@louisville.edu, 502-852-1447

Ronald Fell, Chair and Professor, Biology Department, College of Arts and Sciences,
rdfell01@gwise.louisville.edu, 502-852-6771

Linda Irwin-Devitis, Associate Dean, College of Education and Human Development,
ladevi01@gwise.louisville.edu, 502-852-0572

Mike Jacobson, Professor, Mathematics Department, College of Arts and Sciences,
mikej@louisville.edu, 502-852-6826

Andrew Kemp, Assistant Professor, Department of Teaching and Learning, College of
Education and Human Development, kemp@louisville.edu, 502-852-2144

Ann Larson, Associate Professor, Department of Teaching and Learning, College of
Education and Human Development, ann@louisville.edu, 502-852-6044

Jack Morgan, Professor, Department of Teaching and Learning, College of Education and
Human Development, jack.morgan@louisville.edu, 502-852-0592

Mark Noble, Professor, Chemistry Department, College of Arts and Sciences,
menoble@louisville.edu, 502-852-7296

Regina Roebuck, Associate Professor, Modern Languages Department, College of Arts and
Sciences, rfroeb01@gwise.louisville.edu, 502-852-0489

Bob Ronau, Professor, Department of Teaching and Learning, College of Education and
Human Development, bob@louisville.edu, 502-852-0593

Steve Seif, Associate Professor, Mathematics Department, College of Arts and Sciences,
swseif01@gwise.louisville.edu, 502-852-6108

Chuck Thompson, Professor, Department of Teaching and Learning, College of Education
and Human Development, chuck@louisville.edu, 502-852-0583

Bill Weinberg, Associate Professor, Health Promotion, Physical Education, and Sports
Studies, College of Education and Human Development, weinberg@louisville.edu, 502-
852-0548

Western Kentucky University (1999)
Bowling Green, KY 42101

David Coffey, Professor, Department of Agriculture, Ogden College of Science and Engineering

Tabitha "Toby" Daniel, Professor, Department of Elementary Education, College of Education and Behavioral Sciences

Sam Evans, Associate Dean, College of Education and Behavioral Sciences,
sam.evans@wku.edu, 270-745-4662

Alice Mikovch, Associate Professor, Department of Elementary Education, College of Education and Behavioral Sciences

Joseph Millichap, Professor, Department of English, Potter College of Arts, Humanities and Social Sciences

John Moore, Interim Head, Department of Middle and Secondary Education, College of Education and Behavioral Sciences

Julia Roberts, Professor, Department of Middle Grades and Secondary Education, College of Education and Behavioral Sciences

Lowell Shank, Professor and Head, Department of Chemistry, Ogden College of Science and Engineering

Robyn Swanson, Professor and Coordinator of Music Education, Department of Music, Potter College of Arts, Humanities and Social Sciences

Kentucky State Department of Education
Frankfort, KY 40601

Marilyn Troupe, Director, Division of Teacher Education

MARYLAND**Coppin State College (1998)**

Baltimore, MD 21216

Andrey Bundley, Principal, Douglass High School

Julius Chapman, Dean, Division of Education

Wyatt Coger, Coordinator of Field Services, Assistant Professor, Curriculum and Instruction, Division of Education

Kirk DeBeal, Coordinator, Early Childhood Education, Administration and Special Educational Assistant Programs, Baltimore City Community College

Lori Harris, Assistant Professor, Curriculum and Instruction, Division of Education

Herman Howard, Provost and Vice President for Academic Affairs

Thomas James, Assistant Professor, Curriculum and Instruction, Director of Educational Technology, Division of Education

Joyce Jennings, Former Principal, Dunbar High School

Genevieve Knight, Professor, Mathematics and Computer Science, Division of Education

Frank Kober, Associate Dean and Professor of Curriculum and Instruction, Division of Education

Leontye Lewis, Chair, Curriculum and Instruction, Division of Education

Clyde Mathura, Dean, Division of Arts and Sciences

Gilbert Ogonji, Chair, Natural Sciences, Division of Arts and Sciences

Mary Owens, Dean, Division of Graduate Studies

Thaddaus Phillips, Chair, Special Education, Division of Education

Beatrice Riley, Coordinator, Educational Resource Center

Elinor Santor, Professor, Adult and General Education, Division of Education

William Shaw, Instructor, Mathematics and Computer Science, Division of Education

Alfred Sutton, Assistant Professor, Adult and General Education, Division of Education

Geraldine R. Waters, Chair, STEP and Adult and General Education, Division of Education

Judith Willner, Chair, Fine and Communication Arts, Division of Arts and Sciences

Hood College (2000)

Frederick, MD 21701

Kathleen Bands, Associate Professor, Department of Education

Marie Finn, Associate Professor and Acting Chairperson, Department of Education

Hillal Gill, Assistant Professor, Department of Education

Len Latkovski, Professor, Department of History and Political Science

Mary Ann Marvil, Assistant Professor, Department of Education

Betty Mayfield, Professor and Chairperson, Department of Mathematics and Computer Science

Karen Roebuck, Teacher, Professional Development School, Frederick County Public Schools

Jenni Ross, Assistant Professor, Department of Art

Mark Sandona, Professor and Co-Chair, Department of English and Communication Arts

Frank Sweeney, Associate Professor and Director of the Professional Development School, Department of Education

Tanya Williams, Teacher, Professional Development School, Frederick County Public Schools

Lori Wollerman, Associate Professor, Department of Biology

Johns Hopkins University (2000)

Baltimore, MD 21218

Mary Ellen Beaty-O'Ferrall, Assistant Professor, Department of Teacher Preparation, School of Professional Studies in Business and Education

Victor Corces, Chairman and Professor, Department of Biology, School of Arts and Sciences

Richard Henry, Professor, Department of Physics and Astronomy, School of Arts and Sciences

Rochelle Ingram, Associate Dean and Director, Graduate Division of Education, School of Professional Studies in Business and Education

Francine Johnson, Instructor, Department of Teacher Preparation, School of Professional Studies in Business and Education

Stuart Leslie, Professor, History of Science Department, School of Arts and Sciences

Edward R. Scheinerman, Professor and Chair, Department of Mathematical Sciences, School of Engineering

Elaine Stotko, Chair, Department of Teacher Preparation, School of Professional Studies in Business and Education

Amy Wilson, Instructor, Department of Teacher Preparation, School of Professional Studies in Business and Education

Amy Yerkes, Associate Dean for Academic Programs, School of Professional Studies in Business and Education

McDaniel College (2000)

Westminster, MD 21157

Norma Allen, Program Approval Specialist, Program Approval Section, Maryland State Department of Education

Susan Bloom, Chair and Professor, Art and Art History Department

Robert Boner, Chair and Professor, Math Department

Margaret Boudreaux, Chair and Associate Professor, Music Department

Greg Bricca, Supervisor of Assessment and Accountability, Carroll County Public Schools

Debby Bunker, Principal, Linton Springs Elementary School

Susan Case, Teacher Education Supervisor, Education Department

Sharon Craig, Assistant Professor, Education Department

Alan DeGenaro, Adjunct, Education Department

Thomas Deveny, Professor of Spanish, Foreign Languages Department

Mohamed Esa, Associate Professor of German, Foreign Languages Department

Russ Fazio, Instructional Specialist, University Partnership Programs, Montgomery County Public Schools

Skip Fennell, Professor, Education Department

Kathy Frederick, English Teacher, Francis Scott Key High School

Colette Henriette, Associate Professor of French, Foreign Languages Department

Gina Hicks, Adjunct, Education Department

Karen Howser, Facilitator, School Improvement Training and Equity, Frederick County
Public Schools

Melba Justice, Teacher, West Middle School

Robert Kachur, Assistant Professor, English Department

Mary Kastafanas, Assistant Principal, Linton Springs Elementary School

Roland Kiracofe, Principal, Northwest Middle School

Ochieng' K'Olewe, Assistant Professor, Education Department

Lisa Lebo, Teacher Education alumna

Debra Lemke, Chair and Associate Professor, Sociology Department

Libby Little, Chairperson of Arts, Honors, Education, and Academic Services, Carroll
Community College

Brian Lockard, Chair, Education Department

Jeff Marx, Assistant Professor, Physics Department

Janet Medina, Assistant Professor, Education Department

Chad Miller, Teacher Education alumnus

Paul Miller, Assistant Professor, History Department

Ryan Monroe, Project Coordinator, Bilingual Education, tesol@mcdaniel.edu, 410-857-
4646

Donna Newcomer-Coble, Principal, Hancock Elementary School

Lindsay O'Steen, Teacher Candidate

Lynn Owens, Assistant Professor, Exercise Science and Physical Education Department

Louise Paquin, Chair and Professor, Biology Department

Ken Pool, Dean of Graduate and Professional Studies

Michael Rosenthal, Special Assistant to the Provost, mrosenth@mcdaniel.edu, 410-857-2268

Monica Ross, Teacher Candidate

Kathy Schmidt, Assistant Principal, Franklin High School

Herb Smith, Chair and Professor, Political Science Department

Richard Smith, Chair and Professor, Chemistry Department
Margaret Trader, Associate Professor, Education Department
Susan Travetto, Coordinator of Teacher Professional Development
Don VanOstrand, Teacher Education Supervisor, Education Department

Towson University (1998)

Towson, MD 21252

Robert Blake, Assistant Professor, Department of Elementary Education, College of Education
Larry Boucher, Professor, Department of Chemistry, College of Science and Mathematics
Clarinda Harriss, Chair, Department of English, College of Liberal Arts
Dennis Hinkle, Dean, College of Education
Dan Jones, Former Dean, College of Arts and Sciences, Provost and Vice President of Learning, Interim President
Gloria Neubert, Professor, Department of Secondary Education, College of Education
Larry Shirley, Professor, Department of Mathematics, College of Science and Mathematics and Associate Dean, Graduate College Mathematics
Virginia Thompson, Associate Professor, Department of Geography and Environmental Planning, College of Liberal Arts

Salisbury University (1998)

Salisbury, MD 21801

Donna Andrews, Assistant Professor of Mathematics, Chesapeake College
Beth Barnett, Former Dean, Seidel School of Education, 410-543-6335
Richard Bebee, Former Dean, Perdue School of Business
Steven Brewer, Biology High School Teacher, Wicomico High School, 410-742-3278
Ronald Dotterer, Former Dean, Fulton School of Liberal Arts, 410-543-6450

Judy Ferrand, English Department, WorWic Community College, 410-334-2862

Mark Holland, Associate Professor of Biology, Henson School of Science and Technology

Thomas Jones, Dean, Henson School of Science and Technology, 410-543-6489

Kent Kimmel, Associate Provost

Florence Lednum, Professor of Biological Sciences and Chair of Science Department,
Chesapeake College

Amy Meekins, Associate Professor of Education, Seidel School of Education

Ray Perry, Biology Teacher, Wicomico High School, 410-742-3278

David Rieck, Associate Professor of Chemistry, Henson School of Science and Technology,
410-543-6482

Geraldine Rossi, Co-Director and Professor of Education, Seidel School of Education

Polly Stewart, Professor of English, Fulton School of Liberal Arts, 410-548-4241

Robert Tardiff, Professor of Mathematics and Associate Dean, Henson School of Science
and Technology

Cal Thomas, Professor of Geography, Henson School of Science and Technology

Arlene White, Associate Professor of French, Fulton School of Liberal Arts, 410-543-6253

Jeanne Whitney, Associate Professor of History, Fulton School of Liberal Arts,
410-543-6543

Carol Wood, Associate Professor of Physical Education, Seidel School of Education

Mount St. Mary's College (2000)

Emmitsburg, MD 21727

Christopher Blake, Professor of Education, Director of Teacher Education, and Chair,
Education Department

David Bushman, Associate Professor of Biology and Chair, Science Department

Pam Clark, Associate Professor and Chair, English, Frederick Community College

Sue Helder Goliber, STEP Co-Director, Professor of Education, and Distinguished
Teaching Professor, goliber@msmary.edu

Mary Hamel, Professor of English, English Department

Chris Jarvis, Assistant Professor of Mathematics, Math and Computer Science Department

Judy Ramoy Johnstone, Professor of Education and Coordinator, Secondary Professional Development School

Mindy Korol, Associate Professor of Psychology and Chair, Psychology Department

Barbara Martin Palmer, STEP Co-Director, Associate Professor of Education and Coordinator of Elementary Education, palmer@msmary.edu

Karen Rogers, Grade 5 Teacher, Ballenger Creek Elementary School

Jill Schultz, Assistant Professor and Coordinator of Teacher Education, Frederick Community College

Kristen Urban, Associate Professor of Political Science, Government Department

St. Mary's College of Maryland (1998)

St. Mary's City, MD 20686

Ben Click, Associate Professor of English and Director of the Writing Center, baclck@smcm.edu, 240-895-4235

Michael Ellis-Tolaydo, Professor of Dramatic Arts, mellistolaydo@smcm.edu, 240-895-4244

Laraine Glidden, Professor and Chair of Psychology, lmgldden@smcm.edu, 240-895-4337

Ardith Harle, Assistant Professor of Education, azharle@smcm.edu, 240-895-4339

Al Hovland, Associate Professor of Chemistry, akhovland@smcm.edu, 240-895-4354

Carrie Hughes, Facilitator and Instructional Technology Resource Member, Division of Human Development, cmhughes@smcm.edu, 240-895-4266

Lois Stover, Professor and Chair of Educational Studies, lstover@smcm.edu, 240-895-4451

Merideth Taylor, Associate Professor of Dance, mmtaylor@smcm.edu, 240-895-4237

University of Maryland Baltimore County (2000)

Baltimore, MD 21250

Patrick Allen, Chair, Social Sciences, Human Services, and Teacher Education, College of Southern Maryland, patricka@csm.cc.md.us, 301-934-7862

Thomas E. Armstrong, Professor, Mathematics and Statistics, 410-455-2235

José L. Barata, Director of Academic Outreach, Provost's Office, barata@umbc.edu, 410-455-2680

Susan M. Blunck, Associate Professor, Education, blunck@umbc.edu, 410-455-2869

Kathy S. Bryan, Lecturer, American Studies, kbryan@umbc.edu, 410-455-1351

Ginnie Buckner, Professor, Education, Montgomery College Rockville Campus, gbuckner@mc.cc.ms.us, 301-251-7269

Betty Harris, Chair (retired), Foreign Languages, Baltimore Polytechnic Institute, 410-396-7026

Diane M. Lee, Vice Provost for Undergraduate Education, dlee@umbc.edu, 410-455-2859

Eugene C. Schaffer, Chair, Education, schaffer@umbc.edu, 410-455-2465

Sue E. Small, Director of Professional Development Schools, Education Department, small@umbc.edu, 410-455-1218

Anelle R. Tumminello, Coordinator of English and High School Assessments, Anne Arundel County Public Schools, anellet@umd5.umd.edu, atumminello@aacps.org, 410-222-5454

Terrance L. Worchesky, Associate Professor, Physics, worchesk@umbc.edu, 410-455-6779

David B. Young, Director of Campus STEP, Director of the Center for Educational Research and Development, Education Department, dbyoung@umbc.edu, 410-455-1356

Maryland State Department of Education

Baltimore, MD 21201

Lawrence Leak, Assistant State Superintendent

Virginia Pilato, Chief, Program Approval and Assessment Branch, Division of Certification and Accreditation

STEP WORKING GROUP MEMBERS

Dorothy Abrahamse, Dean, College of Liberal Arts, California State University Long Beach

Robert Baird, Director, School-University Partnerships, The Woodrow Wilson National Fellowship Foundation

Joan Baratz-Snowden, Deputy Director, Educational Issues, American Federation of Teachers

Barnett Berry, Executive Director, Southeast Center for Teaching Quality, University of North Carolina General Administration

Thomas G. Carroll, Executive Director, National Commission on Teaching and America's Future

Thomas E. Dasher, Provost, Berry College

Mary E. Diez, Dean, Graduate School, Alverno College

Emerson J. Elliott, Director, Program Standards and Evaluation, National Council for Accreditation of Teacher Education

Mary Hatwood Futrell, Dean, The Graduate School of Education and Human Development, The George Washington University

Gary R. Galluzzo, Executive Vice President, National Board for Professional Teaching Standards

Jan Kettlewell, Associate Vice Chancellor for P-16 Initiatives, Board of Regents of the University System of Georgia

Jean Miller, Project Director, Interstate New Teacher Assessment and Support Consortium, Council of Chief State School Officers

Frank Murray, President, Teacher Education Accreditation Council, University of Delaware

Arturo Pacheco, Director, Center for Research on School Reform, University of Texas El Paso

Mari Pearlman, Vice President, Teaching and Learning Program, Educational Testing Service

Virginia Pilato, Chief, Program Approval and Assessment Branch, Division of Certification and Accreditation, Maryland State Department of Education

Bob Rice, Senior Vice President and Chief Operating Officer, Council for Basic Education

Kent Seidel, Executive Director, Alliance for Curriculum Reform

Sylvia Seidel, Director, Teacher Education Initiative, National Education Association

Conrad Snowden, Professor Emeritus, Princeton University

James H. Stith, Vice President, Physics Resources, American Institute of Physics

Carol F. Stoel, Vice President, Council for Basic Education

Richard Wisniewski, Professor and Dean Emeritus, University of Tennessee Knoxville

Dorothy Zinsmeister, Senior Associate for Academic Affairs, Board of Regents of the
University System of Georgia

Ex Officio Members

Buzz Bartlett, President and Chief Executive Officer, Council for Basic Education

David G. Imig, President and Chief Executive Officer, American Association of Colleges
for Teacher Education

APPENDIX B

Guidelines for the Standards-based Teacher Education Project

The STEP Initiative is a vehicle to help faculty members respond to TWO ESSENTIAL QUESTIONS about the teacher preparation program.

- How does the program develop, ensure, and assess the *content knowledge* of teachers to support K-12 standards?
- How does the program develop, ensure, and assess the *pedagogical skills* of teachers to support K-12 standards?

Answering these questions requires more than collecting data, but specific information about your program may help in shaping your responses.

Participating in the STEP Initiative will help faculty examine the alignment of teacher education programs with the expectations of P-12 standards. Likewise, STEP is designed to help institutions understand how the success criteria they propose for STEP relate to state (and national) criteria for evaluating teacher education programs.

Four basic questions may help guide the task force in developing its strategic plan and accountability framework. STEP provides three templates that can guide your answers to the following questions.

1. What is your starting point?

Components of Institutional Programs and Participation

2. What are the short-term and the long-term goals for STEP at your institution?

Short-term and Long-term Goals

3. What indicators will you use to track progress toward meeting these short- and long-term goals? How can you shape indicators for STEP to support state and national teacher education standards and requirements?

Indicators

Answers to Questions 1-3 Expected by Winter Break

4. Please provide a thoughtful written response to the **TWO ESSENTIAL QUESTIONS** making use of the data collected in questions 1-3.

Written Document due by the end of the academic year

The answers to these four basic questions will shape a *Strategic Plan to Guide STEP Work during Year II*.

1. COMPONENTS OF INSTITUTIONAL PROGRAMS AND PARTICIPATION

I. Components of a Pre-Teacher Preparation Program

University Admission Requirements	
General Education Requirements	
Remedial Opportunities for Students	
Introductory Course or Structured Explanations to College Majors/Programs	
Assessment of General Education Experiences	

II. Components of Teacher Preparation Program

<p>Required Courses in Academic Disciplines (e.g. percentage with major in English who will be teachers)</p>	
<p>Incorporation of K-12 Standards Into Programs</p>	
<p>Required Courses in Pedagogy</p>	
<p>Clinical Experiences (role for A&S faculty)</p>	
<p>Alternative Paths to Certification</p>	
<p>Program Exit Requirements</p>	
<p>Program Exit Assessments</p>	

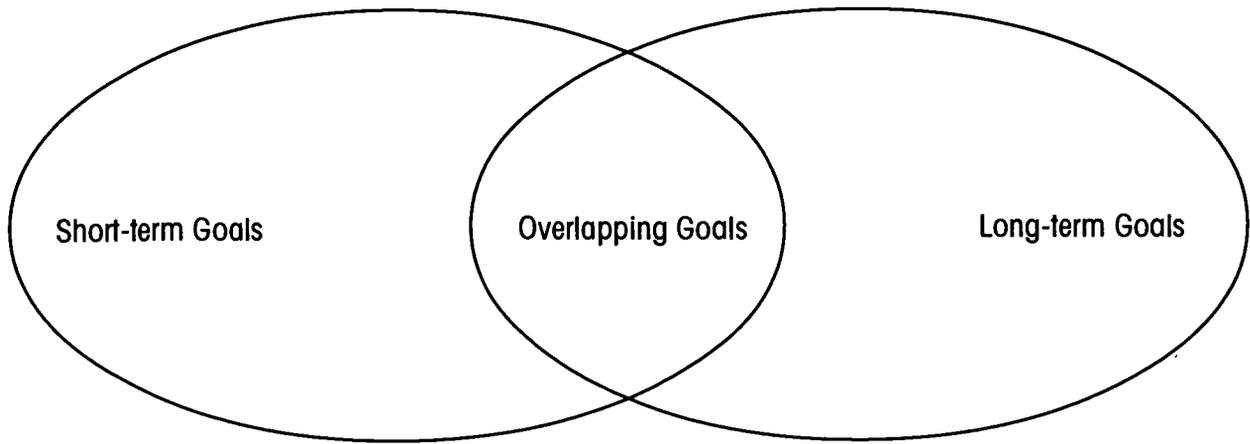
III. Components of Program Effectiveness

State Licensure Rates	
K-12 Assessments of Student Achievement as a Reflection of Teacher Preparation	
Content Knowledge Assessment	
Instructional Knowledge and Skills Assessment	
Assessments of Pedagogical Strategies	

IV. Components of Faculty Participation

Existing Programmatic Relationship Between Faculties of Education and Arts & Sciences	
Institutional Structures Existing to Enhance Inter-Faculty Communication	
Planned Structures to Enhance Inter-Faculty Communication	
Role of A&S Faculty in Teacher Preparation	
Faculty Efforts to Track Student Achievement	
Incentives or Rewards for Participation in the STEP Initiative Among Education Faculty	
Incentives or Rewards for Participation in the STEP Initiative Among A&S Faculty	

2. SHORT-TERM AND LONG-TERM GOALS



3. INDICATORS

Goal	Activities Designed to Reach Goal	Indicator that Goal is Met

Examples of National and State P-12 Student, Teacher Licensing, and Teacher Education Standards

NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS (NCTM)

Principles and Standards for School Mathematics

Geometry Standard for Grades 6–8

- Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.
- Specify locations and describe spatial relationships using coordinate geometry and other representational systems.
- Apply transformations and use symmetry to analyze mathematical situations.
- Use visualization, spatial reasoning, and geometric modeling to solve problems.

Measurement Standard for Grades 6–8

- Understand measurable attributes of objects and the units, systems, and processes of measurement.
- Apply appropriate techniques, tools, and formulas to determine measurements.

Captured from: <http://standards.nctm.org/document/chapter6/geom.htm> and
<http://standards.nctm.org/document/chapter6/meas.htm>
2000 by the National Council of Teachers of Mathematics

GEORGIA DEPARTMENT OF EDUCATION QUALITY CORE CURRICULUM (QCC)

Grade 7 Mathematics: Geometry & Spatial Sense; Measurement Standards

Topic: Angles

- Standard: Classifies angles as acute, right, obtuse, or straight; and names angles using points, numbers, and letters.

Topic: Quadrilaterals, Triangles

- Standard: Classifies quadrilaterals and triangles based on their properties.

Topic: Geometric Figures

- Standard: Contrasts and classifies plane and solid geometric figures (polygons, cones, cylinders, prisms, pyramids).

Topic: Geometric Figures

- Standard: Compares and contrasts geometric figures with respect to congruency and similarity (scaling, dilations).

Topic: Transformations

- Standard: Analyzes effects of basic transformations on geometric shapes.

Topic: Graphing, Integers

- Standard: Identifies and graphs an ordered pair of integers on a four-quadrant coordinate plane.

Topic: Prisms, Cylinders

- Standard: Finds volume and surface area of prisms and cylinders.

Topic: Circles, Polygons, Geometric Solids, Formulas

- Standard: Finds the perimeter (or circumference) and area of polygons and circles, and the volume and surface area of geometric solids using formulas. (Uses student development of formulas when possible.)

Topic: Customary Units, Metric Units

- Standard: Selects and uses appropriate customary and metric units of measure for length (including perimeter and circumference), area, volume, capacity, weight/mass, time, temperature, and angle measure.

Topic: Angle Measurement

- Standard: Measures angles using a protractor.

Topic: Customary Units, Metric Units, Conversion within System

- Standard: Converts from one metric unit to another metric unit and from one customary unit to another customary unit (length, capacity, weight/mass, time, and money).

Captured from: <http://www.glc.k12.ga.us/passwd/search/srchqcc/Standard.asp?SubjectID=2&Grade=7&CSID=160&keywords=&CSType=S&View=SO1999-2002> Georgia Department of Education

INTERSTATE NEW TEACHER ASSESSMENT AND SUPPORT CONSORTIUM (INTASC)

Model Standards for Beginning Teacher Licensing and Development

A Resource for State Dialog

- Principle #1: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.
- Principle #2: The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.
- Principle #3: The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.
- Principle #4: The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.
- Principle #5: The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
- Principle #6: The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
- Principle #7: The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.
- Principle #8: The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.

- Principle #9: The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
- Principle #10: The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Captured from: <http://www.ccsso.org/intascst.html#draft>
1992 Council of Chief State School Officers

NATIONAL COUNCIL FOR ACCREDITATION OF TEACHER EDUCATION (NCATE)

Professional Standards for the Accreditation of Schools, Colleges, and Departments of Education

Standard 1: Candidate Knowledge, Skills, and Dispositions

Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state, and institutional standards.

