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Onward in higher education: Business faculty perspectives on authentic assessment

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Keywords

College of Business, authentic assessment, assessment, Bloom's taxonomy, higher order thinking, practical evaluation



Onward in Higher Education: Business Faculty Perspectives on Authentic Assessment

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Abstract

This mixed-method study explored business faculty's perspectives on drawbacks and benefits associated with authentic assessment at 10 R1 Midwestern universities. In search of solutions, faculty were also asked to provide recommendations for implementing the authentic assessment. Quantitative and qualitative findings suggest that most business faculty favor assessment strategies that promote higher-order thinking and real-world practices. However, ongoing faculty professional development opportunities and reconsidering the assessment culture of higher education are needed to make this critical shift towards authentic assessment.

Keywords: College of Business, authentic assessment, assessment, Bloom's taxonomy, higher order thinking, practical evaluation

Introduction

The United States economy is experiencing unprecedented turmoil due to several factors, such as the effects of the COVID-19 pandemic. Americans are again reminded of how much their economy is intertwined with other global issues. This is happening simultaneously where higher education itself has been facing challenges in the United States (Hersh & Merrow, 2015), being scrutinized for its worth, value, and purpose. A recent article in *The Chronicle of Higher Education* titled "The University in Ruins" simulated the current higher education to fourteenth-century monasteries that ceased to exist for sticking with the status quo (Neem, 2022). Potential students now ask themselves why they should go to college, where all the information they need is at their fingertips. Due to these contextual and historical factors, higher education institutions may ask themselves, "Where do we see ourselves in the next five, ten, or 50 years?"

While many aspects of education have evolved over the decades with the rise of technology, access, and faculty's overall awareness of social justice and equity issues (McNair et al., 2020; Museus & LePeau, 2019; Osei-Kofi et al., 2010), the pace and direction in which higher education is moving do not seem to be compatible with what it was intended to do. For example, Hersh and Merrow (2015) expressed concerns about undergraduate education, referring to it as a "situation [that] has clear implications for America's civic and economic future" (p. 10). Along the same line, Mitani (2021) emphasized that developing higher-order thinking skills in students is crucial in boosting the economy.

One aspect of education worth reinvestigating is how student learning is assessed. For example, multiple-choice exams remain a common assessment practice in undergraduate education (Kuechler & Simkin, 2010; Simkin & Kuechler, 2005; Stanger-Hall, 2012), despite their antiquity and history (Shavelson, 2010). Through these multiple-choice examples, students can recall information (Little et al., 2012); however, its usage as the sole assessment strategy may minimize students' practicing of higher-order thinking. A serious look at the United S economy and the need for a certain level of independence indicates that universities cannot afford to keep producing graduates with only exposure to lower levels of cognitive process in Bloom's taxonomy (Halupa, 2021; Marshall & Carson, 2008). See Figure 1 for a visual of Bloom's taxonomy. The ability of the citizenry to analyze, evaluate, and create is needed more than ever before.

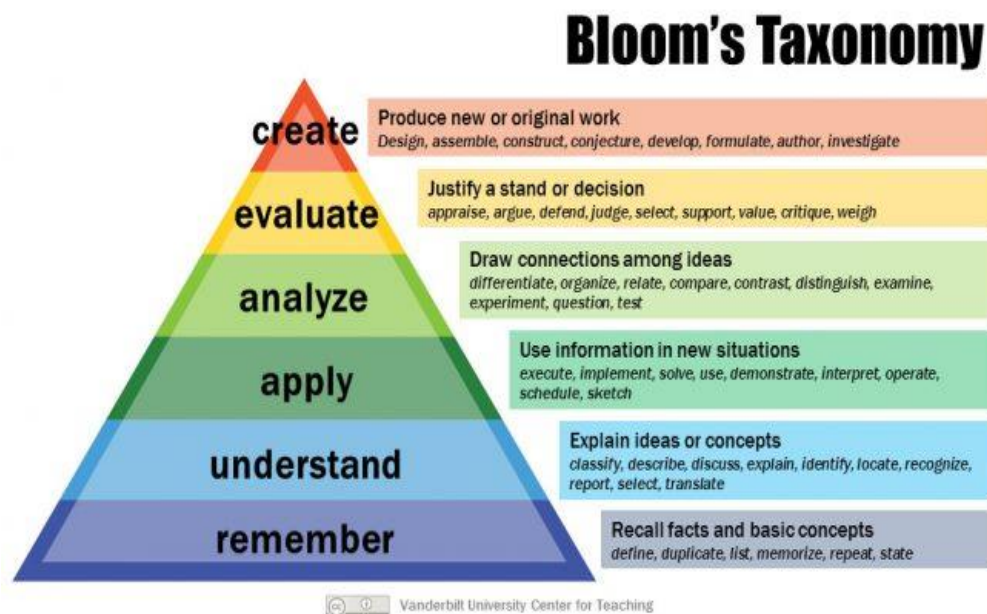
One area in which instructors assess students via multiple choice exams is in schools and colleges of business (Michlitsch & Sidle, 2002). However, the business content students learn in business school is much more complex than rote recall (Guedri, 2001; Shavers & Mitchell, 2019; Wang & Wang, 2011). Previous studies have suggested that business instructors may be open to assessing students in alternative ways, such as using clickers (Lai et al., 2015), oral exams (Burke-Smalley, 2014), and client projects (Childers et al., 2020). Students in business courses would benefit from more authentic assessments to demonstrate their learning of this complex content.

