



Tennessee Board of Regents

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MEMORANDUM

To: Chief Academic Officers

From: Paula Myrick Short, Ph.D. *Paula*
Vice Chancellor for Academic Affairs

Re: Academic Audit Reports

Date: June 7, 2005

I have enclosed the reports of the Academic Audit site teams for the Audit pilot programs on your campuses. I have reviewed the reports as has Dr. Bill Massy and am impressed with the quality of the work of both the Audit teams as well as the campus programs being visited. Please distributed the reports to your respective programs and indicate my appreciation to the chairs and faculty for their involvement in the process.

I hope each of you plan to attend the June 23 session. This will provide an opportunity to discuss the year long pilot and plans for continuing the Academic Audit. Please let me know if you have any questions.

Austin Peay State University • East Tennessee State University • Middle Tennessee State University • Tennessee State University
Tennessee Technological University • University of Memphis • Chattanooga State Technical Community College
Cleveland State Community College • Columbia State Community College • Dyersburg State Community College
Jackson State Community College • Motlow State Community College • Pellissippi State Technical Community College
Roane State Community College • Southwest Tennessee Community College • Volunteer State Community College
Walters State Community College • Nashville State Technical Community College • Northeast State Technical Community College
The Tennessee Technology Centers

Academic Auditor – Narrative Report
Roane State Community College
Biology Department

Date of Audit: April 20, 2005

Auditors:

Jerry Faulkner, Team Chair, CSTCC
Allana Hamilton, Biology Team Leader, NSTCC
Denice King, CSCC
Tim Strange, WSCC

I. Introduction.

Roane State Community College and selected departments participated in the state-wide Academic Audit pilot project during the 2004-2005 academic year. In an effort to improve learning objectives, curricula, teaching methods, student learning outcomes, and quality in biology courses, Roane State's Biology Department, which is a part of the Math/Science Division, requested participation in the statewide Academic Audit pilot project.

In accordance with the *Education Quality Improvement: A Handbook for Departments*, audit conversations were conducted by a team of trained auditors on April 20, 2005 at the Roane State Harriman Campus. The auditing team consisted of representatives from Chattanooga State Technical Community College, Cleveland State Community College, Northeast State Community College and Walters State Community College. The visit consisted of the following activities:

- A. Auditor Orientation Meeting
- B. Plenary Session with Auditors, Faculty and Administration
- C. Student/Auditor Meeting
- D. Faculty/Auditor Meeting
- E. Auditor Mid-Course Meeting
- F. Faculty/Auditor Meeting
- G. Administrator/Auditor Meeting
- H. Auditor Executive Session
- I. Exit Session

Conversations between auditors and faculty, staff and administrators focused on the five focal areas:

- Learning Objectives
- Curriculum and Co-Curriculum
- Teaching and Learning Methods
- Student Learning Assessment
- Quality Assurance

II. Overall Performance

- The RSCC biology department has an excellent mission statement, which can serve as a basis for continued improvement in the department.
- The faculty of RSCC have dealt admirably with the challenge of being disbursed to 8 different campuses in two different time zones. Their efforts to participate in the academic audit in a meaningful way are to be applauded.
- The separation of colleagues in the department provides an excellent opportunity for formalizing their efforts instead of reverting into a less formal sharing if they were in the same building or on the same campus.
- The honesty of their audit report is highly commendable. The auditors found the self-study report to be thorough, reflective and demonstrating effort to improve teaching and learning.

III. Performance in the Focal Areas. How does the unit/program's work in each focal area measure up against the quality and evidentiary principles?

A. Learning Objectives

- The faculty of RSCC are dedicated to student learning. There is no doubt that individual faculty members have made efforts to ensure that their learning objectives were the best possible.
- Students are made aware of the objectives, feel that the objectives guide the instruction, and believe that the objectives directly relate to their respective goals.
- What is lacking is a systematic, formal examination of objectives. It was acknowledged that the current objectives were created by one individual many years ago and that while they have been updated by individual faculty there has not been a comprehensive, co-operative revision of the learning objectives.
- The Academic Audit has brought to the attention of the faculty the lack of common learning objectives between teachers, sections, and sites.
- Faculty acknowledged that the most troubling aspect of not having common learning objectives was the prospect of not being able to certify that every student received the same quality education.
- Academic freedom should not be an excuse to avoid efforts to make sure that each student receives an equal education regardless of teacher, section, or site.
- The faculty has recognized that there are available resources to assist them in constructing common learning objectives. Among those resources are:
 - Experience of new faculty recently joining the department.
 - Other TBR institutions
 - The career programs that receive students from the biology courses
 - Institutions that receive transfer students from RSCC.
 - National organizations such as the Human Anatomy & Physiology Society (HAPS)
 - On-line searches of other colleges
- Developing a departmental syllabus for each of the courses that have multiple sections has been identified as an initiative.