Standard 2: Assessment System and Unit Evaluation

The unit has an assessment system that collects and analyzes data on the applicant qualifications, candidate and graduate performance, and unit operations to evaluate and improve the unit and its programs.

Standard 3: Field Experiences and Clinical Practice

The unit and its school partners design, implement, and evaluate field experiences and clinical practice so that teacher candidates and other school personnel develop and demonstrate the knowledge, skills, and dispositions necessary to help all students learn.

Standard 4: Diversity

The unit designs, implements, and evaluates curriculum and experiences for candidates to acquire and apply the knowledge, skills, and dispositions necessary to help all students learn. These experiences include working with diverse higher education and school faculty, diverse candidates, and diverse students in P-12 schools.

Standard 5: Faculty Qualifications, Performance, and Development

Faculty are qualified and model best professional practices in scholarship, service, and teaching, including the assessment of their own effectiveness as related to candidate performance. They also collaborate with colleagues in the disciplines and schools. The unit systematically evaluates faculty performance and facilitates professional development.

Standard 6: Unit Governance and Resources

The unit has the leadership, authority, budget, personnel, facilities, and resources, including information technology resources, for the preparation of candidates to meet professional, state, and institutional standards.

Captured from: http://www.ncate.org/standard/unit_stnds_ch2.htm
2002 National Council for Accreditation of Teacher Education

TEACHER EDUCATION ACCREDITATION COUNCIL (TEAC)

Accreditation Goal and Principles

Goal: Public assurance that educators are competent, caring, and qualified. The common purpose of teacher education programs, and the other professional programs for those who work in schools, is the preparation of “competent, caring, and qualified” educators. The faculty members in programs seeking accreditation by TEAC are required to reaffirm this ambitious goal as a goal of their own programs.

The three TEAC quality principles are simply the means by which the faculty makes the case that its professional education program has succeeded in preparing competent, caring, and qualified professional educators.

Quality Principle I: Evidence of student learning

The core of TEAC accreditation is the character of the evidence the program faculty members provide about the claims they make about their students’ learning and understanding of the teacher education curriculum. Whatever the particular topics of the curriculum the faculty members claim their students master, TEAC requires that the program faculty members address the following general components of their program in ways that also indicate that the faculty has a balanced and accurate understanding of the academic disciplines that are connected to the program under accreditation review: subject matter knowledge, liberal education, pedagogical knowledge, and teaching skill.

Quality Principle II: Valid Assessment of Student Learning

Because all the available methods for assessing students’ caring and learning are compromised in one way or another, the program faculty will need to employ multiple measures and assessment methods that converge on a dependable finding about the candidates’ accomplishments. However the program faculty members assess what their students have learned from the teacher education program, TEAC requires that there be evidence that the inferences made from the assessment system meet the appropriate and accepted research standards for reliability and validity.

To satisfy Quality Principle II, the faculty’s ongoing investigation of the means by which it provides evidence for each element in Quality Principle I must focus on two aspects of its assessment of student learning — (1) the rationale for the links among the assessments, the program’s design, the program’s goal, and the claims made in support of the program goal, and (2) the evidence that each assessment is valid.

Quality Principle III: Institutional Learning

This principle requires the faculty to use, and have a plan to use, the information it derives from its research into Quality Principle I and Quality Principle II to improve program quality. Quality Principle III presupposes that there is a system of inquiry, review, and quality control in place, a means, in other words, by which the faculty secures evidence and informed opinion needed to initiate or improve program quality. Quality Principle III also encourages program faculty to become skilled at creating knowledge for the improvement of teaching and learning and to modify the program and practices to reflect this new knowledge.

TEAC expects that the faculty will systematically and continuously improve the quality of its professional education programs. TEAC requires evidence related to two issues about the ongoing processes of inquiry and program improvement.

Captured from: <http://www.teac.org/accreditation/goals/index.asp>
2002 Teacher Education Accreditation Council

Comparison of University of Delaware Conceptual Framework, State of Delaware Teacher Standards, and National Middle School Association Standards

CONCEPTUAL FRAMEWORK OUTCOMES	DELAWARE TEACHING STANDARDS	NATIONAL MIDDLE SCHOOL ASSOCIATION STANDARDS
1. Demonstrate their commitment to education as a scholarly profession that requires ethical standards, a continuing process of learning, and the reflective reexamination of knowledge to improve practice.	<p>#9 Professional Growth The teacher understands the importance of continuous learning and pursues opportunities to improve teaching.</p> <p>#12 Professional Conduct The teacher understands and maintains standards of professional conduct guided by legal and ethical principles.</p>	The program prepares professionals who collaborate with: (6.1) colleagues to improve schools and advance knowledge and practice in their fields.
2. Demonstrate their commitment to the belief that learners of all ages and abilities can be educated, and toward the goal of developing citizens competent to live and work in a democratic society.	#5 Learning Environment The teacher understands individual and group behavior and creates a learning environment that fosters active engagement, self-motivation, and positive social interaction.	The program prepares professionals who design and employ teaching and learning approaches appropriate for young adolescents which: (5.2) incorporate learners' ideas, interests, and questions into the exploration of curriculum and pursuit of knowledge.
3. Incorporate the knowledge of human development into their practice to ensure developmentally appropriate learning experiences for learners of all ages and abilities	#2 Human Development and Learning The teacher understands how children develop and learn and provides learning opportunities that support the intellectual, social, emotional and physical development of the students.	The program prepares professionals who understand: (2.1) the physical, social, emotional, intellectual, and moral characteristics of the developmental period of early adolescence within social and cultural context. (2.2) the changes in family settings, social contexts, threats to health and safety, and risk behaviors in contemporary society that affect healthy development of young adolescents.
4. Possess the content knowledge (including pedagogical content knowledge) essential for teaching the major concepts and intellectual processes of the disciplines in their fields.	#1 Content The teacher understands the core concepts and structure(s) of the discipline(s) and creates learning experiences that make the content meaningful to students.	The program prepares professionals who design and employ teaching and learning approaches appropriate for young adolescents which: (5.3) Emphasize the interdisciplinary nature of knowledge while drawing upon the resources inherent in separate subjects. The program includes: (7.1) preparation in two teaching fields that is broad, multidisciplinary, and encompasses the major areas within those fields. (7.2) At least one course designed specifically for teaching pedagogy appropriate for young adolescents.
5. Demonstrate reflective thought, critical thinking, and the speaking, writing, technical and problem-solving skills appropriate for the profession.	#4 Communication The teacher understands and uses effective communication.	

CONCEPTUAL FRAMEWORK OUTCOMES	DELAWARE TEACHING STANDARDS	NATIONAL MIDDLE SCHOOL ASSOCIATION STANDARDS
6. Design learning experiences and teach in ways that promote content knowledge, skill development, critical reflection, and problem solving according to the methods of inquiry and standards of evidence used in their disciplines.	<p>#6 Planning for Instruction The teacher understands instruction planning and designs instruction based upon knowledge of the disciplines, students, the community, and Delaware's student standards.</p> <p>#7 Instruction Strategies The teacher understands a variety of instructional approaches and uses them to promote student thinking, understanding and application of knowledge.</p>	The program prepares professionals who apply their knowledge of the nature of early adolescence and needs of young adolescents to: (3.1) plan developmentally and culturally responsive instruction. (3.2) design appropriate school programs and function within them. The program prepares professionals who design and employ teaching and learning approaches appropriate for young adolescents which: (5.4) teach the basic concepts and skills of inquiry and communication as integral to all learning. (5.5) cultivate skills in recognizing and solving problems. (5.6) utilize multiple grouping strategies that emphasize interdependence, cooperation, and individual responsibilities. The program prepares professionals who understand the rationale for the role of teachers in, and the function of: (4.3) flexible grouping and scheduling.
7. Use educational technology effectively throughout the teaching and learning process.	#11 Educational Technology The teacher understands the role of educational technology in learning and uses educational technology as an instructional and management tool.	The program prepares professionals who design and employ teaching and learning approaches appropriate for young adolescents which: (5.2) incorporate learners' ideas, interests, and questions into the exploration of curriculum and pursuit of knowledge.
8. Plan and use a variety of approaches to assessment that are authentic, developmentally appropriate, and sensitive to the needs of different learners.	#8 Assessment The teacher understands multiple assessment strategies and uses them for the continuous development of students.	The program prepares professionals who design and employ teaching and learning approaches appropriate for young adolescents which: (5.7) employ accountability measures that balance evaluation of academic learning with assessment of individual growth and development. (5.8) include multiple strategies for evaluation and assessment.
9. Demonstrate respect for cultural diversity and individual differences by planning learning activities that are sensitive to issues of class, gender, race, ethnicity, family composition, sexual orientation, age and special needs.	#3 Diverse Learners The teacher understands how students differ and adapts instruction for diverse learners.	The program prepares professionals who apply their knowledge of the nature of early adolescence and needs of young adolescents to: (3.1) plan developmentally and culturally responsive instruction. The program prepares professionals who design and employ teaching and learning approaches appropriate for young adolescents which: (5.1) honor individual differences among learners by utilizing multiple approaches to thinking and learning.
10. Demonstrate a disposition to work as partners with students, families, other professionals and the wider community to provide a supportive, safe, caring learning environment to optimize every learner's educational attainment.	#10 Professional Relationships The teacher understands the role of the school in the community and collaborates with colleagues, parents/guardians, and other members of the community to support students' learning and well-being.	The program prepares professionals who apply their knowledge of the nature of early adolescence and needs of young adolescents to: (3.3) create supportive school environments. The program prepares professionals who understand the rationale for the role of teachers in, and the function of: (4.1) interdisciplinary teams. (4.5) working with colleagues within the framework of the entire school community. (4.6) working with families, resource persons, and community groups. The program prepares professionals who collaborate with: (6.1) colleagues to improve schools and advance knowledge and practice in their fields. (6.2) families, resource persons, and community groups to achieve common goals for young adolescents.

Developed by: University of Delaware

**International Reading Association/National Council of Teachers of
English Standards for English/Language Arts and
University of Georgia Course Matrix**

Standards-based Teacher Education Project (STEP)TM

Standards Development

Discipline: English/Language Arts*

Standards	Opportunities College of Education	Opportunities College of Arts and Sciences
1. Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.	ELAN 4410/6410 ELAN 4401/6401 ELAN 4400 ELAN 4460 ELAN 4470	Core Curriculum: Areas A-F Major Electives
2. Students read a wide range of literature from many periods in many genres to build an understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) of human experience.		Core Curriculum: Areas C, F, and A
3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).	READ 4030 ELAN 4401 ELAN 4400	LING 4000-4110 Major Electives Core Curriculum: Areas C, E, F, and A
4. Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.	ELAN 4460	ENGL 1101 and 1102SPCM 1100/1500 Core Curriculum: Area C
5. Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.	ELAN 4400 ELAN 4460 ELAN 5460	ENGL 1101 and 1102 Any course requiring writing

*Source: IRA/NCTE *Standards for the English Language Arts*

APPENDIXES

Standards	Opportunities College of Education	Opportunities College of Arts and Sciences
6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and nonprint texts.	ELAN 4400 ELAN 4460 ELAN 5460	ENGL 1101 and 1102 LING 4000-4110 Major Electives
7. Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.	ELAN 4401 ELAN 4470	Core Curriculum: Areas D and E Major Electives
8. Students use a variety of technological and informational resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.	ELAN 4400 ELAN 4460 ELAN 5460	ENGL 1101 and 1102 Core Curriculum: Areas A-F Major Electives
9. Students develop an understanding of, and respect for diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions, and social roles.	ELAN 4400 ELAN 4460 ELAN 5460 ELAN 4401	LING 4000-4110 Any multicultural course
10. Students whose first language is not English make use of their first language to develop competency in the English language arts and to develop understanding of content across the curriculum.		Any multicultural course LING 4000-4110 Possible general electives in ESL certification
11. Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.	ELAN (All Courses)	Core Curriculum: Areas A-F Major Electives
12. Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).	ELAN (All Courses)	Core Curriculum: Areas A-F Major Electives

Developed by: Hudson-Ross, S., Ruppensburg, H., McWhorter, P., and Desmet, C. (1999). The English/Language Arts Standards matrix. Data analysis produced for the January 1999 Deans' Forum with the support from the Standards-based Teacher Education Project (STEP).

Kentucky Core Content for Assessment and University of Louisville Elementary and Middle School Science Matrices

11 STANDARDS OF ELEMENTARY SCIENCE PROGRAM

Statement of P-12 Standard	Name/Number of U of L Course that Addresses P-12 Standard	Comments and/or Explanations
Scientific Ways of Thinking and Working	Biol 102-104, 240-241 Chem 201, 202, 203 Geos 105, 107 Phys 107	
Properties of Objects and Materials	Biol 240-241, 242-243 Chem 201-203 Phys 121-122	See Comment #1
Position and Motion of Objects	Phys 121-122	See Comment #1
Light, Heat, Electricity and Magnetism	Chem 201-203 Phys 121-122	See Comment #1
Properties of Earth Materials	Biol 240-241 Chem 201 Geos 105-106	See Comment #1
Objects in the Sky	Chem 201-203 Phys 107-108	See Comment #1
Changes in the Earth and Sky	Chem 201-203 Geos 105-106 Phys 107-108	See Comment #1
Characteristics of Organisms	Biol 102-104, 240-241	
Life Cycles of Organisms	Biol 102-104, 240-241, 242-243	
Organisms and their Environments	Biol 102-104, 240-241, 242-243	
Applications/Connections	All Natural and Life Sciences Courses	See Comment #2

Comment #1: Although several courses cover the content standard listed, students pursuing their certification are not required to take a course which includes the instruction of the content standard.

Comment #2: All courses required for this certification give extensive real-world applications but lack interconnections between distinct science fields.

13 STANDARDS OF MIDDLE SCHOOL SCIENCE

Statement of P-12 Standard	Name/Number of U of L Course that Addresses P-12 Standard	Comments and/or Explanations
Scientific Ways of Thinking and Working (2.)	Biol 240-241, 329 Chem 201-203, 202 Geos 201-203 Phys 221-223	
Transfer of Energy	Chem 201-203 Geos 201-203 Phys 221-223	
Motions and Forces	Phys 221-223, 222-224	
Properties and Changes of Properties in Matter	Chem 201-203, 202-205	
Structure of the Earth System	Geos 201-203 Phys 220	
Earth's History	Geos 201-203	
Earth in the Solar System	Phys 107, 221	
Structure and Function in Living Systems	Biol 240-241, 242-243, 329	
Reproduction and Heredity	Biol 240-241	Not sufficient to cover the topics in depth. Heredity not covered.
Diversity and Adaptations of Organisms	Biol 204-241, 242-243	
Regulation and Behavior	Biol 240-241, 329 Geos 105	
Population and Ecosystems	Biol 240-241	Insufficient coverage in these courses, in particular ecosystems.
Applications/Connections	All Natural and Life Science Courses	See Comment #1

Comment #1: All courses required for this certification give extensive applications but lack interconnections between the distinct science fields.

Developed by: STEP Leadership Team, University of Louisville

Georgia State University Teacher Education Environment in Math and Science (TEEMS) Standards-based Portfolio

Professional Science Education Portfolio

Prepare a portfolio that demonstrates your growth as an intern in the TEEMS program. To do this, you will determine and prepare a list of goals for your learning as a TEEMS intern and document your growth and learning. Your list of goals should include statements about the following areas of your TEEMS experience: planning, instruction, evaluation (of student learning), management (leadership), knowledge of science, and professionalism.

Portfolio Development

Your portfolio will be a document that showcases and evaluates your work during the TEEMS program. Use the guidelines outlined here to create the portfolio:

Principles:

- Portfolios should reflect student ownership of learning.
- Portfolios should represent evidence of growth and learning as learners and interns.
- Portfolios should represent one of a variety of assessment tools.
- Portfolios should contain process and product as evidence.

Purpose:

- To improve your ability as a science teacher.
- To integrate instruction and assessment.
- To facilitate your learning as a TEEMS graduate student.
- To provide evidence of your learning and growth.

Contents:

- Contents should match your goals in the TEEMS program.
- There should be a variety of forms of evidence.
- A variety of people can contribute to your portfolio (e.g., parents, students, peers, mentors, university professors, yourself).
- You should have pieces of evidence to show your progress in areas such as planning, instruction, evaluation, management (leadership), the content of science and professionalism.

Some examples are as follows:

- Planning: process used, lesson plans and unit plans, notes
- Instruction: student evaluations, peer/mentor evaluations, your reflections, videos and critiques of your teaching
- Evaluation: assessment plan or model, tests, performance assessments, description of student projects, results of student projects
- Management (Leadership): leadership plans, video, map of your room, reflective notes
- Science Knowledge: audio/video tapes of your teaching science, science projects, learning log samples, tests and test results, essays, discussions
- Professionalism: readings and reactions, learning log samples, notes of conferences/meetings with faculty/parents/students, attendance at professional meetings

Procedures:

- Save everything you do during the TEEMS program.
- Determine your goals – after session #1, prepare your goals and make copies for yourself, your mentor, and your instructors.
- Determine what documentation you will use as evidence of your growth as a science teacher.
- Begin to develop your portfolio. Your portfolio can take a variety of forms (e.g.,

binder, folder, file folder).

- As you decide what to include in your portfolio:
 - a. Make a selection and date it.
 - b. Identify the piece and give the context to help the reader gain an understanding of it.
 - c. Include a caption outlining your rationale for placing the piece in your portfolio, what it says about you as an intern, the personal meaning it has for you, and what your next steps might be.
 - d. Organize the pieces in your portfolio so they are easy to locate and present a developing picture of your growth as a teacher.
- You will make a presentation of your portfolio to the TEEMS interns at the end of the Spring Semester to include all your growth, work, and experiences during the year with TEEMS. This will be a day in which you will not only show your portfolio, but you will also develop a “science fair” three-panel poster of your work as a TEEMS graduate student.

Portfolio Evaluation Criteria

Form (5 points)

- Organization
- Neatness

Content: Holistic (12 points)

- Relevant
- Meaningful
- Meets goals
- Demonstrates growth as an intern

Content: Analytic (18 points)

- Planning
- Instruction
- Evaluation
- Management (Leadership)
- Science Knowledge
- Professionalism

Reflection (8 points)

- Clear
- Demonstrates growth
- Reflects goals
- Meaningful

Total:

1. On a separate sheet of paper, please provide support for the grade that you have assigned yourself.
2. On a separate sheet of paper, please write your reflections on the portfolio process.

Portfolio Development Matrix

INTASC Principle	TEEMS Portfolio Section	Examples of Evidence
<p>#1 The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students. #3 The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.</p>	Planning	Lesson plans, unit plans, notes, strategies used, process used, reflective teaching feedback
<p>#2 The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development. #5 The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.</p>	Management	Leadership plan, classroom management plan, videos, map of room, reflective notes, inclusion/ special abilities notes/conferences
<p>#4 The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills. #6 The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.</p>	Instruction	Student evaluations, peer/mentor evaluations, reflections, videos and critiques of teaching
<p>#7 The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.</p>	Science Knowledge	Audio/video tapes of science lesson, science projects, tests and test results, discussions of content, knowledge enhancement coursework, etc. Praxis II
<p>#9 The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally. #10 The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.</p>	Professionalism	Reflections, readings and reactions, notes of conferences with parents/ faculty, students, attendance/ participation at professional meetings
<p>#8 The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.</p>	Evaluation	Assessment plans, tests, performance assessments, description of student projects, results of student projects

Portfolio Rubric

Form	Organization	1 point
	Neatness of Portfolio	1 point
	Clarity of Presentation	1 point
	Neatness of Presentation	1 point
	Professionalism of Presentation	1 point
Content: Holistic	Relevant evidence	1-3 points
	Meaningful evidence	1-3 points
	Meets personal goals	1-3 points
	Demonstrates growth as an intern	1-3 points
Content: Analytic	Planning	1-3 points
	Instruction	1-3 points
	Evaluation	1-3 points
	Management (Leadership)	1-3 points
	Science Knowledge	1-3 points
	Professionalism	1-3 points
Reflection	Clear explanation of thoughts	1-2 points
	Reflects personal goals	1-2 points
	Meaningful reflection on six areas	1-2 points
	Demonstrates growth	1-2 points

Rubric points for Content

- 1 – Evidence and explanation is unclear, or major flaws in principle mastery, incorrect use of terms, inappropriate or omitted evidence.
- 2 – Completes the principle, but explanations may be slightly ambiguous or unclear, may contain some incompleteness, inappropriateness, or unclearness in representation, understanding of processes, or conclusions.
- 3 – Clarity of thought, complete. Shows understanding of all principles, reasonable or thoughtful questions, conclusions supportable by evidence shown, shows creativity, some graphic representation of concepts.

Rubric points for Reflection

- 1 – Everything is included, but hard to follow or not supported by evidence.
- 2 – Meets or exceeds expectations. Clear evidence of criteria.

Developed by: Dr. Nydia Rodriguez Hanna, Assistant Professor of Science Education,
Georgia State University

APPENDIX H

University of Georgia Standards Mapping and Alignment Process

Standards-based Teacher Education Project***I. Develop Working Standards Document***

1. Identify standards (for students and teachers) for each area (science, social studies, mathematics, language arts)
2. Analyze selected standards
3. Organize, modify, and/or append standards

II. List Curricular Opportunities

4. Identify curricular experiences (e.g., classroom, field-based) of UGA preservice teachers who will teach in grades 7-12
5. Analyze College of Education and College of Arts and Sciences offerings (or opportunities)

III. Map Standards and Opportunities

6. Map (or match or align) standards and opportunities to learn
7. Identify voids, weaknesses, overlap, redundancy, etc.

IV. Develop Common Set of Expectations

8. Categorize offerings (e.g., formal, informal, field-based) for common set of expectations between College of Education and College of Arts and Sciences

APPENDIX I

University of Georgia STEP Task Force Next STEPs for Standards Mapping and Alignment

1. Each discipline-based work group within the STEP Task Force (English, mathematics, science, social studies) will hold a dinner meeting during the fall semester. At this meeting, the work groups will be asked to:
 - a. Complete any remaining work related to alignment with academic content standards and expand examination of course work in light of alignment with standards related to *teacher preparation* for that discipline (e.g., NCTM standards);
 - b. Develop a tentative strategy for assessing the models of teaching that students experience during their course work both in the College of Education and the College of Arts and Sciences (e.g., lecture, laboratory, cooperative learning); and
 - c. Consider the question: How can we know that students are, in fact, meeting the standards that we agree upon (e.g., Praxis examination)?

Each group will also be asked to prepare a brief written report concerning its work to date that will be shared with members of the Deans' Forum at their next meeting.

2. The two-day Deans' Forum retreat will focus primarily on the STEP agenda. Consultants who possess expertise in the area of standards-based teacher preparation will be invited to attend, speak to, and advise the group.
3. Refinements and implementation for subsequent years will be based on the work described above.

Aligning UGA Course Requirements for Teacher Preparation Programs to Academic Content Standards

(form for Arts and Sciences faculty)

University of Georgia Standards-based Teacher Education Project (STEP)TM

Dear Colleague: Your help is needed in reviewing a standards alignment matrix developed by the UGA Task Force for the Standards-based Teacher Education Project (STEP)TM. Academic content standards have been tentatively identified for what beginning teachers should know and be able to do. These standards were then mapped against the curriculum offered in both the College of Arts & Sciences and the College of Education as a step toward developing a common set of expectations. The matrices that resulted from this process will help us assess whether current courses and programs provide an opportunity for teacher candidates to learn the content and pedagogy defined in the standards. Our purpose at this point is to confirm the accuracy of the matrices and seek information from a broader representation of faculty in order to make modifications, if necessary.

Directions: Please take a moment to review the accompanying matrix, then answer the following questions.

Name: _____ Department: _____

Standards matrix reviewed: _____

1. Generally speaking, is the content included in the standards consistent with the content that is covered in the courses listed? If not, please explain.

2. Are there any voids or omissions? List any course that would address this standard.

3. Is there any overlap or redundancy? Which courses, in your opinion, would most completely address the standard?

4. Note here any further suggestions, recommendations, and/or reactions:

APPENDIX K

Aligning UGA Course Requirements for Teacher Preparation Programs to Academic Content Standards

(form for Education faculty)

University of Georgia Standards-based Teacher Education Project (STEP)TM

Dear Colleague: Your help is needed in reviewing a standards alignment matrix developed by the UGA Task Force for the Standards-based Teacher Education Project (STEP)TM. Academic content standards have been tentatively identified for what beginning teachers should know and be able to do. These standards were then mapped against the curriculum offered in both the College of Arts & Sciences and the College of Education as a step toward developing a common set of expectations. The matrices that resulted from this process will help us assess whether current courses and programs provide an opportunity for teacher candidates to learn the content and pedagogy defined in the standards. Our purpose at this point is to confirm the accuracy of the matrices and seek information from a broader representation of faculty in order to make modifications, if necessary.

Directions: Please take a moment to review the accompanying matrix, then answer the following questions.

Name: _____ Department: _____

Standards matrix reviewed: _____

1. Generally speaking, is the content included in the standards consistent with the content that is covered in the courses listed? If not, please explain.

2. Are there any voids or omissions? List any course not on the matrix that would address this standard.

3. Is there any overlap or redundancy? Which of these courses, in your opinion, would most completely address the standard?

4. With regard to the Arts & Sciences courses listed, are these courses usually available for enrollment by College of Education students in your department?

