Experience Matters, But So Do Limited Resources: Faculty Perceptions of Their Self-Efficacy and Controllability in Assessing Student Learning

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This qualitative content analysis explored the ways in which faculty articulated their self-efficacy and controllability in assessing student learning through a review of one institution's program-level Assurance of Student Learning Assessment Activities and Results Reports. Content analysis techniques were used to examine 33 reports using perceived behavioral control as the conceptual framework of the study. Findings indicate: (1) experience matters in the self-efficacy of assessing student learning and (2) limited resources hinder controllability in assessing student learning. This study provides an "insider" perspective and guidance to higher education institutions seeking to bolster faculty perceived behavioral control in assessing student learning.

Keywords: student learning assessment, faculty, perceived behavioral control, qualitative content analysis

INTRODUCTION

Assessing student learning in the higher education context is a multi-faceted process. It requires institutional streamlined systems, broad understanding of the ways in which to authentically assess student learning in individual classrooms and across the curricula, and faculty leadership and buy-in. While faculty desire to lead these efforts, the possibilities of what and how to assess appear to be endless (Bryan & Clegg, 2019; Condon et al., 2016; Davies & Hadden, 2002; Richman & Ariovich, 2013). An understanding of the ways in which faculty articulate their ability to assess student learning may provide higher education institutions with guidance as they implement assessment systems across the curricula. Thus, the purpose of this qualitative content analysis (Schreier, 2012) of one institution's program-level Assurance of Student Learning Assessment Activities and Results Reports is to describe faculty self-efficacy and controllability in assessing student learning through the conceptual framework of perceived behavioral control (PBC) (Ajzen, 2002; Ajzen & Madden, 1986; Hardin-Fanning & Ricks, 2017; Sparks et al., 1997). The framework provides a structure for identifying pragmatic issues of concern and

strengthening faculty perceptions of their self-efficacy and controllability in assessing student learning. The research questions for this study are:

- 1. How do faculty describe their ability to assess student learning?
- 2. What challenges do faculty experience in assessing student learning?

LITERATURE REVIEW

A dearth of research exists on faculty articulation of their ability to assess student learning as assessment beyond individual courses is a relatively new requirement for faculty. Faculty are curricular experts, but often they possess little experience in matters of pedagogy and assessment so many campuses struggle with developing a culture of assessment that extends from individual courses to programs to the institution. Yet, the research on student learning assessment consistently focuses on the need for facultydriven development and maintenance of assessment systems, and the importance of strong campus assessment leadership (Bryan & Clegg, 2019; Condon et al., 2016; Davies & Hadden, 2002; Fuller, 2019; Lane et al., 2015). To support faculty in these ever-expanding curricular roles, it is imperative that campus administrators provide training and incentives for their full participation in assessment activities, which include helping them understand the ways in which assessment improves student learning (Condon et al., 2016; Fulcher et al., 2014; Hutchings, 2010; Powell, 2011). It is also vital for institutions to demystify the anxiety that weaknesses identified in student learning data and processes will result in punitive repercussions for faculty, which is all too often shared as an assessment fear (Davies & Hadden, 2002; Kuh & Ewell, 2010). Additionally, trainings and other professional development opportunities cannot only be offered under the threat of accreditation as it sours faculty interest and participation in these efforts (Andrade, 2011; Condon et al., 2016; Fuller, 2019; Richman & Ariovich, 2013).

To counter faculty feeling unprepared or overwhelmed by the requirement to assess student learning and marshal assessment systems, various strategies are instituted by campus administrators, such as providing assessment liaisons and consultants to bolster department and faculty efforts, offering assessment trainings and support materials such as key assignments and model rubrics, and focusing on dispelling misconceptions about assessing student learning (Andrade, 2011; Bryan & Clegg, 2019; Chacon, 2014; Condon et al., 2016; Hutchings, 2010; Kuh et al., 2015; Lewis & Swerdzewski, 2009; Richman & Ariovich, 2013). These strategies often are staged to increase communication flow and to ensure faculty have adequate time and resources to engage purposely in student learning assessment processes and support the success of all students (Condon et al., 2016; Kuh et al., 2015; Rickards & Stitt-Bergh, 2016). When these strategies fail or are poorly implemented faculty often consider student learning assessment to be an affront to their academic freedom and autonomy (Andrade, 2011; Champagne, 2011) or as a distraction to their already heavy workloads (Deneen & Boud, 2014).

