

# Navigating a Culture of Evidence: The Lived Experiences of College of Agriculture Faculty Regarding the Academic Assessment of Students

## Abstract

*The accountability movement has created tensions among key actors at institutions of higher education in the U.S. in recent years. As such, a need existed to examine the lived experiences that influenced faculty (n =6) in the College of Agriculture (COA) at Louisiana State University as they engaged in various forms of assessment to evaluate student learning. As a result of our phenomenological analysis, three themes emerged. The themes combined to form the phenomenon's essence, which was that assessment of student learning outcomes was a product of (a) presage, (b) process, and (c) context variables that shaped faculty's lived experiences. In particular, presage variables represented the individual traits that influenced the assessment process such as faculty's beliefs, personal traits, professional backgrounds, and previous teaching experiences. Meanwhile, contextual variables were the unique factors and conditions that affected assessment such as course goals and objectives as well as university policies. Finally, process variables represented the specific activities that affected student learning and instructional practices. Going forward, we recommend that COA's create faculty development opportunities that encourage faculty to reflect and explore alternative strategies that may enhance learning and promote greater equity in the academic assessment of students.*

**Keywords:** academic assessment; colleges of agriculture; faculty development

## Introduction and Review of Literature

The *accountability movement* has created tensions among key actors at institutions of higher education in the U.S. in recent decades. For example, some literature (Baas et al., 2016; Fuller & Skidmore, 2014; Maki, 2010) on accountability has called for higher education institutions to create a pervasive *culture of evidence* using robust academic assessments. Others (Hazelkorn, 2013; Horn & Wilburn, 2013; Nugent, 2008) have critiqued such calls because they maintain that the accountability movement introduces troublesome epistemological concerns regarding the validity of educational assessments to provide accurate evidence of students' academic learning. Despite these opposing views, the accountability movement's popularity has continued to rise in higher education. In the literature, accountability has been framed as the deeply entrenched beliefs and intentions espoused by faculty in regard to their assessment practices (Fuller & Skidmore, 2014; Maki, 2010). As such, the phrase *culture of evidence* represents how institutions of higher education promote or hinder opportunities for faculty to discuss, theorize, and provide feedback about how assessment should be used to document the learning outcomes of students (Baas et al., 2016).

Pellegrino et al. (2001) defined academic assessment as an educational tool used to analyze students' learning and produce data that can be used to draw reasonable inferences about what students know. Academic assessments have been shown to help identify areas of success for students as well as their existing deficiencies (Bass et al., 2016). There are several ways that faculty can assess student learning. For example, observations, classroom dialogue, question posing, critiquing students' work, as well as providing formal tests, informal quizzes, and project-based learning assignments (Abrahams, 2018; Bell & Cowie, 2000; Pellegrino et al., 2001; Rice, 2019). Despite the variety of assessment opportunities available, it is critical to recognize that there are two primary forms of academic

assessment: (1) formative, and (2) summative. Formative assessments represent the ongoing interactions between students and teachers that help gauge a student's level of competency. Pellegrino et al. (2001) claimed that it is only through formative assessment that faculty are able to form decisions about how to adapt their instructional practices to meet their students' needs. Meanwhile, summative assessments have usually been conducted at the end of learning experiences or an academic term. As an illustration, a common summative assessment faculty use has been the final examination of a course. As a result, Bell and Cowie (2000) maintained that faculty should use formative assessments to build a picture of the student's progress while summative assessments could demonstrate a student's mastery of concepts.

In agriculture, Steward et al. (2004) explored how faculty have used formative and summative assessments at Iowa State University. They reported that faculty used students' weekly email journals as well as mid-term feedback as formative assessments (Steward et al., 2004). To examine students' growth, they then employed focus group discussions and a final summative examination. Other forms of assessment in agriculture include the use of authentic assessments by which instructors evaluate whether students' performance on a task meets the standards established using a criterion (Figland et al., 2020; Lear et al. 2019). Authentic assessment has also been reported as a popular technique that agriculture faculty use to evaluate students as they engage in experiential learning activities. For instance, Monaghan et al. (2015) evaluated students using an authentic assessment as students engaged in experiential learning at a school farm. As a result, the researchers reported that instructors perceived they were able to assess students' knowledge and skills more accurately.

