ED 387 155   JC 950 455

TITLE   Faculty Assessment of General Education. Spring
                 1995.
INSTITUTION   John Tyler Community Coll., Chester, VA. Office of
                 Assessment, Research, and Planning.
PUB DATE   95
NOTE   42p.
PUB TYPE   Reports - Research/Technical (143) --
                 Tests/Evaluation Instruments (160)

EDRS PRICE   MF01/PC02 Plus Postage.
DESCRIPTORS   *Academic Achievement; Classroom Techniques; *College
                 Faculty; Communication Skills; Community Colleges;
                 Computation; Computer Literacy; *Course Objectives;
                 Critical Thinking; Cultural Awareness; *General
                 Education; Minimum Competencies; Organizational
                 Objectives; Student Evaluation; *Teacher Attitudes;
                 Two Year Colleges
IDENTIFIERS   John Tyler Community College VA

ABSTRACT
         In spring 1995, Virginia's John Tyler Community
College (JTCC) conducted a survey of faculty to assess their
perceptions of the integration of general education into classes and
programs at the college. A total of 100 surveys were distributed to
full-time faculty members and a random sample of adjunct faculty
members, receiving a 34% response rate. Faculty were asked to
identify a specific course and rate JTCC's four general education
outcomes (i.e., communications, critical thinking, understanding
culture and society, and computational and computer skills) as
essential, very important, important, unimportant, or not applicable
for the course. Faculty were also asked to describe classroom
activities, behaviors indicating mastery, assessment methods, and the
estimated percentage of students demonstrating mastery. Study
findings included the following: (1) communication skills were rated
as at least important by all of the respondents, while estimates of
student mastery ranged from 30% for math to 99% for childhood
development; (2) 71% of Arts, Sciences, and Public Services (ASPS)
and 84% of Allied Health, Business, and Technologies (AHBT)
respondents rated developing analytic and problem-solving skills as
essential, while estimates of student mastery ranged from 20% to 99%;
(3) about 50% of all respondents rated understanding culture and
society as at least important, with student mastery ranging from 25%
to 100%; and (4) 19% of ASPS and 38% of AHBT respondents rated
computational and computer skills as essential, while mastery ranged
from 40% to 99%. (The survey instrument is appended.) (KP)

JOHN TYLER COMMUNITY COLLEGE

FACULTY ASSESSMENT of GENERAL EDUCATION

SPRING 1995

Office of Assessment, Research, & Planning

Faculty Assessment of
General Education

Table of Contents

Faculty Assessment of General Education

Introduction

"Goals are ends we work toward, destinations we set out for, results we strive to achieve" (p. 13). Goals are also reference points that can be used to measure progress and to determine whether or not the College is headed in the right direction. Without clear goals, faculty cannot readily assess the effectiveness of their efforts. To assess and improve instruction, faculty need to first clarify what they want students to learn in their courses. Once instructors know their instructional goals, and have determined the relative importance of those goals, they can begin to assess how well students are learning (Angelo and Cross, 1993).

John Tyler Community College is committed to providing its students a broad and integrated educational experience which will enable them to acquire the knowledge, skills, attitudes, and values associated with a productive and fulfilling life. The general education goals and outcomes were refined by faculty groups in 1992. At that time, it was determined that graduates of the College's associate degree programs should have developed capabilities in the following areas:

Communications. The capacity to receive, process, internalize, and respond to communications effectively; read with comprehension; write clearly and correctly; listen and speak effectively.

Learning Skills. A recognition of the correspondence among the separate disciplines; a demonstrated ability to integrate knowledge.

Critical Thinking. The ability to identify, analyze, and comprehend the various components of a problem; to propose solutions and apply them in the solution of a problem.

Understanding Culture and Society. An understanding of human behavior and institutions; an appreciation of one's culture; an informed acceptance of human diversity - of different values, beliefs, and attitudes; a global awareness of the variety of cultures.

Computational and Computer Skills. To use mathematics; to understand computers.

1

Understanding Science and Technology. A predisposition to inquiry.

Interpersonal Skills and Human Relations. A disposition to consider the ethical implications of subjects; to develop and exercise moral discretion.

Wellness. A holistic appreciation of the benefits and means of wellness: physical, emotional, and social.

General education and the general education outcomes, as described above, can be integrated into every class and program offered at the College. One can assume that faculty are teaching and assessing one or more aspects related to general education. A survey was developed to determine whether this assumption was true and to identify specific courses and teaching methods that integrate the College's general education outcomes (see Appendix A). One-half of the eight general education outcomes were included on the survey to reduce the amount of time needed to complete the survey. The following outcomes were analyzed:

> Communications
> Critical Thinking
> Understanding Culture and Society
> Computational and Computer Skills

Two of the outcomes (*Critical Thinking* and *Understanding Culture and Society*) were selected based on the amount of time faculty groups and numerous committees have spent learning about each outcome and attempting to measure student success in these areas. The remaining two outcomes (*Communications* and *Computational and Computer Skills)* were selected based on responses from previous studies which suggested that JTCC graduates and employers had concerns about the students' ability in these areas. *Communications* and *Computational and Computer Skills* are vital components of each of the College curricula and cannot be overlooked because of their overall importance to students' future success.

A total of 100 surveys were distributed to all full-time faculty and a random sample of adjunct faculty at the Chester and Midlothian campuses. Faculty members were asked to identify a specific course on which to focus when responding to each question. Then, they rated particular aspects of the four general education outcomes as *essential, very important, important, unimportant,* or *not applicable* to the identified course. The particular aspects that were rated included the refined definitions for each outcome that were developed by faculty committees in 1992 and applicable teaching goals taken from the Teaching Goals Inventory by Angelo and Cross (1993).

For each general education outcome, faculty were asked to briefly describe any activities (projects, lectures, readings, etc.) that were conducted in the identified course. In addition, they identified specific behavior indicating mastery of the outcome, methods of assessing that behavior, and the estimated percentage of students demonstrating mastery.

2

The Findings

Of the 100 surveys that were distributed, 34 were returned (34 percent return rate). A total of 21 responses were received from the Division of Arts, Sciences, and Public Services, and 13 from the Division of Allied Health, Business, and Technologies. No follow-up mailings were sent. No distinction was made as to the number of responses from each campus. The responses were grouped into the two academic divisions represented at the Chester campus. The academic division at the Midlothian campus is a combination of both divisions; however, the majority of the responses from the Midlothian campus are represented in the Division of Arts, Sciences, and Public Services.