This mixed-methods research study explored the concept of authentic assessment in schools of business in higher education and some of the challenges and opportunities the faculty face in implementing such assessment. While authentic assessment is not the mere answer for

improving student learning, it is one aspect instructors could explore and give a chance to. There needs to be more literature regarding the nexus of authentic assessment and students' learning at higher levels of Bloom's taxonomy (Villarroel et al., 2018). This paper offers a preliminary investigation on this topic.

Figure 1

Bloom's Taxonomy



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Literature Review

Several authors have expressed concerns about assessment practices in higher education and how some students may be negatively impacted (Ebenstein et al., 2016; Nettles, 2019; Steele & Aronson, 1995; Verschelden & Pasquerella, 2017). Sternberg (2016) argued that the education system might produce better test-takers than actual learners. Palmer and Devitt (2007) noted that most assessments in higher education measure lower cognitive skills, such as *remembering*.

Ewell (2002) explained that no matter how assessment is defined, it is typically used more for measuring student accountability than improving student learning. Alternatively, authentic assessment has been suggested to produce better learners, leaders, and problem solvers (Koh, 2017; Litchfield & Dempsey, 2015; Mohamed & Lebar, 2017; Villarroel et al., 2018; Wiewiora & Kowalkiewicz, 2019). Assessment in higher education has a history that is important to understand.

A Brief History of Mass Examination in United States Universities

Starting in the seventeenth century, United States colleges and universities primarily used oral examinations for various assessments, even in the college admission process. In the mid-nineteenth century, written examinations became widely used in college classrooms as a new way of assessment. For enrollment purposes, each institution used to have its examination until Charles Williams, and Nicholas Butler established the practice of standardized testing for college admission across the nation (Nettles, 2019). In the early twentieth century, large-scale standardized tests found their way into the education system for learning assessment (Nettles, 2019; Shavelson, 2010).

In World War I, a large-scale examination was used for screening and grouping purposes in a norm-referenced manner, as Robert Yerkes suggested the idea of mental testing for recruitment (Gould, 1996; Powell et al., 2011). Now a controversial topic, Yerkes's strategy of comparing students to each other based on the results of their assessments was based on Binet's IQ scale. Students who scored well were placed differently in recruiting for the military compared to those who did not score as well. Originally, Alfred Binet created the IQ test in France in hopes of helping children who needed more attention in school and not labeling anyone (Gould, 1996). Unfortunately, despite his fight against stigmatizing children with lower IQ scores, the test became widely used in the United States to do precisely that: label students permanently with their abilities or disabilities.

Moving away from norm-referenced assessment, a criterion-referenced assessment later found its way to the education system. Positivists' mindset of scholars such as Learned and Wood in the twentieth century convinced other scholars that "thinking was dependent upon

knowledge and knowledge dependent upon facts" (Lagemann, 1983, p. 104), hence a need for criterion-referenced assessments. Fast forward to the 21st century, multiple-choice exams continue to be used in the education system for college admission, formative and summative assessments despite their link to racial bias and unfavorable results for minority students (Ebenstein et al., 2016; Steele & Aronson, 1995; Verschelden, & Pasquerella, 2017). Minority subgroups are believed to experience undue emotional stress in a state of comparison or traditional classroom settings (Lucietto et al., 2020; Yan et al., 2018). About learning and encouraging lifelong learners, Powell et al. (2011) showed, in multiple-choice exams, most students pick their answers through a thoughtful and reflective process rather than by guessing and explained that such assessments take knowledge building away from its constructivist purpose, suggesting there is only one correct answer for everything.

Contemporary Assessment Strategies in United States Universities

Assessment plays a significant role in formal education and student learning at the university level (Bonwell, 2010; Boud & Falchikov, 2007; Boud et al., 1999; Maclellan, 2001; McArthur, 2016; McGinnis, 2018; Taras, 2002; Wiggins, 2011). However, traditional assessment strategies associated with test scores, such as multiple-choice exams, remain the practice of choice in higher education despite its association with surface-level learning (Pereira & Niklasson, 2016; Ramsden, 1988; Struyven et al., 2005; Tang, 1992) and the increasing emphasis on diversity, inclusion, and social justice indications in universities' strategic plans (Butler, 2018; McArthur, 2016). While faculty may design and implement formative and summative assessments differently (Nel & Pretorius, 2019), Rawlusk (2018) pointed out that faculty in higher education mainly rely on giving tests rather than implementing more engaging assessment strategies. Traditionally, higher education students are assessed to determine grades (Sambell et al., 2013; Torrance, 2012). Wiggins (2011) raised awareness of fairness and equity issues associated with multiple-choice questions where wrong answer choices are supposed to distract the learner, and everyone must be assessed the same way. More awareness about other assessment strategies has influenced faculty to continue administering tests as the norm in higher education (Gilles et al., 2011; Postareff et al., 2012; Webber, 2012). Gilles et al. (2011) observed that the issue of assessment technique homogeneity exists more in more prominent universities,

where breaking the norms is difficult. Rawlusk (2018) found that faculty familiar with authentic assessment only knew a limited number of authentic assessment techniques and mainly remained unrehearsed. Similarly, Rodríguez-Gómez and Ibarra-Sáiz (2015) observed that most faculty's primary focus through administering assessments is on determining grades on theoretical aspects through assignments and tests.