5. Note here any further suggestions, recommendations, and/or reactions:

University of Georgia STEP Student Teacher Survey

The purpose of this questionnaire is to elicit information about your academic preparation and student teaching experience in relation to the standards selected for your subject field by the UGA STEP Task Force. Your responses will help to identify strengths and/or gaps in your preparation in content and pedagogy to guide students' learning related to the standards in grades 7-12. Please be as specific as possible in your written comments.

Grade and subject taught during student teaching: _____

Did you start and complete your undergraduate program at UGA? Yes__ No__

Did you transfer to your major from another major from within UGA? Yes__ No__

If you transferred to UGA from another institution or completed another degree program elsewhere, approximately how many semester hours of work had you completed at the time of UGA admission? _____

Prior to formal student teaching, in what other grade levels and subjects did you have experience? _____

1. How well prepared do you feel to address the standards for your teaching? Circle your response.

1	2	3	4	5
Unprepared	Slightly prepared	Generally prepared	Well prepared	Extensively prepared

Comments:

2. If you feel more confident to address some standards than others, please respond to the following:

a) Which ones do you feel most confident about in your teaching?

b) Which ones do you feel least confident about?

3. To what extent did school curriculum and classroom context or curriculum requirements during your student teaching make it possible for you to teach to the standards? Circle your response.

1	2	3	4	5
Not at all	Slightly	Occasionally	Generally	Extensively

4. If you felt constraints or limitations, what were some that you can particularly recall?

5. How capable do you feel to bring students in grades 7-12 to high levels of academic achievement in your subject area? Circle the response that best reflects your view.

1	2	3	4	5
Not at all	Somewhat	Generally	Substantially	Very

Comments:

6. Assuming the standards remain as presently constituted, how might we enhance your teacher preparation program experiences to better prepare you to address the standards in your teaching?

7. How might we best assess your teaching performance related to the standards in ways that would fit most easily with other ongoing academic and teaching responsibilities and requirements? (Examples: In portfolios, lesson plans, pre-post assessments of grades 7-12 students you teach?)

8. If you wish to offer any other comments about your academic or professional preparation to teach to these standards, please do so here.

APPENDIX M

University of Georgia STEP Teacher Response Form

Applicability of UGA STEP Standards to Grades 7-12 Courses

Your department/subject area:

_____ English/Language Arts

_____ Science

_____ Mathematics

_____ Social Studies

School: _____

Course/Grade Level: _____

Directions: *Select the Standards Alignment Table for one subject area. For each standard, rate the extent to which the standard is given attention in your course or is an expectation of teachers at your school in your teaching field. Use the following coding system and write it in the left hand margin next to the standard.*

1. Session. Indicate if the standard is relevant to Fall Semester, Spring Semester, or both.

F = Fall

S = Spring

F/S = Fall and Spring

If the standard is not addressed or is not an expectation at any time during the school year, then do not code the item for this element.

2. Emphasis. If the standard is given attention sometime during the year or is an expectation of teachers in your school program, indicate the extent to which it is given attention or is an expectation.

1 = a little

2 = some

3 = substantial

When completed, some examples of coding that may appear are:

Blank (Standard is not addressed/expected)

F1 (Standard is addressed/expected a little during the Fall semester)

F/S3 (Standard is addressed/expected substantially throughout the year)

Attach this cover sheet to the Standards Alignment Table and return to:

212

212

212

APPENDIX N

University of Georgia STEP Tasks for Review of Standards

1. Using the guide provided, review the standards in relation to the course(s) you teach.

Identify those that are applicable and those that are not, the semester(s) they are stressed and the extent of emphasis they receive.

2. On the reverse side of the guide sheet, identify one standard and give one specific example of how that standard is addressed in your course. Share the example with others in your subject area group. If time permits, do a second standard and example.

3. Select one example to present to the total group in summary discussion.

4. Extension – Take 2-3 packets of standards (your academic field or the other three) and ask two to three teachers in your school or department to do as you have done today. Collect and return the completed forms and packets to us. In addition, we ask that you provide examples of three of the “standards in action” (descriptions) from your classroom. An honorarium will be provided upon receipt of these two items.

University of Georgia
GSTEP Curriculum Team Arts and Sciences Appointment Letter

Date

Address

Dear Dr. :

Thank you for agreeing to participate in the Georgia Systemic Teacher Education Program (GSTEP) for the 2000-2001 school year. As a member of the Secondary English Curriculum Team, you will have the opportunity to make a tremendous difference in how we prepare beginning teachers in Georgia.

We have approved a total of X% of your salary for your work (\$_____). You need to meet with your department head and decide how you will be paid. You may choose to be paid in one of three ways: a) summer salary, b) May semester salary, or c) a draw account for travel, books, equipment, etc. Whichever is chosen, the 2000-01 funds must be spent by August 30, 2001. If you continue your work on this or another GSTEP team, you will receive a new payment and contract for that additional work. By April 23, 2001, please contact the GSTEP budget administrator to let us know what arrangements to make.

Individually, you are expected to attend all meetings, to participate in all work of the group, and to contribute an equal share to analysis, data collection, and preparation of products. Collectively, our expectation is that your Team will achieve the activities and products listed on the reverse side of this letter. If you are not able to participate at all, we assume you will let us know to cancel your compensation.

Please also sign one copy of the reverse side of this letter, completing all blanks, and return to XXXXXXXX by April 23. Our deepest thanks for your important contributions to the improvement of teacher education.

Sincerely,

GSTEP Expectations for Curriculum Teams 2000-2001

GSTEP Year 1 Activities	Year 1 Products
<p>Phase 1: Analyze Curriculum Review and analyze prior STEP alignment work Review national and state standards</p> <p>Identify opportunities for beginning teachers to a) use technology, b) assess and document impact on student learning, and c) support contextual teaching and learning</p>	<p>Phase 1: Product Correlation matrix of UGA courses compared to 7-12 content and/or grade level standards by August 1, 2001</p>
<p>Phase 2: Synthesize, Present, Revise Curriculum Analysis Synthesize analyses into a proposal for program and course modifications as needed.</p>	<p>Phase 2: Product Proposal for program modification based on data analysis submitted to appropriate departments and to GSTEP by August 1, 2001.</p>
<p>Paired Courses: During course analyses, generate ideas for collaborative A&S/COE "paired" courses.</p> <p>Consider variety of ways to "pair" courses including team teaching, swap of graduate assistants, etc.</p> <p>Develop plan for at least one set of paired courses. (Develop further pairs during next two years.)</p>	<p>Paired Courses: Idea generation and plans for 2001-2002 presented in written report to GSTEP and appropriate departments by August 1, 2001.</p>
<p>Build on Course Work: Share innovative courses/ideas among GSTEP partners via web and face-to-face meetings.</p>	<p>Build on Course Work: Team matrices, reports, plans, minutes, posted on GSTEP website by August 1, 2001.</p>
<p>Early Experiences Team Support: Meet with Early Experiences Team to review/approve their work; offer advice from content perspective.</p>	<p>Early Experiences Team Support: Approval of Early Experiences Team's recommendations by August 1, 2001.</p>
<p>Clinical/Induction Team Support: Meet with Clinical/Induction Team to provide in-process input, especially for content area aspects of a resource framework.</p>	<p>Clinical/Induction Team Support: Approval of resource framework and pilot plans for Fall 2001 by August 1, 2001.</p>

I agree to these obligations and terms:

GSTEP Participant Signature

Date

SSN#

Council of Colleges of Arts and Sciences Resolution on Teacher Education

Whereas the quality of teacher education is a subject of vital national interest and concern, and

whereas the single most significant factor in student-learning is the teacher, and

whereas the development of a deep understanding of the discipline one teaches is fundamentally important to the education of high quality teachers, and

whereas university presidents have called for placing teacher education at the center of campus priorities for those institutions who prepare teachers,

therefore be it resolved that the Council of Colleges of Arts and Sciences urges its member institutions to affirm publicly that teacher education is the responsibility of every academic and administrative department contributing to the education of teachers.

Furthermore, the Council of Colleges of Arts and Sciences urges every college and academic department that contributes to the education of teachers to make this important responsibility one of its priorities.

Furthermore, the membership of CCAS urges that the faculty of all colleges, schools, and departments involved in teacher education be represented in the institutional design of the best possible educational program for teachers, as well as in the determination of individual areas of responsibility for implementing the many components of the program and for assessing its effectiveness.

Passed by unanimous vote November 2001

Appendix Q

**Sample Pages From Ball State University Curriculum Mapping Tool
for Aligning Standards and Performance Artifacts to Courses**

NCATE/IPSB/COURSE/ARTIFACT/BSU ONLINE ALIGNMENT TOOL

The IPSB has re-established teacher licensing standards. These standards are essentially divided into combinations of Developmental areas and Content areas, all of which are "anchored" around the INTASC Principles.

Below is the list of the developmental areas and content areas. This list could easily grow to accommodate more content areas, such as Journalism and Business Education.

If you experience any problems using this system, please do not hesitate to contact Dr. Michael J. Modesitt - 765.285.3256

Try the new course search engine. Look at courses and find out what indicators have been aligned to them by other developers.

Developmental Areas:

- [Display Worksheet](#) [Early Childhood](#)
- [Display Worksheet](#) [Middle Childhood](#)
- [Display Worksheet](#) [Early Adolescence](#)
- [Display Worksheet](#) [Adolescence and Young Adults](#)

Content Areas:

- [Display Worksheet](#) [Building Level Administrator](#)
- [Display Worksheet](#) [District Administrator](#)
- [Display Worksheet](#) [Language Arts](#)
- [Display Worksheet](#) [English as a New Language](#)
- [Display Worksheet](#) [Generalist: Early and Middle Childhood](#)
- [Display Worksheet](#) [Health/Physical Education](#)
- [Display Worksheet](#) [School Counseling Professionals](#)
- [Display Worksheet](#) [Exceptional Needs](#)
- [Display Worksheet](#) [School Services](#)
- [Display Worksheet](#) [Fine Arts](#)
- [Display Worksheet](#) [Foreign Language](#)
- [Display Worksheet](#) [Library/Media](#)
- [Display Worksheet](#) [Mathematics](#)
- [Display Worksheet](#) [Science](#)
- [Display Worksheet](#) [Social Studies](#)
- [Display Worksheet](#) [Technology Education](#)
- [Display Worksheet](#) [Career/Technical Education](#)

If you experience any problems using this system, please do not hesitate to contact Dr. Michael J. Modesitt - 765.285.3256

Indicators for the Developmental Area: Middle Childhood

Standard 1: The middle childhood generalist understands that the developmental changes that occur in children aged 7-12 are more radical than those for any other age group					
Knowledge Indicator	Course(s)	Performance Indicator	Course(s)	Disposition Indicator	Course(s)
Indicator 1: recognizes that language and social development and the formation of basic values and self-esteem during middle childhood lay the foundation for successful adolescence and adulthood.		Indicator 1: creates and modifies learning opportunities and environments that are respectful of individual and group development and are based on research and reflective practice		Indicator 1: appreciates independent thinking in children	
Indicator 2: knows that children aged 7-12 are maturing in their ability to think concretely, symbolically, and abstractly		Indicator 2: uses multiple assessments to support the development of each child		Indicator 2: appreciates group dynamics as they affect the 7-12 age group	
Indicator 3: realizes that children aged 7-12 are eager to learn and can begin to make inferences, to explore topics deeply, and to establish informed points of view		Indicator 3: establishes learning goals which motivate students to achieve		Indicator 3: responds positively to diversity among children and appreciates this diversity as an asset within the classroom	
Indicator 4: understands that although children aged 7-12 are willing to conform to adult expectations, they are increasingly influenced by their growing interest in peer approval		Indicator 4: models self-control and positive social interaction and is proactive in promoting the same in the learning environment		Indicator 4: is committed to supporting children in their development and continuous progress (intellectual, physical, emotional, social, aesthetic, and ethical)	
Indicator 5: recognizes that while there are commonalities among children, each child is unique and requires developmentally appropriate learning opportunities				Indicator 5: values the use of multiple assessments as a means to help support children aged 7-12 in their development	
Indicator 6: knows how to use developmentally					

appropriate assessments to gather and apply qualitative and quantitative data about individual children to assist them in their development					
---------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--

Standard 2: The middle childhood generalist creates, modifies, and implements integrated, meaningful curricula appropriate for children aged 7-12

Knowledge Indicator	Course(s)	Performance Indicator	Course(s)	Disposition Indicator	Course(s)
<u>Indicator 1:</u> has a strong knowledge base in the subject areas that comprise the middle childhood curriculum		<u>Indicator 1:</u> communicates meaningful purpose for the curriculum plan		<u>Indicator 1:</u> believes that curriculum should involve all stakeholders (teachers, parents, community, and students) working together	
<u>Indicator 2:</u> understands that the variation among any group of children is normal and respects this diversity in how he/she approaches the curriculum		<u>Indicator 2:</u> demonstrates enthusiasm for the curriculum and engages children in active learning experiences		<u>Indicator 2:</u> appreciates the need to continually expand his/her knowledge base in the subject areas	
<u>Indicator 3:</u> knows a wide variety of approaches to curriculum design, implementation, and assessment		<u>Indicator 3:</u> encourages students to understand, question, and interpret ideas from diverse perspectives		<u>Indicator 3:</u> is responsive to classroom events and the needs of individual children, adjusting curriculum as necessary	
<u>Indicator 4:</u> understands that curriculum is based on children's needs, interests, and backgrounds as well as on the community and curricular goals		<u>Indicator 4:</u> pursues ongoing professional development opportunities that will impact student learning			
<u>Indicator 5:</u> knows the concepts and skills connected to subject matter and understands content developmentally and in an integrated fashion		<u>Indicator 5:</u> demonstrates the ability to collaborate and reflect with colleagues and others			

Standard 3: The middle childhood generalist plans and implements instruction based upon knowledge of students, learning theory, pedagogy, information technology, subject matter, curricular goals, and community					
Knowledge Indicator	Course(s)	Performance Indicator	Course(s)	Disposition Indicator	Course(s)
Indicator 1: understands learning theory, pedagogy, information technology, subject matter, curriculum development and student development, and the community		Indicator 1: applies knowledge of learning theory, pedagogy, information technology, subject matter, curriculum development, student development, and the community in planning and implementing instruction		Indicator 1: values the importance of learning theory, pedagogy, information technology, subject matter, curriculum development, student development, and the community in planning and implementing instruction	
Indicator 2: understands when and how to modify instruction to meet the individual and developmental needs of children aged 7-12		Indicator 2: modifies his/her instruction based on the individual and developmental needs of children aged 7-12		Indicator 2: recognizes that effective instructional practices must be flexible and based on the individual and developmental needs of children aged 7-12	
Indicator 3: knows how to use a variety of assessment methods to guide instructional decisions		Indicator 3: monitors his/her instructional practice and behavior in relation to student needs and performance		Indicator 3: recognizes the importance of ongoing and varied assessment strategies as a means to inform instructional practice	
Indicator 4: knows how to stimulate active learning through the use of a variety of resources, materials, information technology, and instructional strategies		Indicator 4: uses developmentally appropriate resources and instructional strategies (e.g., small group projects, open-ended questioning, group discussion, problem solving, collaborative learning, inquiry experiences, and play) to help children develop intellectual curiosity, solve problems, make decisions, and become successful learners		Indicator 4: knows that effective classroom management is a process that enhances what and how children learn	
Indicator 5: understands effective classroom management techniques appropriate for children aged 7-12		Indicator 5: uses effective classroom management techniques to promote positive relationships, cooperation, and purposeful learning in the classroom		Indicator 5: recognizes that classroom practice must be current and supported by research	

Standard 4: The middle childhood generalist understands the importance of multiple assessments (informal and formal, formative and summative) and uses a variety of developmentally appropriate assessments, some of which are performance-based, to improve student learning

Knowledge Indicator	Course(s)	Performance Indicator	Course(s)	Disposition Indicator	Course(s)
Indicator 1: knows how to develop and use appropriate assessments for the purpose of monitoring children's development as a continuous process, planning curriculum and instruction, and communicating with students and parents		Indicator 1: appropriately selects, uses, and interprets a variety of formal and informal assessment techniques (e.g., observation, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessment, peer assessment and standardized testing)		Indicator 1: values the use of ongoing, multiple assessments in informing classroom practice, communicating with parents, and supporting self-assessment.	
Indicator 2: understands that assessment is an ongoing process (formative and summative) that informs curricular decisions and instructional practices		Indicator 2: creates and modifies assessment techniques that respond to individual development		Indicator 2: believes in using multiple measures (informal/formal, formative/summative) in assessing the intellectual, physical, emotional, social, aesthetic, and ethical growth of children aged 7-12.	
Indicator 3: understands the benefits and limitations of different assessment methods and instruments		Indicator 3: uses assessment information to enhance his/her knowledge of learners, to monitor student progress and performance, to communicate with parents, to support children in self-assessment, and to modify teaching/ learning strategies		Indicator 3: values children's misconceptions as opportunities for learning and growth, rather than as mistakes to be corrected	
Indicator 4: understands the importance of student self-assessment in improving student learning		Indicator 4: maintains useful records of student work and performance and, based on appropriate indicators, can communicate student progress knowledgeably and responsibly to students, parents, and colleagues			

Standard 5: The middle childhood generalist demonstrates professionalism through collegiality, peer support, and professional self-assessment					
Knowledge Indicator	Course(s)	Performance Indicator	Course(s)	Disposition Indicator	Course(s)
Indicator 1: understands the relationship between being an ethical professional and being a positive role model for children		Indicator 1: collaborates with school personnel in constructing and implementing a positive learning environment		Indicator 1: believes that effectively communicating and collaborating with all school personnel is essential to promoting student development	
Indicator 2: understands that peer support and collegiality with all stakeholders serve as a necessary foundation for professionalism		Indicator 2: establishes and maintains respectful, effective, professional communication with colleagues and others within the school community		Indicator 2: values the professional responsibility of serving as an ethical role model for children	
Indicator 3: recognizes that self-assessment provides a basis for professional growth		Indicator 3: exhibits professional ethical behavior (e.g., respects students and adults, demonstrates commitment, maintains confidentiality, etc., and responds appropriately to constructive feedback)		Indicator 3: appreciates constructive feedback through peer and administrative collaboration	
		Indicator 4: utilizes self-assessment as a basis for professional growth		Indicator 4: is sensitive to the responsibilities of self-evaluation through reflective practice	

Standard 6: The middle childhood generalist understands the complexity of how children aged 7-12 learn and creates a learning environment that supports all children and their development					
Knowledge Indicator	Course(s)	Performance Indicator	Course(s)	Disposition Indicator	Course(s)
Indicator 1: understands how learning occurs, comprehends how children aged 7-12 construct knowledge, acquire skills, and develop habits for lifelong learning, and knows how to plan educational experiences accordingly		Indicator 1: exhibits an enthusiasm for learning that sparks curiosity and a love of learning		Indicator 1: acknowledges that the construction of meaning and the application of knowledge are more significant than the mere acquisition of facts	
Indicator 2: knows how to create a classroom environment that motivates		Indicator 2: applies the concepts of learning and inquiry to create learning		Indicator 2: is disposed to	

DEVELOPING KNOWLEDGEABLE TEACHERS

<p>students, fosters risk-taking, stimulates curiosity, nurtures inquiry, and honors diversity</p>		<p>experiences that inspire the excitement of learning and foster risk-taking and collaboration</p>		<p>using children's strengths as a basis for children's growth</p>	
<p><u>Indicator 3:</u> possesses an extensive knowledge of a wide variety of learning resources, including technology, and understands how to select and utilize these resources appropriately to support learning</p>		<p><u>Indicator 3:</u> uses the knowledge of how children aged 7-12 differ in their development and approaches to learning to create and modify environments and experiences that meet the individual needs of all children, including those with exceptional and/or special needs</p>		<p><u>Indicator 3:</u> respects the varied needs, interests, and approaches to learning by children aged 7-12 and takes these into account when planning experiences and establishing environments which support growth</p>	
<p><u>Indicator 4:</u> knows and understands how cultural, socioeconomic, physical, and linguistic diversity, as well as social, emotional and aesthetic intelligences, influence learning</p>		<p><u>Indicator 4:</u> is reflective about his/her classroom practice and continually assesses and evaluates the effects of his/her instructional choices in view of his/her understanding about learning theory and personal beliefs about teaching and learning</p>		<p><u>Indicator 4:</u> respects children's cultural, socioeconomic, and linguistic diversity and acknowledges that children are best understood in the context of their family, culture, and society, as well as in the context of their physical, intellectual, and emotional development</p>	
		<p><u>Indicator 5:</u> uses a variety of learning resources, including technology, to foster inquiry and support learning</p>		<p><u>Indicator 5:</u> believes that a rich array of learning resources and instructional strategies enhances and supports the learning experience</p>	
				<p><u>Indicator 6:</u> values the role of students in promoting each other's learning and recognizes the importance of peer relationship in establishing a climate of learning</p>	
				<p><u>Indicator 7:</u> recognizes the value of intrinsic motivation to students' lifelong growth and learning</p>	

Standard 7: The middle childhood generalist develops and maintains positive working relationships with families, school colleagues, support services, and community members at large to support children in their learning					
Knowledge Indicator	Course(s)	Performance Indicator	Course(s)	Disposition Indicator	Course(s)
<u>Indicator 1:</u> understands schools as organizations within the larger community context and understands the role of community resources in supporting student growth		<u>Indicator 1:</u> participates in collaborative activities designed to make the entire school and community supportive of children and their learning		<u>Indicator 1:</u> respects the diversity of individuals, groups, and communities	
<u>Indicator 2:</u> knows how to communicate and work with all stakeholders (e.g., families, youth serving agencies, policy makers, school colleagues and community organizations) in gaining support for student learning and well-being		<u>Indicator 2:</u> uses information (as educationally and legally appropriate) about students' experiences, family situations, culture, learning behavior, needs, and progress as solicited from family members		<u>Indicator 2:</u> values collaboration with families, school colleagues, support services, and the community at large to support student learning and well-being	
<u>Indicator 3:</u> understands how factors in a student's environment outside of school (family circumstances, community environments, health and economic issues) influence a student's life and learning		<u>Indicator 3:</u> uses knowledge of laws and policies in order to act as an advocate for students		<u>Indicator 3:</u> acknowledges the responsibility to cooperate with school colleagues, families, and support services to address legal and policy issues related to students	
<u>Indicator 4:</u> understands policies and laws related to rights and responsibilities of students, parents, and teachers (e.g., equal education, appropriate education for students with special needs, confidentiality, privacy, appropriate treatment of students, and reporting in situations related to possible child abuse)		<u>Indicator 4:</u> identifies and uses community resources to facilitate student learning			
<u>Indicator 5:</u> knows and understands the cultural, socioeconomic, and linguistic characteristics of students' families and the community at large					

Ball State University Draft Decision Points Document*

*Draft 4/5/02

Decision Point	Professional Significance/Rationale	Type of Evaluation	Criteria	Performance Assessment	Suggested Timeline	Resulting Status
1	Identification with Professional Education	Formative and Summative	<p>Complete introductory course with C or better.</p> <p>Demonstrate knowledge of INTASC, IPSE, and Indiana standards and expected professional dispositions as a part of the introductory course.</p>	<p>Course completion instructor enters notation on knowledge of standards into UAS database.</p> <p>Begin portfolio based on INTASC standards.</p> <p>Artifacts to be developed in classes as appropriate.</p>	Completed by end of Freshman Year	Professional Educator Aspirant
2	Admission to Teacher Education This decision point is designed to demonstrate that the basic and foundational elements expected for pursuit of a professional teaching license are present, and that the student shows a clear interest and commitment to the teaching profession.	Summative	<p>Verify in meeting with advisor:</p> <p>Declaration of teaching major via DAPR</p> <p>Approval of application for admission to teaching curriculum</p> <p>Overall GPA of at least 2.5 in at least 45 hours</p> <p>Pass PPST at IPSE score levels</p> <p>C or better in 100/200 Professional Education Courses</p> <p>Completion of phase one of Professional Growth Plan</p> <p>C or better in Comm 210 or equivalent</p>	<p>All requirements must be completed.</p> <p>Advisor enters notation regarding completed requirements into DAPR and UAS.</p>	Completed by end of Sophomore Year	Professional Educator Pre-Candidate. Permitted to enroll in 300 and 400 level professional education courses.
		Summative	<p>Verify with Licensure Area Faculty:</p> <p>Satisfy content requirements as specified by the student's licensure area.</p> <p>Demonstrate ISTE standards at the general preparation level.</p> <p>Satisfy portfolio review requirements as specified by the student's licensure area.</p>	<p>Licensure area enters notation regarding completed content requirements into UAS.</p>		
		Formative		<p>Complete prescribed portfolio review, results entered into the UAS data base.</p>		

Ball State University Overview of Learning Assessment Model (LAM)

Learning Assessment Model for Teacher Candidates

Gregory J. Marchant
Educational Psychology

James H. Powell
Educational Studies

Melinda K. Schoenfeldt
Elementary Education

*Ball State University,
Teachers College Muncie, IN 47306*

Learning Assessment Model Development

Ball State University's Teachers College is a fully accredited member of the National Council for Accreditation of Teacher Education (NCATE). To maintain accreditation, each of the education programs within the College must meet NCATE standards. Currently, many of these standards are changing, or evolving, to reflect the demands which parents, communities, and state and national legislators are placing on schools and teachers. An important feature that is embedded throughout the new NCATE standards is the expectation that teacher candidates are able to demonstrate that they actually impact student learning. In NCATE Standard 1, which deals with candidate knowledge, skills, and dispositions, the following behavior is expected for teacher candidates:

Teacher candidates accurately assess and analyze student learning, make appropriate adjustments to instruction, monitor student learning, and have a **positive effect on learning for all students...** Candidates for all professional education roles are expected to demonstrate positive effects on student learning. Teachers and teacher candidates **have student learning as the focus of their work.** Throughout the program, teacher candidates develop knowledge bases for analyzing student learning and

practice by collecting data and assessing student learning through case studies, field experiences, and other experiences. They might examine student work samples for evidence of learning and develop lesson plans to help students who are having problems understanding concepts being taught. **Student learning should be demonstrated directly by all teacher candidates during clinical practice.**

In NCATE Standard 2, which deals with the unit assessment system, we are told that the unit must have an assessment system that “examines the (1) alignment of instruction and curriculum with professional, state, and institutional standards; (2) the efficacy of courses, field experiences, and programs, and (3) candidates’ attainment of content knowledge and demonstration of **teaching that leads to student learning.**” And in NCATE Standard 3, which deals with field experiences and clinical practice, we read, “Candidates develop and demonstrate proficiencies that support learning by all students...”