Course Prefixes - Responses			
Arts, Sciences, & Public Service		Allied Health, Business & Tech.	
ART	1	ACC	1
BIO	1	ARC	1
CHD	1	AUT	1
CHM	1	BUS	1
ENG	4	CIS	1
HIS	4	DRF	1
MTH	2	EGR	1
PED	1	ETR	1
PHI	1	NUR	1
PLS	1	OFT	2
PSY	2		
SOC	2		
TOTAL	21	TOTAL	13

The findings are presented in two sections - the Division of Arts, Sciences, and Public Services and the Division of Allied Health, Business, and Technologies. By analyzing the results by academic divisions, faculty and administrators can easily review the assessment activities for the division as well as for specific academic areas. Each general education outcome is listed with course-

3

specific information provided by faculty. Only by reading the entire report is one able to gain the full perspective of the types of assessment activities initiated throughout the College.

It is important to remember that not all aspects of each outcome should be addressed by all faculty in all courses. Nevertheless, the general education outcomes selected for this study are critical to student success in other academic courses as well as necessary skills for the workplace.

4

DIVISION OF ARTS, SCIENCES, AND PUBLIC SERVICES

Communications

More than three out of four faculty (76 percent) in the Division of Arts, Sciences, and Public Services indicated that improving students' ability to receive, process, internalize, and respond to communications effectively was *essential* for their course. The remaining faculty (23 percent) said it was *very important* or *important* .

Two-thirds of the faculty (66 percent) rated improving students' ability to read with comprehension as *essential* and slightly more than one-fourth (28 percent) rated it as *very important* or *important*. One faculty member (5 percent) indicated that this skill was not applicable to his/her course.

Twelve of the 21 respondents (57 percent) rated improving students' ability to write clearly and correctly as *essential*. More than one-third (38 percent) rated it as *very important* or *important*. One faculty member (5 percent) rated this skill as not applicable to his/her course.

When asked to rate the importance of improving students' ability to listen and speak effectively, more than one-half (52 percent) said it was *essential*, while 38 percent rated it as *very important* or *important*. Again, one faculty member (5 percent) indicated that this skill was not applicable to his/her course.

OTHER GOALS - Communications

Often faculty members create their own goals for their courses that are more appropriate than the generic ones created by College committees. Faculty were given the opportunity to list goals associated with *communications* that they achieve in their class. The following information was provided.

Art
- Ability to be visually literate, and communicate with visual fluency (to be able to see and interpret what is observed); to be able to verbalize visual information.

English
- Application of new facts to work assigned.
- Ability to communicate with a group/class.
- Improve sense of style.

History
- Respond to written instructions; analyze documents and source materials.

5

Math
▸ Ability to think critically and to express oneself analytically.

Philosophy
▸ Improve ability to conceive a communicative act according to its purpose.

Political Science
▸ Students should learn to take understandable class notes. I suggest copying their notes by hand as an aid to memory.

Sociology
▸ Communicate with other class members in a clear manner during discussions. Ability to explain clearly information to children.

SPECIFIC BEHAVIOR INDICATING MASTERY - Communications

Faculty listed activities that are conducted in class to develop students' ability to *communicate*. The activities could include projects, lectures, readings, or any other exercise. They were asked to identify specific behaviors that indicated mastery of *communications*. Faculty responded with a variety of events which ranged from specific in-class assessment techniques to general comments about their teaching methods.

Art
▸ Students are able to listen to information presented, see a demonstration of the technique, then practice applying information, first in class, then creatively in personal expression.

Childhood Development
▸ Completion of portfolio.

Chemistry
▸ Written responses to assignments. Written reports of laboratory assignments.

English
▸ Oral papers read in class.
▸ Various kinds of writing.
▸ Students read short stories, essays, poems, plays as a basis for critical thinking and writing. I teach principles of clear communication. Students write unified, coherent, well-developed essays in standard English usage.
▸ Oral presentations--argumentative, information, discussion; multiple written assignments.

History
▸ Lectures, videos, class discussions, and outlines.
▸ Accumulation of knowledge and analytical insight.

6

- ▸ Analyze written materials.
- ▸ Present an answer to a historical question.
- ▸ Ability to receive and respond to communications by reading, listening, and speaking effectively.

Math
- ▸ Discussion and testing.
- ▸ Students must complete essay which represents thorough interpretation of a statistical problem. Good mechanics a must.

Physical Education
- ▸ I cue for movement and expect an appropriate response.

Philosophy
- ▸ An experiment to develop the individual's awareness of the structure of experience and of the structure of language and how they rek te to communicative acts.

Psychology
- ▸ Students read and write response papers on 3 articles. Also, students listen to 6 supplementary tapes and summarize ideas.

Sociology
- ▸ Knowledgeable about current and recent past research done in the discipline.
- ▸ Clear written answers; clear delivery of information.

ASSESSMENT METHODS - Communications

Listed below are a variety of methods used by faculty to assess the specific behavior or activities that indicate mastery of *communications*. How faculty measure student learning is a critical component of the assessment process. Note the vast assortment of methods that are used to assess *communications*.

Art
- ▸ After lecture/demo, individual Q and A as students begin to master. Group critiques of info at end of class. Homework assignments which require students to demonstrate internalizing and using info. Visually (in portfolio) and verbally (crits).

Childhood Development
- ▸ College faculty evaluates portfolio. Outside evaluator evaluates portfolio.

Chemistry
- ▸ Check for coherence and completeness of written responses.

7

English
▸ Willingness to participate. Some do. Some refuse.
▸ Various kinds of writing.
▸ I look for unified, coherent, well-developed essays in standard English usage in their essays. Mastery of the above is the primary factor in my students' grades.
▸ Observation, questioning, reading students' tests.

History
▸ Tests and classroom discussions.
▸ Written papers; class discussion.
▸ Research project--not a paper--hand in research cards.
▸ Observation, class participation, and tests.

·Math
▸ Testing
▸ Students write essay in class.

Physical Education
▸ How a student follows instructions.

Philosophy
▸ Class discussion reactions and test questions on concepts used to describe the structures of experience and language that were identified during the experiment.

Psychology
▸ Structured essay responding to 3-4 questions relating to article. Written responses to questions on tapes.

Sociology
▸ Test.
▸ Essay questions; oral presentation; role playing; description of a situation and student writes what he/she would say.

PERCENTAGE OF STUDENTS - Communications

After applying techniques and assessing the students' ability, the question was raised regarding the number of students who could successfully accomplish the tasks described. The estimated percentage of students who demonstrated mastery of the general education outcome *communications* is shown below.

Art	90%
Childhood Development	99%
Chemistry	75-85%
English*	50%
English	30%
History	50%
History	80%
History	50%
History	75%
History	80%
Math	80%
Math	30%
Philosophy	40-50%
Physical Education	95%
Sociology	80%

*English faculty had the following comments:
▸ What do you mean by mastery, "A" work or "C" work?
▸ Of what? Students who enroll or last until the end? Students who enroll or students correctly enrolled--i.e., who have prerequisites?
▸ What is mastery?

