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COLEDU2022-2744

Teaching for Expediency or Effective Learning

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ATINER CONFERENCE PAPER SERIES No: COLEDU2022-2744

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This paper should be cited as follows:

Williams, B. L. (2022). **"Teaching for Expediency or Effective Learning"**. Athens: ATINER's Conference Paper Series, No: **COLEDU2022-2744**.

Athens Institute for Education and Research
9 Chalkokondili Street, 10677 Athens, Greece
Tel: + 30 210 3634210 Fax: + 30 210 3634209 Email: info@atiner.gr URL: www.atiner.gr
URL Conference Papers Series: www.atiner.gr/papers.htm
ISSN: 2241-2891
18/10/2022

Teaching for Expediency or Effective Learning

Brita L. Williams

Abstract

Formative assessment is an essential component to creating effective teaching and learning. Collegiate instructors typically do not know how to use methods of formative assessment in higher education to gather evidence of learning during the teaching and learning process or why it may inform their instruction and have an impact on student learning; hence, achieving student learning outcomes becomes problematic (Asghar, 2012; Jensen, 2011; Scott-Webber, 2012). The purpose of this study was to explore the current pedagogical methods of formative assessment used in higher education and answer the research question: How are collegiate instructors using methods of formative assessment to inform their instruction? The design for this study was a hermeneutic phenomenological design using Heidegger's hermeneutic circle (Gadamer, 1975). This began with a preunderstanding of what constitutes formative assessment based on research-based best practices used in teacher preparation programs (Gadamer, 1975). Interviews and a focus group were conducted with instructors from two different institutions across a variety of disciplines to gather data on their experiences from their perspectives. One recommendation resulting from this study was to provide faculty development and training in effective teaching and learning strategies to fulfill the mission of educating students (Fullan & Scott, 2009; Giridharan, 2016).

Keywords: *formative assessment, feedback, assessment evidence, assessment methods, reteaching*

Introduction

In this current climate of determining the relevancy of a post-high school degree, the conundrum faculty and administration in higher education are faced with is whether their students are learning at a level that will effectively further their post-graduate aspirations of employment and career advancement. The question asked most often is whether a college degree is worth the time and money spent. While an argument can be made for the benefits of having a well-rounded general education, the cost of that ideal has become untenable for many when that financial aid bill comes due. The question that may be more important to ask is whether that college degree truly reflects substantive learning worthy of the cost. How quickly can one earn a degree, in the hopes of reducing the debt obligation, should be inextricably linked to the quality and effectiveness of the teaching and learning in that same time span. Unfortunately, we live in a "fast-food" society where quicker is cheaper at the expense of quality. To survive the question of relevancy for obtaining a degree in higher education, the point of diminishing returns must be examined, which of course is dependent on the degree subject.

Teaching for expediency does not have to be done at the expense of effective learning. It requires a mindset that presents the teaching with the learning as a cyclical process. The typical "sage on the stage" lecture approach, still used by many instructors in higher education, is based on the belief that teaching is a knowledge dump into the open receptors of students' brains. This assumes that the necessary knowledge and understanding are in fact effectively being received by students such that retention, recall, and application in the future is a given.

The focus of this study was to investigate how instructors in higher education who are not pedagogically trained implemented formative assessment in their classrooms. In researching how formative assessment strategies are implemented by instructors, it was necessary to identify the strategies currently being used. Identifying these strategies provided a base for determining why they may or may not be effective in increasing the students' understanding of the subject. Analyzing how the instructor responded to the data he/she received from these assessments provided insight into the instructor's thinking about how formative assessment should be used. Exploring the feedback given to the students as a result of any formative assessment indicated how an instructor communicates the validity of the assessment results. Hence, the question this research study sought to answer was: How are collegiate instructors using methods of formative assessment to inform their instruction? The following presents the conceptual framework developed to support a review of the relevant literature of the previous research for formative assessment practices in higher education. The methodology and data collection sequence used to conduct this study is explained as well as how it was coded and sorted, and the themes which emerged. An analysis of the data is presented, followed by a discussion of the implications for policy, practice, and theory for effective teaching and learning in higher education as well as recommendations for further research.