Measuring authentic learning can be difficult, especially with multiple-choice exams where students can identify the correct answer from a list presented to them instead of remembering it on their own and using the information for more extensive purposes (Darling-Hammond & Snyder, 2000). Nel and Pretorius (2019) questioned whether traditional teaching, learning, and assessments would prepare the students for real-world jobs and suggested more authenticity in coursework. Rawlusk (2018) identified that an issue associated with most current assessments is the need for more feedback from the learner. In turn, it suggested that a higher level of feedback is needed for a more effective learning process. Verschelden and Pasquerella (2017) stated that “in a world in which there are serious problems to solve, we can no longer afford to have more than half of our population undereducated and under skilled” (p. 121). Nevertheless, alternative assessment practices are dismissed by instructors due to obstructing factors such as perceived time consumption (McArthur, 2016).

Recently, the COVID-19 pandemic has caused considerable changes in assessment strategies within higher education courses (García-Peñalvo et al., 2021; Panadero et al., 2022). At the onset of the global pandemic, García-Peñalvo and colleagues recommended that faculty diversify their method of assessment in order to accommodate students learning at home and via various modalities. More recently, Chan (2022) systematically reviewed the changes in higher education assessment during COVID-19 and concluded, "Teaching and assessments focus on changing from offline to online. The revision of assessment policies, therefore, is necessary to make sure that students achieve course outcomes" (p. 11). While policies continue to evolve at the institutional level, it is becoming more evident that alternative assessment approaches towards assessment are needed and has the potential to become more widely adopted in higher education.

Authentic Assessment

Grant Wiggins coined the term "authentic assessment" in 1989 to emphasize the importance of true learning associated with higher-order thinking (Koh, 2017). Wiggins (1990) wrote, "Assessment is authentic when we directly examine student performance on worthy intellectual tasks" (p. 1). Table 1 summarizes Wiggins's comparison of traditional standardized tests versus authentic assessment.

Table 1

Wiggins's Comparison of Traditional Standardized Assessment and Authentic Assessment

Traditional standardized tests	Authentic assessment
Students recognize or recall what was learned out of context	Students are effective performers
Limited to paper-and-pencil, one-answer questions	A full array of tasks
Select or write correct responses--irrespective of reasons	Craft polished, thorough, and justifiable answers, performances, or products
Standardizes objective "items."	Standardizes the appropriate criteria for scoring varied products
Validity is determined merely by matching items to the curriculum content	Validity depends, in part, on whether the test simulates real-world "tests" of ability
Are more like drills, assessing static and too often, arbitrarily discrete or simplistic elements of those activities	Tasks involve "ill-structured" challenges and roles that help students rehearse for the complex ambiguities of the "game" of adult and professional life.

While Wiggins (1990) did not completely reject the usage of multiple-choice tests for basic knowledge assessment, he opposed using standardized tests as a norm since they do not represent real problems and do not allow students to show their reasoning. Wiggins (2011) categorized standardized tests as diagnostic tools, comparing them to a medical patient's pulse, "Standardized tests have no more effect on a student's intellectual health than taking a pulse has on a patient's health" (p. 84).

Regarding assessment, Wiggins (2011) wrote, "we have lost sight of the fact that a true test of intellectual ability requires the performance of exemplary tasks" (p. 81). In addition, a study by Gault et al. (2010) found that most employers look for *experience* in the college graduates they hire, which does not likely come from completing a multiple-choice test. Similarly, James and Casidy (2018) found that students in business education expressed more satisfaction with authentic assessments, particularly those which were more career-focused. Nevertheless, Nel and Pretorius (2019) argued that many business leaders do not believe that students graduate with the required skills for the real world and that there is a need in higher education to close the gaps between business theories and practices for the students, but many faculty face difficulties doing so.

University Business Faculty Assessment Practices

In a survey of U.S. business schools, 43% of business faculty members cited tests and exams as the most effective way of determining student learning (Michlitsch & Sidle, 2002). Only 15% of faculty cited case studies, and 13% cited projects as the most effective way of determining student learning. Using a conditional process analysis, James and Casidy (2018) found that authentic assessments in business education are positively related to student satisfaction. In particular, career-oriented students viewed authentic assessment more favorably than less career-oriented students. As Michlitsch and Sidle (2002) noted, "A more thorough understanding of perceptions, beliefs, and assumptions about assessment should move us closer to improving the assessment of student learning" (p. 128). Varela et al. (2013) indicated that while tests help measure knowledge in MBA programs, they are not an accurate measurement of managerial skills and proposed a closer look into developing operationalized learning goals. There needs to be more documentation about integration and assessment processes in business

colleges where high-impact educational experiences are practiced (Shavers & Mitchell, 2019). While previous studies have investigated the use of authentic assessment in disciplines such as education (Kearney, 2013; Lam, 2015) and law (Martens et al., 2007), little-known research has involved business schools.