Overall, the course-embedded assessment techniques used in the Division of Arts, Sciences, and Public Services to evaluate *communications*, illustrate a broad range of activities and measures that have several implications. English faculty reported a significantly lower degree of mastery for communications skills, while History faculty also reported somewhat lower percentages. Other faculty reported fairly high percentages of mastery of communication skills. This information should be evaluated in conjunction with faculty's interpretation of mastery. Certainly the goals and expectations of English faculty should be specific and measurable since their focus is clearly on reading, writing, and processing information.

9

Critical Thinking

Nearly three-fourths of the faculty (71 percent) indicated that developing students' ability to apply principles and generalizations already learned to new problems and situations was *essential*. About 24 percent of the respondents rated it as *very important* or *important*. One faculty member (5 percent) did not respond to this item.

The majority of the respondents (95 percent) rated developing students' analytical skills as *essential* or *very important*, while only one person (5 percent) did not respond. On the other hand, developing students' problem-solving skills generated a wide range of responses. About one third of the faculty respondents (33 percent) rated this skill as *essential*, and almost one-half (47 percent) rated it as *very important* or *important*. Nearly one-fifth (19 percent) said this skill was not applicable or did not respond.

Fifteen of the 21 respondents (71 percent) in this Division rated developing students' ability to draw reasonable inferences from observations as *essential*, while 19 percent rated it as *very important*. One respondent (5 percent) indicated that this skill was not applicable, and one person (5 percent) did not respond.

More than three-fourths of the respondents (76 percent) rated developing students' ability to synthesize and integrate information and ideas as *essential*, while 14 percent rated it as *very important*. One respondent (5 percent) indicated that it was not applicable to his/her course, and one individual (5 percent) did not respond.

About two-thirds of the respondents (67 percent) rated developing students' ability to think holistically, to see the whole as well as the parts, as *essential*. More than one-fourth (28 percent) rated it as *very important* or *important*. One faculty member (5 percent) did not respond.

When asked to rate developing students' ability to think creatively, a wide range of responses emerged. One-third (33 percent) rated this skill as *essential*, one-third (33 percent) rated it as *very important*, and 14 percent rated it as *important*. Fourteen percent indicated that this skill was not applicable to their course, and one person (5 percent) did not respond.

Nearly two-thirds of the respondents (62 percent) rated developing students' ability to distinguish between fact and opinion as *essential*, while nearly one-fourth (24 percent) rated it as *very important* or *important*. One person (5 percent) indicated that this skill was not applicable to his/her course, and two faculty members (9 percent) did not respond.

10

OTHER GOALS - Critical Thinking

Other goals associated with *critical thinking* that faculty achieve in their classes are listed below.

Art
- When to use critical thinking effectively (when one answer is desirable), and when it is more efficient to use creative thinking (when multiple solutions are desired).

Chemistry
- Derivation of mathematical formulas from scientific principles.

Philosophy
- Develop ability to relate the "Structure of Language Arts" to skills in thinking analytically, inferentially, and creatively.

Sociology
- I see little distinction between "analytical skills" and "problem solving." I believe we can come closer to teaching "analytical" than "problem solving," since there are probably as many problem solving techniques as there are students.

SPECIFIC BEHAVIOR INDICATING MASTERY - Critical Thinking

Faculty listed a variety of specific behaviors indicating mastery of *critical thinking* skills. A broad range of assessment techniques were utilized throughout the Division, as listed below.

Art
- Ability to weigh strengths and weaknesses of own work in order to improve. Ability to express main idea and how visual elements support it. Ability to crit others constructively.

Chemistry
- Ability to apply knowledge to new problem situations and tasks.

English
- Can questions be asked of speaker reading paper to class?
- Critique of tests.
- Ability to synthesize from details, to analyze a general into specifics, to compare, contrast, trace general causes and effects, define, use inductive and deductive reasoning.
- Comprehension of literature and related social/cultural issues demonstrated in discussion, written assignments, and reading aloud.

History
- Awareness of current situations in America that arise from prior conditions.
- Understand historical process of continuity and change.
- Understanding reasons and "why" of history.
- Ability to identify, analyze, and understand components of a problem and arrive at a solution.

Math
- Completion of problems in "Thinking Critically" section of each chapter.

Physical Education
- Calculate percentages and apply formulas.

Philosophy
- To express, in unambiguous symbolic language, the connections between different types of statements which determine (1) the logical correctness of inferences, and (2) the factual correctness of inferences from fact(s) to facts.

Psychology
- Performance on MC unit tests.

Sociology
- Choosing the best alternative to scenarios about social issues.
- Ability to select important facts and weave them together.

ASSESSMENT METHODS - Critical Thinking

In addition to submitting information about specific behaviors that indicate whether or not students had mastered critical thinking skills, the respondents described methods used to evaluate students' behavior. The list ranges from classic classroom activities to creative techniques.

Art
- Critiques assessing each project every week, for every student. Students record crits in notebooks. Other indicators: Students actively show critical thinking among themselves as they discuss project at hand. Many have critical thinking buddies for feedback.

Childhood Development
- Completion of portfolio.

Chemistry
- Open ended questions after a lab exercise which encourage suggestions for improvements, foreseeable problems, new applications, etc.

English
- Some ask questions. Some refuse to ask questions.
- Oral and written ¡ .esentations
- I look for these skills (ability to synthesize from details, to analyze a general into specifics, to compare, contrast, trace general causes and effects, define, use inductive and deductive reasoning) in their essays.
- Observation, questioning, reading students' texts.

History
- Oral discussion and written tests.
- Written exams; written papers; class discussion.
- Written exams.
- Observation, class participation, and tests.

Math
- Discussion.
- Completion of selected problems.

Physical Education
- If a student is able to apply his knowledge to problems I give in class (mathematical).

Philosophy
- Class discussion and test questions that (1) show students can correctly represent statements and arguments, and do apply criteria of evaluation appropriately; and (2) problem-to-solve tasks.

Psychology
- Multiple choice questions on unit tests requiring students to interpret examples, apply facts, etc.

Sociology
- Tests.
- Essay questions.

13

PERCENTAGE OF STUDENTS - Critical Thinking

Faculty estimated the percentage of students who have demonstrated mastery of the general education outcome - critical thinking skills. Their estimates follow.

Art	95%
Childhood Development	99%
Chemistry	~20%
English*	65%
English	50%
History	75%
History	80%
History	50%
History	75%
Math	80%
Math	50%
Philosophy	40-50%
Physical Education	50%
Sociology	65%

*Comment regarding critical thinking by English faculty member:
▸ Does anyone really master these skills? The question is to what degree should first and second year college students be able to exhibit these skills in their writing?