Literature Review

A synthesis of the literature compiled for this review revealed some commonalities and gaps in the current research. The findings of the studies showed a consensus that formative assessment in higher education is considered an integral part of teaching (Fook & Sidhu, 2013). Presenting feedback in some form was shown to be an important component as well (Frost & Connolly, 2016). The result appeared to show a gap between implementing formative assessment and how it is perceived by students and its impact on authentic student learning (Asghar, 2012; Taras & Davies, 2017). While the research literature substantiated the consensus regarding the importance of implementing formative assessment in the classroom environment, studies were mixed about the means of accomplishing it. This revolves around the purpose for implementing formative assessment. Idika and Eke (2017) and Wormeli (2006), an expert on differentiated instruction, explained that formative assessment is a pedagogical concept requiring flexibility in its application in conjunction with differentiated instruction. Much research has been done on the metacognitive abilities and differences in how individuals process and retain new information for later recall and application (Darling-Hammond et al., 2003; Gardner, 1983; Vygotsky, 1962). The impact of implementing formative assessment is dependent as much on when as on how it is implemented because of the metacognitive differences among the students (Man Sze Lau, 2016). Because of the variability of how formative assessment is used during teaching, discovering a pattern of effective and/or ineffective practices is difficult (Bubb et al., 2013). There is no one strategy that educators can point to as a definitive measure to assure student success (Evans, 2013).

How to Teach Effectively

Pedagogy (n.d.), as defined in the Oxford English Dictionary, is "The art, occupation, or practice of teaching . . . the theory or principles of education". Pedagogy can be separated into two components, general pedagogy and content pedagogy. Content pedagogy focuses on teaching practices specific to the content being taught, such as how to teach essay writing in English language arts, how to teach properties of physics with models and demonstrations, or how to teach dance by doing. General pedagogy focuses on the overall concepts of how to teach and knowing if students are learning. It is this component that can determine whether effective teaching and learning is occurring.

Instructors in higher education, except those in teacher education, generally do not have any prior general pedagogical training nor are they usually required to have such training in many institutions across the United States (Kaynardağ, 2019). Formative assessment is an essential component to creating an effective teaching and learning environment. Most research in methods of formative assessment primarily stems from general pedagogical research for the primary and secondary learning environments. Consequently, collegiate instructors typically do not know how to use methods of formative assessment in higher education to gather evidence of learning during the teaching and learning process or why it may inform

their instruction and have an impact on student learning; hence, achieving student learning outcomes becomes problematic (Scott-Webber, 2012).