Another approach to assessment that has been advanced in agriculture has been to evaluate students' reflective writing. In particular, Boyd et al. (2006) argued that reflective writing served as a powerful way to understand changes and growth in students' affective domain of learning in regard to their beliefs, values, attitudes, and motivations. For example, when students reflected on a virtual international experience, results demonstrated that changes occurred to students' views on career opportunities as well as how social conditions may influence the agricultural industry across the globe. As a consequence, assessment appears to be a critical aspect that grounds the practices of faculty in colleges of agriculture. Currently, little evidence exists about what motivates or deters agriculture faculty to engage students in various forms of academic assessment. As such, it was imperative to better understand the perspectives of faculty regarding their lived experiences as they navigate a culture of evidence to assess their students. Such insights could help institutions of higher education establish the mechanisms needed to provide adequate support to faculty who may struggle with traversing the ambiguities inherent in evaluating student learning (Emil & Cress, 2014; Evans, 2013; Jonson & Thompson, 2013). Consequently, a need emerged to describe the lived experiences that shaped agriculture faculty's assessment practices.

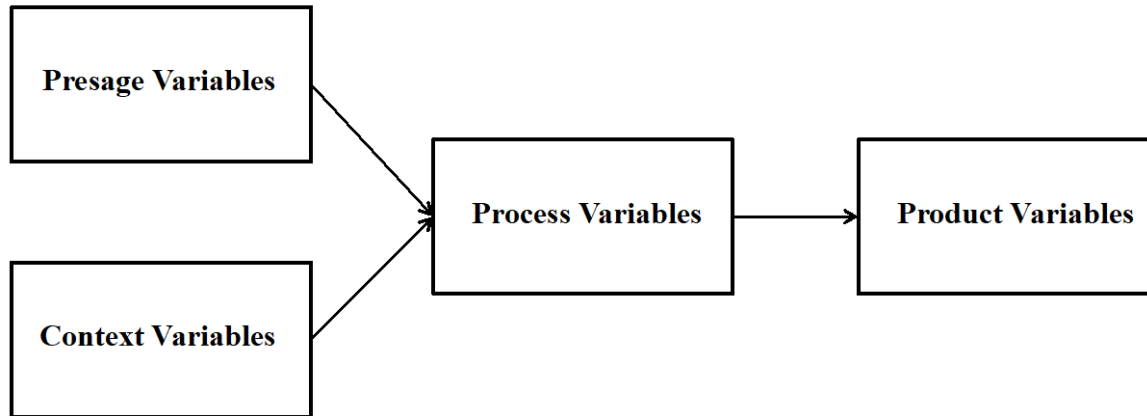
### **Emergent Conceptual Framework**

Through our analysis of data, Dunkin's and Biddle's (1974) model of teaching and learning emerged as an appropriate lens to analyze the lived experiences of faculty regarding the academic assessment of students. The model, which was built on the work of Mitzel (1960), consists of three variables theorized to influence student success: (1) presage variables, (2) context variables, and (3) process variables. In this study, presage variables were conceptualized as the individual traits that influence the teaching and learning process such as faculty's beliefs, personal traits, professional backgrounds, and previous teaching experiences. Meanwhile, contextual variables were the unique factors and conditions that affected the teaching and learning process such as course objectives, curriculum requirements, departmental culture, professional roles, and university policies. Process

variables represented the specific activities that affected student learning and instructional practices. Process variables could include assessment techniques, grading policies, and the variability of assessment types. In the current study, we used the aforementioned variables to understand how they influenced faculty's assessment practices and ultimately student success, or product variables (see Figure 1).

Figure 1

*Dunkin's and Biddle's (1974) Model of Teaching and Learning*



### Statement of Purpose and Research Questions

The purpose of this phenomenological study was to describe the lived experiences of faculty in the College of Agriculture (COA) at Louisiana State University as they engaged in various forms of assessment to evaluate student learning. Therefore, this study supported the American Association for Agricultural Education's (AAAE's) Research Priority 3: *Sufficient Scientific and Professional Workforce that Addresses the Challenges of the 21st Century* (Stripling & Ricketts, 2016). Three research questions also emerged as a result of our analysis of the data: (1) How did presage variables influence faculty's use of assessment? (2) In what ways did context variables affect faculty's use of academic assessment? and (3) How did process variables shape faculty's use of academic assessment?

