

PROFESSORS' SELF PERCEPTIONS OF COMPETENCY

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A twenty-five item survey was developed to determine the professors' self assessment of their competency levels in the main areas covered during this project: Analysis, Assessment, Methods, and Research (Scarborough, 2006). The survey was administered three times during the project: immediately prior to the beginning of the formal teaching sessions, immediately after the conclusion of the formal teaching sessions, and at the end of the semester during which the professors were practicing the concepts learned. Each item was worth 4 points for a maximum total of 100 points. The table below contains the self competency scores for the professors for each content area and each administration of the survey.¹ See Questionnaire in B.1.a and C.2

Table B.1.1

Content Area:	Analysis		Assessment		Methods		Research		Total	
Max. Score:	36		32		24		8		100	
Admin 1 (2/2/06)										
Abdel-Motaleb	18	50%*	11	34%	10	42%	3	38%	42	42%
Azad	26	72%	22	69%	12	50%	5	63%	65	65%
Coller	21	58%	17	53%	14	58%	4	50%	56	56%
Gupta	19	53%	20	63%	11	46%	4	50%	54	54%
Moraga	12	33%	13	41%	6	25%	3	38%	34	34%
Rahn	21	58%	23	72%	11	46%	4	50%	59	59%
Tatara	23	64%	18	56%	16	67%	6	75%	63	63%
Admin 1 mean	20	20%	18	18%	11	11%	4.1	4%	53	53%
Admin 2 (6/16/06)										
Abdel-Motaleb	24	67%	21	66%	18	75%	4	50%	67	67%
Azad	32	89%	27	84%	19	79%	7	88%	85	85%
Coller	30	83%	30	94%	21	88%	7	88%	88	88%
Gupta	32	89%	27	84%	18	75%	6	75%	83	83%
Moraga	29	81%	24	75%	16	67%	6	75%	75	75%
Rahn	33	92%	32	100%	20	83%	6	75%	91	91%
Tatara	33	92%	31	97%	21	88%	7	88%	92	92%
Admin 2 Mean	30	30%	27	27%	19	19%	6.1	6%	83	83%
Admin 3 (12/15/06)										
Abdel-Motaleb	25	69%	25	78%	21	88%	7	88%	78	78%
Azad	30	83%	27	84%	17	71%	7	88%	81	81%
Coller	31	86%	29	91%	21	88%	7	88%	88	88%
Gupta	29	81%	30	94%	17	71%	6	75%	82	82%
Moraga	30	83%	29	91%	17	71%	7	88%	83	83%
Rahn	34	94%	32	100%	18	75%	7	88%	91	91%
Tatara	28	78%	26	81%	18	75%	6	75%	78	78%
Admin 3 Mean	30	30%	28	28%	18	18%	6.7	7%	83	83%

* Interpretation: A score of 18 is 50% of the maximum possible score of 36 for Analysis.

¹ The items from the survey contributing to the score for each content area are Analysis - 1, 2, 3, 7, 9, 16, 20, 23, 25; Assessment - 4, 5, 6, 8, 10, 11, 12, 13; Methods - 14, 15, 17, 18, 19, 21; Research - 22, 24.

The differences between the content area means across the different administration times were analyzed statistically and the results are presented in the table below. The significance levels are from paired samples t-tests on the data from seven professors (df = 6).

Table B.1.2

Index	Means			Difference: Admin 2 - Admin 1	Sig. Level	Difference: Admin 3 - Admin 1	Sig. Level
	Admin 1 (2/2/06)	Admin 2 (6/16/06)	Admin 3 (12/15/06)	Difference		Difference	
Analysis (36)**	20.0	30.4	29.6	10.4	0.000	9.6	0.002
Assessment (32)	17.7	27.4	28.3	9.7	0.000	10.6	0.000
Methods (24)	11.4	19.0	18.4	7.6	0.000	7.0	0.001
Research (8)	4.1	6.1	6.7	2.0	0.001	2.6	0.003
Overall (100)	53.3	83.0	83.0	29.7	0.000	29.7	0.001

** - The number in parentheses is the maximum score for the index.

The data in the table indicate that the professors' increase in self competence from the first administration to the second was statistically significant and that the increase remained strong, and statistically significant, several months later after the professors were able to practice the concepts in their own classrooms.

**COMPETENCY SELF ASSESSMENT
CEET INITIATIVE ON TEACHING AND LEARNING
Jule Dee Scarborough (2006)**

Please respond to each question about the level of knowledge, skill, and confidence you feel you have:

1. Design and develop courses where student learning objectives and outcomes are clear and distinctly different.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

2. Designing and developing a logical and organized course where course syllabi are structured such that students fully understand what is to happen for the entire semester; where the syllabus is the course map for both myself (professor) and the students; and where the syllabus provides all information about objectives, course content, timeline, course requirements, student learning assessments (tests, projects, etc.) grading structure and criteria, etc.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

3. Providing learning activities that align with the syllabus and course content identified in the syllabus; adhering to the timeline in the syllabus; and leading student learning without significant distractions or deviations unrelated to content where each lesson and learning activity are directly related and add value; where no unplanned, last minute, or major assignments not identified on the syllabus are imposed upon students unexpectedly.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

4. Designing a total student assessment system where there is a great variety of types of student learning assessment, tests, quizzes, case studies in industry, literature studies, research, papers or other writing assignments, projects, presentations, portfolios, etc.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

5. Designing student assessments that directly align and measure knowledge and/or skills itemized on course syllabi.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

6. Implementing a student learning assessment strategy throughout the course where feedback on all student assignments, or learning assessments is immediate (or reasonably timed – e.g., 2 weeks); in other words, students receive feedback from the professor on grades or scores for tests, projects, etc. that can be considered immediate in the university schedule context (e.g., 1-3 classes later).