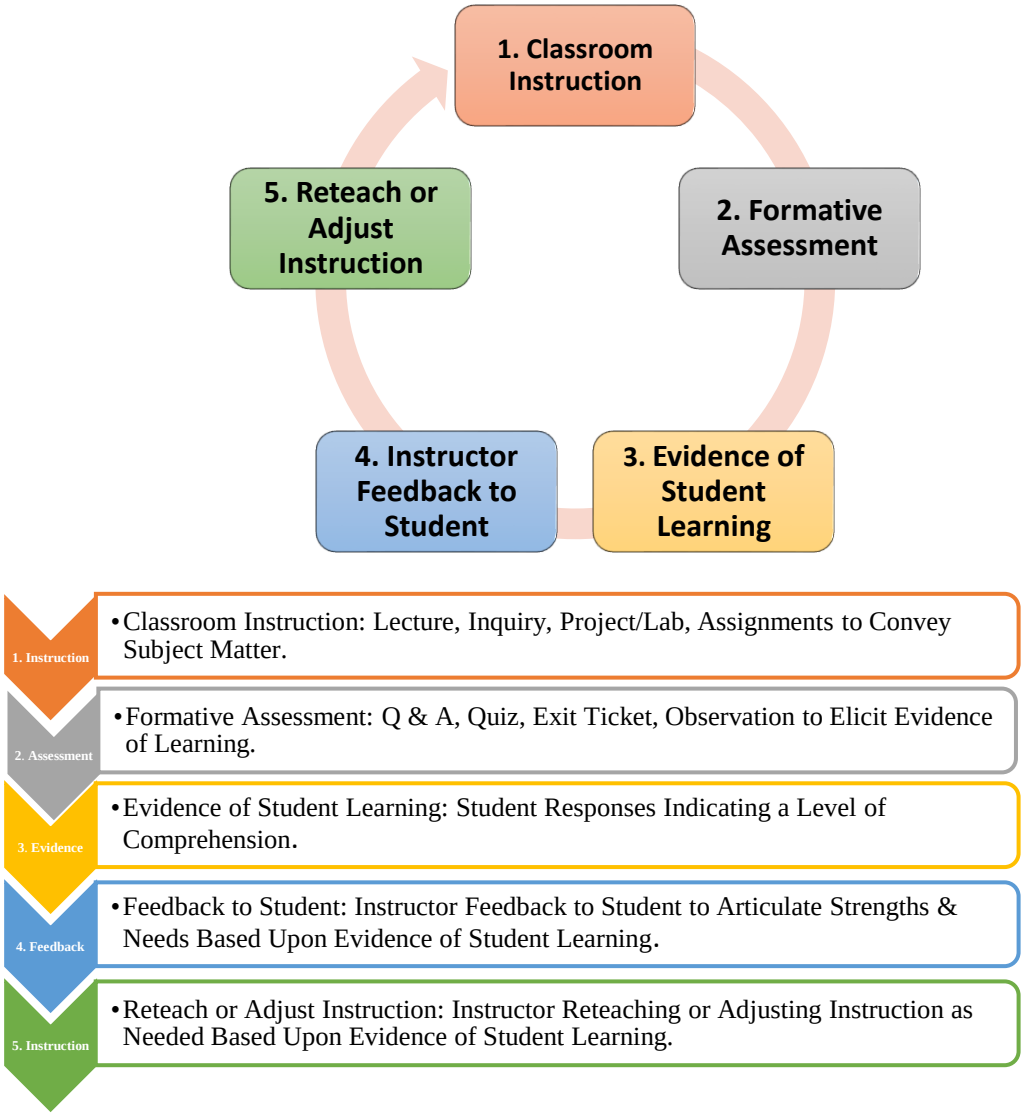
The purpose of this literature review was to provide a conceptual framework and a review of formative assessment practices in higher education. This included an examination into the implementation of formative assessment, the use of instructor feedback, and the impact it may have had on student academic achievement. The conceptual framework developed for this study was based on the widely accepted teaching and learning cycle, focusing on its application of formative assessment (see Figure 1) (Marzano et al., 2001). This framework illustrates a purposeful approach to implementing formative assessment and instructor feedback to improve student learning, providing the students an opportunity to make adjustments in their coursework, and for the instructor to adjust their teaching to improve student learning (Chappuis & Stiggins, 2017). A review of these components in the literature created a body of evidence to support additional research into the implementation of formative assessment practices in higher education. This study provided a baseline for instructors in higher education to evaluate how they determine their students' learning during instruction by combining formative assessment strategies with formative feedback, which creates the opportunity to impact student academic achievement.

The Conceptual Application of Formative Assessment

This conceptual framework illustrates five components of the teaching and learning cycle, of which formative assessment is an integral part (See Figure 1). Using formative feedback, a component of formative assessment, is how teachers can facilitate the understanding of new knowledge (Darling-Hammond et al., 2003). Summative assessments are typically for providing "evidence of student achievement for the purpose of making a judgment about student competence or program effectiveness" and formative assessments are both "formal and informal processes teachers and students use to gather evidence for the purpose of informing next steps in learning" (Chappuis & Stiggins, 2017, p. 21). Simply stated, formative assessment is for learning and summative assessment is the sum of learning. University faculty use mid-terms and final exams, term papers, and final projects to determine a student's sum of learning. If formative assessment is not employed during the learning process, it may be difficult for students to gauge how they will perform on the summative assessments.

