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DEVELOPMENT OF A PROGRAM ASSESSMENT SYSTEM AT THE SUNY-ESF RANGER SCHOOL: THE PROCESS, EARLY RESULTS, AND ANTICIPATED BENEFITS

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ABSTRACT: For the past two years, faculty at the SUNY-ESF Ranger School in Wanakena, New York, have been working with education consultants from Pacific Crest, Inc. to improve the quality of their teaching, their courses, the curriculum, and the Ranger School program in general. The ultimate goal of such efforts is to improve the quality and enhance the success of the school's graduates. The faculty's formalized efforts to improve quality have been focused most recently on the design and implementation of a Program Assessment System (PAS). The PAS developed for the Ranger School clearly articulates the enduring *mission* of the school, prioritizes the five-year *goals* of the program, and explicitly states the key *criteria* that will be used to assess and improve student, faculty, staff, and program performance. Further, the PAS clearly indicates the *measures* that will be used to compare actual performance against the stated standards. Representatives from the faculty, staff, administration, and alumni participated in the design of the PAS since all were recognized as having critical influence over program quality. This team approach fostered the development of a modernized and shared sense of purpose and direction. Equally important, it provided the entire group with the means to measure and evaluate in the years ahead whether the increased program quality they seek is being achieved. This paper describes in more detail both the process used to design a PAS and the specific components and measures that became part of the Ranger School's PAS. If maintained, the PAS will, by design, provide the type of data, information, and self-assessment increasingly requested by external accrediting organizations, prospective students and their parents, alumni, and the public in general. Equally as exciting, it will continue to unite and propel the faculty, staff, and administration toward a shared mission, shared goals, and a collective desire for quality.

INTRODUCTION

For many years, and for many reasons, we, i.e., academics and the bodies that accredit academic programs, focused on inputs as the criteria on which we evaluated the quality of our programs. We focused on enrollments, course registrations, grades of incoming students, contact hours, textbooks used, number and quality of faculty, etc. In recent years there has been a shift toward evaluating quality based on more direct and meaningful criteria, such as knowledge or skill levels of graduates, job placement rates, alumni satisfaction, employer satisfaction, etc. In other words, instead of focusing on what goes into the process of education, we have increasingly found the need to focus on and monitor the outputs and outcomes of our educational efforts.

As we began to focus on outcomes—for example, on the ability of a student to write a well-organized, substantive, and grammatically correct paper—we began to see that our hopes and expectations were often not being met. The latter discovery led us to our interest in assessment or, more specifically, to our interest in "outcomes-based assessment."

I would argue that the Ranger School, and probably every other school represented here, has been engaged in "outcomes-based assessment" all along. But at the Ranger School, at least, it has been an informal, inconsistent, and incomplete engagement. And it rarely, if ever, has involved the entire faculty and/or staff. Now, in the twenty-first century, such an assessment effort is not acceptable. For reasons I will outline below, we need and/or desire a formalized assessment system that is well designed, regularly implemented, and easily used and understood.

The purpose of this paper is to describe our efforts at the Ranger School to develop a "Program Assessment System" (PAS). More specifically, I would like to define what a program assessment system is, explain our reasons for developing one, describe the process we used to develop one, and provide you with an overview of what our PAS looks like at the current time. A final but equally important purpose for presenting this paper is to share with you some of the insights gained and benefits realized by engaging ourselves in this process. Through this sharing I hope to contribute to the development of what has been called "institutional best practices in student assessment" (Peterson and Einarson, 2001), but what I will call "institutional best practices in *program* assessment."

DEFINITIONS

Before going any further, I would like to define some terms that are pertinent to this discussion.

> Assessment: The purpose of an assessment is to provide feedback to improve future performance or work products (Apple and Krumsieg, 2001).

> Evaluation: Unlike assessment, the purpose of an evaluation is to determine or judge the quality of a performance or work product (Apple and Krumsieg, 2001).

Both processes, assessment and evaluation, involve collecting data, but what is done with the data in each process is very different. Evaluation is a commonly used process in academe. Exams, grades, GPA's and tenure are examples of evaluation, as is the accrediting of a college curriculum by an accrediting body such as the SAF. The goal of evaluation is to make a judgment or determination of if, or to what level, certain standards have been met (Apple and Krumsieg, 2001). The goal of assessment, by distinction, is the growth and improvement of the assessee.

