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Assessment of Online Student Learning

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Abstract

To cope with the vast range of changes in our educational system, the delivery of knowledge and preparation of candidates for future learning must include self-awareness skills, learning how to learn, information retrieval, lifelong learning, and preparation for the world of technology (Ornstein, 1998). Assessment prevents surprises for the student as well as the faculty. Improving student learning and teaching expertise is necessary if we are to face the challenge of educating students online to meet the twenty-first century challenges in education.

For this study, the authors tried to determine the perceptions of teaching presence, social presence, and cognitive presence of the students. The candidates' responses to the questionnaire produced the following results: "Teaching Presence" mean score for all the variables was 3.87, "Social Presence" mean score was 3.87, and "Cognitive Presence" score was 3.77. It can be concluded that the online course offerings are meeting the needs of the candidates. At the same time, we have some work to do as revealed in some of the mean scores as reported above.

The role of an educator in the school personnel preparation programs is no longer that of an instructor, lecturer, or even a transmitter of knowledge. The new role in the 21st century is to guide or a facilitate student learning. The faculty/instructor is a person that promotes intellectual discoveries versus learning from lecture. The individual is an instructor that plans instructional strategies and learner assessments to monitor a positive impact on student learning. Always needing to show society how well they serve not only their students during their education but also how the learning achieved by the students is profitable for society as a whole. For a long time, higher education has avoided portraying student learning and achievement as a sole indication that determines that institution's excellence (Reyes, 2006).

There is currently a huge paradigm shift when it comes to describing an institution's success. It really is no longer a time to describe the institution's success by retention or graduation rates. The days of using class SAT scores, student faculty ratios or dollar amounts used on students to evaluate the quality of an institution are outdated and really only a piece of how an institution are rated. There is a push to hold institutions of higher learning accountable for the amount of learning that actually occurs for students from the time they begin their studies until graduation and even how they use that knowledge to better society in their careers.

Scholars are questioning these approaches to assessing institutional quality (Callan & Finney, 2000). They advocate that assessing student learning is the fundamental purpose of higher education (Reyes, 2006). Why is student learning important? Why is society as a whole invested in what students are learning at higher institutions? Student learning is important because society from parents to legislators want to be assured that college students are receiving a quality education. An education that will enable students to use their abilities in their careers and in turn will allow them to be a contributing citizen.

The public, who invest in higher education, want to know that student-learning outcomes are consistent with expectations (Reyes, 2006). There is a current need for new student learning assessment systems to be developed and more importantly implemented to hold institutions accountable.

In order to be successful at really quantifying the quality of student learning, new systems of measure will have to look at not only in classroom experiences but also the out-of-class experiences that students have. Today's students desire a competitive level of knowledge and skills to do well in a competitive and always changing global market (Callen & Finney, 2002).

Currently researchers are looking at past performance vs. future outcomes and learning in the classroom vs. outside the classroom. In the past several years there have been several examples of efforts to assess student learning. Alverno College identified eight "outcome taxonomies" to measure, including communication, problem solving, analysis and involvement in the contemporary world (Astin, 1991). Other universities have looked at student backgrounds, campus impact on the student's life, degrees earned and how competitive students were in their chosen fields.

The University of Texas (UT) System did a learning assessment of each academic university within their system. The study compared students within the UT system to students in other institutions, compared students to their own expected scores based on their admissions test scores, and also compared student assessment based on achievement as a freshmen to achievement as a senior. They are essentially looking at the value they add to a student's learning, how well they are serving the student while at their institution.

The test measured learning using analytical writing skills; make an argument and critique an argument style questioning. Both of the previous style questions measure a student's ability to communicate complex ideas, examine claims and evidence, and support their ideas with relevant reasons and ideas. Their over all results found that students within the UT system do as well or better than the national sample in terms of how seniors and freshman perform the open-ended analysis. How does this help higher education as a whole education as a whole?