B. Curriculum and Co-Curriculum

- The faculty acknowledged that current curricula and learning objectives were created by one individual fifteen years ago and they are updated by individual faculty as needed. There has not been a comprehensive and systematic revision to the biology curriculum in several years.
- The Academic Audit project has brought to the attention of the faculty to review and update course competencies and curricula for courses with multiple sections and instructors.
- Faculty acknowledged that communication has been a problem but plan on implementing regular departmental meetings to facilitate communication between faculty and teaching sites.
- The audit team recommends regular faculty meetings for collaboration and review of curriculum.

- Based upon the student conversations, the faculty do make use of their teaching and work experiences within the curriculum.
- Based upon the student conversations, there are no student questions about the course learning objectives and the curriculum that is being taught. Students did suggest better coordination between lecture and lab content.
- Based upon one student conversation, there are inconsistencies in curriculum between the regular delivery format and the Internet format. (Example: Anatomy/Physiology)

C. Teaching and Learning Methods

- The students stated that active learning depends on individual faculty and stressed a need for more 'hands on' activities. Students advised some faculty members are assessing learning styles using a CD and then incorporating the information in the course presentations. Other faculty members do not assess learning styles and utilize only one method of teaching.
- Some faculty members are teaching at the application level of Bloom's taxonomy and should be commended for teaching to this level. Teaching to the application level follows the Biology Department's Mission Statement: increase student abilities in communication, deductive reasoning, and problem solving.
- Some faculty members are still teaching 'traditional' lecture style. During our visit with students they identified a low level of learning associated with this teaching method. The concept of low level learning with 'traditional' lecture is also supported by research that states learning retention is 50-60% at best. This method of teaching may be a contributing factor to the high attrition rates in the department.
- The audit team also identified inconsistencies concerning resources used for teaching. Some faculty members were using different lab manuals and variations in 'lecture notes' from one faculty member to the other. The team recommends a standard syllabus in the department to establish consistency in the learning objectives as well as course content.
- The team recommends faculty meetings for collaboration with a goal to obtain an acceptable level of consistency. Syllabi were different depending on the instructor and therefore teaching and learning methods varied depending on the instructor.

D. Student Learning Assessment

- The department is correct in stating that the faculty members are the ones most qualified to design and develop the appropriate assessment tools for their students and their individual courses.
- It is evident that the faculty use a variety of methods and approaches in assessment of student learning.
- As reported in the self-study and in the sessions of the visit, while many good practices are in place, it is apparent that the faculty are at different levels in their application of the principles of quality student learning assessment.
- It is important for the faculty to come to a consensus on the student learning outcomes that will be addressed for each course. Since the assessment of student learning should be tied to these student learning outcomes, having a common set of guidelines for all sections of a course will give consistency in what is expected of students in different sections taught by different instructors. Since the faculty use the student learning outcomes as the basis of their assessment instruments, it will give instructors a common framework for designing these instruments. It will also allow for a more seamless transition and common foundation when students have different instructors for lecture and laboratory sections or different instructors in the two semesters of the sequence courses.

- Often students have a difficult time in associating the assessment information on the syllabus with the actual methods that will be employed in assessment of their level of learning. Faculty acknowledged in the interview that this is sometimes the case at Roane State as well. All of the faculty should continue to try to bridge this gap.
- Faculty should continue to build assessment instruments that are designed to test different levels of knowledge. Bloom's taxonomy is a good starting place for aligning the terms used in phrasing the student learning outcomes to the types of questions asked to assess that level of learning.
- Faculty should continue to evaluate the assessment of student learning and to adapt new teaching strategies and assessment methods as needed.
- Faculty should communicate with each other so that all may benefit from the determination of assessment methods that work and those that do not work for monitoring student learning. Group meetings of the faculty to discuss and share best practices on assessment would be helpful for all and would bring an atmosphere of continuous improvement to assessment.
- Faculty should consider developing and employing methods to measure the "value added" learning component. It can give valuable information on the continuing quality of the learning experience.
- In-service sessions, either within the department or campus-wide, on quality assessment practices might be beneficial in bringing different perspectives to this issue.