### Methodology

When approaching this investigation, we chose to ground our decisions through the epistemological lens of constructionism (Crotty, 1998). Crotty (1998) defined construction as "the view that all knowledge, and all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context" (p. 42). As a result, when using this worldview, we were uniquely attuned to understanding the shared experiences of faculty regarding the academic assessment of student learning, which influenced our decision to ground this investigation in the methodological approach of phenomenology (Moustakas, 1994).

Phenomenological research allows investigators to obtain an understanding of how individuals construct meaning from a shared experience on a phenomenon of interest (Moustakas, 1994). As such, researchers must obtain an in-depth understanding of participants through the analysis of their lived

experiences. Then, through an intense process of meaning-making, the researcher seeks to distill themes and offer a rich description of the essence of a phenomenon (Moustakas, 1994). To achieve this, we employed Moustakas' (1994) approach that involved the following phases: (1) *epoché*, (2) phenomenological reduction, (3) imaginative variation, and (4) a synthesis of textural and structural descriptions of the phenomenon. Before outlining our procedures, we address our relevant experiences and biases.

### Reflexivity

To minimize the biases and judgments, it was critical to address the decisions and influences that could have affected the outcomes of the study. First, it is important to reveal that this study was conducted from an international student perspective. Meanwhile, the second researcher was a faculty member at Louisiana State University and has had a professional relationship with each of the participants over the past several years. As a result, such experiences influenced how we approached the study and our interpretations.

### Participation Selection

When conducting phenomenological research, Polkinghorne (1989) recommended that researchers analyze the experiences of a minimum of five individuals. To recruit participants, we used purposeful sampling through a combination of two approaches: (1) typical sample, or individuals who represent an average case, and (2) maximum variation, or the most divergent viewpoints (Dooley, 2007). After IRB approval, we sent an email invitation to 22 faculty, who represented each academic department (maximal variation) in Louisiana State University's COA. The individuals were identified as typical representatives through a nomination process by a panel of experts. Of the 22 recruited, six agreed to participate. Four of the six interviewees were relatively new to Louisiana State University and had significant professional experience from their previous university. Meanwhile, one participant was new to teaching at Louisiana State University. Further, three of the faculty also held administrative roles in their departments. These professional roles appeared to influence how the faculty perceived the role of assessment in evaluating students' learning. Table 1 provides a brief description of the participants' personal and professional characteristics using the pseudonym assigned by the researchers.

Table 1

#### *Personal and Professional Characteristics of Participants*

Pseudonym	Rank	Tenure	Years of Experience	Academic Department	Highest degree
Dr. Carlton	Professor	Tenured	42	Plant Science	Ph.D.
Dr. David	Professor	Tenured	33	Textiles, Apparel Design & Merchandising	Ph.D.
Dr. Christine	Professor	Tenured	30	Agricultural Education	Ph.D.

*Table Continued*

Dr. Aryan	Assistant Professor	Tenure Track	1	Plant Science	Ph.D.
Ms. Linda	Instructor	Non-tenured	7	Animal Science	Masters
Ms. Valerie	Instructor	Non-tenured	31	Textiles, Apparel Design & Merchandising	Masters

### Data Collection and Analysis

The primary source of data for this study was interviews with participants. To triangulate the findings, we also collected participants' course syllabi and conducted observations of courses in which we captured fieldnotes. Interviews with participants occurred in person and ranged from 45 to 70 minutes. To facilitate such, we used a semi-structured interview protocol. Additional probing questions were also posed during interview sessions to gain a better understanding of the participants' experiences. Interviews were recorded using an iPhone application and later transcribed verbatim. Thereafter, we asked the participants to review the transcripts for accuracy – a process known as member checking (Moustakas, 1994).