The Liberal Education and American Promise (LEAP) Essential Learning Outcomes Framework was designed to aid in easing the burden on faculty to design, implement, and maintain student learning assessment systems (Finley, 2012; McConnell & Rhodes, 2017; Rhodes & Finley, 2013). The LEAP framework is organized into four broad areas: (1) knowledge of human cultures and the physical and natural world, (2) intellectual and practical skills, (3) personal and social responsibility, and (4) integrative and applied learning. The framework was established to promote the use of essential learning outcomes, principles of excellence, high-impact practices, authentic assessments, and the use of students' signature work in student assessment data. The Association of American Colleges and Universities (AAC&U) adopted the LEAP framework in 2005 and created Valid Assessment of Learning in Undergraduate Education (VALUE) rubrics in collaboration with faculty and other educational professionals from over 100 higher education institutions. The rubrics provide guidance on the skills, knowledge, and experiences in which all college graduates should gain proficiency prior to graduation, regardless of their major. VALUE rubrics were created for each of the LEAP framework areas and were tested for validity and reliability at over 150 associate and bachelor's degree awarding institutions (AAC&U, 2015; Gray & Phillips, 2019; McConnell & Rhodes, 2017).

Resources and best practices aligned with the LEAP framework and VALUE rubrics abound for faculty and higher education institutions working on improving and deepening their assessment of student

learning. For example, Finley (2012) offered several recommendations for institutions to improve their student learning assessment systems in classrooms and across the curricula, all of which were supported by the LEAP framework. She endorsed the use of direct assessment methods of student learning with instructor- developed rubrics; the inclusion of authentic, dynamic, student-owned, multidimensional, reflective, and versatile assignments; and e-Portfolios in which students demonstrate their growth over time. Finley (2012) also recommended student participation in at least one high-impact practice per academic year, to include first-year seminars, learning communities, service-learning courses, undergraduate research opportunities, and a disciplinary capstone experience.

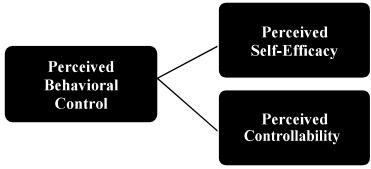
CONCEPTUAL FRAMEWORK

To guide this study, perceived behavioral control (PBC) (Ajzen, 2002; Ajzen & Madden, 1986; Hardin- Fanning & Ricks, 2017; Sparks et al., 1997) was applied as the conceptual framework. Frameworks build upon a foundation of established knowledge, offer logical explanations for the relationships observed, and reveal new understandings about a phenomenon (Anfara & Mertz, 2014). PBC enunciates the web of theoretical propositions that inform the study and the key components that are likely to factor into the ways in which faculty articulate their ability to assess student learning. Thus, PBC focuses on one's ability to perform a particular behavior and includes two distinct components: perceived self-efficacy (ease or difficulty of performing a behavior) and controllability (beliefs about the extent to which performing the behavior is the individual's choice/decision) (Ajzen, 2002). Hardin-Fanning and Ricks (2017) noted:

Performance of a behavior is influenced by the presence of adequate resources and ability to control barriers to behaviors. The more resources and fewer obstacles individuals perceive, the greater their perceived behavior control and the stronger their intention to perform behaviors. (p. 46)

Bandura's (1986, 2005) work on self-efficacy and social cognitive theory serve as the foundation of PBC. The framework provides a structure for identifying pragmatic issues of concern and strengthening faculty perceptions of their self-efficacy and controllability in assessing student learning. Developing an understanding of these issues may provide higher education institutions with guidance as they implement student assessment systems across the curricula. Figure 1 illustrates the hierarchical model of PBC with two separate and lower-level components of perceived self-efficacy and controllability. PBC served as the foundation of the deductive data analysis process and it was employed in consideration of the implications of the study (Anfara & Mertz, 2014).

FIGURE 1 HIERARCHICAL MODEL OF PBC



Note. Adapted from "Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior," by I. Ajzen, 2002, *Journal of Applied Social Psychology*, 32(4), p. 679.

