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ABSTRACT

The use of value-added assessment to improve undergraduate education at Rhode Island College is described, with attention to how the process evolved, problems encountered, and future plans. Value-added assessment is used in the development of student educational plans, curriculum evaluation and revision, and assessment of the interaction of work experience and educational development. Early stages of the project focused on selection of assessment instruments and the student sample, and on introducing faculty to the use of student assessment information in curricular planning and evaluation. The assessment process focuses on both general education and liberal education goals and student gains toward career preparation. Student growth assessment will involve: measuring cognitive and affective growth toward education outcomes established by faculty committees; assessing writing skills periodically; assessing graduates' mastery of major field subject matter; assessing the relationship between course grading and other indicators of student growth; and implementing surveys to determine student attitudes and activities. (SW)

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IMPROVING UNDERGRADUATE EDUCATION WITH VALUE-ADDED ASSESSMENT

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## Improving Undergraduate Education With Value-Added Assessment

### Abstract

This paper describes the Rhode Island College effort to use value added assessment of students in: (1) the development of student educational plans, (2) curriculum evaluation and revision, and (3) assessment of the interaction of work experience and educational development. Beginning as a small effort funded by FIPSE and based on the College's participation in a seven institution consortium, the value-added project has grown to assume a central place in College advising, curriculum, and admissions planning. Discussion is centered on the processes through which the effort evolved, and on the problems encountered along the way.

## Improving Undergraduate Education With Value-Added Assessment

Three years ago, Rhode Island College was the lead institution in founding a consortium directed by Alexandar Astin and funded by FIPSE to explore the use of "value added" information. We have come some distance since then. In the early stages of the project, we focused on selection of assessment instruments, selection of the student sample, and introduction of the faculty to the use of student gain information in curricular planning and evaluation. We have not left these problems, but our focus has expanded considerably. We concentrate now on tracking the progress of each of our students toward desired educational objectives, on evaluating the impact of the curriculum on student development, and on assessing the influence of different kinds of work experiences on student development. In this paper we will discuss the past, and our plans for the future of value-added assessment at Rhode Island College.

### Past Progress

During the summer of 1984, at the inception of the Consortium, we explored available assessment devices with a view toward testing a sample of freshmen students in the Fall. Our alternatives quickly narrowed to two: the American College Testing Service's composite

exam of educational development, and the Behavioral Event Interview developed by McBer and Company. Both exams measure student cognitive and intellectual growth in areas targeted by liberal education. The McBer Behavioral Event Interview had the most intuitive appeal, due to its ability to assess a student's cognitive development and her organizational, conceptual, and articulation skills through oral problem solving in response to a series of questions about actual situations.

However, upon closer examination, two problems with the McBer Exam became evident. First, very little research is available regarding its reliability and validity as an indicator of student cognitive and intellectual development. Secondly, administration of the interview is both time consuming and expensive, requiring significant training on the part of interviewers. While interest in the McBer exam remained, thoughts of using it were postponed pending further investigation and a search for funding. Instead, we administered the ACT-COMP written exam to a sample of freshmen.

It was at this point that we faced a series of sampling and student motivational problems. The sampling issues forced us to make some decisions as to the purpose of the value-added project at the institution. Sampling by either random means, or by means of self-selection had merit in terms of ease and the provision of a manageable data base. Either technique would allow us to test the utility of our assessment techniques in measuring a student's stage of cognitive and intellectual growth; while random sampling would

also permit some assessment of the effectness of the curriculum in producing liberally educated students.

We settled for sampling at first, reminding ourselves that we had only just begun, and that we had no mandate from the faculty to do more. Quickly, however, we became dissatisfied with the limited scope of the project. While it was possible to track the development of those students who agreed to take the test, it was not possible to build this information into the advising or curricular review process in a major way because not all students took the exam. Because student assessment information was not built into the advising and curricular review processes, it was of limited use to either individual students or college policy committees. Students saw little to gain by taking the test; faculty failed to understand what all the bother of value added assessment was about. Although we tested a subset of the freshman class in the Fall of 1985, we had begun to understand that assessment could improve undergraduate education at Rhode Island College only if all students were tested as they entered the College, when they were ready to enter upper division work, and when they left the College as seniors.

By then faculty interests had evolved to the point where extensive assessment was a possibility. During the Spring and Fall semesters of 1985 a faculty committee, convened by the Provost, met to consider the attributes of a liberally educated person, and the extent to which Rhode Island College graduates possessed these

traits. Other faculty committees specified the goals of the general education portion of the curriculum, and began to consider the effectiveness of the program in meeting these goals. As a result, during the Spring Semester of 1986, the college educational policy committee endorsed assessment of all freshmen, sophomores, and seniors to provide for evaluation of the extent to which the College was meeting both its general education and its liberal education goals. At that point, the assessment program at Rhode Island College began in earnest.