We began the analysis of data by acknowledging and bracketing our personal experiences and potential biases that could have affected the findings and conclusions of this study – a phase Moustakas (1994) called *epoché*. Then, to initiate *phenomenological reduction*, we analyzed the data line-by-line to identify significant statements (Moustakas, 1994). To reduce the data, we collapsed the significant statements into categories to understand the existing patterns present in the data corpus. In the third phase, *imaginative variation*, we employed two different approaches, theoretical and diagrammatical coding, to view the data through different lenses and consider rival explanations (Moustakas, 1994). Moustakas (1994) explained that thinking theoretically could be achieved by reducing the data into an essence of the phenomenon. Meanwhile, thinking diagrammatically refers to using visual representation as well as presentation of information and the transfer of knowledge. By thinking theoretically and diagrammatically, Dunkin's and Biddle's (1974) model of teaching and learning emerged as the most appropriate lens to ground our findings and describe the essence of the phenomenon. And, as a result, we were able to describe *what* and *how* the participants used assessment to support their students' learning through a synthesis of *textual* and *structural* descriptions of the phenomenon, which was narrated using three themes of meaning (Moustakas, 1994).

### Imbuing Qualitative Quality

To imbue qualitative quality, we used Tracy's (2010) criteria for excellent qualitative research: (1) worth topic, (2) rich rigor, (3) sincerity, (4) credibility, (5) resonance, (6) significant contribution, (7) ethical, and (8) meaningful coherence. In particular, we designed an investigation that focused on faculty's lived experiences regarding the academic assessment of students – knowledge that was relevant, timely, and significant for the agricultural education literature, i.e., a *worthy topic*. Throughout the investigation, we emphasized *rich rigor* by employing appropriate data collection and analysis techniques. We also strove to maintain *sincerity* by offering insight into our backgrounds and experiences and being open and honest about our biases. Throughout the investigation, we also attempted to uphold *credibility*, *resonance*, and *ethics* through a thick description of our findings, ensuring they could be transferred to other contexts, and protecting the participants' rights by using

pseudo-names to conceal their identities. Finally, we upheld meaningful coherence by employing appropriate methods and approaches to answer the study's research question.

### Findings

The findings from this phenomenological study of agriculture faculty's experiences regarding the academic assessment of student learning emerged through three themes. The themes combine to form the phenomenon's essence, i.e., the assessment of student learning outcomes in the COA at Louisiana State University is a product of (1) presage, (2) process, and (3) context variables that shape faculty's lived experiences (Dunkin & Biddle, 1974). Each theme weaves together the collective experiences of participants by drawing on their internal and external lifeworlds.

#### Theme #1: Presage Variables

Through the lens of Dunkin and Biddle's (1974) model of teaching and learning, presage variables represent the personal and professional dimensions that influenced the participants' use of various forms of assessment. Such factors were described through three subthemes: (1) personal characteristics, (2) past teaching experience, and (3) professional development. To begin, it is critical to acknowledge that most of the participants reported they were primarily introverted; however, they also possessed other personal traits that influenced their assessment practices. Such personal traits included good listening skills, which Dr. Carlton indicated helped him facilitate quality formative assessments of students' learning through personal conversations. Moreover, Dr. Christine explained: "my specific strengths are people skills and having high emotional intelligence to connect with people as well as be able to read in between the lines..." During our observations, she appeared to use this emotional intelligence to encourage students to speak up and express themselves, especially in instances in which they did not understand concepts thoroughly.

Quality communication was another important characteristic that shaped the faculty's use of assessment. For instance, Ms. Linda stated: "I like teaching freshmen or sophomore college students, [so] that kind of blunt honesty seems to resonate with them at times." Further, she also attempted to provide students with feedback that is as "black and white" as possible, which enables them to make the necessary adjustments. Ms. Linda also stated: "...I seem to have a good ability to break [concepts] down so that it is understandable at most levels." This skill was not only helpful to Ms. Linda's teaching but also helped her create assessment tools by which students could easily demonstrate their knowledge of various concepts.

Previous teaching experience also served as a primary foundation that grounded the faculty's assessment practices. Ms. Linda explained: "the more experience you get, the more exposure you get [to] the more creative [assessment approaches] and the more flexible you will become to [incorporate them]." Further, Dr. David, who had more than 30 years of experience in higher education, reported that he used an array of assessment approaches, which has enabled him to identify the most appropriate for improving student learning.