They say their students do the same or better than the national sample, but the national sample is small compared to the whole university system. To be a true comparison, the entire university system needs to be implementing appropriate assessments of student learning. Each university should, in theory, produce a set of performance-based ideas that are communicated to

students, employers and the public as the basis for learning expectations at the university. These performance-based ideas will also communicate to the public what students know and are able to do (Reyes, 2006). There is an overwhelming recommendation to analyze the following skills for students: critical thinking, problem solving, analytical reasoning and writing conventions. Looking at these aforementioned skills, often assumed to be improved by liberal arts programs, will help achieve the accountability requirements for higher education (Reyes 2006).

After reviewing a few articles, the major consensus seems to be not with the need or desire to have more effective student assessment to measure student learning, but in fact what areas to focus on and how to implement an assessment that reflects learning as multidimensional.

Methodology

In 2011-12 academic year, the school administration program was approved to offer online courses. In the second quarter of implementing the online courses, we decided to survey the students taking the online courses. The intent of the survey was to determine the effectiveness of faculty and student engagement in the online courses. To achieve the goal, we used the instrument "Using the Community of Inquiry Framework to Assess Integration of New Technology in Online courses" developed by Dr. Ben Arbaugh and his team.

The "Community of Inquiry Survey" instrument has three descriptive categories. The first category relates to students' perceptions of the "Teaching Presence". It describes "your instructor's course design, facilitation of discussion, and direct instruction – in the course. The second category relates to "Social Presence" which describes the "degree to which you feel socially and emotionally connected with others – in your course. Third is the "Cognitive Presence". The cognitive presence relates to the "extent to which you are able to construct and confirm meaning – in this course". On a Likert scale of 1 to 5, and 1 equal to strongly disagree and 5 equal to strongly agree, 31 candidates taking the online courses were asked to indicate both their agreement or disagreement with each statement and how important they think it is.

Before the instrument was e-mailed to the candidates, this e-mail message was sent to them.

> To effectively facilitate your online learning in courses offered in the Dept. of Advanced Programs, we will be sending you a "Community of Inquiry Survey" to determine your perception on "Teaching Presence", Social Presence", and "Cognitive Presence" in the virtual community of learners.
>
> You will be emailed a link to this survey next week. I (Department Secretary) will be administering the survey and compiling the results. While the surveys are not anonymous, no individual responses will be shared with the Professors. Only aggregate data will be presented to the department with the sole goal of improving our online courses.

A week later the "Community of Inquiry Survey was emailed to the candidates. 100% of the participants responded to the survey. Data analysis was done using Qualtrics.

Results

Below are the results for the "Teaching Presence", "Social Presence", and "Cognitive Presence".

Table 1

Aggregate Score of Teaching Presence as Reflected by Candidates' Responses

The following statements relate to your perceptions of "Teaching Presence"- your instructor's course design, facilitation of discussion, and direct instruction - in the course. Please indicate both your agreement and disagreement with each statement and how important you think it is.