METHODOLOGY

Research Design

A qualitative content analysis research design (Schreier, 2012) grounded by PBC was utilized to explore the ways in which faculty articulate their ability to assess student learning. The conceptual proposition that one's ability to perform a particular behavior is influenced by their perceived self-efficacy and controllability underpinned the approach of the study. Content analysis methods allowed for the systematic data reduction of the publicly available program-level Assurance of Student Learning Assessment Activities and Results Reports by applying precise rules of coding by the conceptual framework (Krippendorff, 2018; Schreier, 2012). The design promoted replicable techniques as trends and patterns in the data were explored and described. Its method dates to the 1950s in the academic discipline of communication (Berelson, 1952) and is now common across the social science fields (Krippendorff, 2018). A content analysis of the assessment reports permitted the consideration of multiple perspectives on the ways in which faculty express their ability to assess student learning, and particularly the challenges faced in doing so (Schreier, 2012). The research questions for this study are:

- 1. How do faculty describe their ability to assess student learning?
- 2. What challenges do faculty experience in assessing student learning?

Research Site

This study was conducted at a comprehensive, regional university in the Mountain West. The university encompasses six schools and colleges, to include business; education; engineering; health sciences; public affairs; and letters, arts, and sciences, offering 36 undergraduate and 24 graduate programs. The institution holds regional accreditation from the Higher Learning Commission (HLC), and several programs are nationally accredited. The College of Business is accredited by the Association to Advance Collegiate Schools of Business (AACSB International) and the College of Education is accredited by the Council for the Accreditation of Educator Preparation (CAEP) and the Council for Accreditation of Counseling and Related Educational Programs (CACREP). Faculty total 832, with a 16:1 student-to-faculty ratio. Full-time faculty by gender is nearly equal, but part-time faculty are 58% female and 42% male. As most institutions across the nation, the reliance on part-time, adjunct faculty has risen precipitously over the past 10 years. In fall of 2019, the enrollment was just over 12,000 students. The university is a selective institution categorized as a mixed residential-commuter campus and is one of the fastest growing institutions in the country. The student body includes nearly 30% students of color and an almost equal female-to-male ratio. The majority of students are in-state residents, with only 13% coming from out of state and less than 1% from abroad. Approximately 30% of students are eligible for Federal Pell Grants, and nearly 80% receive some form of financial aid. In 2018, the retention rate of students enrolled full time was 68%, and the six- year graduation rate was 45%.

Data Collection

All program-level Assurance of Student Learning Assessment Activities and Results Reports (assessment reports) submitted in 2018 from the College of Letters, Arts, and Sciences to the campus Assessment Office were reviewed. In total, 33 reports were examined and included a combination of undergraduate and graduate programs from a variety of academic disciplines such as natural sciences, humanities, and social sciences. A one-phase approach of data collection was performed with a maximum variation and criterion-based sampling plan (Patton, 2015). Institutional Review Board approval was unnecessary, as assessment reports are publicly available on the institution's website.

The assessment reports are completed by a faculty member who leads the assessment activities of a program. That individual may be the department chair or a faculty member who receives a small stipend or course off-load for assuming the program assessment responsibilities. The assessment reports are submitted annually and focus on the student learning outcomes, assignments/measures, and protocols outlined in the program-level Assurance of Student Learning Plans (learning plans). The learning plans

contain program- level mission statements, teaching goals, student learning outcomes, and assignments/measures designed to assess each student learning outcome, and the schedule of planned assessment activities.

Guidance relative to the development of student learning outcomes includes ensuring the outcomes are stated with action verbs, are measurable, are applicable to core curricula, and are summative in nature. The assignments/measures must be clearly related to the student learning outcome being assessed, a threshold minimum competency must be set, the target group must be identified, the scoring criteria must be included with performance indicators and details for each component, and they must provide meaningful, summative data. The finalized assignment/measure must be included, along with the faculty responsible for administration, compilation, and analysis of results. Additionally, a narrative must be included that documents evidence of student learning aggregated and disaggregated and a reflection on areas of strength, as well as opportunities for improvement with an action plan to do so. The assessment reports and learning plans are reviewed by a provost-level faculty committee, and a dedicated staff member with expertise in assessment provides coaching to all faculty leading the assessment activities.