> Program: For the purposes of this paper, the "program" is the Ranger School. The Ranger School, being remotely located and geographically separated by 150 miles from its parent institution, is not a department, but rather a full-service campus. As such, the "program" consists of students, courses, curricula, budgets, faculty, staff, facilities, food, forest, equipment/vehicles, alumni services, public service activities/events,

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and research projects/activities. We quickly learned that a meaningful and comprehensive PAS would need to address all of these components, since they are inextricably linked.

System: According to the *Oxford American Dictionary,* a system is a set of connected things or parts that form a whole or work together. A system, moreover, denotes orderliness and implies cooperation and adaptability based on feedback.

Program Assessment System: A program assessment system is a dynamic, ongoing set of processes used to improve the performances and outcomes of a program, whatever its size and scope (Apple and Krumsieg, 2001). The processes incorporated into a PAS are as follows (Apple and Krumsieg, 2001):

1. determining goals and objectives
2. reviewing current program quality
3. defining measurable outcomes
4. establishing performance criteria (standards) by which to gauge outcomes
5. developing instruments for collecting data
6. collecting the data
7. analyzing the results
8. determining future steps in light of those results

GENERAL REASONS FOR ASSESSMENT

A recent survey of about 1,400 postsecondary education institutions in the United States revealed that the most important purpose for engaging in student assessment activities was to prepare for accreditation self-study (Peterson and Einarson, 2001). Other reasons for engaging in assessment include, but are not limited to (adapted from Apple .and Krumsieg, 2001):

1. providing feedback to improve future performance/product (internal improvement)
2. meeting state reporting requirements
3. justifying and/or documenting value of program
4. improving marketing of program (by documenting quality and continual improvement)
5. obtaining support for increasing or adding additional programs
6. clarifying a mission or adherence to a mission
7. connecting philosophy to practice

RANGER SCHOOL'S REASONS FOR ASSESSMENT

To his credit, Bill Bentley, chair of the department that administers the Ranger School's academic programs, initiated the program assessment effort in a very subtle and non-threatening way. I think, however, that he felt the winds of change perhaps before we did, and was motivated to get us involved with assessment because of the impending changes in the accreditation process. But for the faculty at the Ranger School, it was nothing more than genuine interest in and self-motivation to continually improve ourselves and offer our students the best education we are capable of at any given time (i.e., our motivation was internal improvement). It was also a logical next step for us as we learned more about and attempted to implement "process education" (Apple and Krumsieg, 2000) and improve our student's critical-thinking skills. So we started off with the intent of making our students better critical thinkers, and in doing this, we began to critically think about what we do, why we do it, how we do it, and about how all of the components of our "program" contribute to the success of our students, both before and after graduation.

POTENTIAL AUDIENCES

Related to the reasons for assessment, there are several potential audiences that can be targeted and/or that will benefit from a well-designed and regularly implemented program assessment system. Such audiences include (adapted from Apple and Krumsieg, 2001) the following:

1. students
2. all performers within the program
3. "sponsors" of the program (those who fund the program)
4. stakeholders, like alumni, parents, employers
5. granting organizations
6. accrediting organizations
7. those with political interests

THE PROCESS OF DEVELOPING A PROGRAM ASSESSMENT SYSTEM

There are four main components, or steps, to any assessment process (Apple and Krumsieg, 2001):

1. setting up the assessment (obtain shared purpose from assessee and assessor)
2. designing the assessment (establish important criteria, factors, and scales)
3. performing the assessment (collect and analyze quality data)
4. reporting the assessment (providing feedback in a constructive manner)

To date, we have completed the first two steps in our efforts to develop a program assessment system for the Ranger School, and we are currently implementing the third.

Two full days, one in January 2001 and one in September 2001, were formally set aside to set up and design the program assessment system. Education consultants from Pacific Crest, Inc. were employed to lead and facilitate each of the daylong sessions. The progress made during those two days we attributed largely to the expertise and objectivity of Pacific Crest's consultants.