It is important to separate the evaluative judgment associated with assessments and apply a purposeful approach to improve student learning. Feedback based on the gathered evidence of student learning motivates students to make the necessary adjustments in their understanding to be academically successful. Another important component of using formative assessment in the classroom is the opportunity for the instructor to adjust their teaching to elicit a clearer and more thorough understanding of the course content.

Figure 1. *The Teaching and Learning Cycle based on Marzano et al. (2001) Research-based Best Practices is the Basis for a Conceptual-theoretical Framework for Using Formative Assessment*



Source: Williams, 2020.

Classroom Instruction

The first component of the conceptual framework for investigating formative assessment in higher education began by determining how it is employed within the structure of the classroom instruction (see Figure 1). The university instructor plans their instruction according to their discipline, pedagogical knowledge base, and teaching style. Some of the methods which may be present are lecture, inquiry, a project or lab, and assignments where students can synthesize and assimilate the subject matter conveyed by the instructor and any additional materials used in their teaching.

Formative Assessment

The second component of this conceptual framework detailed the means by which the formative assessment process gathers evidence of learning (Black & Wiliam, 2018). An instructor may utilize a quiz or exit ticket in addition to employing a question-and-answer session or through simple classroom observation (Marzano, 2012). Formative assessment includes a broad range of methods that allow an instructor to perform a check for understanding throughout the teaching and learning experience (Chappuis & Stiggins, 2017; Darling-Hammond et al., 2003; Marzano et al., 2001).

Evidence of Student Learning

All formative assessment instruments or processes as shown in Figure 1 are intended to gather measurable evidence of student learning (Chappuis & Stiggins, 2017). The third component of the evidence elicited from formative assessment may be embedded in the normal process of the instructor's teaching environment (Darling-Hammond et al., 2003). Student responses during a question-and-answer session are evidence of their understanding of the current topic being discussed. Students show their level of comprehension through their responses to a quiz or an exit ticket (Marzano, 2012). The class conversations observed by an instructor provide a meaningful opportunity for gathering evidence of student perspectives of the course material which can lead the instructor to discover how students interpret their teaching. Any means that instructors can utilize to determine the extent of their students' understanding gives them a window into the connection and effectiveness of their teaching (Black & Wiliam, 2018).

Instructor Feedback to Student

Authentic feedback that an instructor presents to students during the learning process (see Figure 1) is the fourth component of this conceptual framework (Owen, 2016). Feedback can serve as an opportunity for additional teaching to shore up student gaps or misconceptions in their understanding of the content. Formative feedback as part of formative assessment is characterized as the articulation of a student's strengths and needs, based upon the evidence of their learning at a point in time and throughout the teaching and learning experience (Chappuis & Stiggins, 2017). The strengths and needs of a student as communicated through instructor feedback provide the student with tangible information to improve their academic learning (Mulliner & Tucker, 2017). Delivering feedback on a student's strengths is more than just stating what is presented as a good comprehension of the subject, but additional suggestions of how the student may extend or apply their understanding to a new task or a more complex version of the one just completed. An instructor's feedback on a student's needs is more than a response that merely communicates what the student is missing in their comprehension, but is additional support for how they can increase their understanding of the subject.