Overall, the activities and assessment techniques used to evaluate students' critical thinking skills are encompassing and innovative. The range for the estimated percentage of students who demonstrate mastery of *critical thinking* varies from 20 percent to 99 percent. Note that no respondents indicated that any of the outcomes were unimportant. *Critical thinking* appears to be a goal that is evaluated across the Division using a variety of techniques.

14

Understanding Culture and Society

When asked to rate the importance of developing an informed appreciation of other cultures, 19 percent of the respondents indicated that this skill was *essential*, 19 percent said it was *very important*, and 43 percent rated it as *important*. Three respondents (14 percent) said that it was not applicable to their classes, and one person(5 percent) did not respond.

Nearly one-third of the respondents (29 percent) indicated that developing an informed concern about contemporary social issues was *essential*, approximately one-fourth (23 percent) rated it as *very important*, and almost one-third (29 percent) rated it as *important*. Two respondents (9 percent) said that this skill was *unimportant* for their class. One faculty member (5 percent) indicated that it was not applicable, and one person (5 percent) did not respond.

When asked to rate cultivating a sense of responsibility for one's own behavior, eighteen of the 21 respondents (86 percent) rated it as *essential*. Two faculty members (9 percent) indicated that this goal was not applicable to their class and one person (5 percent) did not respond.

OTHER GOALS - Understanding Culture and Society

Other goals associated with *understanding culture and society* that faculty achieve in their classes are listed below. Faculty applied their definitions to local as well as global issues, historical as well as future perspectives, and individual as well as societal concerns.

Art
▸ How cultural differences affect perception and expression.

Childhood Development
▸ Plan activities for children that are culturally appropriate.

.Chemistry
▸ Understand technology's role in society.

English
▸ Develop tolerance to oral ideas of others without being subjective.
▸ Ability to respect all members of JTCC community.

Philosophy
▸ Cultivate awareness of the urgency of clear thinking/communicating for clarifying and efforts to resolve social issues.

Political Science
▸ Students should learn about political participation, voting, functions of American government.

15

Sociology
▶ Historical perspective of the change in society relative to topic of death and death rites.

SPECIFIC BEHAVIOR INDICATING MASTERY - Understanding Culture and Society

Faculty provided information about specific behaviors that demonstrate mastery of *understanding culture and society*. Examples from the respondents follow.

Art
▶ Projects in which students research culture/society, create artwork which show an informed expression of other culture's ideals.

Childhood Development
▶ Completion of portfolio.

Chemistry
▶ Oral responses and questions from students.

English
▶ I give a general knowledge test based on reading.
▶ Ability to empathize with others. Break from ego- or ethno-centricity.
▶ Comprehension of literature and related social/cultural issues demonstrated in discussion, written assignments, and reading aloud, as indicated in students' written work and class discussion.

History
▶ I lecture and the students listen, take notes, and interact.
▶ Appreciate different cultures' perceptions of land and property.
▶ Putting self in other cultures or time periods.
▶ Awareness of diverse cultures and behavior and ability to understand various beliefs and values.

Math
▶ Discussion

Physical Education
▶ Role, tardiness--taking responsibility for one's own behavior.

Philosophy
▶ To identify and correctly analyze fallacious arguments of protagonists and of antagonists concerning social issues, individual rights, and individual and corporate responsibilities.

Sociology
▶ (1) Understanding of death rites in several cultures. (2) Comparison of death rites of several cultures. (3) Dialogue re students' ideas and feelings about death.

16

ASSESSMENT METHODS - Understanding Culture and Society

Methods used to assess *understanding culture and society* were described by faculty. They used portfolios, class discussions, written exams, and a number of other techniques. Note that faculty are conducting assessment activities without exerting additional effort or changing their normal lesson plans. It is integrated into what is done and illustrates a variety of methods for teaching and evaluating this general education outcome.

Art
▶ Portfolio documentation of work; students write an artist's statement; critiques.

Childhood Development
▶ College faculty evaluates portfolio. Outside evaluator evaluates portfolio.

Chemistry
▶ None.

English
▶ List of 50 questions asked about politics, history, countries (geography), religion --(ex. Who was Mussolini?).
▶ Respectful interaction in the class.
▶ I look for and value signs of such maturity in their essays.
▶ Observation, questioning, reading students' texts.

History
▶ Oral discussion and written tests.
▶ Written exams; written papers; class discussion.
▶ Class discussion.
▶ Observation, class participation, and tests.

Physical Education
▶ Arriving to class on time, completing homework.

Philosophy
▶ Class discussion, reactions, and test questions that show that students do or do not identify and correctly analyze such fallacious arguments.

Sociology
▶ Test questions; oral presentation; classroom discussion.

17

PERCENTAGE OF STUDENTS - Understanding Culture and Society

Faculty provided estimated percentages of students who demonstrated mastery of the general education goal *understanding culture and society*. The estimates for the percentage of successful students follow.

Art	85%
Childhood Development	99%
Chemistry	50-60%
English*	25%
English	50%
History	75%
History	75%
History	50%
History	75%
Physical Education	90%
Sociology	90%

*The following comments were contributed by English faculty:
▸ Shows lack of reading--most have never been to a library. Frightening.
▸ Very few--it's not a requirement for the course.

Overall, the assessment of students' level of mastery of *understanding culture and society* is fairly high, with the exception of one English faculty. A member of the English faculty pointed out that this general education outcome is not a requirement for the course. Other faculty were able to address this issue successfully, especially sociology, childhood development, physical education and art.

Computational and Computer Skills

Slightly less than one-fifth of the respondents (19 percent) indicated that improving students' math skills was *essential*. Only 9 percent said it was *very important* or *important*. Nearly one-fourth (24 percent) rated this skill as *unimportant* and 43 percent said it was not applicable to their class. One individual (5 percent) did not respond to this item.

When asked to rate developing students' skills in using materials, tools, and/or technology related to computers, only 9 percent of the respondents rated this skill as *essential*. Nearly one-fourth (24 percent) rated it as *very important* and 19 percent rated it as *important*. Ten percent of the respondents gave a rating of *unimportant*, while 33 percent said it was not applicable to their classes. One person (5 percent) did not respond.

18

OTHER GOALS - Computational and Computer Skills

The following goals were listed that are associated with *computational and computer skills* that faculty achieve in their classes.

Chemistry
- Use calculators extensively.

English
- We can't because lab is available only 30 minutes of period.

Sociology
- Interpretation of data.