Data Analysis

A deductive coding process was employed to perform the content analysis of the program-level assessment reports (Schreier, 2012). The researchers first engaged in reflexivity by discussing the experiences, beliefs, values, and assumptions each held on assessing student learning to ensure researcher biases were exposed and considered in the data analysis process (Watt, 2007). We are all employed at various higher education institutions and hold professorship, adjunct faculty affiliation, or administrative positions; all are engaged closely in assessment efforts at their respective institutions. Next, a coding frame was developed with the PBC (Ajzen, 2002) conceptual framework in order to focus the analysis on relevant content and codes that corresponded to the main categories of faculty perceived self-efficacy and controllability in assessing student learning. The coding units were propositional, in that the text of the assessment reports were broken down to examine and describe the underlying assumptions faculty share on assessing student learning at the sentence level (Krippendorff, 2018). The deductive coding process occurred in cycles to ensure successive and deeper understanding of the meaning of the data (Miles et al., 2019).

In the first cycle of coding, each assessment report was reviewed independently using the coding frame, which allowed for direct interpretation of the factors that potentially influenced the perceived self-efficacy and controllability expressed by faculty (Schreier, 2012). This process enabled each researcher to individually draw interpretations consistent with the assessment reports before discussing preliminary findings collectively. Examples of common codes found in this cycle of coding included lack of confidence, positive faculty mindset, structural concerns, and high trust in the process. In the second cycle, similar categories of data were identified cooperatively from the overarching concepts and ideas drawn from the assessment reports in cycle one. Cross-references between the assessment reports narrowed the broad conclusions identified during the direct interpretation cycle by refining and ensuring the codes were carefully connected to the PBC conceptual framework. This was accomplished by placing all codes into the categories of perceived self-efficacy, perceived controllability, or not applicable to PBC. In this cycle, the coding frame was revisited to evaluate its logic and cogency, which was deemed acceptable and rationale (Schreier, 2012), after which the researchers transitioned to the third cycle of coding.

More precise codes were developed in the third cycle by grouping associated data, developing fuse codes, and refining the initial codes identified across the assessment reports in the first two cycles of coding. Thus, patterns in the data were amalgamated and abstracted to create a parsimonious number of codes and themes (Schreier, 2012), such as experience matters, and limited resources. The fourth cycle of coding involved evaluating the representativeness of the themes to ensure they characterized the entirety of the assessment report data, that the themes were aligned to the conceptual framework, and that the themes could be applied more broadly (Schreier, 2012). At the end of this cycle, reflexivity again occurred to ensure we were better informed of conflicting findings with respect to theme development

(Miles et al., 2019). The final two themes were solidified as a result of the 29 codes extracted from the assessment reports: (1) experience matters in the self-efficacy of assessing student learning and (2) limited resources hinder controllability in assessing student learning.

Trustworthiness

Multiple verification strategies ensured the findings were trustworthy by attending to issues of transparency, credibility, dependability, and confirmability (Lincoln & Guba, 1985; Nowell et al., 2017). In order to address transferability, thick, rich descriptions with direct quotes from the assessment reports were utilized, and data saturation occurred prior to the review of all 33 assessment reports (Patton, 2015). Saturation was achieved at the point at which no new patterns and themes were identified in the assessment reports. Credibility was attained through triangulation and cross-case synthesis of the assessment reports across programs when determining whether the themes were cases of similar or different perspectives of the faculty (Patton, 2015). Dependability was accomplished by employing Schreier's (2012) content analysis process to safeguard consistency in the findings and to evaluate the manner in which the final themes represented the whole of the assessment reports. Confirmability was established by authenticating themes in the early and late stages of the data analysis process independently and collectively, which enabled the comparison of multiple feedback loops (Miles et al., 2019). These trustworthiness methods were employed to mediate the limitations of this study.

Limitations and Areas for Future Research

All research is subject to limitations, and this study is no exception. Assessment reports were reviewed from a singular institution, which limits the generalizability of the findings. However, the design and methods can operate as a template for examining the ways in which faculty articulate their ability to assess student learning in other settings. This examination can serve as a means to analyze faculty concerns related to assessing student learning, as well as areas of strength. Additionally, as some faculty had participated in this process for years and others were new to their assessment role, expertise varied widely across the reports. Although the assessment reports offered insights into faculty beliefs around student learning assessment, the reports could not capture the entirety or complexity of the experiences and perceptions surrounding this topic. The data reflected the work of a small fragment of the faculty charged to produce these reports.