Reteach or Adjust Instruction

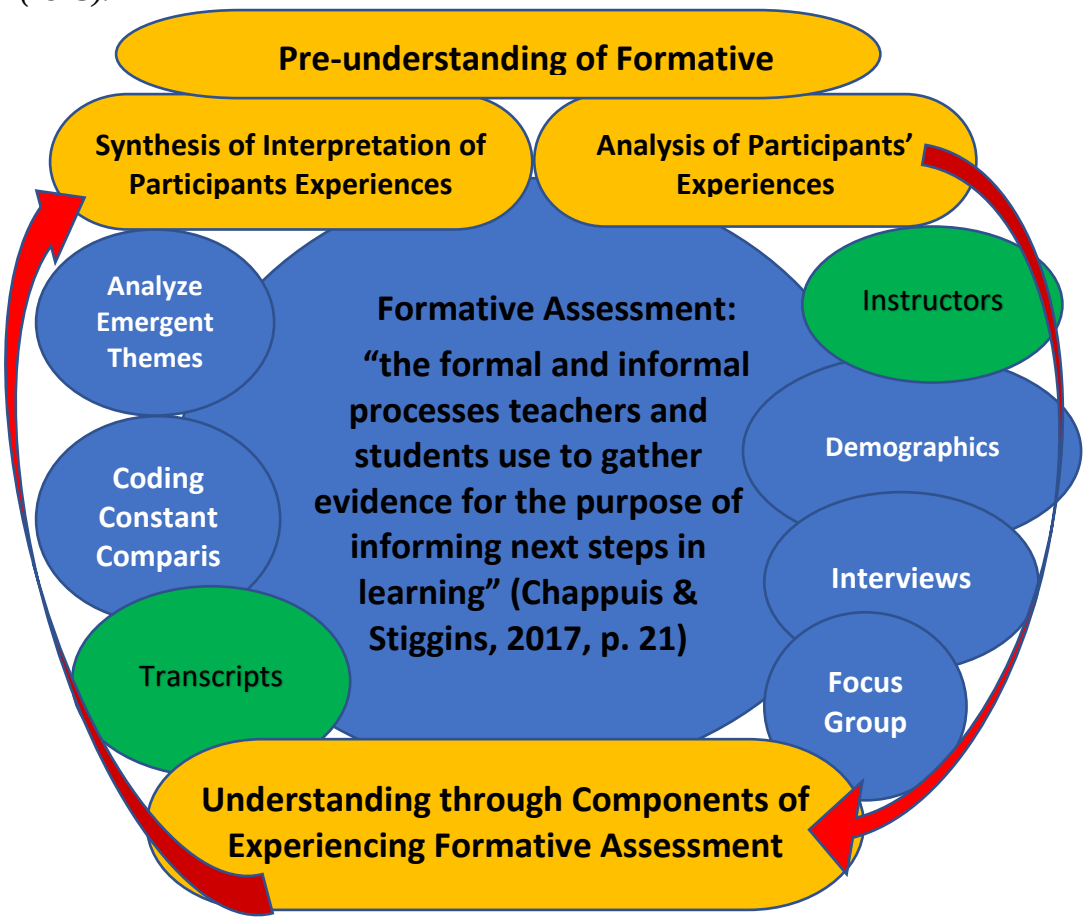
The fifth and final component of this conceptual framework (see Figure 1) illustrates where the application of formative assessment could lead (Grosas et al., 2016). As an instructor implements formative assessment throughout their teaching, they are gathering evidence of student learning which can inform their immediate or future instruction. Some formative assessment results will demonstrate gaps in student understanding, allowing for an adjustment in how their lessons are taught. Other formative assessment results will show a need to reteach some concepts to attain an improved level of understanding in the classroom. Instructors can add this evidence of learning to their reflective practice so they can make changes in future courses to improve student academic achievement (Sambell et al., 2012; Saroyan & Frenay, 2010).

Research Methodology

Exploring the current pedagogical methods of formative assessment used in higher education helped answer the following question: How are collegiate instructors using methods of formative assessment to inform their instruction (Williams, 2020)? The method for this research was a hermeneutic phenomenological design using Heidegger's hermeneutic circle (See Figure 2) (Gadamer, 1975). This design was structured to describe the experiences of collegiate instructors and interpret their attributed meanings in how formative assessment was used during instruction. This begins with a preunderstanding of what constitutes formative assessment based on research-based best practices currently applied in teacher preparation programs.

The instructor participants for this research came from two separate institutions of higher education across a variety of disciplines in the Pacific Northwest of the United States. One institution is a comprehensive state university, and the other is a community college. The comprehensive university was founded over a century ago as a state teacher's college and gradually transformed to become a 4-year comprehensive (non-research) state university. It offers a significant number of undergraduate and master's degrees in nearly 50 programs to over 10,000 students per year. The community college offers about 20 degrees in the liberal and technical arts, as well as the sciences, which lead to technical certifications or university transfer degrees. Both institutions are in rural, small-town environments but are only 2 hours away from a major metropolitan area. Their student populations draw from both rural and urban areas of the Pacific Northwest. This results in a diverse environment with nearly half of them being students of color and about two-thirds of the students receiving public funding.