SPECIFIC BEHAVIOR INDICATING MASTERY - Computational and Computer Skills

Specific behavior that demonstrates mastery of *computational and computer skills* is indicated in the list below. Note the number of faculty who stated that these skills are not applicable to their courses.

Art
- N/A

Childhood Development
- None

Chemistry
- Students learn to use calculators to solve specific problems using dimensional analysis methods.

English
- We venture forth to computer lab--I give the basic introduction.
- Ability to use word processing in writing, to use computer programs to build verbal skills.
- Computer generated texts.

History
- N/A
- Not directly required.
- N/A
- N/A

Math
- Discussion.
- Students must apply computer technology to real problems.

19

Physical Education
- N/A

Sociology
- Interpretation of statistics as they relate to social variables.
- N/A

ASSESSMENT METHODS - Computational and Computer Skills

In-class methods used to assess students' level of *computational and computer skills* are listed below. As mentioned above, a number of faculty do expect students to have computer skills and the computational component can be interpreted in a variety of ways.

Art
- N/A

Childhood Development
- None

Chemistry
- Correctness of numerical responses to specific questions and problems.

English
- Those who become angry at me and the computer are usually computer illiterate and have jobs where they don't interact with the computer. Trying to get students beyond subjective negative reaction and out of culture/high tech shock is a challenge.
- I look for results in their essays--word-processed essays, improvement in verbal or sentence skills.
- Observation.

History
- None.
- N/A
- N/A

Math
- Testing.
- Use of MINITAB to complete statistical problems.

Sociology
- Test

20

PERCENTAGE OF STUDENTS - Computational and Computer Skills

The estimated percentages of students who demonstrate mastery of computational and computer skills are listed below. Generally, faculty who expect students to master this skill estimate that at least half of the students, in most cases, are successful.

Chemistry	60-70%
English	50%
English	85%
History	N/A
History	N/A
Math	80%
Math	40%

*English faculty gave the following comments:
▸ More and more word processors. Improvement in verbal and sentence skills is greater in English 01 (where grammar is taught) than in English 111 -- where rhetoric and logic are taught.

Overall, a small percentage of the faculty who responded have determined *computational and computer skills* as a goal for their classes. Those who do teach and assess this general education skill are faced with challenges as well as successes. With the computer literacy requirement for all JTCC graduates, faculty in the Division of Arts, Sciences, and Public Services must consider alternative methods to encourage and monitor students' computer skills.
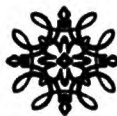
DIVISION OF ALLIED HEALTH, BUSINESS, & TECHNOLOGIES

Communications

Almost one-half of the faculty (46 percent) in the Division of Allied Health, Business, and Technologies who responded to the survey rated the importance of improving students' ability to receive, process, internalize, and respond to communications effectively as *essential*. The remaining faculty (54 percent) rated it as *very important* or *important*.

Six of the 13 faculty respondents (46 percent) rated improving students' ability to read with comprehension as *essential*, while approximately one-third (31 percent) rated it as *very important*. Fifteen percent of the respondents rated this skill as *important*, and one person (8 percent) indicated that it was *unimportant*.

When asked to rate the importance of improving students' ability to write clearly and correctly, an equal number (31 percent each) rated it as *essential* and as *very important*. Nearly one-fourth rated it as *important*. Two faculty members (15 percent) rated this ability as *unimportant*.

Five of the 13 respondents (38 percent) rated improving students' ability to listen and speak effectively as *essential*, while nearly one-fourth rated it as *very important*. Two faculty members each (15 percent each) rated improving students' listening ability as *important* and *unimportant*' One person said this skill was not applicable to his/her class.

OTHER GOALS - Communications

Other goals associated with *communications* that faculty achieve in their classes are listed below.

Architecture
▶ Ability to draw in an effective (communicating) manner. Also ability to read drawings.

Electronics
▶ Communicate using engineering graphics.

SPECIFIC BEHAVIOR INDICATING MASTERY - Communications

Faculty were asked to describe activities (projects, lectures, readings, etc.) that are provided in class to develop students' *communication* skills. As presented in the following list, faculty identified specific behaviors that demonstrate mastery of this skill.

Accounting
▶ Written reports and oral presentations.

22

Architecture
- (1) Ability to write well. (2) Ability to read & comprehend. (3) Ability to draw.

Automotive
- Communication of specific alignment, suspension, or steering-related problems with a customer.

Business
- Write a three page article.

Engineering
- Calculations presented clearly.

Electronics
- Communicate conclusions following laboratory procedures.
- Written and oral reports.

Nursing
- Satisfactory communication project.

Office Systems Technology
- Completion of assignments based on oral and written communications.
- Compose written communication that achieves intended results and maintains goodwill.

ASSESSMENT METHODS - Communications

Faculty listed the methods they use to evaluate student's level of success regarding their *communication* skills. Some of the technical classes required students to demonstrate physical activities while others used classic examples of assessment techniques.

Accounting
- Teacher evaluates.

Architecture
- (1) 2 essays. (2) 3 tests and exam. (3) Set of drawings.

Automotive
- Students describe tire wear and steering characteristics of a car they will be aligning. (In other words, what's wrong with it? Why does it need aligning?)

Business
- Instructor evaluation.

23

Engineering
- ▸ Homework problem and labs.

Electronics
- ▸ Grade lab reports for spelling and grammar.
- ▸ Evaluate understanding of reports.

Nursing
- ▸ Communication project. Test.

Office Systems Technology
- ▸ Assessment of assignments.
- ▸ Examine communication for purpose, tone, correctness.

PERCENTAGE OF STUDENTS - Communications

Faculty were asked to estimate the percentage of students who demonstrate mastery of the specific components of *communication* skills that they measure in their classes. In general, faculty evaluated student success regarding this skill as satisfactory; in most cases, at least 60 percent of the students achieved mastery. Note an Office Systems Technology faculty member gave a slightly lower estimate (50 percent). This may be due to the extensive focus on exercises that require precise communication skills that are required for this type of course.

Accounting	80%
Architecture	65%
Automotive*	75%
Business	85%
Engineering	80+%
Electronics	66%
Nursing	80%
Office Systems Technology	90%
Office Systems Technology	50%

*Faculty offered the following comment: All will perform this, but perhaps not at mastery level.

24

Critical Thinking

The majority of the faculty who responded (84 percent) indicated that developing students' ability to apply principles and generalizations already learned to new problems and situations was *essential*. One person each (8 percent each) gave a rating of *very important* and *important*.

More than two-thirds of the respondents (69 percent) rated developing students' analytic skills as *essential*, while 15 percent rated it as *very important*, and 8 percent rated it as *important*. One faculty member (8 percent) indicated that developing students' analytic skills was *unimportant* for his/her class.