A longitudinal approach to reviewing assessment reports over time would provide a more in-depth understanding of the influence of PBC on the assessment of student learning. Analyzing data in this manner would allow for examination of the ways in which faculty and the institution combat challenges to assessing student learning in practice. Finally, the institution at which the study was conducted recently passed the regional institutional accreditation process; thus, commitment to the assessment of student learning was high. This may not be the case at other institutions, particularly among those that have not recently undergone their regional accreditation visit. Therefore, conducting a similar study at institutions that have not experienced an accreditation visit in the past year may prove fruitful.

FINDINGS

Faculty tended to view their ability to assess student learning as works in progress, with a continued need for improvement and refinement. This finding was particularly true for faculty new to submitting the program-level assessment reports. Faculty with several years of experience in submitting these reports expressed confidence in their ability to create student learning outcomes but were less confident in authentically assessing student learning. While all faculty conveyed confidence in delivering high-quality curricula, they shared concerns about providing a variety of course offerings, standardizing course content with a high number of adjuncts teaching introductory courses, and developing strong mentoring relationships with all students in an era of limited resources. Thus, following the data analysis process, two themes emerged: (1) experience matters in the self-efficacy of assessing student learning and (2) limited resources hinder controllability in assessing student learning.

Experience Matters in the Self-efficacy of Assessing Student Learning

Faculty demonstrated high self-efficacy, interest, and engagement in creating student learning outcomes but shared lower confidence in their ability to measure student learning. All programs created student learning outcomes, but only about half operated with outcomes that met the stated criteria for efficacious outcomes. For example, many were not stated with action verbs or were not directly measurable. Some faculty also shared concerns about whether their assessment efforts aligned with broader campus accreditation efforts, which appeared to cause apprehension regarding possible negative consequences for faculty. One faculty member indicated, "It is hard to find measures that actually assess the outcomes and meet the requirements of campus . . . will the campus use the results punitively on faculty?"

Only one third of programs relied on assignments/measures with well-developed scoring criteria, such as rubrics that included performance indicators and details for each student learning outcome. Program faculty with several years of experience in assessment utilized student learning outcomes over time, which allowed the longitudinal measurement of student learning, while others were consistently in need of modification and refinement. One faculty member new to submitting the assessment report noted, "This student learning outcome needs to be rewritten more clearly in the new questionnaire for incoming and outgoing students, it needs to be an expected and required competency." Faculty expressed a need to clarify this outcome and to ensure it could be measured appropriately to better understand student learning in this particular area.

In general, faculty expressed great confidence in the disciplinary content knowledge and skills required of their students, but the process for translating the requirements to an assessment measure caused a diminished sense of self-efficacy in measuring student learning. As one faculty member shared, "The demonstration of critical thinking is probably the most important student learning objective we as a department value but it is also one that is challenging to assess." Several data collection cycles were necessary to fine-tune assignments/measures before faculty were confident about their ability to authentically assess student learning. As articulated by one faculty member:

We recently developed and piloted two intentionally challenging questions that address student learning outcome one, however, the questions need to be re-evaluated due to confusion and poor performance among the students. Another survey has been identified, and this will be piloted next.

In this instance, the program adopted a measure that was administered at another institution, although its potential success in this institutional context was unknown, faculty were hopeful of its utility.

Those with well-developed assessment plans used their student learning outcomes as a feedback measure to spark essential programmatic conversations. One faculty member stated, "We continue to revise our assessment plan as the program evolves . . . this has prompted discussions among the faculty with respect to our department goals." Additionally, the assessment results inspired program faculty to reconsider individual course goals to ensure students receive the needed instruction to meet program-level student learning outcomes. As noted by one faculty member:

This is the second year we have taught our . . . [capstone] course and used our new assessment rubric . . . Based on the results of the first two years, we are re-orienting the class format and reducing the number of credits, we will use a similar rubric to assess outcomes, but intend to teach the class in a different manner. We will focus on methods of analysis and effective communication.