Figure 2. *Heidegger's Hermeneutic Circle, Based on Gadamer's Interpretation (1975).*



Source: (Williams, 2020).

To fully understand formative assessment, its components and purposes must be defined. These components were examined through interpretive analysis of the lived experiences of the instructors in the learning environment of higher education. The participants were interviewed as to their individual experiences and a focus group was added to gather additional descriptions of the participants' combined experiences. Each interview documented the experiences of using formative assessment in the classroom, including the feedback given to the students and how it was received by them. The focus group discussion recorded any additional personal perspectives the participants may have recognized through the discussion with their peers.

Transcriptions of the interviews and focus group dialogue were coded for clusters of meanings and themes to determine the central underlying meaning of the participants' experiences (Flipp, 2014). While coding by chunking and using constant comparison, patterns, and their relationships with each other emerged. Initially, the transcripts were coded by description for the occurrence of the participants' described actions related to formative assessment and feedback. Additional descriptive coding was applied to the participants' described responses.

Next, the instructors' responses were coded by strategies of formative assessment. Analytic coding was used to develop thematic categories and look for linking patterns between the participants' actions and responses with the types of formative assessment used or experienced (Richards & Morse, 2007).

The credibility of this study relied in part on the standardization of how the participants were chosen, as well as in the construction of the interview questions, which in turn contributed to internal validity (Seidman, 2006). The selection of the participants used the purposeful sampling method of maximum variation of the population (Creswell, 2013; Palinkas et al., 2015; Suri, 2011). Using the same interview questions for all participants, as shown in Appendix A, elicited data from equal starting points (Seidman, 2006). The focus group discussion was facilitated using open-ended questions, as shown in Appendix B, to avoid any leading questions which prompted the group to explore their collective experiences (Nagle & Williams, 2013). It is equally important to note that the transcripts of both the face-to-face interviews and the focus group's discussion are accurate, operating as the primary source documents to be interpreted. Including instructors from institutions that are different from each other geographically and institutionally contributed to a triangulation of the data. These different perspectives created a more complete picture of how formative assessment is currently utilized in the classroom. The focus group discussion provided an additional combined perspective that arose from the participants comparing their individual experiences with each other. The resulting triangulation of the data reinforced the study's validity and created a more persuasive conclusion.

Results

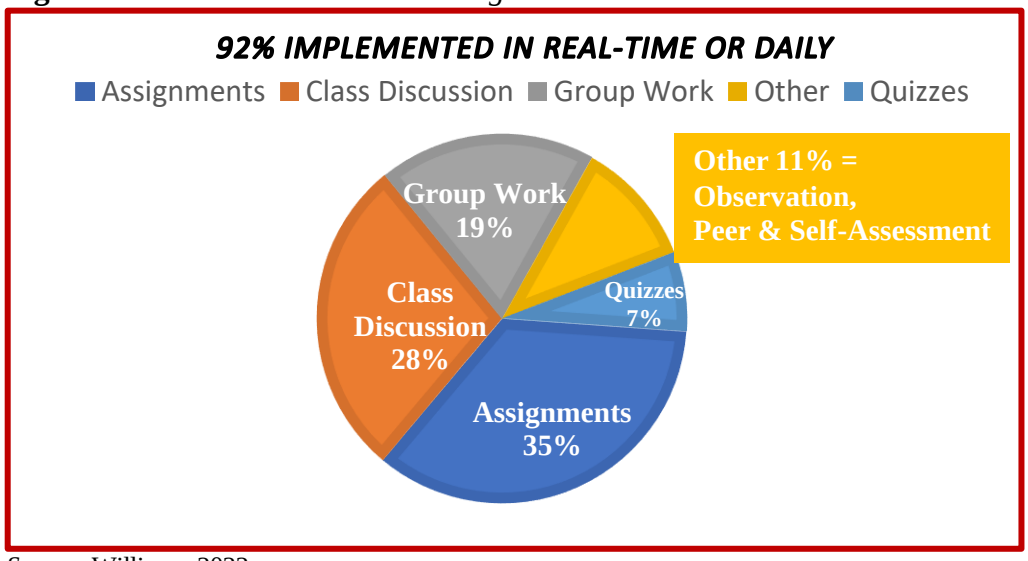
Each participant expressed their eagerness to be interviewed about how they determined whether their students are learning. In responding to the interview questions, the participants described their teaching style and how they believed it was working in their classes. Each participant's method of teaching included a variety of strategies for determining whether their students were learning the material, struggling with the content, or apathetic towards the class. The data collected from the participant interviews and focus group revealed several thematic threads: 1) formative assessment strategies used by the instructors, 2) different ways the instructors delivered feedback to students on the formative assessments, and 3) how the instructors used formative assessment to inform their instruction (Williams, 2020).