When asked to rate the importance of developing students' problem solving skills, more than two-thirds of the respondents (69 percent) gave a rating of *essential*. Two faculty members each (15 percent each) rated this skill as *very important* or *important*.

More than one half of the faculty (54 percent) rated developing students' ability to draw reasonable inferences from observations as *essential*, and one-third (31 percent) rated it as *very important*. Each of the remaining two faculty members (8 percent each) rated this skill as *important* and *unimportant*.

More than one-half of the respondents (54 percent) rated developing students' ability to synthesize and integrate information and ideas as *essential*, while one third (31 percent) gave a rating of *very important*. One faculty member (8 percent) gave a rating of *important*, while one person (8 percent) said this outcome was not applicable to his/her class.

Seven of the 13 respondents (54 percent) rated developing students' ability to think holistically, to see the whole as well as the parts, as *essential*, while one-third (31 percent) gave a rating of *very important*. One individual (8 percent) rated this skill as *important*, and one person (8 percent) said it was not applicable to his/her class.

About one-fourth of the respondents (23 percent) gave developing students' ability to think creatively a rating of *essential*. About one fourth (23 percent) gave a rating of *very important*, 38 percent rated it as *important*, and 15 percent rated it as *unimportant*.

Five of the 13 respondents (38 percent) rated developing students' ability to distinguish between fact and opinion as *essential*, while about one-fourth (23 percent) rated it as *very important*. One faculty member (8 percent) gave a rating of *important*, while about one-third (31 percent) indicated that it was *unimportant*.

OTHER GOALS - Critical Thinking

Other goals associated with *critical thinking* skills that faculty achieve in their classes are listed below.

Architecture
▸ Ability to distinguish between levels of quality work.

Engineering
▸ Clear presentation of mathematical analysis required.

SPECIFIC BEHAVIOR INDICATING MASTERY - Critical Thinking

Specific activities which have been identified to demonstrate mastery of *critical thinking* skills are described below. Faculty have used a number of applied techniques as well as paper and pencil exercises.

Accounting
▸ Analytical problem solving project.

Architecture
▸ Copy and produce drawings, modifying as necessary for different formats.

Automotive
▸ Properly align the front and/or rear end of a car.

Business
▸ Read assigned articles and write synopsis.

Engineering
▸ Ability to analyze and solve mathematical problems relating forces and material behavior.

Electronics
▸ Correctly solving circuit analysis problems.
▸ Logical reasoning.

Nursing
▸ Successful test taking.
▸ Ability to plan care for clients.

Office Systems Technology
▸ Solving problems without specific instructions.
▸ Write business report with conclusions--differentiate fact and opinion.

ASSESSMENT METHODS - Critical Thinking Skills

Specific methods used in class to assess behavior that indicate students' mastery of *critical thinking* skills are listed below:

Accounting
▸ Teacher evaluates.

Architecture
▸ Grade drawings, making comments, criticizing before class.

Automotive
▸ Students do this [Specific Behavior Indicating Mastery] in the shop period.

Business
▸ Instructor evaluation.

Engineering
▸ Tests, homework, computer programs.

Electronics
▸ Class participation in problem solving. Homework, lab and lecture design problems.
▸ Problem solving. Designing.

Nursing
▸ Test
▸ Graded CP's.

Office Systems Technology
▸ Satisfactory solutions to problems.
▸ Write business report with conclusions.

PERCENTAGE OF STUDENTS - Critical Thinking Skills

Faculty estimated the percentage of students who demonstrate mastery of the *critical thinking* skills outcomes. The range of estimates (50-90%)was given, as follows.

Architecture	65%
Automotive*	75%
Business	85%
Engineering	80+%
Electronics	66%
Nursing	80%
Office Systems Technology	90%
Office Systems Technology	50%

*Comment by faculty member: All should do it [the prescribed activity], but I don't think all will "master" it.

Understanding Culture and Society

One faculty member (8 percent) in the Division of Allied Health, Business, and Technologies who responded to the survey gave developing in students an informed appreciation of other cultures a rating of *essential*. More than one-half (54 percent) gave it a rating of *very important* or *important*. One person (8 percent) indicated that this skill is *unimportant*, while one-third of the respondents (31 percent) indicated that it is not applicable to their classes.

When asked to rate the importance of developing in students an informed concern about contemporary social issues, one respondent (8 percent) gave a rating of *essential*, while nearly one-half (46 percent) rated it as *very important* or *important*. Fifteen percent gave a rating of *unimportant*, and one third of the faculty respondents (31 percent) indicated that this concern was not applicable to their classes.

Nearly one-half of the faculty (46 percent) gave cultivating in students a sense of responsibility for one's own behavior a rating of *essential*. About one-third (31 percent) gave a rating of *very important* or *important*. Two of the 13 respondents (15 percent) gave a rating of *unimportant*, while one person (8 percent) said it was not applicable to his/her class.

OTHER GOALS - Understanding Culture and Society

The following list represents faculties' description of other goals associated with *understanding culture and society* that are achieved in their classes.

Accounting
▸ Contemporary business practices and economic policies.

Architecture
▸ Develop respect for all individuals in the classroom.

Automotive
▸ Responsibility to do the job correctly, even though short cuts may make you more money in the short run. We talk about this in many classes.

Engineering
▸ Historical development of subject from Greek geometry to modern computer analysis is discussed and presented in texts.

Office Systems Technology
▸ Develop informed appreciation for and acceptance of other points of view.

SPECIFIC BEHAVIOR INDICATING MASTERY - Understanding Culture and Society

Faculty included activities (projects, lectures, readings, etc) that they provide in their classes to develop students' *understanding of culture and society*. Specific behaviors that demonstrate student mastery are listed below.

Architecture
▸ Acceptance of others in class.

Engineering
▸ Cultural, historical background discussed.

Electronics
▸ N/A
▸ How systems have evolved in other parts of world.

Nursing
▸ Ability to give individualized care based on socio cultural criteria.

ASSESSMENT METHODS - Understanding Culture and Society

Methods used to assess the behaviors described are listed. Some faculty relate students' *understanding of culture and society* to class assignments, while others note relationships among students.

Architecture
▶ Camaraderie among all individuals; lack of racial and "class" (redneck, etc.) jokes & comments.

Engineering
▶ Not assessed.

Electronics
▶ Discuss systems in other parts of world.

Nursing
▶ Test
▶ Clinical observation. Graded NCP.

PERCENTAGE OF STUDENTS - Understanding Culture and Society

Faculty estimated the percentage of students who demonstrated mastery of *understanding culture and society*. Only a few faculty were able to provide an estimate.

Architecture	10%
Business	100%*
Nursing	90%

*Faculty added comment: Of those participating.