Thus, we see that the issue of our candidates demonstrating an impact on K-12 student learning is mentioned in three of the six new NCATE standards. Clearly it is important that our candidates are equipped with the tools to assess and analyze student learning, and that they become proficient in doing this as part of their preservice training.

Ball State University is initiating the Student Assessment Project as a part of its Title II TQE grant. Initially, a purpose and four goals for developing a Ball State University student assessment project were established. The BSU project’s stated purpose, “to enhance the quality of pre-service teachers by equipping them with processes and procedures for assessing the performance of the K-12 students they teach,” and four goals provided the framework for the development process. The four goals were to: 1. Develop a protocol, 2. Field-test the protocol with a sample of student teachers, 3. Revise the protocol and prepare for full implementation with all student teachers, and 4. Recommend procedures for incorporating the elements throughout the pre-service preparation program.

Associate Dean Tom Schroeder and Dr. Greg Marchant from the Department of Educational Psychology assembled a faculty team to review the literature concerning Teacher Work Sample and other student assessment tools. Dr. Marchant headed the team whose other members included Dr. James Powell from the Department of Educational Studies and Dr. Melinda Schoenfeldt from the Department of Elementary Education. The faculty team attended an AACTE Conference on Student Assessment to ascertain what approaches other teacher education programs from across the United States were developing.

The faculty team developed protocol and developed a time line for the implementation of the project. Dr. Sam Evans from Western Kentucky University and a nationally recognized leader in the Teacher Work Sample process served as an outside consultant for the project. Input from university professional education faculty and personnel and students from K-12 PDS schools will be incorporated into the Ball State University project. Field-testing of the model could take place in the fall of 2002.

We hope that you will find the LAM to be an exciting and worthwhile way to address current concerns about the role that teacher candidates play in the education of K-12 students. We have always felt they have had a powerful influence on student learning, and through this project they will be able to demonstrate the extent of that influence.

Learning Assessment Model for Teacher Candidates

The Learning Assessment Model (LAM) is designed to facilitate and evaluate the teacher candidate's ability to align instruction and assessment with standards and best practice, their ability to demonstrate their students' learning, and to provide evidence of their own understanding of how the assessment of their students' learning informs their instruction.

The LAM provides a protocol of rubric driven evaluation criteria for (1) the pre- and post-assessment of academic standards, (2) the development of an instructional unit including an authentic-based project and scoring rubric, and (3) the evaluation of group and specific student performance based on assessment information with interpretations and implications for instruction.

Although the LAM is implemented during the teacher candidates' student teaching experience, the skills necessary to complete the project will need to be developed throughout their teacher education program. The LAM project is not intended to be an *additional* unit to be taught during student teaching, it is designed to be a framework for designing and reflecting on the success of a unit that could be a regular part of student teaching.

LAM Unit Process (semi-linear with interaction with decision making contexts):

Standards ➡ Content ➡ Pre-Assessment ➡ Instruction ➡ Project ➡ Post-Assessment ➡ Evaluation

The above model represents a unit where standards inform the content to be taught. This content is assessed prior to instruction. The instruction leads to a project that is assessed, and also is followed by a post-assessment comparable to the pre-assessment measure. A key element of the model is the evaluation of the learning that has occurred.

LAM Decision Making Contexts (Context is a recurring element in the model);

Some of the context considerations include standards; testable skills and knowledge; the nature of the school, class, and students; authentic (real-life) applications; instructional strategies; media and technology; project design; nature and criteria of assessment; and evaluation.

The LAM includes areas for evaluation and specific scoring rubrics for:

The Instructional Unit

Assessments

Unit Project

Evaluation of Student Learning

Learning Assessment Model Area Elements

The Instructional Unit

Inclusion of academic content standards

Identification of testable skills and/or knowledge

Identification of authentic applications of the unit skills and/or knowledge

Sequential appropriateness and accommodation of developmental differences

Identification of instructional strategies

Incorporation of media and technology

Assessments (pre-/post- measures)

Validity of assessment related to identified skills and/or knowledge

Reliability of pre- and post- assessments

Quality of multiple choice item construction

Presence of bias in assessment measures

Presence of specific and appropriate criteria for mastery levels

Unit Project

Availability of adequate directions

Incorporation of the standards in the project

Incorporation of authenticity as a central theme in the project

Incorporation of diversity among students in project design

Presentation of evaluation criteria

Project Rubric

Appropriately addresses the standards incorporated in the project

Inclusion of evaluation of processes and conventions

Appropriateness and objectivity of format

Presence of specific and appropriate criteria for mastery levels

Evaluation of Student Learning

Pre-test performance graph (number of students by score)

Interpretation of pre-test performance

Rationale for instructional modifications based on pre-test

Project rubric performance graph (number of students by score)

Interpretation of project performance

Post-test performance graph (number of students by score)

Interpretation of post-test performance

Comparison of pre-test, post-test, and project rubric performance

Rationale for modifications for future instruction

Learning Assessment Model Format

The LAM development team recognizes the challenges facing student teachers and the cooperating teachers working with them. This awareness guided the development of a rubric driven model. It is hoped that the rubrics created will be used to evaluate the unit of instruction produced as part of the normal process of student teaching. Therefore, student teachers developing a unit of instruction to meet the criteria for a cooperating teacher, a university department, a university supervisor, and/or a licensing requirement should make efforts to meet the goals of the LAM rubrics as part of this process.

The burdens on teacher candidates and those working with them are considerable. The addition of student teaching evaluation instruments and processes tied to the INTASC Principles has added significantly to the responsibility of everyone involved in the process. It is hoped that the direction provided by the LAM rubrics will provide guidance without creating another major burden for those involved.

The only additional paperwork that should need to be generated specific to the LAM is the student teacher's evaluation of their students who participated in their unit of instruction. This report should reflect an understanding of their students' performance and insight into the impact this information has on instruction. This is to be accomplished through graphs and brief narratives. The questions on the following page should serve as a guide to this process.

Evaluation of Student Learning Assessment Element Questions

- I. Pre-test performance
 - A. Pre-test performance graph (number of students by score)
 1. Did your graph accurately reflect the knowledge/skills measured and the data collected, and was the average (mean) identified?
 2. Did you identify the individual students on the graph?
 - B. Interpretation of pre-test performance (not to exceed one page)
 1. What did the average (mean) performance and range of scores tell you about class performance and/or the nature of the test?

2. Did you consider different areas of knowledge/skills and/or different individual students or groups of students?
- C. Rationale for instructional modifications based on pre-rest (not to exceed one page)
1. Based on the pre-test performance what modifications (if any) did you deem necessary?
 2. Did you present a rationale for your decision concerning modifications?
- II. Project performance
- A. Project performance graph (number of students by score)
1. Did your graph(s) accurately reflect the rubric scores?
 2. Did you identify the individual students on the graph?
- B. Interpretation of project performance (not to exceed one page)
1. What did the rubric scores tell you about class performance and/or the nature of the project?
 2. Did you consider different aspects of the project and/or different individual students or groups of students?
- III. Post-test performance
- A. Post-test performance graph (number of students by score)
1. Did your graph accurately reflect the knowledge/skills measured and the data collected, and was the average (mean) identified?

2. Did you identify the individual students on the graph?

B. Interpretation of post-test performance (not to exceed one page)

1. What did the average (mean) performance and range of scores tell you about class performance and/or the nature of the test?

2. Did you consider different areas of knowledge/skills and/or different individual students or groups of students?

IV. Performance comparisons

A. Comparison of pre-test, post-test, and project rubric performance (not to exceed one page)

1. What did the differences in (mean) performance and range of scores tell you about class performance and/or the nature of the assessments?

2. Did you consider different areas of knowledge/skills and/or different individual students or groups of students?

B. Rationale for modifications for future instruction (not to exceed one page)

1. Based on the performance comparisons, what modifications (if any) will you make in the future?

2. Did you present a rationale for your decision concerning modifications?

LAM Unit Rubric

UNIT	Unsatisfactory = 0	Basic = 1	Proficient = 2	Distinguished = 3
Major Content Standard	Does not use a state academic standard	Uses one state academic standard	Uses two or more academic standards	
Secondary Content Standard in a Different Area	Does not include a secondary content standard	Uses one standard from another content area	Uses two or more standards from other content areas	
Testable Skills and/or Knowledge Across the Two Content Area Standards	Identifies no or one skill or type of knowledge	Identifies two skills and/or types of knowledge	Identifies three skills and/or types of knowledge	Identifies four or more skills and/or types of knowledge
Developmental and Sequential Appropriateness of Unit Skills and/or Knowledge	Sequentially inappropriate, and does not accommodate developmental differences	Sequentially appropriate, but does not reflect developmental differences	Sequentially appropriate, accommodates a limited developmental range	Sequentially appropriate, accommodates a good developmental range
Identification of Authentic Real-Life Application of Unit Skills Knowledge	Does not identify an authentic real-life application of unit skills and/or knowledge	Identifies one authentic real-life application	Identifies two authentic real-life applications of skills and/or knowledge	Identifies three or more real-life applications of unit skills and/or knowledge
Instructional Strategies	Identifies one strategy	Identifies two	Identifies three	Identifies four or more
Incorporation of Media and Technology	Teacher uses one or no technology in instruction	Teacher uses two types of technology in instruction	Teacher and students use one type of technology	Teacher and students each use two or more types of technology

Section Criteria: Unsatisfactory 0-6 Basic 7-11 Proficient 12-16 Distinguished 17-19

LAM Assessment Rubric

ASSESSMENT	Unsatisfactory = 0	Basic = 1	Proficient = 2	Distinguished = 3
Validity	Addresses no or one testable skill	Addresses two testable skills	Addresses three testable skills	Addresses four or more testable skills
Reliability	Pre- and Post-tests are not aligned in content and difficulty	Pre- and post-tests aligned in content or difficulty (not both)	Pre- and post-tests are aligned in content and difficulty	
Multiple Choice Test Items (must be included, but assessment not limited to m.c.)	Assessment does not include multiple choice items	Developed multiple choice items with one best answer	Items are clearly worded with noextraneous cues	Items are well constructed and reflect a range of difficulty levels
Bias in Assessment	Assessment is biased in favor of one or more demographic areas	No bias evident, but not relevant to students	Assessment is culturally sensitive and relevant to students	Assessment items can be justified in terms of any apparent bias based on sound educational principles
Accommodations for Student Needs	Accommodations needed for IEPs, but not made	No accommodations required or IEP accommodations made		Accommodations made based on student needs in addition to those identified by IEPs
Criteria	No criteria present	Criteria present, but vague or inappropriate	Specific and appropriate criteria present	Criteria address highest possible criteria present cognitive level

Section Criteria: Unsatisfactory 0-4 Basic 5-8 Proficient 9-12 Distinguished 13-14

LAM Project Rubric

PROJECT	Unsatisfactory = 0	Basic = 1	Proficient = 2	Distinguished = 3
Directions	Directions are not presented or are at inappropriate developmental levels	Directions cover all aspects (steps) in the process of the project and are developmentally appropriate	Complete appropriate directions are presented and available in multiple forms and sources	
Representation of Standards	Does not tie into content standards	Ties into one major and one secondary content area	Ties into one major and one secondary content area	Ties into two or more major and secondary content areas
Demonstrates Understanding of Diverse Needs of Students	Does not address any type of differences among students	Addresses two types of differences among students	Addresses three types of differences among students including exceptionalities	Addresses four or more types of differences among students, including exceptionalities
Level of Authenticity	Students create oral, written, or visual product with no connection to real-life application	Students create oral, written, or visual product with a connection to real-life application	Students role-play or demonstrate the connection to real-life application	Students simulate or engage in real-life experience
Evaluation	Criteria for evaluation are not presented	Criteria for evaluation are provided	Criteria for evaluation are provided and explained	Criteria for evaluation are provided and explained, and there is evidence that formative evaluation took place.

Section Criteria: Unsatisfactory 0-4 Basic 5-8 Proficient 9-12 Distinguished 13-14

LAM Project Rubric Rubric

PROJECT RUBRIC	Unsatisfactory = 0	Basic = 1	Proficient = 2	Distinguished = 3
Assessment of Standard	Rubric does not address a content standard	Addresses content standard, but inadequately weights content standard relative to other aspects of the project	Appropriately weights content standard addressed in project	Appropriately addresses and weights two or more content standards in the project
Assessment of Processes and Conventions	Rubric does not address associated processes and conventions	Rubric addresses associated processes or conventions	Rubric addresses associated processes and conventions	
Rubric Format	Elements are combined and not objectively worded	Elements are combined or not objectively worded	Elements are separated and objective	
Criteria	No criteria present	Criteria present but vague or inappropriate	Specific and appropriate criteria present	Criteria address highest possible cognitive level

Section Criteria: Unsatisfactory 0-3 Basic 4-6 Proficient 7-8 Distinguished 9-10

LAM Evaluation of Student Learning Rubric

EVALUATION OF STUDENT LEARNING	Unsatisfactory = 0	Basic = 1	Proficient = 2	Distinguished = 3
Pre-test Performance Graph (number of students by score)	No graph or incomplete or inaccurate graph	One graph for whole test using raw scores with mean and pre-established criteria identified	One graph for whole test using percent correct with mean and pre-established criteria identified	Separate complete graphs produced for different skills/knowledge tested
Interpretation of Pre-test Performance	Interpretation does not accurately reflect data	Interpretation reflects whole class performance	Interpretation reflects whole class and specific student performance	Interpretation reflects whole class and specific student performance and skill/knowledge comparisons
Rationale for Instructional Modifications Based on Pre-test Analysis	No rationale presented for modifications or lack of modifications	Rationale based on whole class pre-test performance	Rationale reflects differences in specific student performance or skill/knowledge performance	Rationale reflects differences in specific student performance and skill/knowledge performance
Project Rubric Performance Graph (number of students by score)	No graph or incomplete or inaccurate graph	One graph for rubric total using raw scores with mean and pre-established criteria identified	One graph for rubric total using percent correct with mean and pre-established criteria identified	Separate complete graphs produced for rubric areas
Interpretation of Project Performance	Interpretation does not accurately reflect data	Interpretation reflects whole class performance	Interpretation reflects whole class and specific student performance	Interpretation reflects whole class and specific student performance and skill/knowledge comparisons
Post-test Performance Graph (number of students by score)	No graph or incomplete or inaccurate graph	One graph for whole test using raw scores with mean and pre-established criteria identified	One graph for whole test using percent correct with mean and pre-established criteria identified	Separate complete graphs produced for different skills/knowledge tested
Interpretation of Post-test Performance	Interpretation does not accurately reflect data	Interpretation reflects whole class performance	Interpretation reflects whole class and specific student performance	Interpretation reflects whole class and specific student performance and skill/knowledge comparisons
Comparison of Pre-test, Post-test, and Project Rubric Performance	Interpretation does not accurately reflect data	Interpretation reflects relative performance across assessments for the whole class	Interpretation reflects whole class and specific student performance	Interpretation reflects whole class and specific student performance and skill/knowledge comparisons
Rationale for Modifications for Future Instruction	No or inappropriate rationale presented for modifications (or lack of modifications)	One strength and one weakness identified among elements	Two strengths and two weaknesses identified among elements	Three strengths and three weaknesses identified among elements

Section Criteria: Unsatisfactory 0-7 Basic 8-14 Proficient 15-23 Distinguished 24-27

Appendix T

**Excerpts From Ball State University Student Teaching Portfolio Guide
and Evaluation Instrument**

Student Teacher's Portfolio Handbook

presented by

**Phi Delta Kappa International
& Ball State University
*Teachers College***

Office of Educational Field Experiences
Ball State University • Teachers College

Roy A. Weaver, Ed.D., Dean

Student Teaching Portfolio Team

Patricia Hughes, Ed.D., Director

Office of Educational Field Experiences

C. Frederick Dykins, Ed.D., Assistant Professor, University Supervisor

Department of Educational Studies

Sheryl Proctor, M.S., University Supervisor

Department of Educational Studies

Jan Richard, M.S., Teacher

Mitchell Elementary School, Muncie Community Schools

M. Kay Stickle, Ph.D., Professor

Department of Elementary Education

The committee appreciates the suggestions and assistance received for this document from university faculty, supervisors, local school administrators, teachers, and student teachers in the field.

The *Student Teacher's Portfolio Handbook* is designed as a complement to:
the *Evaluation of Student Teachers Guidebook*

Copyright ©2000 by Ball State University. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information-and-retrieval system, without written permission from Ball State University.

Published and distributed by

Phi Delta Kappa International • Center for Professional Development & Services
408 N. Union Street • P.O. Box 789 • Bloomington, IN 47402-0789 • 800-766-1156
Email: cpds@pdkintl.org • Website: www.pdkintl.org

Types of Artifacts for Documentation of the INTASC Standards

What is an artifact?

An artifact is any piece of evidence used for demonstration purposes. Most items will come from the everyday materials, plans, and student work completed in the classroom. Additional items will come from others (e.g., observation notes, evaluations, notes to/from parents).

Listed below are many types of artifacts. This list is not intended to be all inclusive but to serve as a guide for you. Refer to "Suggested Artifacts for Portfolios: Demonstrating Competence on the INTASC Standards" p.8 for items specific to each standard. Modifications may be made for student teachers in Early Childhood, Special Education, and other special area settings.

Caution: When including student work, photos, and reflections in your portfolio, use *first names only* referring to students. Guidelines for confidentiality are clearly defined in the Family Educational Rights and Privacy Act (FERPA) of 1974. Confidentiality must be maintained in both written and oral presentation of samples.

General

Journal entries

Anecdotal notes

Video or audiotapes of instruction along with reflective narratives

Informal and formal evaluations from others

Photographs: pictures that provide evidence of your work or skills, include a caption and supporting evidence

Teaching Skills and Knowledge

Lesson plans: highlight with captions particular areas of evidence such as tapping prior knowledge, use of technology, cooperative learning and set-up, critical thinking questions

Student work samples: attach the lesson plan or directions given for the assignment
(These are very strong pieces of evidence.)

Copies of teaching materials developed: learning packets, learning centers, etc.

Media/technology skills: samples of discs, photos, plans, etc., including electronic gradebook; templates for lesson plans or activities; lists of web sites used for teacher and students; lessons showing use of computers/Internet to enhance instruction; PowerPoint presentations (teacher or student copies); use of Distance Learning Labs; use of overhead, camcorder/VCR, interactive video, laser disks, cable and educational television, etc.

Evidence of how you used e-mail, data bases, distance learning equipment, and the Internet to research and communicate with educators worldwide; print-out examples of on-line news groups and listserv memberships you use

Bibliographies of materials used

Understanding of Students

Evidence of meeting individual needs: lesson plans, individualized plans or IEP adaptations, behavior modification plans

Case studies

Modifications of lessons with student samples

Challenge material presented to individual students or small groups

Evidence of understanding of multiple intelligences

Organization and Classroom Environment

Record-keeping: rubrics, checklists, gradebook excerpts, contracts, or anything that demonstrates your ability to organize, manage, and assess student progress

Classroom management philosophy with materials as evidence

Photos of environmental print and bulletin boards with explanations

Seating arrangements

Evaluation

Assessments: tests created, authentic performance-based assessments along with scoring rubrics, informal assessment strategies, evidence of student progress over time

Diagnostic tools used to get to know students

Samples of checklists or organizational systems used for informal assessment

Professionalism and Community Involvement

Goals (short- or long-term)

Self-assessments: video evaluations, journal entries, narratives that analyze your teaching along with your problem-solving strategies

Handouts or notes from workshops attended: include a reflection piece describing how you used this information in your teaching

Lists of workshops/conferences attended: include follow-up on how you incorporated new knowledge

Memberships in professional organizations

Self-initiated volunteerism

Evidence of teaming: team-teaching, participation in faculty planning

Community resources: evidence of speakers, study trips, materials organized by you

Parent communication: samples of newsletters, notes, progress reports, responses to parent concerns, notices, records of phone contacts, etc.

Family involvement: parent volunteer activities initiated, involvement of families in curriculum or assignments, extracurricular activities initiated

Professional writing: anything published

Products Demonstrating Excellent Teaching

Student samples before/after significant instruction

Pre/post student scores demonstrating improvement

Evidence of student's change in attitudes over time toward learning

Student's work demonstrating a high degree of understanding based on challenges you presented

Evidence of comprehensive integration of instruction over time

Collecting Artifacts During Student Teaching

You should begin collecting *potential* artifacts early on in your placement. As you write journal entries and lesson plans, create assessments, design management strategies, etc., consider which items might serve as good evidence of your growth and competence. Place the item with the appropriate INTASC standard in your notebook. You will, of course, gather more artifacts as you increase your classroom responsibilities. Take note of the requirements for the Showcase Portfolio to be sure you are collecting appropriate evidence. Remember that the intent of the portfolio is not to "create extra work" for you, but rather to have you consistently collect evidence of your good teaching and make sure you are addressing the elements in each INTASC principle.

Prior to each benchmark conference, your supervisors will be reviewing the items you have collected up to that point. In preparation for your final Showcase Portfolio presentation, you will be reviewing and selecting your *best artifacts for each INTASC principle* and writing a reflective piece for each one.

It is your responsibility to regularly update your portfolio and to have it available at all times for your supervisors.

Suggested Artifacts for Portfolios: Demonstrating Competence on the INTASC Standards

This list is not intended to be all-inclusive. Please include any evidence documenting your progress or competence toward an INTASC standard. In addition to the materials suggested here, you might also include notes and evaluations you have received from supervisors or other school staff. Modifications may be made for student teachers in Early Childhood, Special Education, and other special area settings.

Principle #1 The student teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful to students.

Element	Possible Evidence
Knowledge of Content	Resource references in lesson plans and units Learning packets that demonstrate knowledge of content/skills Lesson plans, web sites, or outlines in which concept is clearly explained Research conducted in preparation for instruction
Use of Interdisciplinary Approaches When Teaching Content (may connect to literature, writing, the arts)	Lesson plans Work from students showing cross-curricular understandings Evidence of student involvement in planning theme units References or feedback from colleagues in other disciplines
Selects Content to Encourage Diverse Perspectives	Materials used (written plans and unit) Selection of materials that incorporate positive images of any ethnic group, gender, etc. Journal reflections Selection of materials to break down stereotypes Video/audiotape and analysis of class discussion

Principle #2 The student teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Element	Possible Evidence
Developmental Characteristics of Students	Case studies or observation notes Examples of differentiated curriculum Adaptations of materials and of lesson plans Diagnostic tools used to get to know students Video or audiotapes with analysis Samples of checklists used to record developments
Activates Prior Knowledge and Experiences	Written lesson and unit plans Video and audiotapes with analysis Journal reflections Evidence of connections to real-life experiences or to the "big picture"

Principle #3 The student teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

Element	Possible Evidence
Teaching to Individual Learning Abilities	Lesson plans demonstrating a variety of teaching strategies Feedback from support staff (special education, Title I, gifted-education, etc.) Journal entries Plans showing integration of multiple intelligences Learning centers or supplemental activities Samples of differentiated curriculum for select students (above is <i>required</i> for Showcase Portfolio) Evidence of adaptations based on students' IEPs
Selection of Resources to Meet Range of Individual Needs: Special Education to Gifted	Materials listed in plans and unit Literary collections covering a wide variety of abilities Evidence of manipulatives and hands-on learning Learning centers with specific objectives to challenge learners
Expectations for Learning and Achievement	Objectives in plans demonstrating challenging material Student or parent interviews Journal reflections or observations

Principle #4 The student teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills. *Note:* Instructional strategies include, but are not limited to: cooperative learning, small and large groups, lecture, project work, thematic instruction, partner learning, use of media resources, and technology.

Element	Possible Evidence
Selecting Resources for General Instruction	Resources listed on written plans and unit Study trip objectives matched to curriculum and student needs Unit plans: resource list and rationale Records of how materials were selected: your criteria
Best Practices: Multiple Teaching Strategies, Active Learning, Modeling	Video or audiotapes with analysis Evidence of multiple intelligences in delivery of instruction and assessments Anecdotal observations of small group instruction or cooperative groups Use of learning centers or stations Explanation of grouping procedures used in the classroom Collection of pre- and post-test data to support teaching strategies used
Student Teacher Role in the Instructional Process	Journal reflections Video or audiotapes with analysis Evaluations from supervisors

Principle #5A The student teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction in the classroom.