Methodology

This mixed-method study explored the perspectives of business college faculty on the concept of authentic assessment. The purpose of the study, survey design, and participants are explained in the following paragraphs.

Purpose and Research Questions

This descriptive study aimed to identify business instructors' perceptions of authentic assessment practices and the perceived successes and barriers to implementing them in their classes. The results of this study should assist business instructors in developing more authentic assessment practices. In addition, the universities' centers for excellence in teaching and learning may also benefit from the study results as they seek to support business instructors in their course design and pedagogical practices. Two research questions guided this study:

1. What are business faculty's perceptions of authentic assessment?
2. What successes and challenges do business faculty describe or anticipate in authentically assessing students?

Survey

The research team developed a survey with 41 questions for this exploratory, descriptive study. Qualtrics was used as a survey tool which included both the Likert scale and open-ended questions. Descriptive data statistics extracted from the quantitative part of the survey are provided in the results, followed by the themes and sub-themes identified from faculty responses in the open-ended questions. To ensure all participants were working from a common definition of authentic assessment, the survey included the following introduction:

Authentic assessment refers to evaluating real work rather than theoretical knowledge. According to Grant Wiggins (1990), "Assessment is authentic when we directly examine student performance on worthy intellectual tasks. Traditional assessment, by contrast, relies on indirect or proxy 'items'" (p. 1).

For the current study, 22 questions were used to answer the research questions. The survey consisted of instructors' perceptions of authentic assessment (12 questions) and potential successes and barriers to implementing authentic assessment (seven questions). A Likert scale (Strongly Disagree, Disagree, Agree, and Strongly Agree) was used to elicit participants' perceptions of authentic assessment. Sample Likert scale questions included "I use authentic assessments in my class" and "Authentic assessment is a good way of preparing students for the workplace." The focal points were three open-ended questions on instructors' successes and barriers to implementing authentic assessment in their classes. These open-ended questions included "Please share any drawbacks you anticipate or have experienced in authentic assessment" and "What recommendations would you make in evaluating students in higher education?" Before sending out the survey, the university's institutional research board approved the study.

Participants

Surveys were sent to 1,992 business professors at ten research-intensive universities in the Midwest. Purposive sampling (Merriam, 2015) was used to elicit the perspectives of business faculty at highly rated programs within research-intensive universities. The email addresses for these faculty members were obtained from their publicly available university websites. Ninety-four business faculty members responded with a response rate of 4.71%; however, not all participants chose to complete every survey question. Of the 94 participants, 39 responded to at least one open-ended question; Table 2 demonstrates the participants' demographics and frequency distribution.

Table 2*Frequency Distribution for Participant Demographics*

	<i>n</i>	% of sample
Gender (n = 62)		
Male	36	58.6
Female	26	41.94
Academic Ranks (n = 63)		
Lecturer	9	14.29
Senior Lecturer	10	15.87
Assistance Professor	7	11.11
Associate Professor	9	14.29
Professor	16	25.40
Clinical Associate Professor	4	6.35
Adjunct Faculty	1	1.59
Fixed-term Faculty	5	7.94
Instructor	2	3.17
Total Years of Teaching in Higher Ed. (n = 64)		
0-5	11	17.19
6-10	11	17.19
11-15	11	17.19
16-20	8	12.50
21-25	10	12.63
26-30	4	6.25
31-35	3	4.69
36 or Higher	6	9.38
Age (n = 64)		
Under 21-29	0	0
30-39	12	18.75
40-49	16	25.00

50-59	19	29.69
60-69	15	23.44
70 or Older	2	3.12
Tenure Status (n = 64)		
Non-Tenure Track	36	56.25
On-Tenure Track	7	10.94
Tenured	21	32.81
Teaching Load (n = 64)		
Part-time	6	9.38
Full-time	58	90.63
Taught at least one class in the past three years (n = 64)		
Yes, I have	64	100
No, it has been more than three years	0	0

Data Analysis

The research team used a thematic model from Braun and Clarke (2013) to analyze the responses to the open-ended questions. First, the lead author exported the qualitative data from the open-ended questions within the survey. Second, the lead author reviewed the qualitative data collected in a single Word document. Third, the lead author generated initial codes throughout the Word document. Sample codes included "time-consuming" and "grading issues". Fourth, the lead author generated themes from the list of codes. For example, the "time-consuming" code and the "grading issues" code were initially combined to create "logistical obstacles." Fifth, the lead researcher prepared a thematic outline that included themes and sub-themes. For example, two sub-themes of "logistical obstacles" were "time and grading." Finally, the lead researcher used thick descriptions to add richness and clarity to the readers by providing several direct quotes from the participants (Wertz et al., 2011). Finally, to establish trustworthiness, the second researcher acted as a peer debriefer (Lincoln & Guba, 1985) by looking at the lead researcher's thematic outline compared to the raw qualitative data. The peer debriefs combined several themes and enhanced thick descriptions for each theme.