Computational and Computer Skills

When asked to rate the importance of improving students' mathematical skills, five of the 13 respondents (38 percent) rated this skill as *essential*, five (38 percent) rated it as *very important*, and one person (8 percent) rated it as *important*. Two faculty members (15 percent) gave a rating of *unimportant*.

More than one-half of the respondents (54 percent) rated developing students' skill in using material, tools, and/or technology related to computers as *essential*. About one-fourth of the faculty (23 percent) rated it as *very important*, and the remaining one fourth (23 percent) rated it as *important*.

OTHER GOALS - Computational and Computer Skills

Other goals associated with *Computational and Computer Skills* that faculty achieve in their classes are described below.

Architecture
▸ Develop appreciation of importance of computers in the discipline; also, their limitations.

Engineering
▸ Solve problems by writing computer programs and using tutorial disks provided with text.

Electronics
▸ Problem solving through computer simulations.

Office Systems Technology
▸ Use computer as tool to improve writing skills.

SPECIFIC BEHAVIOR INDICATING MASTERY - Computational and Computer Skills

Faculty listed activities that were conducted in their classes to develop students' *computational and computer skills*. The following specific behaviors indicate mastery of this skill.

Architecture
▸ Math problems, interest in computers in profession.

Automotive
▸ Align a car using a computerized alignment machine.

Business
▸ Use computer to develop article.

Drafting
▸ Execute commands and graphically solve problems.

Engineering
▸ Calculation of behavior of material behavior.

Electronics
▸ Problem solving and simulations using computer.
▸ Solve problems.

Nursing
▸ Ability to compute dosage calculations problems accurately.

Office Systems Technology
▸ Ability to use contemporary hardware and software.

ASSESSMENT METHODS - Computational and Computer Skills

Methods used to assess the behaviors that demonstrate student mastery of *computational and computer skills* are described below. Faculty used a number of traditional methods, such as tests, as well as laboratory assignments and observation techniques.

Architecture
▸ Test items, expressed desire to go into CAD.

Automotive
▸ Students will align the car using this type of equipment.

Business
▸ Evaluate disk by instructor.

Drafting
▸ Laboratory assignments.

Engineering
▸ Tests and computer analysis.

Electronics
▸ Lab assignments. Problem working (homework).
▸ Number of correct problems.

Nursing

▸ Tests. Accurate computation of dosage problems in clinical.

Office Systems Technology

▸ Observation of independent use of equipment and software.

PERCENTAGE OF STUDENTS - Computational and Computer Skills

Faculty *estimated the percentages of students who demonstrated mastery of computational and computer skills* in their classes. Most respondents estimated fairly large percentages of students who were successful.

Architecture	75%
Automotive	75%
Business	80%
Drafting	95%
Engineering	90+%
Electronics	50%
Nursing	98%
Office Systems Technology	99%

Overall, faculty in the Allied Health, Business, and Technologies Division agreed that the majority of their students can demonstrate mastery of *computational and computer skills* - a goal that is taught and assessed by many. This general education skill is a vital component for the subject matter taught throughout the Division.

CONCLUSION

The introductory courses taught at the community college level, whether in the liberal arts or in a technical field, should be an object of special attention in planning general education. Many students who select an introductory level course will never take another course in the discipline, so it clearly does not introduce them to further formal work in the field. One special goal of such a course should therefore be some guidance to these students about how they can continue learning in the discipline on their own.

The need to teach one's discipline to students not majoring in it provides a special opportunity for investigating the ways in which that discipline illuminates the problems and questions of life. Exploring the role of the course in the student's intellectual life need not lead to diluted content. Instead, it can show how the course provides a framework for dealing with intellectually challenging questions that can be asked or answered by anyone (Katz, 1988).

The four general education outcomes selected for this study are critical to students' success in academic course work as well as essential skills for the workplace. Although teaching and assessing all aspects of each outcome are not necessary for each course, faculty and administrators should examine the results to determine whether or not the level of student success is acceptable. A summary of the results suggests the following.

Nearly all of the faculty respondents agreed that teaching and assessing *communications* skills were important in their classes. Many created a variety of their own goals which were appropriate for their specific classes. Student mastery ranged from 30% - 99%; this wide range of skill level should be studied to determine ways to increase the overall skill level of some students in mastering this vital general education skill. Note that for a number of classes, nearly all of the students have mastered *communications* skills.

Faculty gave a wide range of responses to the importance of various components of *critical thinking*. For many respondents, developing students' ability to apply principles to new situations, developing analytic skills, and developing problem solving skills were rated as important. Faculty created a number of *critical thinking* goals and assessment techniques specifically related to their classes. Student mastery of *critical thinking* skills ranged from 20% - 99%. Again, this wide range of skill levels should be considered to determine whether 20% mastery in specific classes is acceptable while nearly all of the students in other classes are achieving this goal.

About one-half of the respondents rated the importance of *understanding culture and society* as important. Many faculty were able to modify the definition of this goal to meet the needs of their classes. The percentage of students who demonstrated mastery of this outcome ranged from 25% - 100%. The wide range of student success is consistent and suggests that those in specific courses will master specific general education skills, while in other courses the focus is on some other general education goal.

A smaller percentage of faculty rated the importance of *computational and computer skills* as important. Many faculty in the Division of Arts, Sciences, and Public Services stated that developing computer skills is not applicable to their courses. With the computer literacy requirement for graduation, some expectation or need for computer skills seems reasonable. Computer skills may not be taught in each class, but other goals associated with the use of computers are relevant and appropriate for any class. It was estimated that 40% - 99% of the students master these skills in the specific classes listed in the study.

Successful mastery of the general education goals is essential for students' future success. These goals provide the basic foundation for technical training as well as general knowledge needed for additional academic preparation. With only one-third of the faculty responding to the call for their assessment of the general education outcomes, one must consider whether faculty are seriously interested and participating in this component of their students' education. The results of this study may help some instructors see how others are incorporating general education in their daily class preparations.

Effective instruction includes formal and informal methods to determine how well students are learning. Continued emphasis must remain with helping students to achieve their academic goals and assessing students' level of success in general education and technical skills. It is a challenging but essential task for the College to reflect on what shape we want our courses to take, fully acknowledging the fact that for many students one course will be their only exposure to a particular discipline. Such reflection should raise basic questions about the nature of each course, its focus, and its far-reaching power. By exploring how each course fits in with courses in other subjects, we are likely to find ourselves reviewing the connectedness and disconnectedness of subjects and assessment methods. Our review will help move us out of discipline isolation and toward an inquiry into the foundations, boundaries, and linkages of subject areas.