E. Quality Assurance

- Individual faculty clearly have made efforts to assure quality. What is lacking is a cooperative, coherent mechanism.
- The statement from the narrative (p. 13) that the biology department does "... not have a process in place to evaluate course design, teaching effectiveness, or assessment techniques to insure the ongoing quality of these parameters." is an incredible self identification of a major need in the department. RSCC faculty are to be commended for recognizing the need and for honestly acknowledging it in their self study.
- Current evaluation of faculty seems to be functioning at a fire-fighting level. The audit can be an opportunity to formalize a process.
- The faculty has acknowledged the need for more data gathering. Identified sources of data include:
 - Surveying students that have transferred to four year institutions
 - Surveying students entering career programs in allied health

IV. Overall judgment of unit/program's application of principles.

Quality Principles	Learning Objectives	Curriculum and Co-Curriculum	Teaching and Learning Methods	Student Learning Assessment	Quality Assurance
Defining quality in terms of outcomes	4	3	4	3	3
Focusing on how things get done	4	3	4	3	3
Working collaboratively	4	4	4	4	3
Basing decisions on evidence	3	3	3	3	3
Striving for coherence	4	4	4	4	4
Learning from best practice	3	3	3	3	3
Making continuous improvement a priority	4	4	4	4	4

Key:

- (5) applied extensively
- (4) applied to some degree
- (3) not applied now but would clearly be useful
- (2) not applied now but might be useful
- (1) not applied and not applicable

V. Overall maturity assessment and rationale: How does the team characterize the unit/program's maturity of effort – no effort, firefighting, emergent effort, organized effort, or mature effort? What are your reasons for this assessment?

The chart listed below compares the focal area analyses determined by the Roane State Biology Department faculty and the Academic Auditors.

Focal Area	Roane State (Biology Dept.) Analysis	Academic Auditors Analysis
Learning Objectives	Emergent and Organized	Emergent
Curriculum and Co-Curriculum	Emergent and Organized	Emergent
Teaching and Learning Methods	Emergent and Organized	Emergent
Student Learning Assessment	Organized	Emergent
Quality Assurance	Informal	Emergent with informal elements of fire-fighting

Key:

No effort = traditional methods, little quality consciousness

Firefighting = response to problems, ad hoc adjustments, little focus on quality principles

Emergent = individual initiative, experimentation with quality principles

Organized = initiatives planned and tracked, methods based on principles, developing metrics/norms

Mature = embedded culture of quality, continuous improvement, shared organizational learning

VI. Conclusions. Briefly indicate the team's conclusions regarding the following as they might apply to the auditor's conclusions.

Commendations:

The auditing team does agree and commend the following:

- A. Faculty viewed Academic Audit as a positive experience.
- B. Faculty were honest about their findings as described in the self-study.
- C. Faculty are motivated and committed to teaching excellence and improvement.
- D. Students expressed to the auditors they feel they are receiving a quality education in their biology courses.
- E. Faculty are accessible to students outside the normal lecture/lab hours.
- F. Faculty are motivated and dedicated to improve communication between faculty on multiple sites.

Affirmations:

The auditing team does agree and affirm the following:

- A. Communication between teaching sites has been a barrier for faculty interaction.
- B. Inconsistency in curricula between course sections, teaching sites and delivery methods.
- C. The development of a departmental syllabus as a potential initiative for 2005-2006.
- D. The development of a process to evaluate course design, teaching effectiveness and assessment techniques.

Recommendations:

The auditing team does agree and recommend the following:

- A. Implement the following two initiatives for 2005-2006
 - i. Review and update course competencies
 - ii. Collect data from other biology/health science departments, analyze data and develop plans to incorporate suggestions into course curricula.
- B. Develop a procedure to assess and document student learning outcomes.
- C. Develop standardized course syllabi.

The team's overall summary conclusion is the biology faculty have whole-heartedly participated in the academic audit pilot project with a positive attitude to improve upon course learning objectives, curricula, teaching and learning methods, student learning assessment and quality assurance. The potential initiatives as described in the self-study report are appropriate to the mission and goals of the department and meet a clearly defined need. Faculty efforts to participate in the academic audit in a meaningful way are to be applauded.