Results and Findings

The results section includes data analysis of the two research questions mentioned above. The quantitative data answer the first research question. The second research question answered the quantitative and qualitative data with some of the participants' quotes included. Since survey questions were optional, not all participants answered all questions. However, the number of responses for each Likert scale question ranged from 65 to 83. In addition, between 30 and 35 participants responded to each open-ended question.

Research Question 1

To understand business faculty's current assessment practices and their perception of different assessment effects on students, results from 12 Likert scale survey questions were used.

Faculty responses to questions about their experiences with authentic assessment varied. Descriptive data showed that only 16% of the respondents said they already knew the definition of authentic assessment before seeing it on the survey. Interestingly, 75% said they do use authentic assessment in their class. Over 52% give several multiple-choice or T/F exams to their students throughout the semester, and 45% said that their exams require proctoring. Nevertheless, the effectiveness of multiple-choice exams is questioned by the faculty, with over 62% wondering about the effectiveness of such assessments in student learning. Faculty also shared their perception of student preparedness for the job market, and only 29% thought multiple-choice exams would prepare students for the job market and professional work. The survey also included questions about quality test writing skills. About 66% of the respondents indicated they had not received any extensive training on how to write quality test questions. Simultaneously, 70% did not trust the publishers' test banks to consist of well-written questions. Refer to Appendix A to see details about Bloom's taxonomy's educational objectives. Without mentioning Bloom's Taxonomy, faculty were asked to respond to questions about their perceptions on the cognitive evaluation level of multiple-choice questions. Most faculty agreed that multiple-choice questions are more suitable for remembering facts and details, and only 35% agreed that multiple-choice questions stimulate higher-order thinking. Regarding authentic assessment, zero out of 65 faculty disagreed that authentic assessment is a good way of preparing students for the workplace. Not all faculty thought implementing authentic assessment was doable in their courses, but a 62% majority thought it was indeed doable.

Research Question 2

To understand business faculty's current or anticipated successes and challenges in authentically assessing students' results, seven Likert scale questions and three open-ended survey questions were used. For example, sample Likert scale questions used to answer research question 2 in this study included "The number of students I have each semester influences the type of assessments I use" and "I have received extensive training on how to write quality test questions."

Class size was perceived as an underlying factor, as 81% of the faculty respondents agreed that the number of students they have each semester influences their assessments. Designing class projects was perceived as requiring more time, and 74% said they would design more projects for students if they had more time and fewer students. More administration support was also expected from over half of the respondents (54%) to design more projects for students—access to technology. Collegial support was not prohibiting issues in creating more projects. Professional development for faculty on test-writing showed inconsistencies, and 66% of the respondents disagreed that they had received extensive training on writing quality test questions. Open-ended questions were also analyzed. The authors found two common themes in drawbacks, one common theme in benefits, and one common theme in the recommendations from the participants.

Drawbacks of Doing an Authentic Assessment

Faculty were asked to comment on the drawbacks of authentic assessment. Two common themes of *logistical obstacles* and *institutional obstacles* emerged from the responses. Each theme had its sub-themes, as explained in the next section.

Logistical Obstacles

Logistical obstacles had to do with designing and delivering authentic assessments. Faculty's concerns were mainly over such assessments' time constraints and grading practices. It needs to be clarified if the comments were perceived or experienced.

Grading Projects Takes Time

One factor repeatedly mentioned in participants' open-ended responses as a drawback was the notion of time. In most comments, time was associated with the evaluation piece and the ambiguity of the grading process in authentic assessments. While it is not clear from the

responses if they are based on anticipation or experience, drawbacks included comments such as "time is probably the biggest - finding the right tools and then being able to grade" or "grading projects takes a tremendous amount of time/effort" In addition to time commitment, faculty are unsure how to be fair in grading as one mentioned "Time commitment and student responses to variability in grading" The next section discusses concerns about grading itself.

Grading Is So Subjective

In addition to time commitment, concerns were raised by the faculty on grading logistics behind evaluating authentic assessments from start to end: "I struggle between grading the output and grading the effort put into it" Faculty were unsure how evaluating and grading authentic assessments could or should take place since that would cause a shift from the well-accepted positivist approach to a student constructivism approach. One participant captured this concern by writing, "There are challenges with it being an assessment that students are not used to receiving. They regularly search for the "correct" answer instead of engaging in process discussions" Some faculty saw grading as subjectively problematic "grading becomes a challenge because it seems to be subjective... which creates problems" Some faculty could not bypass the grade variance expectation of their university: "It is also more difficult to get enough grade variation with authentic assessment, so removing the expectation for variance in grades would make this more feasible" This relates to the issue of status quo explained in the next section.

Institutional Obstacles

Institutional obstacles had more to do with decisions outside of the faculty's control and the overall culture of higher education. For example, in authentic assessments, faculty's concerns pointed out the class size and a cultural shift as needed in teaching and assessing.