Element	Possible Evidence
Management of Transitions	Video or audiotapes with analysis Journal reflections Classroom map to demonstrate traffic flow and management of materials Management plan Procedures developed and how they were taught
Management of Time and Materials	Journal reflections Video or audiotapes with analysis Procedures for handling materials
Directions and Procedures	Written plans or procedures Management plan Video or audiotape with analysis Handouts from workshops with summaries/evidence of how this new knowledge was applied in the classroom
Pacing	Videotape and analysis Journal reflections
Performance of Non-Instructional Duties	Anecdotal or journal reflections

Principle #5B The student teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction in the classroom.

Element	Possible Evidence
Positive Climate for Intrinsic Motivation	Environmental print (displays, bulletin boards, etc.) Documented opportunities for students to share with others Affective inventories with students Student or parent interviews Anecdotal observations of explicit community-building activities Videotapes with analysis Evidence of positive comments used routinely with students Your beliefs about discipline (<i>required</i> for Showcase Portfolio)
Establishing Expectations for Behavior	Examples of rule-setting or clarifying experiences Evidence of consequences/rewards for behavior choices Videos, audiotapes, journal reflections

Monitoring Student Behavior	Evidence of cooperative group social skills being taught and used Videos, audiotapes, journal reflections
Response to Student Misbehavior	Recorded logs tracking individual behavior problems and responses Record-keeping or notes to parents Comments from school support staff Videos, audiotapes, and journal reflections

Principle #6 The student teacher has knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Element	Possible Evidence
Oral and Written Language	Video or audiotapes and analysis Communications with school staff, community, parents, etc. (demonstrating your writing skills)
Quality of Questions	Video and audiotapes with analysis Evidence of divergent questions in written plans Samples of student-generated questions
Discussion Techniques with Student Participation	Anecdotal observations of student discussions Student interviews and evaluations Video or audiotapes with analysis Summaries/analysis of class or community meetings
Use of Media and Technology: felt/magnetic boards, charts, film/overhead projectors, computers (Internet, PowerPoint, Distance Learning, etc.) as available	Resources in lesson and unit plans Feedback from media staff Log of activity on computers or in labs, showing continuous use of technology Photographs, transparencies, web sites, etc. Products created by students (Evidence of competence in technology is <i>required</i> for Showcase Portfolio)

Principle #7 The student teacher plans instruction based upon knowledge of the subject matter, students, the community, and curriculum goals.

Element	Possible Evidence
Purposeful Learning Activities Based on Essential Skills/District Curriculum	Proficiency statements or references in lesson plans and units
Short- and Long-Term Planning (including unit plans)	Lesson and unit plans Journal reflections Evidence of pre-tests and references to prior learning to determine plans Planning charts or web sites
Lesson Plans: Monitoring and Adjustment	Written extensions and/or remedial plans Video or audiotapes with analysis, journal reflections

Principle #8 The student teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Element	Possible Evidence
Variety of Formal/Informal Assessment Strategies	<ul style="list-style-type: none"> Student journal entries used for assessment Samples of teacher-made tests/quizzes/diagnostic tools Student rubrics for self-evaluation Samples of authentic/alternative assessments (<i>required</i> for Showcase Portfolio) Collection of before/during/after samples showing student growth (<i>required</i> for Showcase Portfolio)
Assessment Data Used in Lesson Planning/Adjustment	<ul style="list-style-type: none"> Pre- and post-tests used to analyze instructional effectiveness K.W.L. charts and adjustments to plans Interpretations of data and adjustments made based on objectives being met
Evaluates Criteria and Feedback	<ul style="list-style-type: none"> Student journals and portfolios K.W.L. charts and adjustments to plans Written comments on students' work Rubrics or assessment criteria developed by student teacher or students Journal reflections on decisions based on assessments
Recording and Monitoring Assessment Data	<ul style="list-style-type: none"> Written evidence of regular assessments Use of computer for feedback or record-keeping Gradebook, spreadsheets, charts, graphs

Principle #9 The student teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Element	Possible Evidence
Reflection on Teaching (written journal and conversations)	<ul style="list-style-type: none"> Journal reflections Analysis of video and audiotapes Evidence of personal goal-setting and subsequent results
Relationships with Colleagues	<ul style="list-style-type: none"> Anecdotal observations from staff/administrators Evidence of leadership role within a teaching team Minutes and/or notes of successful team planning (agenda, presentation notes, communications, etc.) Materials shared with colleagues

Professional Growth
(includes student
teaching requirements
and portfolio)

Articles/books read and subsequent application of knowledge
Attendance at professional meetings and subsequent
classroom application
Active membership in professional organizations
Examples of committee work
Action research conducted within the classroom
Articles written or presentations to faculty
Student teaching requirements

Principle #10 The student teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Element	Possible Evidence
Participation in School/District Events and Projects	Evidence of participation in extra curricular activities Involving students in community projects Civic involvement Handouts or artifacts from events Samples of materials prepared for meetings, classes, etc. in which a leadership role was assumed
Sensitivity to Student Needs and Awareness of Community Resources	Contact with support services within or outside of the school Documented contact with community agencies (Classroom teacher must approve contacts regarding individual student's needs.) Anecdotal observations from school staff
Respectful and Productive Communications with Families	Communications with parents (formal and informal) Newsletters and invitations Family learning projects Materials prepared for parent conferences Innovative connections with families Feedback from parents Logs of parent contacts and subsequent actions

The Classroom Teacher's Role in the Portfolio Process

Classroom teachers will want to review the portfolio regularly. It will be most helpful to review the contents prior to a benchmark conference. Student teachers will appreciate feedback and guidance in selecting artifacts. The classroom teacher should also respond to issues discussed in journal entries. The portfolio should serve as a catalyst for dialogue about good teaching practices.

The University Supervisor's Role in the Portfolio Process

The university supervisor serves as the link between the university and the local school environment. The supervisor should review the portfolio on each visit. Students should be given positive feedback along with suggestions for improving the contents of the portfolio. The supervisor will specifically be checking to ensure that student teaching requirements are being met in a timely fashion and with professional quality. The supervisor may want to establish some time frames for completion of portions of the portfolio throughout the semester. Time should also be provided at seminars for discussion of artifacts and for small group sharing.

University supervisors will provide assistance in setting dates for the final portfolio presentation by each student. This presentation time will likely replace a final classroom observation. Following the presentation, supervisors may wish to use that time (privately with the classroom teacher) to discuss the student's INTASC evaluation, the final competence levels on INTASC, and the narrative for the Summative Student Teaching Evaluation.

The Showcase Portfolio for Student Teaching

Contents

- Table of Contents
- School Demographics and Classes Taught
- Philosophy of Education (revise the one you completed for your student teaching application)
- Goal Sheets (collected throughout the semester)
- Reflective Observations (from outside observations completed)
- Analysis/Reflections of Videotapes
- Ten INTASC Principles: 1 to 3 artifacts per principle along with a written reflection piece for each one. (see "Specific Requirements for Each Student Teaching Placement" p.16)
- The Teaching Unit

In addition, the following artifacts are required for specific principles.

Specific Requirements: These items may be counted as artifacts

INTASC #3: Show samples of differentiated curriculum

INTASC #5: Include your beliefs about discipline

INTASC #6: Provide evidence of your competence using technology to enhance instruction

INTASC #8: Include in-depth analysis of student progress and authentic assessments

Note: Appropriate modifications to these requirements may be made by supervisors for Early Childhood, Special Education, and special area settings.

Purpose

This is your opportunity to present evidence of the beliefs and skills you have developed during your teacher preparation program. Preparing for this presentation will also help you define your strengths and weaknesses and prepare for job interviews. You will gain confidence as you practice articulating and supporting your beliefs about education!

Preparation

Two weeks prior to the end of your student teaching, begin selecting your best artifacts for each INTASC principle and writing your reflective pieces. Do not underestimate the time you will spend in preparation! Practice your presentation skills at home. Keep the time of your presentation to 20-25 minutes. It is not necessary to read your Philosophy of Education during the presentation. You will paraphrase your written reflections.

Written Reflections

Included in this manual is a form titled, "Reflective Analysis of Portfolio Artifact." Type or hand-write one for each artifact. During your presentation, briefly paraphrase what you have written. Your supervisor/s will read your written explanation after your presentation.

The Presentation

Smile! This is your time to shine! Have student samples pulled from the notebook and ready to hold up for viewing. Taking items in and out of the 3-ring binder is time-consuming and distracting.

Evaluation

Your university supervisor will use a simple performance scale to document the contents of your portfolio. A form for this evaluation is included on p.18 in this handbook.

The contents for each INTASC standard will be evaluated as follows:

- Strong, convincing, and consistent evidence; quality reflection (5)
- Clear evidence and/or reflection (3)
- Limited evidence and/or limited reflection (1)
- No evidence and/or weak reflection (0)

Evaluation of Student Teachers Guidebook

presented by

**Phi Delta Kappa International
& Ball State University
Teachers College**

Office of Educational Field Experiences
Ball State University • Teachers College

Roy A. Weaver, Ed.D., Dean

The Evaluation Team

- M. Kay Stickle, Ph.D., Chair of the Committee, Professor
Department of Elementary Education
- Marilyn Buck, Ed.D., Associate Professor
School of Physical Education
- C. Frederick Dykins, Ed.D., Assistant Professor, University Supervisor
Department of Educational Studies
- Don P. Ester, Ph.D., Associate Professor
School of Music
- Nancy Farley, Ed.S., Former Principal
Harrison Elementary School, Harrison-Washington School Corporation
- Linda Hargrove, Ph.D., Associate Professor
Department of Special Education
- Patricia Hughes, Ed.D., Director
Office of Educational Field Experiences
- Philip Metcalf, M.S., Ex Officio, Acting Director
Institute for Community Education Development & School Improvement;
State Chairperson—Indiana Professional Standards Board
- Sheryl Proctor, M.S., University Supervisor
Department of Educational Studies
- Jan Richard, M.S., Teacher
Mitchell Elementary School, Muncie Community Schools
- Ben Bennett, B.S., Retired
Maxon Inc.; Representative of the Muncie community

The committee appreciates the feedback received from administrators, teachers, and student teachers in the field who worked with the document during the two-year pilot study.

Appreciation is extended to Carmel Clay School Corporation for its early experimentation with an alternative approach to evaluating the performance of Ball State University student teachers in their schools.

Copyright ©2000 by Ball State University. All rights reserved, including copyrighted material by Charlotte Danielson. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information-and-retrieval system, without written permission from Ball State University.

Published and distributed by

Phi Delta Kappa International • Center for Professional Development & Services
408 N. Union Street • P.O. Box 789 • Bloomington, IN 47402-0789 • 800-766-1156
Email: cpds@pdkintl.org • Website: www.pdkintl.org

Formative Evaluations of
INTASC Principles
Based on Rubric Scales

Rubrics are, with permission, adapted from:

Danielson, Charlotte (1996), *Enhancing Professional Practice, A Framework for Teaching*,
Alexandria, Virginia: Association for Supervision Curriculum Development.

Copyright ©2000 by Ball State University. All rights reserved, including copyrighted material by Charlotte Danielson. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information-and-retrieval system, without written permission from Ball State University.

Principle 1: The student teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful to students.

Element	Level of Performance			Distinguished*
	Unsatisfactory	Basic	Proficient	
Knowledge of Content	Makes content errors, does not correct errors of students or self, or lacks initiative to research content.	Displays basic content knowledge but cannot articulate connections with other parts of disciplines.	Displays solid content knowledge and makes connections between the content and other disciplines.	Takes initiative to locate and teach information beyond traditional text. Seeks to keep abreast of new ideas and understanding in the field.
Use of Interdisciplinary Approaches when Teaching Content (may connect to literature, writing, the arts, etc.)	Is unaware of interdisciplinary approaches to teaching and learning.	Displays limited awareness of interdisciplinary approaches to teaching and learning and incorporates some of these strategies.	Is very aware of interdisciplinary approaches to teaching and learning and regularly incorporates these strategies.	Incorporates interdisciplinary strategies on a regular basis and utilizes the knowledge/skills of colleagues and students to enhance learning.
Selects Content to Encourage Diverse Perspectives	Demonstrates little attention to multiple perspectives. Content is presented without discussion of its relationship to real experience or other disciplines or cultural norms. Individual differences are ignored.	Demonstrates an awareness of multiple perspectives and opens discussions about subject matter to the class. Strives to include content that dispels stereotypes.	Routinely discusses multiple perspectives in subject matter and includes attention to students' personal, family, and community experiences. Individual differences are respected.	Strategically introduces resources and experiences that challenge the learner's beliefs and assumption about common understandings, thus creating an environment where critical thinking is a habit.

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 1: The student teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful to students.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Knowledge of Content	Level _____	Level _____	Level _____	Level _____
Use of Interdisciplinary Approaches when Teaching Content (may connect to literature, writing, the arts, etc.)	Level _____	Level _____	Level _____	Level _____
Selects Content to Encourage Diverse Perspectives	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 2: The student teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social, and personal development.

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Developmental Characteristics of Students	Displays minimal or no knowledge of developmental characteristics of age group, and/or uses inappropriate activities and assignments.	Designs some activities and assignments in a developmentally appropriate way.	Assesses individual and group performance in order to design instruction that meets learners' needs (cognitive, social, emotional, and physical).	Learners are engaged in activities to stimulate their thinking, test ideas/materials, and assume responsibility for shaping their learning tasks (brainstorming, choice activities, opinions/feelings, discussions, etc.).
Activates Prior Knowledge and Experiences	Displays little understanding of prerequisite knowledge important for student learning and fails to activate students' prior knowledge.	Does demonstrate some awareness of the importance of prerequisite knowledge; however, is inconsistent in activating students' prior knowledge.	Consistently helps students make connections between current content and their own background and experiences.	Lessons include deliberate opportunities for students to discover the connections between current content and life experiences. Students see the purpose and the "big picture."

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 2: The student teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social, and personal development.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support			
Element	Week #	Week #	Week #
Developmental Characteristics of Students	Level _____	Level _____	Level _____
Activates Prior Knowledge and Experiences	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 3: The student teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Teaching to Individual Learning Abilities	Is unaware of individual learning abilities as all students receive same delivery of instruction and assignment regardless of differences.	Is aware of the need for adaptations in assignments, time allowed, response modes, etc. and occasionally accommodates these needs for different learners.	Demonstrates awareness that lesson plans take into account the needs of various learners. Appropriate adaptations are a routine part of planning and delivery.	Articulates clearly individual student goals and expectations. Individualized instruction allows for most students to succeed and be challenged.
Selection of Resources to Meet Range of Individual Needs: Special Education to Gifted	Uses or seeks no additional resources or supplemental materials for students with individual needs.	Has limited knowledge of additional resources and attempts to meet the individual needs of some students (i.e., low-achieving or gifted) by assessing resources.	Routinely utilizes supplemental materials and outside resources with students at both ends of the learning curve.	Actively seeks out resources from the community or professional organizations and utilizes these sources and materials for the benefit of varied learners.
Expectations for Learning and Achievement	Conveys only modest expectations for student achievement through instructional goals and activities, interactions, and the classroom environment.	Conveys consistent expectations for student achievement through instructional goals and activities, interactions, and the classroom environment. Instruction is appropriate for the grade level or course.	Appropriately challenges students by presenting material at a qualitatively high level.	Expects students to challenge themselves by providing opportunities for choice in activities and assignments

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 3: The student teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Teaching to Individual Learning Abilities	Level _____	Level _____	Level _____	Level _____
Selection of Resources to Meet Range of Individual Needs: Special Education to Gifted	Level _____	Level _____	Level _____	Level _____
Expectations for Learning and Achievement	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 4: The student teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills. *NOTE: Instructional strategies include, but are not limited to, cooperative learning, small and large groups, lecture, project work, thematic instruction, partner learning, use of media resources, and technology.*

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Selecting Resources for General Instruction	Utilizes materials from a teacher's guide only. Book content is read and discussed with no outside materials or resources included.	Displays limited awareness and/or use of resources available or does not take initiative to obtain materials. Occasionally uses supplemental materials.	Routinely seeks out multiple resources for teaching, selecting those most appropriate for comprehensiveness and accuracy. Makes a deliberate attempt to allow for multiple ways of learning.	Seeks out and uses resources from professional organizations or through community speakers, study trips, commercial materials, etc. These resources are not just "add-ons" but are fully integrated into a comprehensive curriculum.
Best Practices: Multiple Teaching Strategies, Active Learning, Modeling	Relies mostly on direct instruction/lecture method and giving assignments. Students are passive learners. No modeling.	Written plans and delivery of instruction show evidence of more than one strategy within a lesson and a variety of approaches over time. Students are actively engaged for at least one half of the lesson. Some evidence of modeling.	Written instructional strategies are effectively incorporated in each lesson based on subject matter and needs of students. ◆ Students are actively involved in problem solving and critical thinking with peers in small and large groups when appropriate.	Facilitates inquiry through carefully planned lessons and involving students at the planning stage. Most students are actively engaged in questioning concepts, developing learning strategies, and problem solving. Motivation is evident.
Student Teacher Role in Instructional Process	Primarily serves as "giver of information" in an authoritarian mode of instruction.	Occasionally facilitates small groups but steps in to problem solve for the students.	Role varies depending on student activities. ◆ Expects students to self-direct and problem solve as needed. Facilitates learning.	Demonstrates multiple roles as needed. Students are actively engaged and self-directed, seeking resources, and collaborating with others.

* Descriptions at the distinguished level may not be appropriate for some settings.
◆ May not be appropriate in some settings.

Principle 4: The student teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills. **NOTE:** Instructional strategies include, but are not limited to, cooperative learning, small and large groups, lecture, project work, thematic instruction, partner learning, use of media resources, and technology.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Selecting Resources for General Instruction	Level _____	Level _____	Level _____	Level _____
Best Practices: Multiple Teaching Strategies, Active Learning, Modeling	Level _____	Level _____	Level _____	Level _____
Student Teacher Role in Instructional Process	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 5A: The student teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction in the classroom.

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Management of Transitions	Much time is lost during transitions. May be unaware of lost time, does not plan for transitions.	Transitions are sporadically efficient, resulting in some loss of instructional time.	Transitions occur smoothly with little loss of instructional time. Specific procedures are taught and used effectively.	Transitions are seamless with students assuming some responsibility for efficient operation.
Management of Time and Materials	Time and materials are inefficiently handled, resulting in loss of instructional time.	Time and materials are handled moderately well.	Time and materials are handled smoothly with little loss of instructional time or interest.	Time and materials are handled smoothly and efficiently with no loss of attention or interest. Students assume some responsibility for efficient operation of time and materials.
Directions and Procedures	Directions and procedures are confusing to the students.	Directions and procedures are clarified after initial student confusion or are excessively detailed.	Directions and procedures are clear to students and contain an appropriate level of detail. Frequently checks for understanding.	Directions and procedures are clear to students. Anticipates possible student misunderstanding, plans, monitors for it.
Pacing	The pacing is too slow or rushed.	Pacing is inconsistent.	Pacing is usually appropriate. Teacher adapts pace by monitoring students.	Pacing of the lesson is smooth, timely, and appropriate, allowing for reflection and closure.
Performance of Non-Instructional Duties: attendance, lunch count, distribution of papers, duties, etc.	Performance of non-instructional duties is inefficient. May be inattentive to these duties.	Duties are handled fairly efficiently.	Duties are managed and completed in a clear, professional manner without loss of instructional time.	Systems for performing duties are well established with students assuming appropriate responsibility for efficient classroom operation.

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 5A: The student teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction in the classroom.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Management of Transitions	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Management of Time and Materials	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Directions and Procedures	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Pacing	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Performance of Non-Instructional Duties: attendance, lunch count, distribution of papers, duties, etc.	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 5B: The student teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction in the classroom.

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Positive Climate for Intrinsic Motivation	Teacher does not attend to positive social relationships. More reprimands than compliments are heard. Rewards may be offered too frequently to motivate students.	Students are complimented for appropriate behavior and study habits. Teacher encourages students to appreciate others. Minimal extrinsic rewards offered.	Classroom environment is positive. Students are actively engaged. Extrinsic rewards are not necessary to motivate students. Teacher clearly shows a caring attitude toward all students.	Teacher helps the group develop shared values and expectations for interactions and academic discussions creating a positive classroom climate of openness, mutual respect, support, and inquiry.
Establishing Expectations for Behavior	No standards of conduct appear to have been established, or students are confused as to what the standards are.	Standards of conduct appear to have been established for situations and most students seem to understand them.	Standards of conduct are clear to all students. Teacher reviews and prompts behaviors when appropriate.	Standards of conduct for various situations are clear to students and appear to have been developed or revised with student participation.
Monitoring Student Behavior	Is unaware of what students are doing, and/or student behavior is not monitored.	Generally aware of student behavior but may miss the activities of some students. May neglect to use positive reinforcement.	Is consistently alert to student behavior, uses positive reinforcement and behavior prompts.	Monitoring is subtle and preventive. Students monitor their own and their peers' behavior in appropriate ways.
Response to Student Misbehavior	Does not respond to misbehavior, or the response is inconsistent, overly repressive, or does not respect the student's dignity.	Attempts to respond to misbehavior but with uneven results.	Response to misbehavior is appropriate, successful, and respects the student's dignity.	Response to misbehavior is highly effective and sensitive to students' individual needs. Assists students in making appropriate behavior choices.

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 5B: The student teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction in the classroom.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Positive Climate for Intrinsic Motivation	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Establishing Expectations for Behavior	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Monitoring Student Behavior	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Response to Student Misbehavior	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 6: The student teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Oral and Written Language	Speech is inaudible or written language is illegible. Language may contain grammar, syntax, or spelling errors. Vocabulary may be inappropriate, vague, or used incorrectly.	Speech and written language are clear and correct. Vocabulary is correct, but limited or not appropriate to students' ages or backgrounds.	Speech and written language are clear and correct. Vocabulary is appropriate to students' ages and interests.	Oral and written language are correct and expressive with well chosen vocabulary that enriches the lesson.
Quality of Questions	Questions are usually of poor quality: low level of thinking or one word responses are accepted.	Questions are a combination of low and high quality. Only some invite a thoughtful response. Wait time is inconsistent.	Appropriate variety of questions. Challenges students to justify responses, probing for learner understanding, and helping students articulate ideas. Consistently provides adequate wait time.	Knows how to ask questions and stimulate discussion in different ways for particular purposes. Promotes risk-taking, divergent thinking, and stimulations of curiosity. Students learn to question.
Discussion Techniques with Student Participation	Interaction is predominantly recitation style, with teacher mediating questions and answers. Only a few participate in the discussion.	Makes some attempts to engage students in a true discussion but with only limited success.	True discussion, with teacher stepping aside when appropriate. Teacher insures that all voices are heard in the discussion.	Students assume considerable responsibility for the success of the discussion, initiating topics, and making unsolicited contributions. Students insure that all voices are heard in the discussion.
Use of Media and Technology: felt/magnetic boards, charts, film/overhead projectors, computers (Internet, PowerPoint, Distance Learning, etc.) as available	Limited use of media and/or technology to enhance learning.	Some media and/or technology used, but is inconsistent or of limited quality.	Lessons consistently use media and/or technology to add instructional impact and increase learning.	Takes initiative to integrate new technology formats into curriculum. Quality and depth are consistently strong.

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 6: The student teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Oral and Written Language	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Quality of Questions	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Discussion Techniques with Student Participation	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____
Use of Media and Technology: felt/magnetic boards, charts, film/overhead projectors, computers (Internet, PowerPoint, Distance Learning, etc.) as available	Level _____	Level _____	Level _____	Level _____
	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 7: The student teacher plans instruction based upon knowledge of the subject matter, students, the community, and curriculum goals.

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Purposeful Learning Activities Based on Essential Skills and District Curriculum	Learning activities are not compatible with school and district curriculum and/or do not follow an organized progression.	Activities may follow an organized progression but are not completely compatible with the required curriculum.	Learning activities are highly relevant to students' needs and match instructional goals. Unit plans are keyed to state/district curriculum.	Learning activities follow a well-organized progression and follow the school/district curriculum requirements.
Short- and Long-Term Planning (including unit plans)	Thoughtful planning is not evident in lessons. Lesson plans are not prepared in a timely fashion.	Short-term planning is evident and lessons are consistently ready on time. There is minimal evidence of long-term planning or connections to past/future teachings.	Long-term planning with connections to past/future teachings is clearly evident and prepared in advance of teaching. Plans are linked to students' needs and performances.	Responds to unanticipated sources of input, evaluates plans in relation to short- and long-term goals. Has a clear understanding of the "big picture" for planning.
Lesson Plans: Monitoring and Adjustment	Adheres rigidly to an instructional plan even when a change will clearly improve the lesson.	Begins to check for understanding within a lesson. Attempts to adjust a lesson but with mixed results.	Routinely checks for understanding within the lesson. Makes minor adjustments to lessons or units and the adjustments occur smoothly.	Makes major adjustment to plans to meet student needs, interest, and motivation.