#### The Present

Faculty and administrators at Rhode Island College are emerging from a period of reflection on the mission of the institution. This reflection was spurred by the strategic planning process at the College, by participation in the Association of American College's Project on Redefining the Meaning and Purpose of Baccalaureate Degrees, by the selection of a new president, and by an Admissions Office marketing study. The mission of the institution as a comprehensive college which provides students with both a liberal education and preparation for entrance into a wide variety of careers has been reaffirmed. Thus, the assessment process at Rhode Island College will test with regard to liberal education, and measure student gains toward career preparation. As far as we know, no other college or university has attempted to evaluate programs

which integrate education and work in accordance with the assessment of student development.

The need for this type of assessment evolved naturally. Most of the College's students commute to campus and are employed off-campus. Studies by Astin and others (cf. Astin, 1975, 1977; Cohen, Brawer, and Connor, 1969; Kosher and Bellamy, 1969) indicate that off-campus work and commuting by students contribute strongly to failure to complete academic programs. To combat the negative effects of these factors, next year the College will embark on a substantial program designed to make work and education complementary rather than conflicting. The College will evaluate this program by using testing procedures which provide for assessment of student gains in contrasting work and non-work environments. Student work and study programs will be altered in accordance with the findings.

Overall, the student assessment and educational improvement project at Rhode Island College has three objectives:

(1) To track student progress toward desired education objectives and to use this information in advising.

(2) To evaluate the impact of the curriculum on student development and to use this information in curriculum and policy modification.

(3) To assess the influence of different kinds of work experiences on student development and to use this information in integrating work and learning for students.

Since the developmental information gathered is to be used as a diagnostic aid in student advising, growth progress will be assessed for each student. To meet the objectives specified above, the following procedures will be implemented.

I. Assessment of Student Growth

A. Measure student cognitive and affective growth toward education outcomes already established by the appropriate faculty committees. The College will administer the ACT-COMP Examination to all students at the beginning of their college career, as they enter upper division work, and as they graduate. The College will seek additional resources to administer the McBer Behavioral Event Interview as well.

B. Assessment of growth in writing skills, to be evaluated at two or three points in each student's undergraduate career. To ensure that evaluations are not artificial or intrusive, they will focus on written material required in coursework.

C. Assessment of graduating students' development toward mastery of major field subject matter. Departments may choose the Graduate Record Examination, develop an examination based on departmental criteria, or administer a combination of assessment techniques.

D. Assessment of the relationship between course grading and other indicators of student growth. The College recognizes that faculty already invest significant effort and ability in evaluating students, and that colleges do not use that information as

extensively as they could in student advising and curriculum revision.

E. Implementation of surveys to determine a variety of student behavioral characteristics (such as employment, academic involvement, calendar time/college credit accumulation ratio, and living arrangements) and to establish student perceptions of college services, college policies, and their own development.

II. Evaluation and Modification of College Curriculum, Policies, and Procedures in Light of Assessment Evidence

A. Dissemination of student growth and behavior data to faculty for use in student advising and curriculum development.

B. Examination of current advising procedures and curriculum (both the General Education Program and departmental majors) by appropriate faculty groups on the basis of student assessment data.

### The Future

While implementation of the above procedures will take some time--four years to complete a cycle of student data, and somewhat longer to fully evaluate and adjust the curriculum on the basis of the data--we will begin to use student assessment data immediately in developing an educational plan for each student. It is our experience that most academic institutions already have a significant amount of student data available, but that the data is

neither centralized nor sufficiently accessible to advisors and curriculum planners to permit good use of it. We will use student data at hand in the College Admissions and Records Offices, from the Annual Freshmen Survey, and from the ACT-COMP freshmen testing to build an educational development file for each student. On the basis of existing knowledge of student educational growth, we will extrapolate from the student's current characteristics to predict expected outcomes given student progress along specific curricular paths. While it is expected that students will alter their educational plan on a yearly (and possibly even semesterly) basis, having sight of their developmental history and of desired educational outcomes in their individual educational plan will maximize their progress toward their goals.

It is hoped that as students monitor their intellectual growth through the assessment process, their belief in themselves will increase. Most of our students are the first generation in their family to go to college. They do not have confidence in their intellectual abilities, or in their skills in writing and articulation. The process of assessing these skills regularly, and of comparing their own levels of skill development to those of students across the nation will permit students to appraise their abilities on the basis of the objective evidence. We are optimistic that this will increase our students' self-esteem.

We are also optimistic that our effort to integrate work and education with the assessment process will help our students to set

higher sights for themselves. As we assess the interaction of particular types of work experiences and educational development, we will be able to guide our students in choosing work experiences that will facilitate, rather than inhibit, their intellectual and cognitive growth.

The assessment process may well yield as many gains for faculty as it does for students. Constructive monitoring of the growth of students in response to the educational experiences developed and offered by the faculty provides tangible evidence of the product of faculty efforts. Student gain scores, and student percentile rankings on the basis of national student data can provide faculty with objective evidence of the impact of their teaching efforts. The self-esteem and political clout of the faculty may well increase on the basis of such evidence.

Development and use of the educational plan through the advising process should facilitate long-term, on-going curricular revision on the basis of the data as faculty monitor the effects of the curriculum and of specific curricular paths (e.g. majors) on students at varying levels of intellectual development. The process of curricular revision should become an on-going response to the student assessment process. Student gain may become an important element in assessing curricular effectiveness.

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