Class Sizes Are Too Big

The concern with class size was also evident in the quantitative segment of the survey. In the qualitative part of the survey, several participants elaborated on the issues associated with class size and authentic assessments. For example, participants wrote comments such as "hard to scale when class size increases" or "doing authentic assessment at scale is resource intensive." Faculty reported designing group activities to overcome issues associated with large class sizes. While group work is a practical strategy, faculty may need more professional development in

designing and handling issues. One faculty participant who implemented group work said, "my projects have students work in groups, which goes well...until it doesn't" another participant listed two other issues following class size: "Class sizes are too big, qualified TAs are hard to find, students resist a different way of succeeding" This also speaks to the issue of status quo that has emerged as another sub-theme.

The Power of Status Quo

Implementing an out-of-norm assessment strategy in higher education was seen as a difficult task by the faculty and a drawback. As one participant wrote, "The education system still values summative assessment rather than a demonstration of competency through performance The drawback is that most departments prefer to keep things the way they are and have been Status quo is real" Faculty seemed to feel somewhat powerless in going about changing the assessment culture in a way that is accepted by all stakeholders Changing the culture could work with incentives by the leaders, but authentic assessment "is not incentivized at R1 institutions," one participant wrote, universities still demand traditional grades on students' transcripts. Exams serve two purposes: (a) assigning a grade relative to other students and (b) giving the students one more opportunity to learn the material. Concerns also included students' lack of accountability and expectations of being constantly assessed as part of their learning process, "Yes, feedback is important, but the big problem is that we've conditioned students to expect assessments of everything."

Some other responses revealed an inconsistent understanding of authentic assessment among institutions. In general, concerns included "We don't know how to do it and therefore don't construct assessments that are valid to anything but our grade distribution targets" or "Not sure what it is" Those who were savvier on the topic advocated more support for their colleagues "I use projects with companies, and I think many faculty not only need support to make those connections but training on how to maintain those relationships over time" On the contrary, preparing students for change in assessment was also suggested, "Concerns with authentic work, just as with project-based and service learning, include how the students are being prepared and how they are being encouraged to apply concepts and reflect on learning."

Benefits of Authentic Assessment

Faculty were asked to comment on the benefits of authentic assessment. One common theme of *meaningful learning* emerged from the responses, which hold a subset of themes of *higher-order thinking*, *relevancy*, and *boosted competencies*, explained in the next section.

Meaningful Learning

Faculty believed more meaningful learning might happen because of authentic assessment. It is evident in faculty's comments that authentic assessment would engage students in higher-order thinking and is more relevant than students' schoolwork.

Higher Order Thinking

Authentic assessment would allow for better demonstration of student understanding of the course materials as one faculty commented "Permits students to put concepts into practice to demonstrate that they comprehend course material" Another faculty reminded us of the big picture in higher education writing "The point of higher education is not to memorize a textbook Students need to know how to apply skills to new contexts, to exercise judgment, and to keep teaching themselves after the class is over Using real data and situations in more open-ended assessments stimulates this sort of learning more than closed-form multiple choice questions" This thinking aligns well with Bloom's taxonomy, demonstrated in Figure 1, where it is believed students' experiences beyond just understanding and into applicational opportunities result in better learning and higher order thinking Faculty suggested this type of learning may also be more rewarding to students as evident in comments such as: "Students enjoy & appreciate hands-on experience Students who "figure it out" thrive and prosper" or "Feels more "real life", students are more engaged, students can get creative and they create something that motivates or helps them as opposed to satisfying my needs or expectations" Higher order thinking was associated with more success in future careers in one of the comments "It encourages higher order thinking and helps with career preparation" Faculty also expressed several thoughts about increased students' engagement with authentic assessments such as "Authentic assessment benefits the students more as it requires student active engagement in identifying the problem and creating solution It allows for creativity and students input in the learning process", or one said "I think students learn the material with greater depth Authentic assessment requires them to engage with materials in a much deeper manner".

Relevancy and Boosted Competencies

Faculty shared thoughts on how learning can be more relevant inside and outside of college through authentic assessments and how it "Connects the learning objectives of the course to skills that can be specifically applied outside the course"; it "permits students to put concepts into practice" For many students, authentic assessment could answer the infamous question of *why do I have to know this?*, as participants summed it up "It matches expectations in the real world" and referred to authentic assessment as "Realistic, prepare students for the workplace, more wholistic [sic] evaluation."

In addition to making the course learning outcomes relevant, faculty saw benefits in doing authentic assessments as boosting students' competence because, as one participant said, it "develops analytical and problem-solving skills; seems relevant to students; improves their ability to talk about applications of the material," faculty felt "authentic assessments help prepare our students to be good practitioners."

Faculty Recommendations for Implementing More Authentic Assessment

The final segments of the survey asked faculty to share their recommendations on how students in higher education should be evaluated. In responses, emphasis was given to more precise student learning outcomes as the basis and more hands-on learning assignments. While several comments supported the need for lower-level assessment practices for students to understand the basics, faculty saw value in doing various types of assessments to meet the needs of all students, as one comment suggested, "It is important for students to have a strong foundation (knowledge or theories and terminology), but also that they were able to build on that foundation through the application."