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

7. Designing and developing instruction using Bloom’s Taxonomy of levels of learning where the upper levels of Bloom’s are achieved many times throughout the course (e.g., levels-knowledge, comprehension, application, synthesis, analysis, and evaluation).

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

8. Designing and developing student learning assessments (e.g., tests, performances) using Bloom’s Taxonomy of levels of learning where the upper levels of Bloom’s are achieved many times throughout the course (e.g., levels-knowledge, comprehension, application, synthesis, analysis, and evaluation).

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

9. Developing a course using the “reversed design” process.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

10. Designing and developing traditional tests that directly measure what students are responsible for learning from professors and other sources or activities identified in the syllabi; where the items are an adequate sample of the content domain and the item types are appropriate to the purposes of the test; where the items require thinking at the upper levels of Bloom’s Taxonomy; where the scoring and grading procedures are transparent to the student and as objective as possible; where each item can be traced directly back to the standards, student learning objectives, text and source information, and learning experiences.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

11. Performing test analysis involving statistical analysis of students’ responses; obtaining item statistics for judging and improving the quality of individual items and for judging and improving the quality of instruction.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

12. Developing student performance tasks to measure what students can do with knowledge; where there is a direct link to traditional tests that move student learning assessment from “knowing about” to “performing or doing-using knowledge”; where the upper levels of Bloom’s Taxonomy or levels of learning are demonstrated.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

13. Designing and developing rubrics for the purpose of scoring (grading) student performances that measure "learning by doing" where students demonstrate what they know by using knowledge to perform a task, etc.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

14. Designing and developing a course where many different teaching models are used throughout the course (e.g., lecture, direct instruction, reciprocal, reciprocal-performance, mastery learning, graphic organizers, concept attainment, conceptualization, inductive thinking, deductive thinking, concept formation, inquiry, training, synectics, psychomotor, metaphorical, non-directive, role play, cooperative/collaborative, etc.).

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

15. Designing and developing a course where many different teaching styles are used throughout the semester (e.g., command, practice, self-check, inclusion, guided discovery, convergent discovery, divergent production, learner-designed, learner-initiated, self-teaching styles).

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

16. Designing and developing a course that accommodates different learning intelligences and student learning styles as "characteristic of the cognitive, affective, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" or "the way each learner begins to concentrate, process, and retain new and difficult information" or "concrete experience, reflective observation, abstract conceptualization, active experimentation."

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

17. Designing and developing a course where the burden of learning is on the student rather than the professor; where the professor assumes instructional leadership and directs student learning but is not entirely responsible for “imparting” all the knowledge to be learned “directly”; where students actively engage in their own learning; where lecture is not KING. BE HONEST!

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

18. Designing and developing student learning activities where “cooperative” or “collaborative” learning models are used formally; where “informal,” “formal,” or “base” structures are used based upon Kagan or Johnson and Johnson strategies throughout the course or for major learning activities.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

19. Designing and developing student learning activities where cooperative learning in small groups provides the opportunity for students to experience accomplishing a goal together; where students would feel that they are gaining self-esteem and respect from others, that they are learning more because they are learning with others, that the experience raised everyone's learning and consequently their grades; where higher level thinking occurs because of students engaging in inquiry together and asking questions of each other; where social skills develop as an outcome; and where they increase their capacity to cope with stress or adversity – especially where group learning is designed with performance criteria and where they were trained or educated about group behavior or dynamics.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

20. Designing and developing learning activities where multiple intelligences are required for learning.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

21. Designing and developing problem-based learning where students are assigned a problem with conditions, constraints and/or possibilities that require materials (sometimes), research, and/or collaboration; where students have to take responsibility for their own learning by solving the problem; where the problem crosses the boundaries of disciplines, entwining theory and practice; where there is a focus on the processes of knowledge acquisition rather than the products of such processes; where the professor is a facilitator rather than instructor; and where students will engage in self and peer assessment.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

22. Engaging in the scholarship of teaching, research in the classroom on teaching and student learning using appropriate research design and methodology, analytical or statistical procedures, etc.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

23. Using course evaluation data or information as feedback to determine course changes.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

24. Evaluating the effectiveness of "interventions" or course changes to improve student learning.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>

25. Closing the feedback loop and actually make course changes for the purpose of improving student learning.

1	2	3	4
<i>Lack sufficient knowledge, skills, confidence to apply</i>	<i>Possess some knowledge and skills, but lack sufficient confidence to apply</i>	<i>Possess some knowledge and skills; feel somewhat confident to apply</i>	<i>Possess high level knowledge and skills; confident to apply</i>