More significant teaching experience also appeared to shape how faculty used assessments to evaluate students' mastery of concepts. For example, Ms. Valerie maintained that she preferred to use rubrics to assess students' learning because of her previous experiences. She explained: "...at the [university] I [taught at] before I came here, [faculty] often traded classes...[so] everybody used pretty much the same rubric. I came to rely on them." Previous teaching experience also seemed to shape the participants' beliefs about assessment. As an illustration, Dr. Carlton believed that the more experience faculty gained in assessing students' knowledge, the more they begin to understand the depth at which

assessment approaches can be used to deepen student learning. He explained: “I think as you go along you may place greater value on assessment methods as learning tools. Then, students might reorganize or reprioritize their thoughts that provoke deeper thinking.”

Participants also reported they engaged in conferences, seminars, and collaborative teaching, which improved and enhanced their use of various assessment approaches. For participants in this study, faculty development appeared to have a positive influence on their confidence in assessing student learning because they were able to attain new ideas and have the support needed to enhance their self-efficacy. For instance, Ms. Valerie maintained: “Faculty development is very helpful because...we kind of get some blinders on...I think it is always good to hear other viewpoints you know to see other people’s methods because it may not work for you but at least it is good to stop and think about it ...”

### **Theme #2: Context Variables**

The second theme, context variables, provided insight into the situational elements faculty reported that influenced their practices regarding the academic assessment of students. These factors are described through two subthemes: (1) course goals and objectives, and (2) university policies. First, it is important to acknowledge that each course taught by participants in this study appeared to use the unique goals and objectives of their courses to evaluate students’ mastery of concepts. For example, in our analysis of Dr. Carlton’s course syllabi, students were expected to have knowledge of what organisms cause diseases in plants, how such causes disease, and the ways in which they use disease cycles to improve the management of plant health. In response, Dr. Carlton implemented various forms of authentic assessment by which students were required to demonstrate mastery in a laboratory setting, based on established criteria detailed in rubrics.

Faculty also articulated that course policies served as key contextual influences that shaped their assessment practices. In particular, some faculty emphasized how university policies that addressed accommodating students with exceptionalities influenced their assessment practices and how they communicated about such. For example, in Dr. Christine’s course syllabus, she explicitly stated her plan for accommodating students’ needs during formal assessments that would impact their grades. Further, she also explained how she “worked in cooperation with disability services at Louisiana State University to streamline effective assessment for students with exceptionalities.” However, it should be noted, that some faculty did not clearly articulate how they upheld university policies and appeared to only have a surface-level understanding of accommodating students with exceptionalities as well as strategies for promoting greater equity during the academic assessment of students.

### **Theme # 3: Process Variables**

The final theme, process variables, represented the specific activities that helped faculty facilitate student success concerning academic assessment. Such factors were described through three subthemes: (1) approaches to assessment, (2) grading policies, and (3) use of technology. In the current study, participants largely conceptualized assessment into one of two categories: formative and summative. Case in point, Dr. Carlton reported that to ensure students were completing course readings, he employed formative assessments using quizzes to evaluate students’ understanding of the course material. He explained: “I usually have a very short quiz at the start of each lab mostly to encourage students to come to the lab with some idea of what we are going to be doing...” Then, at the end of the semester, Dr. Carlton used final exams to gauge students’ changes in knowledge as well as their ability to solve problems. Other formative assessment approaches included: reflection, personal conversations, and oral discussions.

In particular, Dr. Christine perceived that reflection played a critical role in her assessment of student learning because it provided thick, rich descriptions and insights into how students processed concepts and constructed new meanings. She expanded: “often times we will do reflection after a lesson or after an assignment, that provides critical information... [they] did not understand...so you have to push students sometimes not to just report back what the class covered...to be much deeper...” By reflecting on concepts, Dr. Linda explained it often helped reduce their “confusion and anxiety about assessment.” Regarding summative assessments, faculty reported using comprehensive exams, final reports, presentations, and other project-based learning experiences. For instance, Dr. Carlton stated that at the end of the semester, students created presentations that encouraged them to delve deeper into plant diseases.