Representatives from the faculty, staff, administration, and alumni participated in the design of the PAS as all were recognized as having critical influence over program quality. The latter group—which consisted of tenured and nontenured faculty, teaching assistants, secretaries, maintenance workers, kitchen workers, a department chair, the college president, and recent graduates—was divided into and worked as two teams. Working under very specific time constraints, each team was responsible for working through a 12-step methodology toward the development of a PAS applicable to the Ranger School program. This methodology is outlined and described in detail in Pacific Crest's *Program Assessment Handbook* (Apple and Krumsieg, 2001). Periodically throughout each day the teams came together to reflect on and synthesize their ideas and products.

EARLY RESULTS: THE RANGER SCHOOL PROGRAM ASSESSMENT SYSTEM

Due to time constraints, not all steps of the 12-step "methodology for producing a quality PAS" were completed. Results from the steps that were completed follow.

Mission Statement (Step 1)
The mission of the SUNY-ESF Ranger School is to develop leaders in the application of forest and surveying technology by providing highly respected educational programs and opportunities in a unique environment. This one-sentence statement captures the essence of the program and articulates the enduring mission of the Ranger School. This mission statement is, of course, related to, but more specialized than, the broad SUNY-ESF mission statement.

SUNY-ESF Ranger School's Program Goals for 2006 (Step 2)
The Ranger School faculty and staff identified 12 goals to pursue over the next five years. Those 12 goals are listed below:

1. annually produce 55 highly motivated, committed A.A.S. graduates in Forest Technology or Surveying Technology.
2. produce a summer bridge program for 25 students (e.g., advanced high school degree holder, first-year community college student in need of remediation, re-directed ESF student, career-changing degree holders) who need supplemental credits in preparation for the A.A.S. degree program.
3. have an established, effective Program Assessment System.
4. further develop a well-funded, attractive, high-quality, relevant, and affordable program.
5. foster a vibrant college community of competent, respected staff, faculty, and students.
6. have 5 working articulation agreements with four-year programs across different regions of the country.
7. have a working agreement with 5 colleges where their students can take our program as a component of their program at their college rate.
8. provide a plan for the support of applied forest research activities.
9. provide a plan to support community development activities.
10. provide the appropriate assistance in the development of an updated, "state-of-the-art" forest management plan for the James F. Dubuar Memorial Forest.
11. become a recognized leader in the continuing education of forest and survey technicians, related professionals and constituencies by providing conferences, workshops, and courses that don't exist.
12. earn ABET accreditation of the Surveying Technology curriculum.

Description of Key Processes Associated with the Program (Step 3)
The following processes were identified as helping to accomplish the goals listed in step 2:

1. There is an ongoing system for formative and summative assessments of instruction, student placement and development, client satisfaction, and goal development.
2. Planning, assigning responsibilities and resources, and assessing specific goals are delegated to appropriate faculty and staff members.
3. A dynamic and effective marketing and recruitment program exists that defines the product, the message, the clients, and the communication plan.
4. A strong development program exists that builds upon past efforts/processes to diversify participation and meet identified current and future needs.
5. Annually update each course's curriculum, its processes and student support services for producing excellent professional skills and ongoing well-being that meets the expectations of all clients.
6. Have in place an annual plan to enhance the quality and quantity of exposure and association with national professionals and modern technology to improve both educational and professional performances.
7. Provide community leadership to put in place a community development plan, which supports the health of the community and ultimately a positive environment for the faculty, staff, and students.

Assessment of the Current Program (Step 4)
Following the SII method of assessment (Apple and Krumsieg, 2001), several strengths of and several areas for improvement in the current program were identified. In addition, several insights (i.e., key discoveries and/or learning outcomes) were shared and recorded. It is important to note that this step, as with all others, was conducted by a diverse group of people who represented nearly all facets of the program. As such, this assessment was better directed and more valid than if it had been made by the faculty only, for example.

Create a "Standards Table" (Steps 5-10)
Steps 5-10 of the PAS development methodology involved defining and prioritizing "performance criteria" (i.e., focus areas of quality); identifying 1-3 "factors," or measurable characteristics, for each criterion; identifying "instruments" that existed or could be built to measure the factors; determining internal and external "standards"

for each criterion that could be used as a basis for evaluation; assigning accountability for each factor; and appropriately weighting each factor based on the contribution it makes to overall program quality. The results of completing steps 5-10 are incorporated into a "Standards Table" (Table 1).