The task of reconsidering the ways we educate our students has only begun. Much work remains for all of us, and it holds the promise that more effective instruction will take place in all classes offered at JTCC.

35

REFERENCES

Angelo, Thomas A, and Cross, K. Patricia, (1993). Classroom assessment techniques: A handbook for college teachers, San Francisco, CA: Jossey-Bass.

Katz, Joseph et al, (1988). A new vitality in general education, Washington, D.C.: Association of American Colleges.

36

40

DIRECTIONS: Please select ONE course that you are currently teaching. Respond to each item on the survey in relation to that particular course. (Your responses might be quite different if you were asked about your overall teaching and learning goals.)

PLEASE PRINT THE TITLE OF THE SPECIFIC COURSE ON WHICH YOU ARE FOCUSING: _____

PLEASE RATE THE IMPORTANCE OF EACH OF THE GOALS LISTED BELOW IN THE SPECIFIC COURSE YOU HAVE SELECTED. ASSESS EACH GOAL'S IMPORTANCE TO WHAT YOU DELIBERATELY AIM TO HAVE YOUR STUDENTS ACCOMPLISH, RATHER THAN THE GOAL'S GENERAL WORTHINESS. THERE ARE NO "RIGHT" OR "WRONG" ANSWERS.

For each goal, circle one response on the scale. In relation to the course on which you are focusing, indicate whether goal you rate is:

5	Essential	a goal you always/nearly always try to achieve
4	Very Important	a goal you often try to achieve
3	Important	a goal you sometimes try to achieve
2	Unimportant	a goal you rarely try to achieve
1	Not applicable	a goal you never try to achieve

	Essen-tial	Very Import.	Impor-tant	Un-Import.	Not Appl.
COMMUNICATIONS					
1. Improve ability to receive, process, internalize, and respond to communications effectively.	5	4	3	2	1
2. Improve ability to read with comprehension.	5	4	3	2	1
3. Improve ability to write clearly and correctly.	5	4	3	2	1
4. Improve ability to listen and speak effectively.	5	4	3	2	1
5. List other goal(s) associated with communications that you achieve in your class.					

_____

	Essen-tial	Very Import.	Impor-tant	Un-Import.	Not Appl.
CRITICAL THINKING					
6. Develop ability to apply principles and generalizations already learned to new problems and situations.	5	4	3	2	1
7. Develop analytic skills.	5	4	3	2	1
8. Develop problem-solving skills.	5	4	3	2	1
9. Develop ability to draw reasonable inferences from observations.	5	4	3	2	1
10. Develop ability to synthesize and integrate information and ideas.	5	4	3	2	1
11. Develop ability to think holistically; to see the whole as well as the parts.	5	4	3	2	1
12. Develop ability to think creatively.	5	4	3	2	1
13. Develop ability to distinguish between fact and opinion.	5	4	3	2	1
14. List other goal(s) associated with critical thinking that you achieve in your class.					

_____

	Essen-tial	Very Import.	Impor-tant	Un-Import.	Not Appl.
UNDERSTANDING CULTURE AND SOCIETY					
15. Develop an informed appreciation of other cultures.	5	4	3	2	1
16. Develop an informed concern about contemporary social issues.	5	4	3	2	1
17. Cultivate a sense of responsibility for one's own behavior.	5	4	3	2	1
18. List other goal(s) associated with understanding culture and society that you achieve in your class.					

_____

BEST COPY AVAILABLE

41

	Essen-tial	Very Import.	Impor-tant	Un-Import.	Not Appl.
COMPUTATIONAL AND COMPUTER SKILLS					
19. Improve mathematical skills.	5	4	3	2	1
20. Develop skill in using materials, tools, and/or technology related to computers.	5	4	3	2	1

21. List other goal(s) associated with computational and computer skills that you achieve in your class.

_____

PLEASE STATE BRIEFLY BELOW ANY ACTIVITIES, (PROJECTS, LECTURES, READINGS, ETC.) YOU PROVIDE IN YOUR CLASS TO DEVELOP STUDENTS' ABILITY. INDICATE HOW YOU MEASURE YOUR STUDENT'S LEARNING IN THE FOLLOWING AREAS:

COMMUNICATIONS
Specific behavior indicating mastery:

Method of assessing that behavior:

Estimated percentage of students demonstrating mastery:

CRITICAL THINKING
Specific behavior indicating mastery:

Method of assessing that behavior:

Estimated percentage of students demonstrating mastery:

UNDERSTANDING CULTURE AND SOCIETY
Specific behavior indicating mastery:

Method of assessing behavior:

Estimated percentage of students demonstrating mastery:

COMPUTATIONAL AND COMPUTER SKILLS
Specific behavior indicating mastery:

Method of assessing behavior:

Estimated percentage of students demonstrating mastery:

PLEASE RETURN TO CARMON KIAH BY MARCH 3, 1995.

BEST COPY AVAILABLE

THANK YOU!!!

42

BEST COPY AVAILABLE

END

U.S. Dept. of Education

Office of Educational
Research and Improvement (OERI)

ERIC

Date Filmed
February 27, 1996

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

Specific Document)

ERIC

JC 950 4155

I. DOCUMENT IDENTIFICATION:

Title

FACULTY ASSESSMENT OF GENERAL EDUCATION

Author(s)
Carmon J. Kiah, Ph.D.

Corporate Source	Publication Date
John Tyler Community College, Chester, VA 23831	Spring 1995

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community documents announced in the monthly abstract journal of the ERIC system Resources in Education (RIE) are usually made available to users in microfiche reproduced paper copy and electronic optical media and sold through the ERIC Document Reproduction Service (EDRS) or other ERIC vendors Credit is given to the source of each document and if reproduction release is granted, one of the following notices is affixed to the document

If permission is granted to reproduce the identified document please CHECK ONE of the following options and sign the release below

| X | ← Sample sticker to be affixed to document | Sample sticker to be affixed to document → | ☐ |

Check here
Permitting
microfiche
(4 x 6 film)
paper copy
electronic
and optical media
reproduction

| "PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY ———— Sample ———— TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)." |

Level 1

| PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY ———— Sample ———— TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) |

Level 2

or here
Permitting
reproduction
in other than
paper copy

Sign Here, Please

Documents will be processed as indicated provided reproduction quality permits If permission to reproduce is granted, but neither box is checked documents will be processed at Level 1

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce this document as indicated above Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder Exception is made for non profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries

Signature: *Carmon J Kiah*	Position: Coordinator, Assessment, Research, & Planning
Printed Name: Carmon J. Kiah	Organization: John Tyler Community College
Address: 13101 Jefferson Davis Highway Chester, VA 23831	Telephone Number: (804) 796-4012
	Date: October 2, 1995