As indicated by another faculty member, "We're currently re-recording all the videos we use for the flipped classroom approach in that course, and we're also using end-of-course survey data . . . to formulate and implement appropriate course changes." Student assessment data also provided programs an opportunity to discuss assessment priorities. One faculty member noted, "While we would like to see

continued improvement in our students' writing skills, we are mixed on our departmental goal for this measure." Clearly, faculty were taking time to reflect critically and carefully on the purpose and value of their student learning outcomes while continuing to consider the appropriate measures for assessing student learning longitudinally.

Limited Resources Hinder Controllability in Assessing Student Learning

In the program-level student learning assessment reports, nearly all faculty shared that limited resources hindered their ability to provide a variety of course offerings, to standardize course content with a high number of adjuncts teaching introductory courses, and to develop strong mentoring relationships with all students. These shortcomings were couched as potentially weakening student learning in their programs. This actuality was clear even in programs that had effective and sophisticated assessment systems and data outcomes. Numerous faculty expressed uneasiness in their ability to offer the diversity or frequency of courses desired by students with the instructional funds at their disposal. As noted by one faculty member:

Some students do have concerns about the type and frequency in which we are able to offer courses to our graduate students but that is more of an administrative issue, beyond the departments' control [emphasis in original]. We would like to offer additional courses to our graduate students, but we simply do not have the resources/faculty [emphasis in original] to offer our courses more frequently than we already do.

They intimated they simply could not meet student needs in this area because they did not control the flow of resources for instruction. Another faculty member expressed frustration with that which appeared to be conflicting needs expressed by students:

The Department continues its ongoing discussion on whether to require all majors take a pre-senior thesis course. Students consistently call for this and say it should be required, but students also frequently ask for a greater number and variety of courses, and, of course, we cannot honor both requests.

The assessment report stated students rarely understood the extent or complexity of program-level instructional constraints, as the allocation of institutional resources is a mystery to them, as well as to many faculty and programs.

Faculty also voiced concern relative to their ability to standardize core course content with the overreliance on part-time, adjunct faculty to teach most of the introductory courses in a program. As articulated by one faculty member, "The Department faced a major challenge in 'regularizing' instructional skill development at the 1000 level because of the high number of adjuncts who teach these courses." Adjunct faculty often are called upon to teach the bulk of introductory courses because departments have inadequate resources to hire additional tenured/tenure-track or full-time instructors. Faculty in several programs indicated they attempt to mitigate this challenge by inviting adjunct faculty to participate in departmental meetings and retreats, as well as purposefully seeking their input on curricular matters and intended curricular changes that affect their content area. Despite these types of efforts, adjunct faculty were cited as too often playing a peripheral role in the pedagogical and curricular changes that could affect the assessment of student learning in their courses.

In the assessment reports, faculty openly recognized the importance of developing strong mentoring relationships with their students, as well as the role of mentoring in the success of students in college and later in their careers. As shared by one faculty member:

We believe that the close 1:1 relationship that students have with faculty mentors who supervise the thesis project provides exposure to the specific sub-discipline in which students conduct their thesis research . . . but we can't create these kinds of relationships across the undergraduate curriculum.

Another faculty member noted a desire to offer more undergraduate research opportunities in the curriculum: "With over 800 majors, it is not feasible to give every major an independent research experience with a faculty member, so we integrated a research-based experience into the second semester of the introductory-level ... course." Faculty appear to be committed to providing mentoring opportunities as best they could, as they acknowledged the benefit to student learning despite the lack of institutional capacity across all programs.

DISCUSSION

The program-level student learning assessment reports indicated faculty across programs possess a strong commitment to continuous improvement efforts in assessing student learning. While committed, additional support clearly is needed for faculty and programs to meet the accountability for student learning now required in higher education. As has been noted by others, some faculty lacked a basic understanding of assessment concepts, the purpose and value of assessing student learning, and the ways in which examining assessment data can positively impact the classroom and program experience for both students and faculty (Bryan & Clegg, 2019; Condon et al., 2016; Deneen & Boud, 2014; Fuller, 2019; Kuh et al., 2015; Lane et al., 2014). Program faculty with greater experience created streamlined processes for assessing student learning and regularly reflected upon ways to continue to improve student learning with intentionality and transparency. As reported by Powell (2011), faculty who authentically engaged in the assessment process found great value in identifying weakness in student learning and developing plans to purposely address those weaknesses. This practice engendered positive faculty beliefs on the concept that assessment can improve student learning in this study. However, those in programs more recent to the assessment process struggled with clearly articulating their student learning outcomes, measuring them authentically, and finding value in engaging in assessment work.