Assessment Culture in Higher Education Calls for a Review

Faculty see flaws in the existing evaluation and grading system but are still determining how challenging such a firmly entrenched issue should be. Employers need to see the current grading system as a usable configuration, and grading inflation is not helping the issue either. In response to "what recommendations would you make in how we should evaluate students in higher education," faculty's opinions covered a wide range of essential issues depicting the big picture in higher education. Three main themes emerged from the faculty's recommendations for setting different learning outcomes, switching to a more pragmatic evaluation system, and giving

more autonomy to faculty when it comes to assessments and evaluation. Table 3 includes the themes and several excerpts of faculty's quotes associated with the three themes:

Table 3

Themes extracted from faculty recommendations for implementation of authentic assessment

Themes	Representative Quotes
Set Different Learning Outcomes	Greater use of practical hands-on assessment of understanding versus exams.
	We need to assess in a way that stimulates learning instead of regurgitating knowledge. Furthermore, we need to assess (in my areas) the outcomes of students experimenting with the ideas they are learning - as opposed to whether they understand the ideas in theory.
	Application is key.
	Re-focus student's efforts on learning content and how to apply it across a broad spectrum of situations and place less emphasis on GPA
	Too much effort is spent trying to make it impossible for students to cheat on multiple-choice tests when we could instead engage in assessments that are more beneficial to the students and harder for them to cheat.
Switch to a Practical Evaluation System	No grades
	Focus more on completing experiential exercises, and proficiency or expectations exceeds, meets, or fails to meet with an explanation.
	1xxx level courses should all be Pass/Fail.
	Award grades based on effort and growth and give separate evaluations of student work that could include creativity, teamwork, organizational skills, and sophistication. Employers would see two sets of assessments.
	Stop giving so many "A" grades and make grades more informative of performance by ceasing to "inflate" them.
	Less reliance on textbook publishers created questions. Shut down sites like Course Hero and Chegg.

<p>Give More Autonomy to Faculty</p>	<p>Student evaluation matters less than it used to in higher education. At my university, we are not allowed to fail students. We are also on a forced curve with a B+ median in core classes and an A- median in elective classes. We are encouraged to give at least a B. What is the point of assessment when everyone will get the same grade regardless? We no longer tell students that hard work pays off; they know it. As a result, they put in minimal effort even though we are supposedly an "elite" institution. Therefore, I care much less about assessment than I did at the start of my career.</p>
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Discussion and Implications

The assessment of students in higher education has been a long-term discussion. While faculty want the best learning experiences for their students, challenges exist in planning the ideal course of action. The authors of this article do not entirely oppose multiple choice exams as some faculty participants also believed multiple choice exams are suitable in certain circumstances, particularly in recalling information or demonstrating understanding of a subject. *"Theory is still critical,"* as one participant noted. Multiple-choice exams are also suitable in introductory courses or early stages of complex learning processes. One participant commented that Bloom's taxonomy's reference to lower cognitive practices is essential to deeper learning and mastery of the subject: "homework and multiple-choice exams are useful for developing and assessing basic skills." Another participant wrote: "My course is an introduction to a topic area. I teach them many little ideas under one big umbrella and hope a few stick in their work life, exams help ensure they understand the specific content." While applicational aspects of learning are accepted as a vital part of learning in higher education, dismissing multiple-choice exams may still be unimaginable to many due to obstacles mentioned earlier in the article. One participant, for example, presented an alternative solution in reaching higher-order thinking using multiple-choice exams, suggesting "authentic assessment is partially due to the way the content is taught. It needs to be taught in the context of the content application that a multiple-choice question can measure."

While multiple-choice can serve a purpose in business courses, this assessment modality becomes problematic when it is the sole assessment strategy in a course, including the summative assessment. In addition, an apparent disconnect is present when multiple-choice exams are heavily used in upper-level college courses with juniors and seniors who should be experiencing more advanced cognitive challenges and feeling prepared to confront real-world's problems as soon-to-be professionals in the field.

A Need for Professional Development

Discussion about authentic assessment and its potential to enhance student learning should occur at the micro (departmental) and macro (institutional) levels. The results from the current study suggest that many faculty see the need to implement more authentic assessments but need support in implementation. As one faculty commented, "High-quality assessment requires resources; without an honest commitment from the leadership, MC will continue to predominate because it can be graded so quickly" There were others who not only were unsure about the notion of authentic assessment but also expressed skepticism by sharing comments such as "We do not know how to do it and therefore do not construct assessments that are valid to anything but our grade distribution targets," "I am not sure how it would be done," "Just another name," or "Not sure what it is."