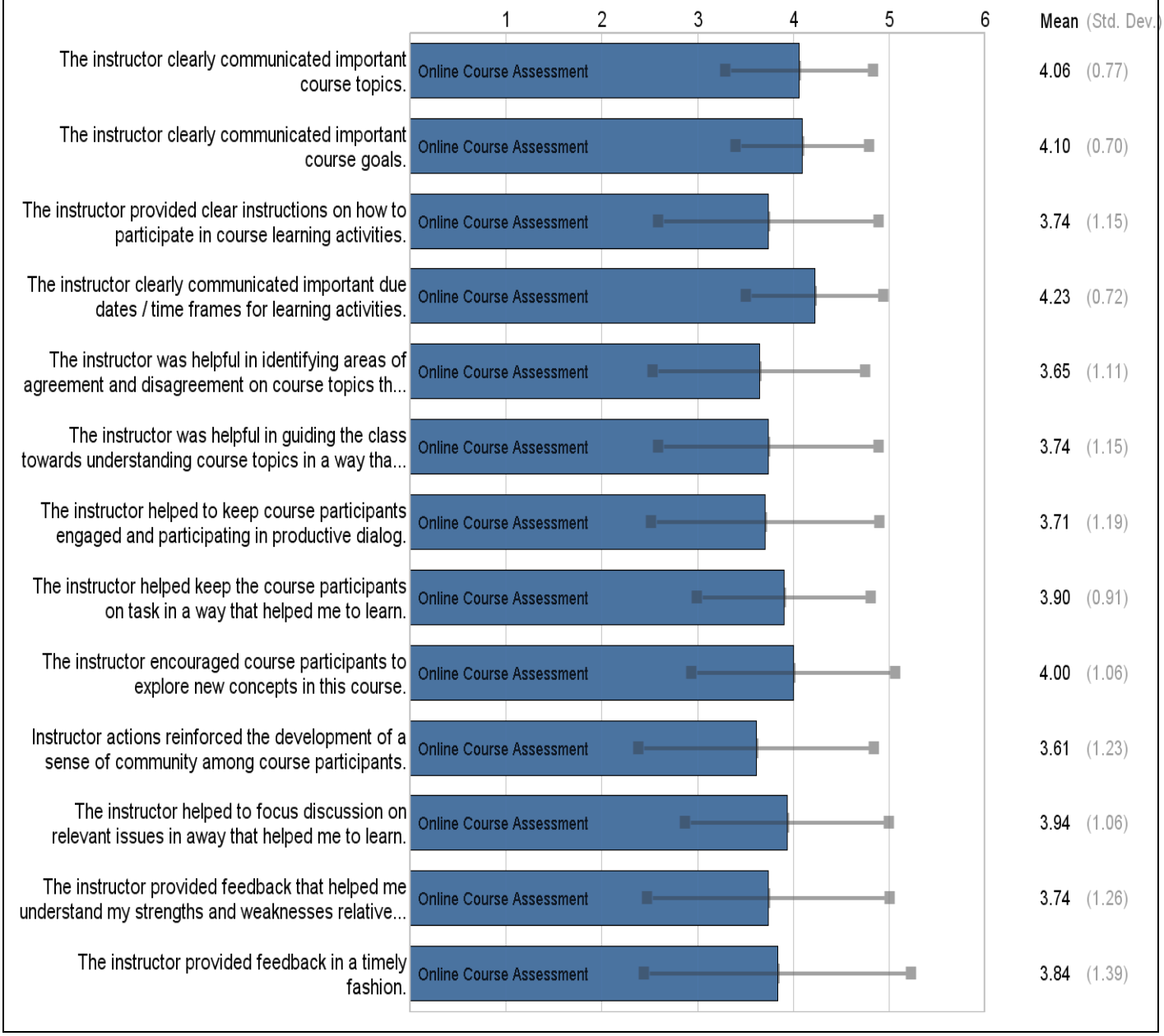


Table 2

Aggregate Score of Social Presence as Reflected by Candidates' Responses

The following statements relate to your perceptions of "Social Presence" the degree to which you feel socially and emotionally connected with others in your course" Please indicate both your agreement or disagreement with each statement and how important you think it is.