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 7: The student teacher plans instruction based upon knowledge of the subject matter, students, the community, and curriculum goals.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Purposeful Learning Activities Based on Essential Skills and District Curriculum	Level _____	Level _____	Level _____	Level _____
Short- and Long-Term Planning (including unit plans)	Level _____	Level _____	Level _____	Level _____
Lesson Plans: Monitoring and Adjustment	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 8: The student teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Element	Level of Performance			Distinguished*
	Unsatisfactory	Basic	Proficient	
Variety of Formal/ Informal Assessment Strategies	Uses minimal number of assessments or only commercially prepared tests. Methods of assessments not consistent with instructional goals.	Some instructional goals are assessed but not all. Gathering of assessment data is more frequent and begins to use performance-based measures.	Data on student progress is gathered in multiple ways such as observations, portfolios, teacher-made tests, performance tasks, student self-assessment and standardized tests.	Involves learner in self-assessment activities to foster awareness of their strengths/needs and to set personal goals for learning.
Assessment Data Used in Lesson Planning/ Adjustment	Assessment results affect lesson planning only minimally.	Uses assessment results to plan for the class as a whole.	Assessment results are used to adjust plans for individuals and small groups.	A deliberate attempt is made to assess instructional goals for the sole purpose of determining the next steps in instruction for individuals, small groups, and the whole class.
Evaluates Criteria and Feedback	Criteria for evaluation is not predetermined on paper. Feedback is not provided in a timely manner or is of poor quality.	Feedback to students is timely but may only be minimal (just a score). Learners are not made aware of performance criteria in advance.	Learners are given evaluation criteria in advance (rubrics, point systems, etc.). Feedback includes qualitative comments to highlight strengths or needs.	Learners are involved in setting criteria for evaluation. Feedback is individualized and includes personal goal setting. Descriptive rubrics are created and shared with students.
Recording and Monitoring Assessment Data	Numerous errors in scoring of student work. Assessment records are in disarray or not up-to-date resulting in errors and confusion.	Scoring of papers and written records are adequate but require frequent monitoring to avoid errors.	System for scoring and recording data is fully effective and up-to-date.	System is highly effective and students are involved in collection and summarizing of data.

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 8: The student teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Variety of Formal/ Informal Assessment Strategies	Level _____	Level _____	Level _____	Level _____
Assessment Data Used in Lesson Planning/ Adjustment	Level _____	Level _____	Level _____	Level _____
Evaluates Criteria and Feedback.	Level _____	Level _____	Level _____	Level _____
Recording and Monitoring Assessment Data	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 9: The student teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Reflection on Teaching (written journal and conversations)	Does not know whether a lesson was effective or achieved its goals. Profoundly misjudges the success of a lesson. Perceptions are often inaccurate. Does not accept constructive criticism well.	Generally accurate impression of a lesson's success. Offers vague, general suggestions for improvement or is dependent on supervisors for ideas. Open to suggestions.	Can accurately determine whether a lesson has met the stated goals and cites references about how it may be improved. Is committed to reflection, self-assessment and learning as an ongoing process. Welcomes constructive criticism.	Is able to critically analyze a lesson weighing the relative strength of the weak areas. Offers alternative actions complete with probable successes with different approaches. Actively seeks constructive criticism.
Relationships with Colleagues	Little interaction with colleagues or relationships are negative, self-serving or unprofessional.	Maintains professional cordial relationships with school staff and attends required meetings.	Seeks opportunities to work with colleagues to learn and grow professionally. Is willing to give and receive help.	Routinely shares materials, resources, ideas with colleagues. May volunteer to organize tasks or take the lead with activities within a department/team or at the school level.
Professional Growth (includes student teaching requirements and portfolio)	Makes no effort to share knowledge with others or to assume professional responsibilities (attire, mannerisms, communications). Does not complete student teaching requirements.	Participates in professional activities that are provided. Conducts him/herself in a professional student teacher manner most of the time. Some student teaching requirements are not completed appropriately.	Consistently demonstrates professionalism in appearance/manners. Actively seeks out professional literature, colleagues, conferences, mentors, etc. to grow professionally. Student teaching requirements are completed with quality and depth.	Demonstrates levels of leadership on a team or with the faculty. May include: sharing new knowledge/skills, conducting/sharing action research in the classroom, making presentations to faculty, fully coordinating events such as study trips, teaching after school enrichment classes.

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 9: The student teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Reflection on Teaching (written journal and conversations)	Level _____	Level _____	Level _____	Level _____
Relationships with Colleagues	Level _____	Level _____	Level _____	Level _____
Professional Growth (includes student teaching requirements and portfolio)	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 10: The student teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Element	Level of Performance			
	Unsatisfactory	Basic	Proficient	Distinguished*
Participation in School/District Events and Projects	Avoids becoming involved in school/district projects and events.	Participates in school/district events when specifically asked.	Volunteers to participate in more than one activity and makes substantial contributions. Participates as much as possible as a full staff member.	Frequently seeks opportunities to volunteer for activities outside of own classroom or creates activities such as enrichment/remedial classes for students outside of regular school day. Values his/her role in making the entire school a productive learning environment.
Sensitivity to Student Needs and Awareness of Community Resources	Does not readily observe or identify clues to student distress, special needs, etc. Does not honor confidential information about students.	Identifies special needs of some students (vision, hearing, counseling, medical intervention, etc.) but does not communicate concerns with classroom teacher. Respects the privacy of students and confidentiality of information.	Is concerned about all aspects of a child's well-being (cognitive, emotional, social, and physical), and is alert to signs of difficulty. Takes steps to stop discrimination or harassment among students.	Is persistent in seeking to end discriminatory activity or harassment among students. Also, teams with the classroom teacher to obtain support services.
Respectful and Productive Communication with Families	Provides minimal information to parents or is insensitive to parent concerns about students. Does not make an effort to get involved with parents.	Adheres to the existing formats for communications with parents. Needs to be reminded to communicate with individual student's parents.	Teams with the teacher to communicate with parents about their child's progress (both positive and negative) on a regular basis and openly welcomes parents to the classroom. Responds to parent concerns are handled with great sensitivity.	Demonstrates initiative in creating new avenues for connections/communications with families. This may include: family learning projects, a new or different type of class newsletter, utilizing parents in class projects.

* Descriptions at the distinguished level may not be appropriate for some settings.

Principle 10: The student teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Key to Levels on the Rubric: U = Unsatisfactory B = Basic P = Proficient D = Distinguished*

Rationale & Support				
Element	Week #	Week #	Week #	Week #
Participation in School/District Events and Projects	Level _____	Level _____	Level _____	Level _____
Sensitivity to Student Needs and Awareness of Community Resources	Level _____	Level _____	Level _____	Level _____
Respectful and Productive Communication with Families	Level _____	Level _____	Level _____	Level _____

* Descriptions at the distinguished level may not be appropriate for some settings.

Johns Hopkins University Candidate Self-assessment of Content Knowledge and Expertise in English

*Johns Hopkins University
Graduate Division of Education
Department of Teacher Preparation*

Candidate Self-Assessment of Content Knowledge and Expertise in ENGLISH

Candidate: _____ Social Security # _____

Date: _____ Area for Teaching Certification: _____

Academic Background:

College/University	Degree	Date Conferred	Major(s)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Directions:

This self-reflective assessment tool is designed to help identify strengths and gaps in your content knowledge in your chosen discipline. The assessment is also intended to orient you to the content knowledge needed to implement school curriculum. No first-year candidate is expected to demonstrate confidence in all areas of content knowledge included on this assessment. The completed self-assessment will serve as the first step toward a personalized content development plan for expanding your content knowledge and expertise.

For each topic listed in the assessment, rate your knowledge and confidence using the following scale:

- 0 = I have not yet built any knowledge of this content area
- 1 = I have limited knowledge on this topic.
- 2 = I am familiar with this content area, but may lack some breadth or depth.
- 3 = I have strong knowledge of this content area.
- 4 = I feel competent to teach this topic.

For any item that you rate as 1 or above, indicate the source of your knowledge and confidence. For example, you may have taken a course, written a research paper on a related topic, participated in a related activity from which you gained practical knowledge, or been employed in a position which required the development and application of this knowledge.

MAT Candidate Self-Assessment: English

Topic	Rating	Documentation of Content Development
LITERARY HISTORY		
Ancient Literature (Greek)		
Drama		
Epic		
Lyric		
Philosophy		
Ancient Literature (Roman)		
Epic		
Satire		
Pastoral Tradition		
Ancient Literature (Near Eastern)		
Mesopotamian		
Hebraic		
Other		
British/European Literature		
Medieval		
Old English Poetry (e.g., Beowulf)		
Middle English Literature (e.g., Chaucer)		
Chivalric Tradition		
Sacred/Philosophical Tradition		

MAT Candidate Self-Assessment: English continued

Topic	Rating	Documentation of Content Development
Renaissance/Early Modern		
Humanism		
Reformation/Counter Reformation		
Elizabethan and Restoration Periods		
Utopian Tradition		
Enlightenment		
The Philosophes and the New Science		
The Rise of the Novel		
Romanticism		
Impact of the French Revolution		
Impact of the Industrial Revolution		
Concept of the poet legislator/philosopher		
Realism/Naturalism		
Rise of Communism/Socialism		
Experimentation with the novel as a form		
Modern		
Impact of WWI and WWII		
Emerging poetic and narrative forms (e.g., "stream of consciousness, "unreliable" narrator)		
Impact of Psychoanalytic Theories		

MAT Candidate Self-Assessment: English continued

Topic	Rating	Documentation of Content Development
Contemporary		
Postcolonialism		
Others?		
U.S. Literature/Literature of the Americas		
Exploration through Revolution		
Travelogues/Narratives of Exploration		
Promotion/Anti-Promotion literatures		
Political Treatises/Essays		
Influence of Religious Traditions (e.g., Puritanism, Quakerism, Anglicanism)		
Early Republic through Civil War		
Rise of the Novel		
Rise of Nationalism		
Westward Exploration and Expansion		
Transcendentalism		
Abolitionist Movement		
Late 19th Century through World War I		
Reconstruction Period		
Women's Suffrage and Equal Rights Movement		

MAT Candidate Self-Assessment: English continued

Topic	Rating	Documentation of Content Development
Great Depression through Contemporary		
Modernism		
Expatriate Movement		
The Harlem Renaissance		
The Beat Generation		
Anticommunist Movement/McCarthyism		
Postmodernism		
Native American Literature		
Hispanic American Literature		
Asian American Literature		
LITERATURE FOR CHILD/ADOLESCENT READERS		
WORLD LITERATURES		
Middle- and Near Eastern		
Indian		
African		
Asian		
South/Central American		

MAT Candidate Self-Assessment: English continued

Topic	Rating	Documentation of Content Development
LITERARY ANALYSIS		
Literary Genres		
Poetry		
Epic		
Short Story		
Novel		
Drama		
Essay		
Biography/Autobiography		
Satire/Parody		
Utopia		
Rhetoric and Poetics		
Tropes (metaphor, simile, metonymy, irony, etc.)		
Schemes (of parallelism, omission, inversion, etc.)		
Metres (poetic foot and line, etc.)		
Forms (ode, ballad, villanelle, etc.)		
Elements of Fiction and Drama		
Plot		
Character		

MAT Candidate Self-Assessment: English continued

Topic	Rating	Documentation of Content Development
Conflict		
Point of View		
Setting		
LITERARY THEORY		
Structuralism		
Post-structuralism		
New Criticism		
Reader Response		
Old vs. New Historicism		
Feminist/Gender Theories		
Marxist/Political Theories		
HISTORY OF THE ENGLISH LANGUAGE AND PRINT MEDIA		
Oral vs. Written Literacy		
Evolution of the English Language		
Standardization of Written English		
History of Book Production		
COMPOSITION AND THE WRITING PROCESS		
The writing process: prewriting to editing		
Research writing formats and processes (APA, MLA, etc.)		

MAT Candidate Self-Assessment: English continued

Topic	Rating	Documentation of Content Development
Modes of Exposition (narration, description, definition, analysis, evaluation, etc.)		
Strategies of argumentation and refutation		
Paragraph structure and function		
Tone, diction, and style		
Grammar, mechanics, and syntax		

Appendix V

Example of Johns Hopkins University Candidate Work for Certification in Secondary English

*Johns Hopkins University
Graduate Division of Education
Department of Teacher Preparation*

Candidate Self-Assessment of Content Knowledge and Expertise in ENGLISH

Candidate: _____ Social Security # _____

Date: 2/7/01 Area for Teaching Certification: Secondary Education (English)

Academic Background:

College/University	Degree	Date Conferred	Major(s)
<u>University of Notre Dame</u>	<u>B.A.</u>	<u>5/99</u>	<u>English + Philosophy</u>
_____	_____	_____	_____
_____	_____	_____	_____

Directions:

This self-reflective assessment tool is designed to help identify strengths and gaps in your content knowledge in your chosen discipline. The assessment is also intended to orient you to the content knowledge needed to implement school curriculum. No first-year candidate is expected to demonstrate confidence in all areas of content knowledge included on this assessment. The completed self-assessment will serve as the first step toward a personalized content development plan for expanding your content knowledge and expertise.

For each topic listed in the assessment, rate your knowledge and confidence using the following scale:

- | | | |
|---|---|----------------------------------------------------------------------------------|
| 0 | = | I have not yet built any knowledge of this content area |
| 1 | = | I have limited knowledge on this topic. |
| 2 | = | I am familiar with this content area, but may lack some breadth or depth. |
| 3 | = | I have strong knowledge of this content area. |
| 4 | = | I feel competent to teach this topic. |

For any item that you rate as 1 or above, indicate the source of your knowledge and confidence. For example, you may have taken a course, written a research paper on a related topic, participated in a related activity from which you gained practical knowledge, or been employed in a position which required the development and application of this knowledge.

Topic	Rating	Documentation of Content Development
LITERARY HISTORY	----	----
Ancient Literature (Greek)	----	----
▪ Drama	1	High school readings
▪ Epic	1	High school readings
▪ Lyric	1	College course touched on this
▪ Philosophy	3	Course on Ancient Philosophy
Ancient Literature (Roman)	----	----
▪ Epic	1	High school reading
▪ Satire	1	College course touched on this
▪ Pastoral Tradition	1	College course touched on this
Ancient Literature (Near Eastern)	----	----
▪ Mesopotamian	0	
▪ Hebraic	0	
▪ Islamic	0	
British/European Literature	----	----
Medieval	----	----
▪ Old English Poetry (e.g., Beowulf)	3	Studied this in a British lit. class
▪ Middle English Literature (e.g., Chaucer)	3	Studied this in a British lit. class

▪ Chivalric Tradition	1	Course touched on this
▪ Sacred/Philosophical Tradition	0	
Renaissance/Early Modern	---	---
▪ Humanism	1	Course touched on this
▪ Reformation/Counter-Reformation	1	Course touched on this
▪ Elizabethan and Restoration Periods	2	British lit. course covered this
▪ Utopian Tradition	0	
Enlightenment	---	---
▪ The <i>Philosophes</i> and the New Science	1	Courses touched on this area
▪ The Rise of the Novel	4	Took a course on this topic
Romanticism	---	---
▪ Impact of the French Revolution	4	Took couple courses on this time period
▪ Impact of the Industrial Revolution	4	" " " "
▪ Concept of the poet-philosopher	4	" " " "

Realism/Naturalism	----	----
▪ Rise of Communism/Socialism	1	Briefly touched on this in a course
▪ Experimentation with the novel as a form	1	Briefly touched on this area
Modern	---	---
▪ Impact of WWI and WWII	2	Modernism course touched on these areas
▪ Emerging poetic and narrative forms (e.g., "stream of consciousness, "unreliable" narrator)	3	" " "
▪ Impact of Psychoanalytic Theories	2	" " "
Contemporary	---	----
▪ Postcolonialism	2	Did some postcolonial reading + research for my Special Topics Research Project
▪ Others?	0	
U.S. Literature/Literature of the Americas	----	----
Exploration through Revolution	---	---
▪ Travelogues/Narratives of Exploration	3	Studied this genre and time period in Special Topics
▪ Promotion/Anti-Promotion literatures	0	
▪ Political Treatises/Essays	1	Read some in an American Lit. course

<ul style="list-style-type: none"> ▪ Influence of Religious Traditions (e.g., Puritanism, Quakerism, Anglicanism) 	4	Touched on in American Lit. course and in Special Topics
Early Republic through Civil War	---	---
<ul style="list-style-type: none"> ▪ Rise of the Novel 	1	Touched on in American Lit. course
<ul style="list-style-type: none"> ▪ Rise of Nationalism 	1	" " " "
<ul style="list-style-type: none"> ▪ Westward Exploration and Expansion 	0	
<ul style="list-style-type: none"> ▪ Transcendentalism 	4	Took course on this topic ; wrote paper on it
<ul style="list-style-type: none"> ▪ Abolitionist Movement 	1	Touched on in American Lit. course
Late 19th Century through World War I	---	---
<ul style="list-style-type: none"> ▪ Reconstruction Period 	0	
<ul style="list-style-type: none"> ▪ Women's Suffrage and Equal Rights Movement 	2	Covered in American Lit. course
Great Depression through Contemporary	---	---
<ul style="list-style-type: none"> ▪ Expatriate Movement. 	1	Read some Expatriate literature in a course

▪ The Harlem Renaissance	1	Briefly touched on in college Current job
▪ The Beat Generation	1	Read some of this time period on my own
▪ Anticommunist Movement/McCarthy. ism	0	
Native American Literature	2	Read some literature in a course
Hispanic American Literature	1	Covered briefly in a course
Asian American Literature	2 2	Readings in high school
LITERATURE FOR CHILD/ADOLESCENT READERS	4	2 Current job has forced me to become familiar with this area
WORLD LITERATURES	----	----
▪ Middle- and Near Eastern	0	

▪ Indian	0	
▪ African	3	Did a research project on modern African literature for Special Topics.
▪ Asian	2	Took Modern Chinese Lit course + Modern Russian Lit course
▪ South/Central American	0	
LITERARY ANALYSIS	----	----
Literary Genres	----	----
▪ Poetry	4	Took a number of courses in which we analyzed poetry. Current job also studied this
▪ Epic	1	High school readings
▪ Short Story	4	Took a couple of courses in which we read short stories. Current job also studied this genre.

▪ Novel	4	Took courses on this + wrote papers about it.
▪ Drama	3	Covered all of these in various courses at college.
▪ Essay	3	" " " "
▪ Biography/ Autobiography	3	" " " "
▪ Satire/Parody	1	Just briefly touched on this genre.
▪ Utopia	0	
Rhetoric and Poetics		
▪ Tropes (metaphor, simile, metonymy, irony, etc.)	4	College courses Current job

▪ Schemes (of parallelism , omission, inversion, etc.)	0	
▪ Metres (poetic foot and line, etc.)	2	Studied in college courses
▪ Forms (ode, ballad, vilanelle, etc.)	3	College courses Current Job
Elements of Fiction and Drama		
▪ Plot	4	College courses Current Job
▪ Character	4	↓
▪ Conflict	4	
▪ Point of View	4	
▪ Setting	4	
LITERARY THEORY		
▪ Structuralism	0	
▪ Post-structuralism	0	
▪ New Criticism	0	

▪ Reader Response	2	I believe I'm familiar with this in my current job.
▪ Old- vs. New Historicism	0	
▪ Feminist/Gender Theories	0	
▪ Marxist/Political Theories	0	---
HISTORY OF THE ENGLISH LANGUAGE AND PRINT MEDIA	---	---
▪ Oral vs. Written Literacy	1	Talked about briefly in Special Topics
▪ Evolution of the English Language	0	
▪ Standardization of Written English	0	
▪ History of Book Production	3	Covered in Special Topics class
COMPOSITION AND THE WRITING PROCESS	---	---
▪ The writing process: prewriting to editing	4	High school, college courses Current job

<ul style="list-style-type: none"> ▪ Research writing formats and processes (APA, MLA, etc.) 	4	College courses
<ul style="list-style-type: none"> ▪ Modes of Exposition (narration, description, definition, analysis, evaluation, etc.) 	4	↓
<ul style="list-style-type: none"> ▪ Strategies of argumentation and refutation 	3	
<ul style="list-style-type: none"> ▪ Paragraph structure and function 	4	
<ul style="list-style-type: none"> ▪ Tone, diction, and style 	4	
<ul style="list-style-type: none"> ▪ Grammar, mechanics, and syntax 	3	

Special Topics

Content Development Plan

My goals for this course are as follows:

1. Expand my knowledge of the English content area into all the different realms of study.
2. Better balance my knowledge of and exposure to literature of different time periods and different cultures.
3. Refresh myself in subject areas that I may have once known, but have since forgotten.
4. Envision and lay out a plan of action in which I will take concrete steps to improving my knowledge and understanding of the English field.
5. Research an area that I am lacking expertise in.

Where do I want to be in 6-12 months:

1. I want to have a broader base of knowledge in the English content area.
2. I want to be more well-read in all areas.
3. I want to have very few, if any, areas in which I have no prior knowledge.
4. I want to feel confident enough to teach most areas in the English curriculum.
5. I want to be a “lifetime learner” and continue to grow in my understanding of and appreciation for literature.

What specifically do I need and want to learn more about:

1. Ancient Literature (all types)

2. Realism/Naturalism
3. Contemporary Literature
4. Early Republic through Reconstruction Literature
5. Specific Time Periods (Harlem Renaissance, Beats, Anti-Communist)
6. Multicultural and World Literature
7. Literary Theory (???)
8. History of English Language and Print Media (???)
9. General Overview of the Different Time Periods and Movements of Literature (many of these terms I am just unfamiliar with)

Research Project Ideas (Tentative):

1. Study of a particular literary theory
2. Research a particular multicultural literature (Hispanic, Asian, African)
3. Study of African literature
4. Rise of the English language
5. Beginning of Literature (Ancient—Greek, Roman, Near Eastern)

Special Topics Research Paper

April 16, 2001

The Story of an Abiku Nation:

Ben Okri's *The Famished Road*

Modern African literature stands as one of the most talked about areas of current literary study. The number of diverse writing styles and themes found in this largely uncharted genre is truly overwhelmingly. African literature from the 20th Century demonstrates the wide array of cultures, beliefs, religions, and ideas present on the gigantic continent. Within the last couple decades, the number of literary critic, exploring this "hot-spot" in literature has multiplied considerably. West African literature, in particular, has been the focal point of study for many. A young Nigerian writer, Ben Okri, serves as a classic example of the refreshing and exhilarating ideas and narrative styles that are emerging from modern Africa. Ben Okri's The Famished Road highlights the political and social turmoil within the Nigerian nation, but also portrays the spiritual and magical undertones that exist within the Nigerian culture.

Ben Okri is hailed by many as one of the most promising and talented African writers of the 20th Century. He was born in 1958 into a middle-class family in Nigeria. At the age of three, he moved to London to reconnect with his father, who was a lawyer. Okri attended a number of mixed-race schools in London, often encountering hostility and bitterness among his classmates. In 1966, he moved back to Nigeria, where he lived in the city of Lagos. Again in 1978, Okri left Nigeria for London to obtain his university education. Ben Okri continues to live in London until this present day. He started to write almost immediately after college and spent time working as a poetry editor for a British magazine and also as a broadcaster with the BBC. Okri has written a number of novels and a couple collections of short stories. Most of his work was only published in London; until 1987, when a collection of his short stories was released in America.

Okri's most famous novel, The Famished Road, was published in 1991 and received widespread acclaim and recognition, including the prestigious Booker Prize for fiction.

Okri's homeland of Nigeria serves as much more than just an interesting backdrop for his writing. The Nigerian culture, political system, and history play a very important part in all of his stories. Nigeria is an "invented nation". It has been described as a "multiethnic state that makes sense geographically, but not-culturally or historically" (Coundouriotis, Claiming 147). The boundaries of Nigeria were established by the British in 1914. However, inside this artificial, national boundary exist numerous internal boundaries between different peoples, beliefs, cultures, and religions. National unity has always been a major problem for Nigeria. Unbeknownst to many, Nigerian is not a nationality. Political and social strife has run rampant in the country's brief history. The English controlled Nigeria for much of the 20th Century. Nigeria gained its independence from Great Britain in 1960 after a bloody Civil War. How-

ever, many of the same problems have continued to plague the Nigerian people for the last forty years. Violence, political corruption, widespread poverty, and disease have been mainstays in this West African nation. Ben Okri's writing emerges from this turbulent history and present and is filled with many glimpses into and comments upon his troubled society. The majority of his stories are set in the 1950's in Nigeria, which is pre-Civil War. His work abounds with allegories, metaphors, and symbols of his Nigerian culture, tradition, and history.

Okri's novel The Famished Road is a stunning tale of a young boy, Azaro, coming of age in an unnamed city in Nigeria. Azaro is the story's first person narrator and leads the reader through an enchanting series of real and surreal experiences. Azaro is an abiku or spirit child. The abiku child in the Nigerian culture is doomed to constantly travel between the living and the dead. Abiku children are bound by a contract with the spirits to forever return from the living to the realm of the spirits. Thus, abiku children often die early in their lives only to return again to the same parents as another child. This cycle of birth, death, and rebirth is repeated time and time again. The belief in the abiku child is one that is fairly common in West African cultures. Azaro, however, breaks his contract with the spirits and chooses to inhabit the world of the living, but not without constant pressure and visits from his spirit companions. Furthermore, since Azaro is a spirit child, he has the frightening ability to see and communicate with the spirits around him. Azaro's spiritual connection is a source of many problems for his family.

Azaro is born into absolute poverty, which is very commonplace in Nigeria. He lives with his mom and dad in a one-room house that is part of a larger compound. His dad is a manual laborer, who must go out every day in search of new work in the marketplace. Azaro's mother is forced to sell various goods in the city to make ends meet. Both mother and father are harassed by members of the competing political parties in the hopes that they will cave in to the pressure in the upcoming elections. Azaro's father is a heavy drinker and has a horrible temper, which often leads to violence both within and outside the household. Azaro's father is called Black Tyger, because he once was famous boxer and wrestler. Black Tyger is deeply troubled by his inability to adequately provide for his family and dreams of bigger and better things. Azaro's mother is also downtrodden by their impoverished condition and struggles to keep going on a daily basis. Their lives are forever troubled by money, outside interferences, and Azaro's wanderings. The town itself is fairly deprived, but is beginning to feel the effects of the Western influences of industry and technology. Azaro becomes close friends with Madame Koto, an owner of a local bar/restaurant in the town. She recognizes the strange powers in Azaro and invites him to help out and keep her company in her establishment. Madame Koto's transformation in the novel also serves as a major obstacle for Azaro and his family.