In our analysis of the faculty’s syllabi, we also noted they all used a cumulative grading system to evaluate students in alignment with Louisiana State University policy. Nevertheless, each participant graded formative and summative assessments in a variety of ways. For instance, Dr. Carlton’s grading of summative exams was not black and white. He explained: “before I grade the students’ answers, I write the answer that I would have given. Then, [I assign] some points based on what I think are higher priority aspects of that response...” Additionally, Dr. Christine considered multiple factors that may influence students’ comprehension of the subject. If she recognized that most students did not understand a concept, she adjusted her grading and would “reteach the concept.”

The majority of the participants also reported they used various technologies to enhance their assessment of students’ learning. For example, Dr. Carlton explained that he used a web-based assessment platform to save time and improve the feedback to students. She described how she incorporated the technology:

...I used [Turning Technologies] the last time I taught to do quizzes at the start of the lab, I guess for two reasons. One is for my convenience so we don’t divert more time than is necessary to that exercise, but it also gives the student some feedback before we are about to start the lab. They don’t just take the quiz and find out next week what they got, they see immediately... they are also able to compare their responses to other students. So, hopefully, the [students] that came unprepared see that others did come prepared.

Regarding technology, Ms. Linda, an instructor in the animal science department, explained: “[...]technology] reduces the time I spend grading. I can use a Moodle quiz, [and] I don’t have to worry about grading...I can assess their knowledge more frequently without feeling that it is using up my time especially if it’s a class that I teach year after year because you can develop a test bank of questions.” In her course syllabi, some of the technology applications used by her students included Kahoot, Flipgrid, and Top Hat. In observations of her courses, we noted that she specifically outlined the instructions for how the students should use these applications. In addition, Dr. Christine also reported the use of Kahoot in her class. She explained that the technology was a fun online testing platform that kept students engaged during the lesson and helped her understand and visualize data trends – a factor she felt improved student learning. She also stated: “it’s a neat, quick tool... real instant if you don’t have time.” Thus, the participants largely elected to use technology because it helped make assessment more convenient. As a result, the advantages that faculty reported regarding the use of technology for assessment were (a) it saved time, (b) provided students instant feedback, and (c) faculty could better visualize assessment data and use it in meaningful ways.



## Conclusions

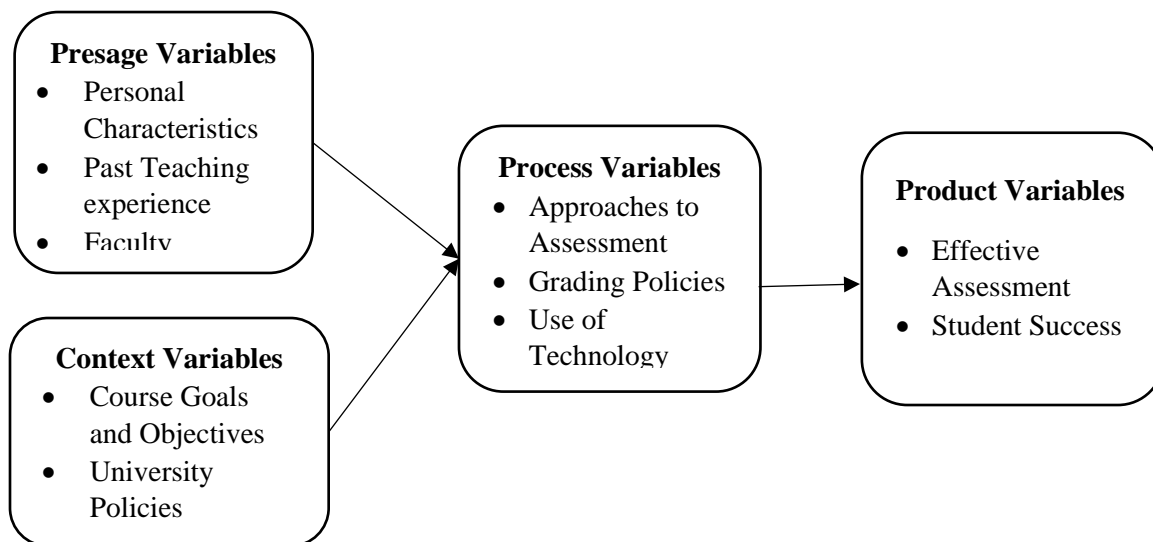
The intent of this phenomenological study was to describe the lived experiences that influenced faculty in the College of Agriculture at Louisiana State University's decisions regarding the assessment of students' learning. As a result of our analysis, we concluded the emergent themes from this investigation combined to form the phenomenon's essence, i.e., the assessment of student learning outcomes was a product of (a) presage, (b) process, and (c) context variables that shaped faculty's lived experiences (see Figure 2). We also concluded that the faculty's past teaching experience appeared to shape their beliefs regarding how they use and select more creative ways to evaluate student learning.