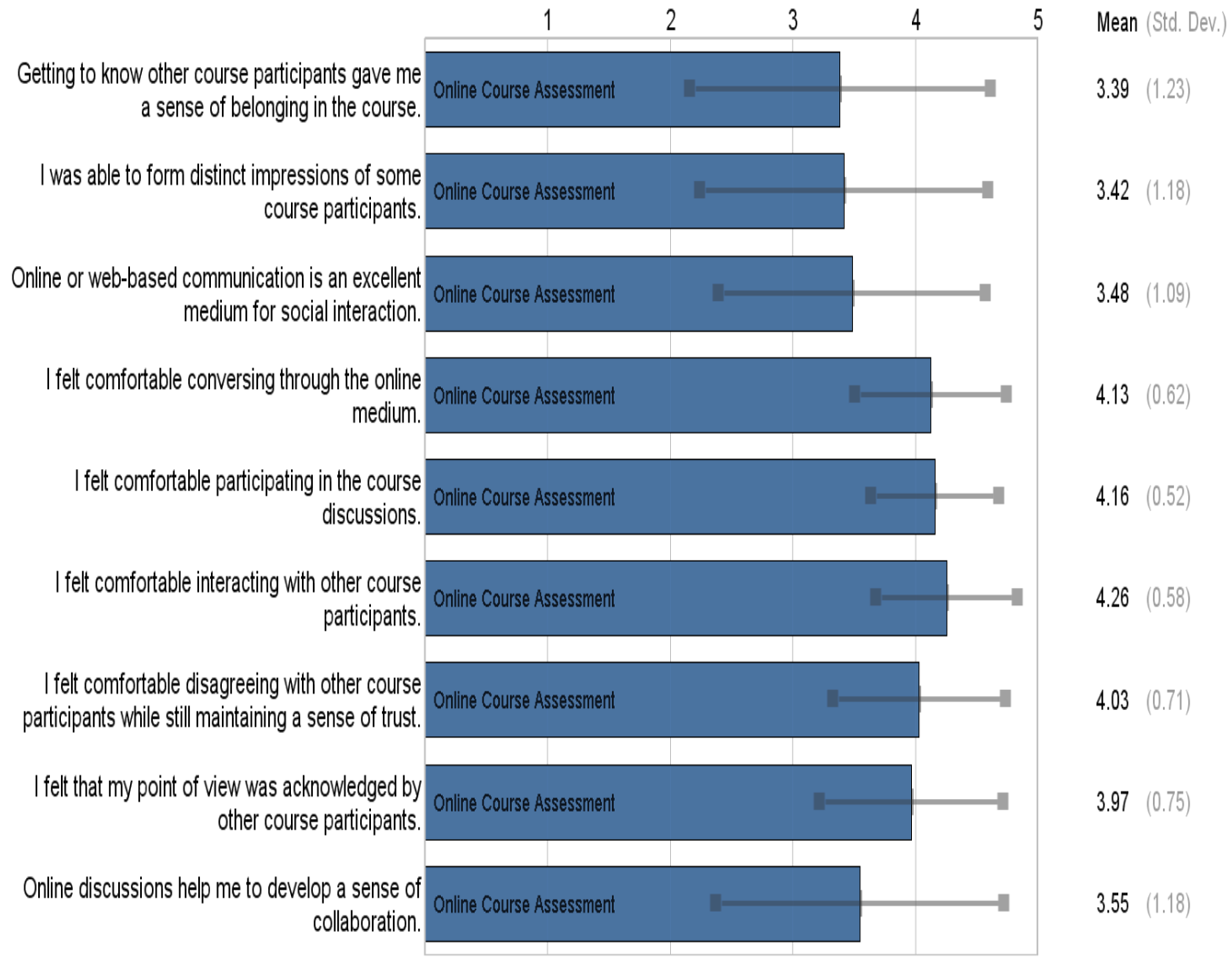
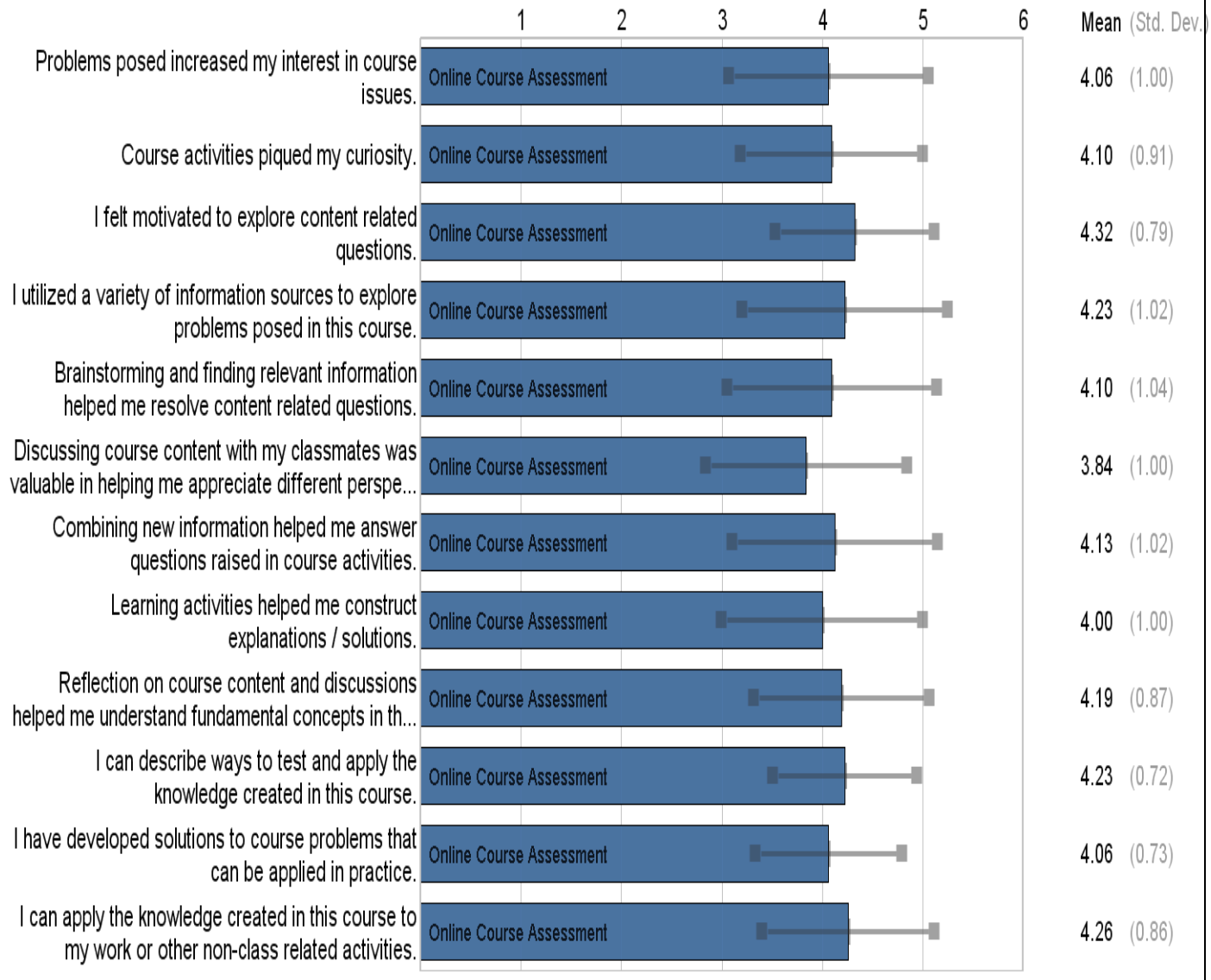