Business colleges play a crucial role in U.S. economy and the challenges in today's economy may be calling for some educational reforms in our institutions. The current study surveyed business faculty in 10 R1 universities in the Midwest, and could provide relevant information to department heads, centers for excellence in teaching and learning, and decision makers in the upper administration to better understand challenges the business faculty are facing when trying to involve students in more profound and more relevant learning. Depending on institutional strategic plans, the result of this study may provide knowledge needed to remove obstacles for faculty and provide necessary support and professional development on student learning. The sooner we accompany our students to higher levels of Bloom's taxonomy's cognitive process, the better the students will be prepared to face the challenges of the world to provide solutions. Based on the results of this study, faculty would greatly benefit from professional development opportunities in authentic assessment to better understand its purpose and logistics. While multiple-choice questions may be used to elucidate facts and basic concepts,

undergraduate students in higher education should have ample chances to analyze, evaluate, and create.

Future Research

A limited number of known empirical studies focused on assessment practices in colleges of business in recent years have been published in the United States. Future research is also needed to study business schools' undergraduate students' perspective after graduation regarding school assessment strategies and their impact on their career. Students' perspective on different assessment strategies while in school can also provide important insight as faculty also expressed concerns about cheating. One participant commented, "cheating is still a problem in business schools, and probably always will be. Not sure why you did not address it in this survey". Finally, conducting similar research beyond business colleges is needed.

Limitations

The current study involved participants from within colleges of business at research-intensive universities. Three significant limitations affected the results of the study. The first one is that about 83% of the faculty respondents did not think they knew its definition or had just heard the term. However, 75% said they use authentic assessment in their class. This dichotomy may be due to the fact that the definition of authentic assessment was provided in the survey and although the faculty might have not heard the term, they did use it to some degree. The second limitation is that the Likert scale lacked an "I don't know" and "Not applicable" options. As a result, participants might have marked "Neither agree nor disagree" instead. Due to this limitation, the numbers from the middle column in the Likert scale were not used in the descriptive data towards either agreements or disagreements. The third limitation is that not all questions had the same number of responses. The number of participants varied for different questions.

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Appendix A

#	Field	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	Total
1	I use authentic assessments in my class.	1.45% 1	11.59% 8	11.59% 8	50.72% 35	24.64% 17	69
2	I feel authentic assessments are too time-consuming.	5.80% 4	28.99% 20	40.58% 28	23.19% 16	1.45% 1	69
3	The number of students I have each semester influences the type of assessments I use.	7.25% 5	4.35% 3	7.25% 5	28.99% 20	52.17% 36	69
4	I assess the students the way I was assessed in college.	21.74% 15	42.03% 29	11.59% 8	21.74% 15	2.90% 2	69
5	We have sufficient professional development opportunities and support for teaching practices at our university.	2.90% 2	17.39% 12	11.59% 8	31.88% 22	36.23% 25	69
6	I give several multiple-choice or T/F exams to my students throughout the semester.	33.33% 23	8.70% 6	5.80% 4	27.54% 19	24.64% 17	69
7	My students receive feedback when they get a question wrong in an exam.	4.41% 3	16.18% 11	17.65% 12	33.82% 23	27.94% 19	68
8	Sometimes I wonder about the effectiveness of multiple-choice questions in student learning.	5.80% 4	11.59% 8	20.29% 14	27.54% 19	34.78% 24	69
9	I would design more projects for students, if I have more time and less students.	2.94% 2	10.29% 7	13.24% 9	38.24% 26	35.29% 24	68
10	I would design more projects for students, if I had more administration support.	7.35% 5	16.18% 11	22.06% 15	42.65% 29	11.76% 8	68
11	I would design more projects for students, if I had the appropriate technology.	18.84% 13	26.09% 18	33.33% 23	17.39% 12	4.35% 3	69
12	I would design more projects for students, if I had the support of my colleagues.	31.88% 22	20.29% 14	24.64% 17	15.94% 11	7.25% 5	69
13	Multiple-choice exams prepare students for the job market and professional work.	28.99% 20	18.84% 13	23.19% 16	28.99% 20	0.00% 0	69
14	I trust that publishers' test banks consist of well-written questions.	42.03% 29	27.54% 19	17.39% 12	13.04% 9	0.00% 0	69

Showing rows 1 - 14 of 14

#	Field	Never	Sometimes	About half the time	Most of the time	Always	Total
1	Tests / Quizzes	6.25% 4	23.44% 15	15.63% 10	20.31% 13	34.38% 22	64
2	Formal Essays	34.38% 22	28.13% 18	7.81% 5	17.19% 11	12.50% 8	64
3	Projects	6.25% 4	23.44% 15	12.50% 8	17.19% 11	40.63% 26	64
4	Presentations	9.38% 6	39.06% 25	7.81% 5	21.88% 14	21.88% 14	64
5	Peer Assessment	28.57% 18	34.92% 22	9.52% 6	11.11% 7	15.87% 10	63
6	Interviews	69.84% 44	20.63% 13	6.35% 4	1.59% 1	1.59% 1	63
7	Exhibitions and Demonstrations	64.52% 40	16.13% 10	4.84% 3	9.68% 6	4.84% 3	62
8	Other	6.25% 1	12.50% 2	18.75% 3	31.25% 5	31.25% 5	16

Showing rows 1 - 8 of 8