The Famished Road is usually classified as a novel of magical realism. The South American writer Gabriel Garcia Marquez is probably most famous for his stories of magical realism, but towards the mid-1980's critics began using this term in reference to other third world writers. African writing, in particular, during the late 1980's dealt with one reality in which different worlds and realms co-existed inside of it. The boundaries between the living and the dead, the spirit and the natural, and reality and dreams disappeared. Realism is the existence of a solid, well-defined, external reality. Many post-colonial and third world writers moved away from

this tradition and developed a style all their own. They tended to celebrate different ways of seeing and narrating that were very non-European or Western. Magical realism is when impossible things happen in the world we all inhabit.

Magical realism is not like a Western fantasy, but instead, the magical and spiritual aspects of the story are directly tied to reality. The otherness does not exist elsewhere or in a separate territory, but within the familiar and known. Okri's novel is filled with encounters of the strange, the beautiful, the grotesque, the abnormal, and much more. Azaro functions as the eyes of the reader allowing him/her to witness the spirits intermingling with the living. Azaro perceives these strange creatures upon his first trip to the marketplace (Okri, 16) to his visits to Madame Koto's bar (106) to his many wanderings in the forest and many other places around the town. Initially, Azaro believes that they are only "strange people" (16), but later realizes that they are all spirits (136). He is visited by spirits, animals, and deformed creatures throughout the novel. These spirit encounters suggest that the world is not what it seems to be and that there are mysterious forces at work all around us. This blending between reality and fantasy is very characteristic of both Okri's fiction and many other modern African writers. However, many African writers reject this "magical realist" label, because it, too, is a Western or post-modern category that is being forced upon their writing (Roy, 24).

Politics also factor predominantly into Okri's novel. Azaro is introduced to the vicious nature of Nigerian politics via the "free milk scandal" (126). Members of one political party attempt to buy votes from the impoverished community by making enormous promises and handing out free milk. Ultimately, all the promises are seen to be empty and the milk results in mass numbers of people getting sick. The poor residents are outraged at this injustice and unleash a violent uprising the next time a political party comes to town. The people burn and destroy the party van which comes parading through town. Its burned shell stands as a constant reminder to the town of the violence and chaos within the political system (155). For many people in the town, politics only means corruption and unneeded trouble. There is a Party of the Rich and Party of the Poor, but to many they are one and the same.

Initially, Azaro's father tries to avoid politics and refuses to talk about anything related to it. However, after his boxing match with Green Leopard, Azaro's father (Black Tyger) is suddenly very politically motivated. Black Tyger has thousands of grand ideas and plans to improve the way of life in the town. He starts campaigning for a government position and talks of only politics and the changes that he will make. People regard him as a madman and deem his political schemes as foolish and insane. Black Tyger tries to throw a party in which he can voice his ideas to the masses, but everything turns into a catastrophe. His political idealism eventually results in violence and destruction as the party breaks up (422). Azaro's father represents in many ways the nation of Nigeria and its political struggles. Black Tyger stands for the working class, uneducated citizen who is never taken seriously in the world of politics. Black Tyger is illiterate, like much of the larger population, and his only instrument in gaining power and fortune is through violence or boxing. Nigeria's political history is filled with violent uprisings and rebellions, but all have been short-lived and to no avail. The elite of society remain in power and are seemingly forever corrupt and deaf to the cries of their countrymen. Black Tyger's political aspirations and plans are destined to disappear, because his story is the same as many others in Nigeria's past.

Myths, legends, and stories also have a major role in many modern African pieces of literature. Okri's novel is no different; The Famished Road begins with a creation myth. He writes, "In the beginning there was a river. The river became a road and the road branched out to the whole world. And because the road was once a river it was always hungry" (3). This tale that begins the reader's journey into the novel mentions a number of themes that will resound throughout (river, road, hunger). In addition, the first sentence is very similar to the beginning of Genesis. This similarity suggests the extreme importance put on myths and stories in African culture. Another legend surfaces in the novel when Azaro and his father meet Madame Koto for the first time. Madame Koto's public disgrace and beating of a patron, who refuses to pay, results in her becoming some sort of a legend in town. The people talk of her myth; "her legend, which would sprout a thousand hallucinations, had been born in [their] midst — born of stories and rumours which, in time, would become some of the most extravagant realities of [their] lives" (37). In this case, myth and reality become almost interchangeable. Madame Koto later becomes a figure that is so much larger than life that the truth is often hard to decipher. The townspeople live to hear and share stories about her and her wild escapades within her bar. The tales take on a life all their own.

There are two other major instances of stories being told within the novel. On page 258, Azaro's father tells him the story of the King of the Road. This tale serves as the focal point for much of the novel, including the title. The King of the Road represents much of the human evil and greed found in modern day society. The hunger and cruelty of this monster is believed to never go away, but to always be present in the world. Azaro's father uses this story to warn his son of the many dangers and hardships that he will encounter in his life. The road can also be seen as a symbol of industrialization, technology, and progress intruding into the African culture. Regardless of how it is interpreted, the father's tale lingers throughout the novel and produces a lasting impression upon the young boy. It is evident that myth plays an important part in African society.

The other major example of a story being told is on page 482, when the mother tells the tale of the "blue sunglasses". This story is also embedded with lots of inner meaning. Azaro's mother shares a story about her encounter with a talking tortoise and a white man in the market one afternoon. The story explores the issue of time not being what one thinks it is and bringing about change in Africa. Once again, her story seems to hold some sacred truth or principle that bears direct relevance to the events in their own lives. Throughout the novel, myths and stories are told by the characters, which help in guiding the young Azaro along his journey. Life is often clarified through myth. The characters tell stories and myths to make sense of the confusion and suffering in their lives.

Symbolism is another major component of Okri's The Famished Road. The major symbol in the novel is that of the abiku or spirit child. An abiku child is doomed to repeat its cycle of coming and going, never breaking free of this repetition. Abiku children are usually seen as evil, because of their disregard for their parents' emotions and their resentment towards the real world. However, Azaro breaks free of the cycle and renounces his spirit companions. He is kept in the living world by the bruised yet loving face of his mother, who he desires to make happy (5). Azaro chooses to stay and stop the cycle. Azaro is a symbol for the Nigerian nation at large. The country of Nigeria is like an abiku child in that it is caught in a horrific cycle of

rebirth, suffering, and death. Azaro's friend says, "Our country is an abiku country. Like the spirit-child, it keeps coming and going. One day it will decide to remain. It will become strong. I won't see it" (478). Nigeria keeps repeating its history over and over. Nothing ever changes; the violence, corruption, and poverty continue to devastate the nation. However, as with Azaro, there will come a time when the nation chooses to take a different path. Eventually, Nigeria will choose to live and head down the path to freedom, prosperity, and peace. Azaro stands as a reminder of that potential, of that future glory, if the people decide to claim it.

Another major symbol within the novel is Madame Koto and her bar. Madame Koto represents the sickness of the Nigerian nation. She begins the novel as the mother of the town — strong and powerful, yet poor. However, she is transformed over time into everything that is bad about modern day Nigeria. Her bar becomes home to the political figures of society, who bring with them all their wealth, power, greed, sex, and corruption. People go to Madame Koto's to fulfill their base desires — food, drink, and sex. Her place is the only establishment in the entire town to get electricity, which represents the intrusion of Western society and technology into the traditional African way of life. With this new luxury comes all these other evils, which breeds more greed and jealousy within the community. Okri's writing is rich in symbols, so as to make a much larger, yet still subtle, statement about the current situation of Nigeria. The Famished Road is as much a social and political commentary on the state of affairs in this west African nation as it is an elaborately constructed story of one boy's childhood.

Literary scholars have heralded Ben Okri's The Famished Road as a truly amazing work of modern African literature. It is extraordinary that for being such a newly published book that it has received this much attention and criticism. The majority of the literary criticism focuses on the theme of Nigeria as an abiku country and what forces are at play in bringing about change in this West African nation. Eleni Coundouriotis explores many of these issues in two separate pieces. In the first, she discusses how Nigeria's lack of history causes problems in creating a future. In the novel, "the characters live in a present which has no thrust in time...the present leads nowhere" (Coundouriotis, "Landscapes" 41). The people of the town have no memory; she calls it "historical forgetfulness" (41). Throughout the novel, events are forgotten or disappear into the past leaving behind no memory of their existence. "That which does not remain visible is forgotten" (43). Thus, the burned shell of the political van and the photographs stand as a permanent reminder of the people's history, but none of these things last. The van is eventually removed and nobody buys the photos. At one point, Azaro states that the pictures serve as proof that the incidents really occurred, otherwise people would have forgotten about them and no longer believed them to be true (Okri, 155). It is as if only the photographs themselves make things real. This reliance on the visual also drowns out all language and text (Coundouriotis, "Landscapes" 44). The people of the novel are disempowered by their inability to read. They are condemned, like an abiku child, to repeat history over and over.

For the people in the novel, "real, waking life is one of forgetfulness... degradation seeks forgetfulness. It is a numbness, a coping mechanism in the daily struggle of existence" (46). They choose to forget the events in their lives, because most of them involve only pain and suffering. However, by choosing to forget these events, they are choosing to repeat many of

them. “Okri not only warns against forgetfulness, he shows that a genuine potential for change is impossible without the development of a historical consciousness. The future is generated according to our understanding of the past. A forgetful nation is a symptom of illiteracy and poverty” (48). Until Nigeria creates an identity and a sense of their history, they will never move forward into the future. Coundouriotis continues to explore these themes of history and creating a future in her other essay. She discusses how the novel can be read as an allegory for the emergence of the Nigerian nation told through the childhood of Azaro. Like an abiku child, Nigeria has repeatedly chose to repeat history rather than remember it. “The collective refusal to be is the nation’s resistance to emergence and refusal of history” (*Claiming* 149). The community does not remember nor are they aware of their origins or the environment around them. Events happen in the novel, but nobody seems to make sense of them. “No one consciously connects these events to each other to form a meaningful sequence” (158) which results in the endless repetition of the past.

Derek Wright offers a slightly different perspective on the novel. He argues that “Azaro’s commitment to the living seems to Okri to signify a defiant assertion of faith in Africa’s material survival and betterment, no matter how difficult the circumstances and how great the suffering” (Wright, 154). Wright sees Azaro as a perfect embodiment of the Nigerian nation, and Azaro’s coming of age and persistence seems to predict the coming of age of Nigeria. However, Wright also contends that Azaro is more of a presence in the novel rather than an agent. Azaro does very little in the novel; he is in fact quite powerless and passive. Thus, it seems as if Okri is saying that Nigeria can only sit and wait for its glorious future. Wright also argues that the novel suggests that “altered forms of perception and understanding thus engendered can be grounds for radical social transformation and the creation of genuine independence” (160), but this process is never shown in the novel. He also questions the ending sentence in the novel: “Dreams can be the highest point of a life” (Okri, 500). Wright argues that this ending can be either interpreted as dreams being the highest point of perception or as dreams being the best that we can ever hope for and all that we are likely to achieve (161).

Brenda Cooper also discusses the forces of change in the Nigerian society and whether change is even possible. Nigeria, like the spirit child, is caught in this vicious cycle of growth and destruction. Cooper first sees the advances of the Western world as a possible source of change in Nigeria. Azaro’s mother’s story of the blue sunglasses demonstrates that Africa has something to gain from the West (Cooper, 74-75). However, the advances of the West also create a host of problems, which are most clearly demonstrated by the deterioration of the forest, the building of the road, and the corruption that flourishes in Madame Koto’s bar. Cooper argues that the photographer is able to break free from this cycle of history. He is liberated through travel. However, the photographer is condemned to a life of fear and isolation (86), so this does not appear to be a viable solution. Politics appear to offer no hope for Nigeria, since they are a clear example of the universal cycle of human greed. Azaro appears to break the cycle of repetition by the sheer force of the creative human will (95). However, Cooper argues that Okri never really shows us if change is possible. He is very elusive on the reality of change. It remains to be seen whether Nigeria and Azaro are on a road to a new destination or still in that futile circle (99). Anjali Roy argues that it is important to note the difference between the

Western and African view of change. The Western or JudeoChristian idea of change is one of a linear progression, like the road. The history of the world moves along the path of a line and eventually reaches a climax, which is the apocalypse or end of the world. Africans view change in a more circular or cyclical nature. The world changes, but it follows a natural cycle. History occurs and reoccurs again. Time and history are continual or eternal. Thus, Roy argues that Nigeria can only hope to continue the pattern of comings and goings that is characteristic of an abiku country (34).

Ben Okri's novel The Famished Road is an amazing example of modern African literature. It is a piece rich in imagery, symbolism, and myth. The novel explores the ideas around the birth and emergence of a nation. Okri examines the forces that operate in the world that bring about positive and negative change within a culture. He makes a strong commentary about the negative role politics has had in Nigeria and suggests other avenues of change for a struggling nation. His novel can be called a work of magical realism, but it must also be seen as a post-colonial work and a truly original and unique expression of an impoverished society. Literary scholars agree that the work abounds in symbolism and volatile issues and themes, but come to a variety of different conclusions on its effects and perspectives. Ben Okri succeeds in illuminating a world in which anything is possible, but what remains to be seen is can this world become a reality.

Works Cited

Primary Sources:

Okri, Ben. The Famished Road. New York: Random, 1991.

Secondary Sources:

Cooper, Brenda. Magical Realism in West African Fiction: Seeing With a Third Eye. New York: Routledge, 1998.

Coundouriotis, Eleni. Claiming History: Colonialism, Ethnography, and the Novel. New York: Columbia UP, 1999.

Coundouriotis, Eleni. "Landscapes of Forgetfulness: Reinventing the Historical in Ben Okri's *The Famished Road*." The Post-Colonial Condition of African Literature.

Ed. Daniel Gover, John Conteh-Morgan, and Jane Bryce. Trenton: Africa World Press, 2000.

Roy, Anjali. "Post-Modern or Post-Colonial? Magical Realism in Okri's *The Famished Road*." The Post-Colonial Condition of African Literature. Ed. Daniel Gover, John Conteh-Morgan, and Jane Bryce. Trenton: Africa World Press, 2000.

Wright, Derek. New Directions in African Fiction. New York: Twayne, 1997.

Daily Lesson Plan

Course: English II

Grade Level: 10th

Duration: 90 minute lesson

Unit: World Literature

Teacher's Name:

Overview: This lesson would be used immediately after finishing the modern African novel The Famished Road by Ben Okri. It would be a part of a larger unit on world literature. The novel could either be read in parts or in its entirety, and it could be read individually, as a class, or using a combination of both. During the student's reading of the novel, I would ask them to focus on specific images that reoccur time and time again and also to take notes about the major characters. I would also model for them my own thought process while I was reading the text and share with them some of the major themes and ideas that I took note of. There would be various comprehension quizzes and reading checks throughout the novel. Today's lesson is designed to introduce them to the use of symbols in literature. They will be introduced to what a symbol is and how it functions within a literary text. We will then critically explore, identify, and discuss some of the major symbols in Okri's novel. The students will work in groups to come up with their own interpretations to some of the novel's symbols. Finally, the students will be asked to select a common, everyday object and develop a symbolic meaning between that object and some theme or issue in the novel. Students will do a brief presentation the next day in class that explains the connection between their object and the novel.

Objectives: Students will be able to:

- explain how literary elements, such as symbols, create meaning for readers (MD 2.8.2)
- discuss the themes in a selection and explain how they represent a view or comment on life, using evidence from the text (MD 2.12.2)
- explain the literal and interpretive meaning of a text (MD 2.8.4)

-assume various roles in a group activity and create a group presentation

that incorporates visual aids to enhance its delivery (MD 6.12.1)

-develop an individual, oral presentation that presents and supports a

symbolic connection they have made with the text (MD 6.12.2)

Materials Needed: Overhead, transparencies, markers, 9x12 flashcards with various symbols on them, approximately 30 small, ordinary objects (i.e. toothpick, paperclip, hand-held mirror, eraser, coffee mug, paper towel, matchbox car, candle, magnet, scotch tape, ruler, gumball, etc.), and copies of the novel or sections of the novel for everyone.

Procedures/Activities:

I. Drill=

Answer these questions about the novel The Famished Road.

1. What did they call Azaro's father?
2. Who is Ade?
3. What was the story of the blue sunglasses about?
4. In your opinion, did the novel end on an optimistic (positive) or pessimistic (negative) note? Support your answer.

II. Motivation=

Teacher asks the students to shout out what things or ideas come to mind when he/she holds up various signs with pictures on them.

Signs include=

-octagon shape	-bald eagle
-heart	-Statute of Liberty
-American flag	-peace sign
-green light	-cross

Teacher asks the students what all of these things have in common (they are symbols; they stand for or represent something else larger)

III. Concept Development=

Class works to come up with a definition for *symbol*. Teacher then gives them a more formal definition —> *symbol is anything that stands for or represents something else beyond it*. What other literary concept is similar to a symbol? *metaphors, similes, allegories*. We would then talk about the differences and similarities between these terms. The class would try to come up with any other symbols they are aware of.

IV. Symbols in Literature=

We would talk about the role that symbols play in literature. Why do you think an author would use a symbol?

-What is its purpose or function?

-Why doesn't the author just come out and tell us?

-We would talk about how symbols are normally images that repeat themselves throughout a text. Characters and places can also function as symbols within a story.

-What are some of the major images that are repeated in the novel? (road, hunger, forest, spirits, etc.)

-Who are some of the major characters in the novel? (Azaro, Black Tyger, Madame Koto, etc.)

-Do you think that some of these things are symbols in the novel? How do they connect to the larger themes or ideas in the novel?

V. Modeled Symbol Interpretation=

Teacher selects a major symbol from the story (Black Tyger) and describes its characteristics. Teacher models his/her own interpretations of what the symbol means to the larger novel and draws further conclusions. Teacher records possible interpretations and conclusions on the overhead.

For example= Black Tyger —> strong, stubborn, hard worker, fighter, violent, drinker, uneducated, downtrodden

Possible Interpretations = Black Tyger represents the lower class people of Nigeria, the poor and uneducated citizens of the country. Just like him, their only instrument for change is through violence and fighting. He is illiterate, like much of the population. They both are consumed with their own vices (drinking) and are victimized by the powerful and elite in society.

VI. Group Activity & Presentation=

Students would be randomly assigned into groups of 4 members. Their assignment is to discuss the symbolic meanings of 5 major elements in the story. Using the teacher model as an example, they are to describe the qualities of the image and create a list of possible interpretations. Each group is expected to come up with a possible interpretation for the larger meaning of the symbol. The groups must then record their interpretations on an overhead and make a short presentation to the class. Each member of the group will be assigned a role (leader, recorder, presenter, timekeeper). The 5 elements are Madame Koto and her bar, Azaro, the photographer, the forest, and the road. Each group is asked to use the novel for specific details and support for their interpretations. Groups are given approximately 25 minutes to work and then must give a graded 3-5 minute presentation. The students are graded on the group cooperation, quality of their presentation, the neatness of their overhead, and the support for their interpretations.

VII. Wrap-Up=

Class will discuss the presentations and the different interpretations of the symbols in the novel. Students are welcome to share more of their own ideas and opinions. We will talk about why Ben Okri used such symbols in his novel, what was their purpose, why didn't he just come out and say what he meant

VIII. Homework=

Students will select one everyday, ordinary object from about 30 different things. They must draw a connection between their selected object and some theme or issue within the novel. They should treat their object as a symbol of some aspect of the text. Teacher models an example —> *A safety pin is a symbol of the cyclical pattern in the story of the abiku child and Nigeria as an abiku country. Things keep travelling in a circle and keep repeating themselves. The abiku child keeps coming and going. However, the circle of the safety pin can be broken just like Azaro breaks the abiku cycle. Nigeria must also break out of its circle or endless repetition and embark on a new path. However, this new path can be dangerous and rough just like the exposed end of the safety pin.* Students will be given 5 minutes at the end of class to write down all the describing features and functions of their object. They must then at home create a symbolic meaning for that object that is somehow related to the novel.

They should compose a paragraph (5-7 sentences) about their object and its symbolic connection with the novel. They will also make a brief (2 minute) presentation on their interpretation in class tomorrow.

Assessment: Students will be assessed in their group work and group presentations. I detailed the assessment criteria in that section. I will also assess their understanding of symbols and how symbols create meaning through a series of questions and discussions during class. Individuals will be further assessed tomorrow on their individual presentations and paragraphs on their symbolic objects.

Modifications: The only adaptations that I need to make for my class is to go around to specific academically challenged students and see that they have understood the assignment. I often have to repeat the directions for these students and work to get them started with both the group and individual assignment. In addition, I always put an overhead up with the directions and grading rubric on it for the students to see.

Appendix W

University of Delaware Candidate Self-Assessment in Language Arts

Language Arts

Language Arts Standard One:

Use written and oral English appropriate for various purposes and audiences.

Written Communication

I know how to write the following discourse types:

T 126 a) Expressive

0. 1. 2. 3. 4.

T 127 b) Informative

0. 1. 2. 3. 4.

T 128 c) Argumentative/Persuasive

0. 1. 2. 3. 4.

T 129 I know how to develop my writing using dialogue, characterization, and point of view.

0. 1. 2. 3. 4.

T 130 I know how to write informative texts in each of the following categories: description, narration, cause/effect, classification, definition, comparison/contrast, and evaluation.

0. 1. 2. 3. 4.

T 131 I know how to use the following informative text formats: letters, summaries, messages, reports, memos, proposals, resumes, and applications.

0. 1. 2. 3. 4.

T 132 I can use primary and secondary sources and avoid plagiarism.

0. 1. 2. 3. 4.

T 133 I know how to communicate a clear-cut position on an issue in argumentative and persuasive texts.

0. 1. 2. 3. 4.

T 134 I know how to support a position in argumentative and persuasive texts with personal opinion, expert opinion, examples, statistics and data, quotations of others' opinions, and a refutation of the opposing view.

0. 1. 2. 3. 4.

T 135 I know how to show evidence of reasoning.

0. 1. 2. 3. 4.

Oral Communication

T 136 I know how to formulate a message that includes essential information and uses situation appropriate language.

0. 1. 2. 3. 4.

T 137 I know how to analyze the needs of an audience and modify the message accordingly.

0. 1. 2. 3. 4.

T 138 I know how to organize the message appropriately by using effective patterns of organization and by using review to aid the audience's comprehension.

0. 1. 2. 3. 4.

T 139 I know how to deliver the message by adjusting the language to the situation; selecting an appropriate presentation style; and controlling volume, tone, speed and enunciation for intended effect.

0. 1. 2. 3. 4.

T 140 I know how to use non-verbal strategies including: gestures, eye contact, and facial expressions.

0. 1. 2. 3. 4.

T 141 I can be secure, comfortable and in command of the situation and exhibit self-control.

0. 1. 2. 3. 4.

T 142 I know how to incorporate a range of audio-visual aids as appropriate.

0. 1. 2. 3. 4.

T 143 I know how to respond to feedback during an oral presentation by adjusting volume and speed, answering questions, and repeating key ideas.

0. 1. 2. 3. 4.

T 144 I know how to respond to verbal and nonverbal cues by modifying the message, delivery, and organization.

0. 1. 2. 3. 4.

Language Arts Standard Two:

Construct, examine, and extend the meaning of literary, informative, and technical texts through listening, reading, and viewing.

T 145 I know how to use appropriate texts to develop an increasingly extensive vocabulary.

0. 1. 2. 3. 4.

T 146 I know how to actively seek meaning of unknown words by using context cues, reference works, technology, and human resources.

0. 1. 2. 3. 4.

T 147 I know how to self-monitor comprehension during reading, listening or viewing by generating a purpose for the activity and by making and revising predictions and making inferences.

0. 1. 2. 3. 4.

T 148 I know how to use (self-monitoring) strategies to understand text by doing the following: reread to make sense, adjust the rate of reading, and seek meaning of new words.

0. 1. 2. 3. 4.

I know how to demonstrate an understanding of oral and printed texts by doing the following:

T 149 a) making and revising predictions

0. 1. 2. 3. 4.

T 150 b) identifying story elements such as characters, plot, etc.

0. 1. 2. 3. 4.

T 151 c) interpreting the impact of figurative language and literary devices

0. 1. 2. 3. 4.

T 152 d) retelling a story or restating informative text through speaking and/or writing

0. 1. 2. 3. 4.

T 153 e) organizing the important parts of the text into summaries, outlines, or graphic organizers

0. 1. 2. 3. 4.

- T 154 f) identifying the author's purpose
0. 1. 2. 3. 4.
- T 155 g) comparing information between and within text
0. 1. 2. 3. 4.
- T 156 h) discriminating between fact and opinion
0. 1. 2. 3. 4.
- T 157 l) drawing conclusions
0. 1. 2. 3. 4.
- T 158 j) determining the validity of information and giving supporting evidence
0. 1. 2. 3. 4.
- T 159 k) relating the text to real-life situations
0. 1. 2. 3. 4.
- I know how to critically analyze and evaluate information and messages presented in print, speech, and mass media by doing the following:***
- T 160 a) connecting and synthesizing information from many sources
0. 1. 2. 3. 4.
- T 161 b) formulating and expressing opinions
0. 1. 2. 3. 4.
- T 162 c) responding to questions that require critical thinking
0. 1. 2. 3. 4.
- T 163 d) drawing conclusions
0. 1. 2. 3. 4.
- T 164 e) interpreting the use of non-literal or figurative language
0. 1. 2. 3. 4.
- T 165 f) recognizing discrepancies between a speaker's verbal and non-verbal messages
0. 1. 2. 3. 4.
- T 166 g) overcoming problems presented by ambiguity
0. 1. 2. 3. 4.