Table 3

Aggregate Score of Cognitive Presence as Reflected by Candidates' Responses

The following statements relate to your perceptions of "Cognitive Presence" the extent to which you are able to construct and confirm meaning "in this course. Please indicate both your agreement or disagreement with each statement and how important you think it is.



Conclusion

The data results, especially in the "Teaching Presence" which is 3.78 and "Social Presence" which is 3.87 need improvement. The instructor's course design, facilitation of discussion, and direct instruction needed to be looked at by the online teaching faculty. The result of the "Cognitive Presence" is 3.77. The result is good but can be improved. "As the college classroom changes, we have an opportunity to closely monitor and modify the teaching/learning process within that classroom. Classroom assessment provides a compelling model for realizing this opportunity" (Angelo & Cross, 1993, p. 304).

References

Arbaugh, B., Cleveland-Innes, M., Diaz, S., Garrison, & R., Shea, P. (2000). Using the Community of Inquiry framework to assess integration of new technologies in online courses. *The Internet and Higher Education, 13*(1–2), 37– 44.

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco, CA: Jossey-Bass Publishers.

Astin, A.W. (1991). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education.* New York, NY: American Council on Education/Macmillan.

Callan, P.M., & Finney, J.E. (2002). Assessing educational capital: An imperative for policy. *Change, 34*(4), 25-31.

Ornstein, A.C., & Hunkins, F.P. (1998). *Curriculum foundations, principles, and issues* (3rd ed.). Needham Heights, MA: Allyn & Bacon.

Flint, W. (1993). *Classroom Assessment Techniques (CATs) for online instruction*. Retrieved from http://drwendyflint.com/sitebuildercontent/sitebuilderfiles/onlineassessmentjournal.pdf