Steps 11 and 12 in developing a PAS involve designing a process for continually assessing the program and the PAS itself. We have not formalized this process yet, but foresee opportunities to make faculty meetings, faculty retreats, annual reports, student surveys, advisory committee meetings, alumni surveys and interviews, and employer surveys a part of that process. In addition, we hope to have our PAS reviewed by the Society of American Foresters if and when they move to an outcomes-based assessment of forest technology programs.

Table 1. Standards Table for the SUNY-ESF Ranger School, September 2001.

Performance Criteria	Factor	Instrument	Linked Goals	External Standard	Internal Standard	Person Accountable	Weight
Desired Environment	Enrollment/ Graduation	Registrar	1, 2, 7, 10, 12	45	55	K.N.	22.5%
Diverse Curriculum	Placement	Questionnaire	3, 6, 12	85%	95%	K.N.	12.5%
Learning Laboratory	Managed Forest	Assessment Instrument for Management Plans	3, 4, 10	Good	Very Good	R.H.	10%
Desired Environment	Retention of Students	Registrar	4	85%	90%	C.L.W.	10%
Learning & Growth Environment	Student Performance Skills	Portfolio Skills Test	3, 10	Good	Very Good	J.M.S.	7.5%
Learning and Growth Environment	Professional Experience for Students	Log of Activities	3, 4, 8, 9, 10	20	40	M.R.B.	7.5%
Professional Staff	Collective Expertise	Vitae — summary tool	5, 8, 9, 10			C.L. W.	7.5%
Field Experience	Hours Logged	Log by Students	1, 4, 8, 9, 10	400	600	W.G.A.	7.5%
Professional Staff/Associates	Specialties	Annual Report	5, 10	25	50	W.B.	5%
Student Oriented	Student Satisfaction (weight accessibility heavily)	Survey	3, 5, 6, 7, 10	Good	Excellent	K.N./Class Advisor	5%

INSIGHTS AND BENEFITS RESULTING FROM THE DEVELOPMENT OF A PAS

The team approach used to develop our PAS fostered the development of a modernized and share sense of purpose and direction. It has, I think, united us and propelled us—the faculty, staff, and administration—toward a shared mission, shared goals, and a collective desire for quality. Equally important, the development of a PAS has provided the team with the means to measure and evaluate in the years ahead whether the increased program quality we seek is being achieved.

Other insights and benefits include

1. Outside consultants facilitated and ensured progress, and provided expertise to help clarify and/or answer questions.
2. Engaging in the process increased interaction and cooperation among faculty.
3. There now exists a more positive faculty attitude toward assessment.
4. There is greater use of teaching approaches that promote student involvement in learning (i.e., teaching is focused on learning outcomes and the production of high-quality graduates).
5. Our forest—our outdoor classroom—is a critically important resource: Our mission and nearly all of our performance criteria are linked directly to availability of a quality forest.

6. Applied research activities are supported and validated: Several of our performance criteria are linked to the goal of developing a research plan.

7. CE activities/events, although thought to be important, are not supported/validated by our current prioritized list of performance criteria.

8. The separation of PAS development workshops by 9 months, and the preparation and review of this paper by Ranger School faculty, constituted assessments of our PAS. These assessments have revealed to us that, while there are some refinements to make (e.g., in standards), our PAS is valid and on track.

9. Many of the instrument listed in the Standards Table we have used, currently use, and/or can develop relatively easily, we think.

10. There are selfish reasons for developing a PAS: We want to improve ourselves so that we can survive, excel, attract more students, and produce quality graduates that are ready and able to meet the challenges of their time. Enhancing student/graduate success is, arguably, an indirect, not a direct benefit of the PAS.

11. We need now to focus on student outcomes at the curriculum level and develop instruments that can be used to assess and/or evaluate those outcomes.

SUMMARY

In this paper I have defined what a program assessment system is, and have described the process that we followed at the SUNY-ESF Ranger School to develop one. Further, I have overviewed the current structure and content of the PAS developed for the Ranger School. Most importantly, I have shared with you some of the insights we gained and benefits we have already realized by engaging ourselves in the development of a PAS. We are hopeful that our new PAS will provide the type of data, information, and self-assessment that is needed to improve our program and, ultimately, the quality of our graduates.

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