Whether faculty and programs were managing well-developed assessment systems or were in a process of refinement, limited resources influenced their perceived self-efficacy and controllability in assessing student learning. Those who tended to share greater self-efficacy and controllability described their assessment efforts with ease and had aligned their student learning outcomes to their disciplinary, professional standards. Faculty experiencing difficulty and low self-confidence in this endeavor may benefit from aligning their efforts to their professional standards and gaining access to student learning resources provided by their professional associations, as well as utilizing the LEAP Framework and associated VALUE rubrics developed for their discipline.

PBC (Ajzen, 2002; Ajzen & Madden, 1986; Hardin-Fanning & Ricks, 2017; Sparks et al., 1997) was a valuable conceptual framework in investigating faculty perceived self-efficacy and controllability in assessing student learning. Knowledge of the areas in which faculty feel confident in assessing student learning, as well as areas in which they feel ineffective, can provide a roadmap for institutions to identify the means in which to support faculty and program assessment efforts. As all institutions are different, understanding the unique circumstances and needs of faculty is an important piece of creating a culture of assessment across higher education. Specifically addressing a program's ability to provide a variety of course offerings, to standardize course content with a high number of adjuncts teaching introductory courses, and to develop strong mentoring relationships would strengthen faculty assessment efforts from a pragmatic standpoint and likely would improve their mindset on assessment.

Implications

The findings of this study concur with other research which indicates higher education institutions must provide individual faculty- and program-level support to ensure faculty remain central to the assessment process, which takes strong assessment leadership at the campus level (Bryan & Clegg, 2019; Condon et al., 2016; Davies & Hadden, 2002; Fuller, 2019; Kuh et al., 2015; Lane et al., 2015; Rickards & Stitt-Bergh, 2016). Institutions across the country have implemented a number of initiatives to create cultures of assessment on their campuses, which also could be used as prototypes by others. Some of the most effective efforts have included the following: (1) training to build a program-level assessment

system with model student learning outcomes, rubrics, and data feedback loops (Bryan & Clegg, 2019; Chacon, 2014; Condon et al., 2016; Fulcher et al., 2014; Hutchings, 2010); (2) hiring consultants charged with working one-on- one with programs to design disciplinary-specific assessment systems (Bryan & Clegg, 2019; Lewis & Swerdzewski, 2009); and (3) instituting reward systems that recognize those who demonstrate proficiency in assessing student learning (Hutchings, 2010).

Institutional-level assessment conversations that only occur through the confines of looming accreditation visits are much less successful than those focused on easing faculty workload concerns and implementing all-in-one models that support programs in aligning course- and program-level student learning outcomes (Andrade, 2011; Condon et al., 2016; Richman & Ariovich, 2013). Ignoring faculty resource concerns will not make them disappear and in fact, they could become so entrenched that they serve as effective barriers to developing a culture of assessment that is guided by shared understanding and values of campus assessment priorities. Gathering and addressing these concerns are critical to faculty being properly engaged in accreditation efforts so they can not only feel comfortable with, but also, effective in assessing student learning for both accountability and continuous improvement purposes.

CONCLUSION

This qualitative content analysis study (Schreier, 2012) grounded by PBC (Ajzen, 2002; Ajzen & Madden, 1986; Hardin-Fanning & Ricks, 2017; Sparks et al., 1997) offers a unique viewpoint of facultyled program-level assessment activities. This study represents a contribution to knowledge on the theory of PBC by extending the framework to student learning assessment systems and practices, as no research exists in which PBC is used in this context. It calls attention to the ways in which faculty describe their ability to assess student learning, as well as the challenges they experience in doing so. Experience matters in faculty self-efficacy for assessing student learning; however, limited resources hinder the perception of controllability, even among the most knowledgeable and skilled assessment-focused faculty. The findings of this study provide an "insider" perspective and guidance to higher education institutions seeking to bolster faculty self-efficacy in assessing student learning, as well as faculty beliefs concerning the extent to which assessing student learning is in their control. Attending to these areas of faculty concern may improve the culture of assessment and strengthen the design, implementation, and maintenance of student learning assessment systems across college campuses.

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