The findings aligned with those reported by Unal and Unal (2019), which illuminated that the more experience faculty gained, the more creative and comfortable they became in assessing student learning. In addition, the faculty used course goals and objectives to guide their assessment practices. Such a finding supports VanDerZanden's (2013) work that discovered that course goals and learning objectives influenced faculty's choice of assignments, teaching and learning strategies, and evaluation approaches. Further, the faculty also reported that they used a range of formative assessments such as discussions, personal conversations, and reflection.

These assessment approaches appeared to foster a valuable interaction between students and educators, which participants perceived enhanced their students' learning experiences, which complemented Prashanti's and Ramnaryan's (2019) maxims of formative assessment that theorized that such could help build professional relationships between faculty and students. In this study, participants also reported they used a number of authentic assessments to evaluate student learning. Such approaches appeared to be increasingly central to faculty's beliefs about assessment and seemed to be intimately connected to their teaching and learning practices. Next, we provide conclusion for each theme identified in this investigation.

**Figure 2**

*The Essence of Faculty's Lived Experiences Regarding the Academic Assessment of Students*



*Note.* Adapted from Dunkin's and Biddle's (1974) Model of Teaching and Learning.

The first theme, presage variables, provided evidence that faculty's personal characteristics influenced the types of assessment approaches they chose to use in their courses. For example, quality communication and interpersonal skills as well as the ability to listen and empathize with students were personal characteristics that faculty attempted to incorporate to assess students' performance – a finding supported by the work of Maba et al. (2018). Further, as faculty gained teaching experience, their beliefs about assessment appeared to evolve. We also concluded that faculty development opportunities appeared to expose faculty to new ideas and assessment strategies – a finding bolstered by ample evidence in the literature (Alkharusi 2011, Alkharusi et al. 2012, Matovu & Zubairi 2014; Munoz et al., 2012).

The second theme, context variables, illuminated how participants used university policies such as course goals and guidance on accommodating students with disabilities to help them attain desired student learning outcomes through various approaches to assessment. Similarly, Meyers and Nulty (2009) reported that well-constructed course aims and objectives create a sense of direction and purpose for the students, which enabled them to direct their own learning efforts and become more successful in assessments of their learning. However, it should be noted that the faculty's understanding of how to accommodate student learning as well as the ability to foster equity during academic assessments appeared to be deficient. Faculty also emphasized how university policies helped heighten students' awareness of key concepts and ensured that the assessment process fairly assessed their learning. The study's final theme, process variables, demonstrated how faculty used summative assessments such as exams and quizzes to gain an understanding of students' mastery of course concepts while also encouraging students to come to class prepared. Therefore, we concluded that traditional approaches to assessment such as exams and quizzes established basic knowledge, which prepared them to move onto concepts that required them to use more advanced critical thinking skills (Michaels, 2017). Finally, participants in this study reported that technology-enhanced their ability to assess student learning by providing a more efficient and practical medium to evaluate students' learning.

### Discussion, Implications, and Recommendations

The value of higher education has been questioned today in U.S. society, perhaps more than ever before (Nilson, 2016). The criticisms range from rising student costs that have outpaced inflation to the low retention of students, especially regarding racial minorities and individuals from low socio-economic backgrounds (Beale, 2012; Kretovis, 2011). Further, employers have also reported that students have been ill-prepared to enter the workforce (Alston et al., 2019, 2020; Soler et al., 2022). As a consequence, administrators, faculty, and other decision-makers in institutions of higher education have begun to ponder the role of assessment in addressing such criticisms, and whether providing additional evidence of improvement may help them better navigate this *culture of evidence* (Hazelkorn, 2013; Horn & Wilburn, 2013; Nugent, 2008). For example, current trends in higher education assessment, especially in COA, have shifted toward emphasizing forms of authentic assessment that place value on skill-based evidence. As an illustration, participants in the current study reported they believed that such supported students' learning, skill development, and was also aligned with multiple university learning initiatives. Therefore, we recommend that the best practices of using authentic assessments in COA be distilled through additional research.