T 167 h) proposing other interpretations as valid if supported by the text

0. 1. 2. 3. 4.

T 168 l) evaluating texts and media presentations for bias and misinformation

0. 1. 2. 3. 4.

T 169 k) recognizing persuasive and propaganda techniques and how they are used

0. 1. 2. 3. 4.

T 170 l) distinguishing between logical and emotional arguments

0. 1. 2. 3. 4.

T 171 m) evaluating expository and technical texts and media presentations for completeness, accuracy, and clarity of communication

0. 1. 2. 3. 4.

T 172 n) evaluating the literary merit of various texts and media presentations

0. 1. 2. 3. 4.

I know how to extend meaning by doing the following:

T 173 a) offering a personal response to texts

0. 1. 2. 3. 4.

T 174 b) using information from printed or oral texts to complete authentic tasks

0. 1. 2. 3. 4.

T 175 c) using divergent thinking

0. 1. 2. 3. 4.

I can recognize the presence and role of mass media by doing the following:

T 176 a) evaluating the content, form and techniques of electronic, print and cinematic messages and how such messages affect them

0. 1. 2. 3. 4.

T 177 b) identifying the underlying purposes of media messages

0. 1. 2. 3. 4.

Language Arts Standard Three:

Access, organize, and evaluate information gained through listening, reading, and viewing.

T 178 I know how to identify, locate and select sources of information relevant to a defined need.

0. 1. 2. 3. 4.

T 179 I know how to use the following sources: printed materials, personal interviews, oral reports, forums, and technological forms of information.

0. 1. 2. 3. 4.

T 180 I know how to develop and use procedures to gather information.

0. 1. 2. 3. 4.

T 181 I know how to extract information relevant to a specific purpose.

0. 1. 2. 3. 4.

T 182 I know how to organize, manipulate and express relevant information and ideas.

0. 1. 2. 3. 4.

T 183 I know how to develop and follow a process for research completion.

0. 1. 2. 3. 4.

I know how to use technology to synthesize information into a meaningful format to do the following:

T 184 a) express ideas and experiences

0. 1. 2. 3. 4.

T 185 b) create text, drawings, and diagrams

0. 1. 2. 3. 4.

T 186 c) create photographs, videos and graphics

0. 1. 2. 3. 4.

T 187 d) present information that is sufficient in quantity and depth

0. 1. 2. 3. 4.

T 188 I know how to avoid plagiarism.

0. 1. 2. 3. 4.

I know how to evaluate both sources and information to:

T 189 a) select sources that are authoritative

0. 1. 2. 3. 4.

T 190 b) analyze sources for accuracy, bias, stereotypes and validity

0. 1. 2. 3. 4.

T 191 c) interpret information as appropriate to a specific purpose

0. 1. 2. 3. 4.

T 192 d) formulate logical conclusions

0. 1. 2. 3. 4. **Language Arts Standard Four:****Use literary knowledge accessed through print and visual media to connect self to society and culture.*****I know how to connect my own experiences to those of literary characters by doing the following:***

T 193 a) explaining the reasons for a character's actions

0. 1. 2. 3. 4.

T 194 b) responding to the sensory, intellectual, and emotional elements of literature

0. 1. 2. 3. 4.

T 195 c) relating to the feelings of characters of various ages, genders, nationalities, races, cultures, religions, and disabilities

0. 1. 2. 3. 4.

T 196 d) understanding characters' motivation and situation

0. 1. 2. 3. 4.

T 197 e) relating incidents in the text to life experiences

0. 1. 2. 3. 4.

T 198 f) relating the theme of texts and media to personal experiences

0. 1. 2. 3. 4.

T 199 g) seeking other texts and media as a result of a literary experience

0. 1. 2. 3. 4.

T 200 I know how to respond to literary text and media using interpretive, critical and evaluative processes.

0. 1. 2. 3. 4.

T 201 I know how to make inferences about the content, events, characters, setting, theme, tone, mood, and author's purpose.

APPENDIXES

0. 1. 2. 3. 4.

T 202 I know how to interpret the effect of figurative language, allusion, diction, dialogue, and description.

0. 1. 2. 3. 4.

T 203 I know how to evaluate the author's word choice, style, content and literary elements.

0. 1. 2. 3. 4.

T 204 I know how to recognize literary merit.

0. 1. 2. 3. 4.

T 205 I can understand the differences among genres and the author's purpose in choosing a particular genre.

0. 1. 2. 3. 4.

T 206 I know how to explain the effect of point of view.

0. 1. 2. 3. 4.

I know how to demonstrate an appreciation for culturally diverse literary texts and media by historical and contemporary authors by responding to texts and media that do the following:

T 207 a) represent the diversity of American cultural heritage inclusive of ages, genders, nationalities, races, religions, and disabilities

0. 1. 2. 3. 4.

T 208 b) represent various historical periods, from ancient world to present

0. 1. 2. 3. 4.

T 209 c) represent world literature

0. 1. 2. 3. 4.

I know how to use literature to understand self and society by doing the following:

T 210 a) using literature to shape decisions

0. 1. 2. 3. 4.

T 211 b) using literature for understanding social and political issues

0. 1. 2. 3. 4.

APPENDIX X

University of Louisville Proposal for Assignment and Responsibilities of Arts and Sciences and Education Faculty Liaisons

Recognizing that they have a common interest in providing support for students interested in pursuing careers in teacher education, the College of Arts and Sciences (A&S) and the College of Education and Human Development (CEHD) have been exploring ways to work together to ensure better coordination of advising, recruitment of high quality candidates, and collaboration on joint courses and curriculum. In particular, the Standards-Based Teacher Education Project (STEP) has brought faculty members from the two units over the last two years to discuss alignment of undergraduate and graduate curriculum with P-12 core content and expectations for P-12 teachers. As a result of the work of the STEP leadership team, the need for designated A&S and Education Faculty Liaisons to work with students interested in a teaching career has been identified as the greatest priority for improving recruitment, advising, and preparation of teacher education students. The appointed faculty will work in pairs (one from A&S and one from CEHD) to provide clear communication and support for students at all levels.

To establish designated Faculty Liaisons in A&S departments and the CEHD's Secondary Education program to recruit, advise, and support A&S students interested in pursuing a career in teaching, the A&S and CEHD propose the following plan.

Identification of Liaisons

The Dean of Arts and Sciences will ask department chairs to identify a responsible person or persons to handle recruitment and advising for students interested in teacher education. The person(s) identified will need to meet the requirements stipulated in the Job Description included in this proposal. The appointments will be confirmed by the Teacher Education Committee, which broadly represents both A&S and CEHD and includes members of the STEP Leadership Committee.

The Dean of Education and Human Development will ask the Chair of Teaching and Learning to identify faculty members in the Secondary Education program to serve as counterparts to the A&S Liaisons. Again, the appointments will be confirmed by the Teacher Education Committee.

Contractual Arrangements

The Teacher Education Committee will then prepare a contract for each appointed faculty member that stipulates the advisor's responsibilities and the incentives provided. The contracts will be signed by the A&S or Education Faculty Liaison, the Liaison's Department Chair, the A&S Dean, the CEHD Dean, and the Chair of the Teacher Education Committee.

Job Description

Faculty members appointed to the position of A&S Faculty Liaison will need to be abreast of research and new developments in their fields, have demonstrated effectiveness in advising and interacting with students, have some knowledge of P-12 curriculum and schools, and be committed to the goal of increasing the number of highly qualified teacher candidates and supporting them through their content preparation. Education Liaisons will meet the same criteria, but will support the students from their undergraduate study, if appropriate, through the completion of their teacher education program. It should be noted that these responsibilities go far beyond the usual advising activities that faculty are expected to engage in.

Their responsibilities will include the following:

I. Recruitment and Advising

Together, A&S and CEHD faculty will recruit promising undergraduates into both undergraduate and graduate teacher preparation programs and provide advising to all teacher education students majoring in the advisor's discipline and to students in the major who express an interest in entering a teacher education program. With the help of their Education Liaison partner, A&S faculty will bring opportunities for undergraduates in their departments to explore careers in teaching. These could include speakers, tutoring opportunities, school visits, and similar activities.

II. Communication

The A&S Liaisons will serve as the contact persons for Education Advising Center staff and Education faculty concerning content courses and related issues for teacher education students majoring in the advisor's discipline. They will attend periodic meetings with CEHD personnel to discuss teacher preparation programs and possible improvements/adjustments. They will also communicate with Education faculty members who are responsible for the methods courses in the advisor's discipline.

The CEHD Liaisons will serve as the contact persons for the A&S Advising Center staff and A&S faculty concerning education programs. They will attend periodic meetings with A&S personnel to discuss connections between A&S and CEHD programs. They will also meet with undergraduate students interested in a career in Education. They will be in frequent contact with their A&S partner Liaison to discuss individual student needs and program issues.

III. Assessment

A&S Liaisons will assess content knowledge mastery of applicants to the School of Education's programs and suggest additional coursework as needed. This assessment might include an interview or other performance demonstration in addition to analysis of transcripts. The A&S Liaisons might also visit some classrooms where teacher education students are student teaching to become familiar with current educational practices. They will also assist with assessment of candidates' content knowledge when they are ready to exit teacher preparation programs and will help ensure that teacher education graduates in the advisor's discipline are prepared to take the Praxis exam.

CEHD Liaisons will work with the A&S Liaisons to ensure that candidates possess essential content and pedagogical knowledge to be successful teachers. In addition, CEHD Liaisons will advise students about the Education component of their programs and will work with the A&S counterpart Liaison to ensure that students are receiving consistent advice about their progress and courses and experiences required for certification or an advanced degree. CEHD Liaisons will also participate with A&S Liaisons in offering professional development opportunities for new and experienced teachers and will offer access to practicing teachers and pedagogical resources.

As part of the assessment process, the Faculty Liaisons will notify the Education Advising Center and others, as designated, of students who have been advised. They will monitor the progress of students through their programs, sharing periodic progress reports with the deans of A&S and the CEHD with copies to the Teacher Education Committee.

Incentives

Each A&S and CEHD Faculty Liaison will receive a base amount of \$500 designated for professional development activities as incentive and recognition for the additional responsibilities of their collaborative positions. For departments with more than 14 students being advised and supported, additional compensation will be provided. The additional compensation will be shared by the A&S and CEHD Liaisons. In cases where the professional development fund is administered by the A&S Department Chair, half of the additional compensation will be designated for the CEHD counterpart Liaison. The additional compensation will be calculated as follows:

15-29 students	additional \$500
30-44 students	additional \$500
45-60 students	additional \$500

The compensation can be used by the Faculty Liaison (or the Department Chair) for any appropriate professional development expense, such as travel, books, software, or equipment. Funds will be released to the appropriate department chair when reports indicating the number of students in the workload are submitted each semester by the Liaisons to the A&S and Education Deans.

STEP Committee Responsibilities

The STEP Leadership Committee will take responsibility for developing the reporting form to be used for accounting purposes each semester. In addition, STEP members will create an annual Faculty Liaison Evaluation Form to help monitor the overall performance of the A&S and CEHD Faculty Liaison Program.

At the beginning of each academic year, the STEP Leadership Committee will provide a one-day workshop for A&S and CEHD Faculty Liaisons to acquaint them with new state regulations, changes in CEHD or A&S programs, CEHD and A&S personnel with whom they will work, and issues related to their responsibilities. A packet of materials and resources will be developed for each Faculty Liaison for use in carrying out their responsibilities.

Funding

The Provost's Office has agreed to provide funding for this program. At the current time, it is impossible to estimate the number of students who will be served by A&S Faculty Advisors. It is clear, however, that an increase in the number of students being recruited and advised in A&S is a positive outcome for all three units involved, since increased enrollment in A&S and Education graduate courses will help the university meet its benchmark goals set by the Council on Postsecondary Education (CPE).

At present, it is estimated that there might be 300 students in the secondary education pipeline at any given time. There are 20 departments in the College of Arts and Sciences and approximately 6 faculty members working with students seeking certification in secondary education.

As a baseline, then, the budget would be as follows:

PD funds for A&S Liaisons @ \$500/each	\$10,000
PD funds for CEHD Liaisons @ \$500/each	3,000
Additional PD funds for student loads exceeding 14 (estimated):	
4 departments with 30-44 students	2,000
2 departments with 45-60 students	1,000
TOTAL	\$16,000

Index to Developing Knowledgeable Teachers

A Nation at Risk, 82

Accountability, 18, 38, 45, 85

Albany State University, 45, 114

Alliance for Curriculum Reform, 12, 136

Alverno College, 8

American Association of Colleges for Teacher Education, 6, 8, 11, 38, 43, 45, 66, 89, 111, 130

American Council on Education, 67

American Federation of Teachers, 23

Armstrong Atlantic State University, 26

Arts and sciences/education liaison, 26, 111

Arts and Sciences/Teacher Education Collaboration, see Project 30

Assessment,

By arts and sciences faculty, 24-26, 71, 79

By education faculty, 26-27

Candidate, 24, 29, 30, 32, 56, 71, 76, 80, 82, 85, 88, 93, 98, 104

Of impact on P-12 student learning, 21, 28, 29, 47, 88, 93

Program, 23, 34, 82, 87

System, 18, 28, 29, 69, 74, 78, 88

Use of data, 29, 49, 71, 109

Ball State University, 12, 27, 73-80

Baltimore City Community College, 20, 27, 55

BellSouth Reinventing Schools of Education Initiative, 116, 118, 119, 127

Board of Regents of the University System of Georgia, 16, 42, 45, 93, 113, 127, 131

- Principles and Action for the Preparation of Educators, 16, 45, 113, 127, 131
- Carnegie Academy for the Scholarship of Teaching and Learning, 95
- Carnegie Corporation of New York, 8
- Center for Educational Renewal, 90
- Center for Excellence in Leadership of Learning, 72
- Center for Teaching and Learning, 95
- Charter school of education, 124
- Collaboration
- Of arts and sciences and education, 6, 11, 30, 35, 39, 41, 44, 45, 50, 57, 64, 66, 79, 82, 85, 89, 99, 110, 114, 137
 - Of 4-year institutions and 2-year colleges, 6, 30, 55, 64, 86, 89
 - Of higher education and P-12 schools, 6, 11, 30, 45, 50, 64, 71, 82, 85, 89, 110, 114
- Constructing Physics Understanding, 117, 122
- Content knowledge of teachers, 6, 18, 23, 24, 39, 79, 82, 85, 92, 99, 102
- Content pedagogy, 18, 23, 24, 39, 50, 82, 85, 92, 99, 102, 137
- Coppin State College, 11, 20, 21, 27, 54-65
- Council for Basic Education, 6, 8, 12, 38, 43, 45, 111, 130
- Council for Exceptional Children, 82
- Council of Colleges of Arts and Sciences, 67
- Council on Postsecondary Education, 120
- Deans' Forum, 45, 48
- Delaware, 16
- Department chairs, 21, 66
- Deregulation of teacher licensing, 52
- Education Trust, 40, 89, 110
- Educational Testing Service (see also Praxis), 86, 89, 118
- Electronic Learning Community, 99
- English/language arts, 100, 102, 103, 119

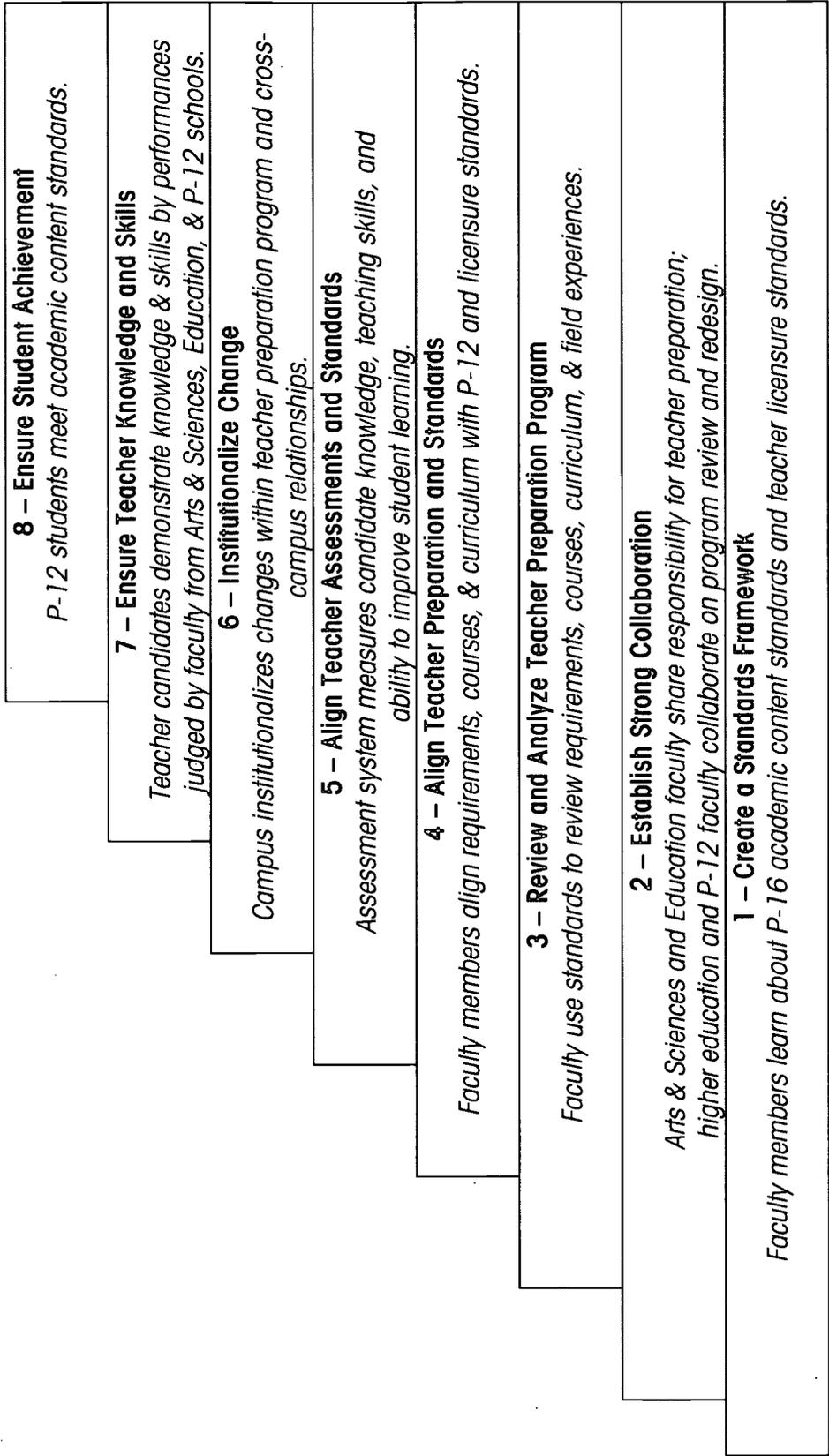
Excellence in Teacher Education Institute, 99
 Family and Consumer Science Education, 117, 121
 Fort Valley State University, 12, 124-128
 General education requirement, 23, 102
 Georgia, 8, 16, 42, 130, 134, 141
 Georgia College and State University, 27
 Georgia P-16 Initiative, 11, 130
 Georgia Southern University, 29
 Georgia State University, 12, 24, 26, 28, 30, 31, 92-95, 130
 Georgia Systemic Teacher Education Program, 45, 49, 114
 Green River Regional Education Cooperative, 123
 Higher Education Act (of 1998), 16, 84, 99, 134, 140
 Historically Black Colleges and Universities, 124
How People Learn: Brain, Mind, Experience, and School, 89
 Indiana, 8, 17, 67
 Indiana Professional Standards Board, 17, 66, 69, 73, 74, 78
 Indiana State Department of Education, 73
 Institutional analysis, see STEP Process
 Institutionalizing change, see STEP Process
 INTASC Principle 1, 26, 30, 98, 101
 INTASC Principle 8, 28
 International Reading Association, 22, 106
 Interstate New Teacher Assessment and Support Consortium, 17, 22, 24, 26, 27, 28, 54, 55, 58, 59, 69, 77, 78, 85, 89, 93, 98, 99, 110
 Jefferson County Public Schools, 111, 112
 Johns Hopkins University, 13, 24, 98-101, 102
 Kentucky, 8, 67, 110, 116
 Kentucky Core Content for Assessment, 22, 116, 117, 120, 121, 123

- Kentucky Department of Education, 111, 116
- Kentucky Education Reform Act, 16
- Kentucky Educational Professional Standards Board, 110, 111, 123
- Leadership, 42, 70, 78-79, 82, 86, 92-95, 110, 113, 116
- Learning Assessment Module, 77
- Lesson study, 112
- Maryland, 8, 17
- Maryland State Department of Education, 64, 134, 135
- Maryland Essential Dimensions of Teaching, 54, 134
- Maryland Redesign of Teacher Education, 17
- Master of Arts in Teaching, 24, 98, 111
- Mathematics, 27, 60, 63, 106, 117
- Mathematics journal assessment, 27, 30
- Mathematics self-assessment, 107-108
- McDaniel College, 26
- Metropolitan Atlanta P-16 Council, 92
- Morehead State University, 21, 26, 29
- Mount St. Mary's College, 27
- Music, 71, 119
- National Assessment for Educational Progress, 82
- National Commission on Excellence in Education, 82
- National Commission on Teaching and America's Future, 42, 43, 89, 130
- National Council for Accreditation of Teacher Education, 12, 16, 17, 18, 22, 28, 29, 45, 54, 55, 58, 64, 66, 82, 85, 106, 110, 127, 134, 140
- National Council of Teachers of English, 22, 66, 100
- National Council of Teachers of Mathematics, 22, 27, 30, 66, 82
- No Child Left Behind*, 6, 82
- Northeast Georgia P-16 Initiative, 45, 46, 49

- P-12 teachers (see also collaboration), 21
- P-16, 40
- P-16 Coordinator for South Georgia, 114
- Performance Assessment for Colleges and Technical Schools, 114
- Physics, 117
- Portfolios, 24, 26, 76, 98
- Portfolios, electronic, 77, 119
- Praxis, 23, 24, 27, 55, 58, 71, 74, 76, 86, 89, 93, 98, 99, 102, 111, 118, 126, 140
- Professional Development Schools, 55, 63, 64, 79
- Professional Education Council, 94
- Professional Education Faculty, 94
- Professional Standards Commission, 45
- Professionalization of teaching, 52
- Project 30, 90, 102
- Promotion and tenure, see reward structure
- Quality Core Curriculum, 22, 27, 48, 126
- Quality Undergraduate Education, 95, 114
- Renaissance Partnership for Improving Teacher Quality, 28, 89, 119
- Reward structure, 20, 30, 51, 94
- St. Mary's College of Maryland, 24, 25
- San Diego State University, 117
- Sciences, 31, 70, 77, 93
- SRI International, Inc., 8, 12, 40, 82, 87, 139
- Standards
- P-12 academic content, 6, 11, 22, 30, 38, 40, 45, 48, 54, 73, 75, 77, 82, 85, 99, 100, 102, 116, 119, 136, 139, 140
 - Teacher, 22, 73, 77, 85, 99, 110, 119
- State University of West Georgia, 130

- STEP goals, 33-34
- STEP process, 47, 55, 67, 73, 86, 88, 90, 99
- Discipline subcommittees, 20, 50, 69, 92, 114, 116
 - Faculty Task Force on Teacher Preparation, 20, 66, 74, 139
 - Institutional Analysis, 17, 19, 23, 47, 49, 58, 66, 69, 73, 82, 99, 140
 - Institutionalizing Change, 34, 94
 - Products, 33-34
 - Program alignment, 22, 23, 29, 39, 50, 58, 67, 75, 84, 92, 102, 111
 - Request for Proposals, 40, 86
 - Standards Mapping, 22, 23, 45, 47, 50, 58, 61-62, 67, 74, 75, 92, 102, 136
 - Work Plan, 30, 33-34, 86, 88
- Student teaching, 26, 27, 79
- Teacher Education Environment in Math and Science, 24
- Teacher Preparation Report: Current Knowledge, Gaps, and Recommendations*, 70
- Teacher Quality Enhancement grant, 45, 74, 79, 116, 119, 134
- Teacher Work Sample, 28, 93, 119, 120, 132
- Technology Innovation Challenge, 122
- Title II*, 16, 18, 74, 79, 84, 99, 116, 119, 134, 140
- Two-year colleges (see also collaboration), 21
- University of Delaware, 12, 22, 26, 102-109
- University of Georgia, 11, 22, 45-53, 114, 130
- University of Indianapolis, 12, 20, 26, 66-72
- University of Louisville, 12, 22, 24, 26, 110-112
- Valdosta State University, 12, 27, 45, 90, 113-115
- Western Kentucky University, 12, 28, 116-123
- Western Maryland College (see McDaniel College)
- What Matters Most: Teaching for America's Future*, 40

The Steps That Support P-12 Learning and Assessment





1307 New York Avenue N.W., Suite 300
Washington, DC 20005-4701
Tel: 202/293-2450 Fax: 202/457-8095
Web: www.aacte.org



COUNCIL FOR
BASIC EDUCATION
An Independent Voice for Educational Excellence

1319 F Street N.W., Suite 900
Washington, DC 20004-1152
Tel: 202/347-4171 Fax: 202/347-5047
Web: www.c-b-e.org

ISBN: 0-89333-194-5



U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)



NOTICE

Reproduction Basis



This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.



This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").

EFF-089 (3/2000)