Another consideration for assessment work moving forward has been the role of equity (Montenegro & Jankowski, 2017). In our review of the faculty's syllabi, we noted that each contained the required language regarding disability services as mandated by Louisiana State University. Further, the faculty also articulated that issues of equity were critical to assessment efforts and that more work should be dedicated to the disaggregation of data so that a better focus could be placed on emphasizing

the learning needs of students with exceptionalities. However, during interviews, the faculty's understanding of accommodating students' learning needs appeared to be more trivial. As such, we recommend that future research explore the role that assessment may play in addressing issues of student equity. For example, what are the most appropriate approaches to assessing diverse student groups with differences in their ability, gender, race, sexual orientation, socioeconomic status, and other factors? Such a notion does not appear to have been explicitly explored in the literature on assessment in agriculture.

The participants spoke overwhelmingly positive of their faculty development experiences in this investigation – a notion supported by existing literature (Hersh & Keeling, 2013; Singer-Freeman & Bastone, 2016). As such, we recommend that faculty development opportunities be more purposefully integrated into COA's assessment efforts. Perhaps, such a change could support the faculty's use of technology as well as how they communicate results and incorporate such to make changes to improve students' understanding of concepts (Fuller & Skidmore, 2014; Maki, 2010). We also recommend that COA administrators more intentionally partner with university assessment offices and centers for teaching and learning to provide COA faculty with the support needed to facilitate a change in culture that better supports innovation in students' academic assessment.

Findings from this study also revealed that faculty engaged in efforts to embed academic assessments in students' various formal and informal learning assignments and activities. As COA faculty continue to place more focus on assessment, it will also become more critical to ensure that students' learning experiences and associated outcomes reflect an accurate representation of academic achievement that becomes consistent across agricultural disciplines. As such, we recommend that COA, and associated academic departments, engage in curriculum mapping efforts to better document where specific concepts have been learned and how such learning has been assessed. Perhaps, this change could also create a space in which faculty begin to engage in more critical conversations about issues of aligning course assignments and experiences in ways that evoke the desired learning outcomes.

Over the past decade, a shift has occurred. Administrators at institutions for higher education have altered their focus from engaging faculty in assessment to helping faculty learn to better use assessment data (Jankowski et al., 2018). In accord, faculty in the current study reported that they used technology to improve their understanding of student data trends. As such, we recommend that CoA provide greater support through faculty development sessions that highlight ways to use technology to enhance the academic assessment of students. However, additional work should also be taken to engage more stakeholders in the assessment process (Baas et al., 2016; Fuller & Skidmore, 2014; Maki, 2010). Therefore, we recommend that academic departments within CoA create opportunities for faculty and stakeholders to review assessment tools and provide recommendations to enhance them in ways that might better prepare students to enter the workforce. Future research should also examine the effectiveness of such initiatives in improving students learning outcomes.

Trends regarding assessment in the CoA at Louisiana State University were on a relatively positive trajectory. Granted, more work is needed, especially regarding the role of equity in the assessment practices of faculty (Abrahams, 2018; Bell & Cowie, 2000; Pellegrino et al., 2001; Rice, 2019). However, a discernable trend also existed among participants regarding the use of assessment data to improve student learning outcomes as well as their use of authentic assessments embedded throughout students' academic experiences. Therefore, we recommend that such practices continue to be nurtured and celebrated by administrators. And finally, since Dunkin's and Biddle's (1974) model for teaching and learning helped reveal the essence of the faculty's experience regarding the academic assessment of students, future theory-building efforts should be used to refine the factors – presage,

context, and process – that emerged in this investigation that appeared to influence university agriculture students' success regarding academic assessment.

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