Organizing a presentation of the data required a collating of the codes by theme and instructor. The occurrences of each code were tallied and organized by theme. The data is also represented graphically based upon the tally of occurrences of each code to illustrate trends within the data.

Formative Assessment Strategies

The methods of formative assessment used most were assignments, class discussions, and in-class group work (See Figure 3). While there is a common perception that assessments must be in the form of quizzes or tests, I maintain that anything you ask your students to write, say, or do, during the process of teaching, is an assessment of their learning. Written work, either in the form of daily assignments, a quick write in class, quizzes, or extended writing assignments are different ways for students to express their understanding of the material presented. Class discussions, listening to students working together in groups, facilitating Socratic seminars, oral presentations, or a personal conversation with a student are all examples of determining a student's level of comprehension of the course content. Requiring the performance of a skill or performing a specific activity or task allows students to demonstrate their cognitive and physical ability to meet the learning outcomes of the course.

Figure 3. *Formative Assessment Strategies Used*

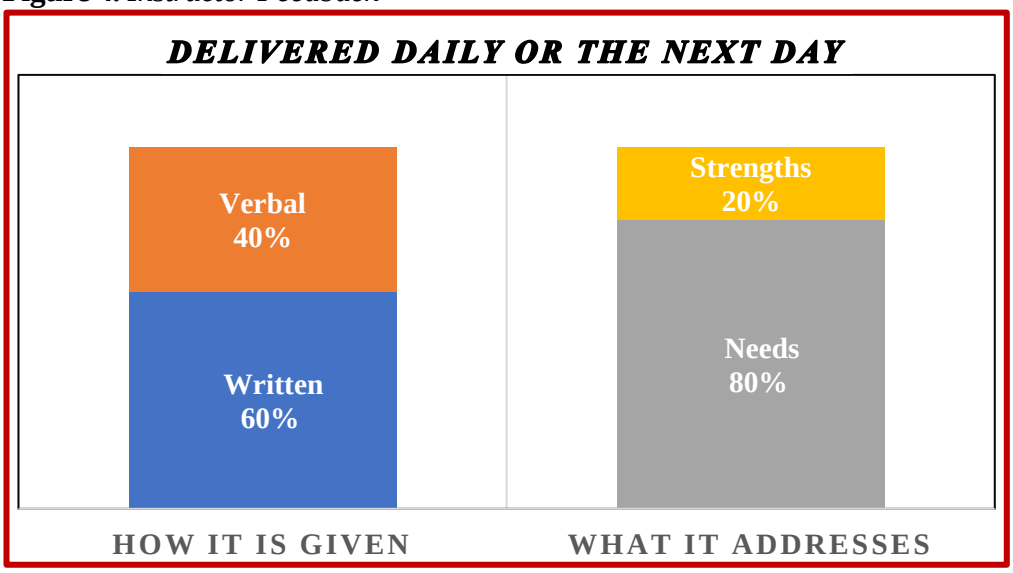


Source: Williams, 2022.

Instructor Feedback

The participants revealed that their feedback was usually delivered verbally during personal, group, or whole-class discussions and they would write feedback on individual assignments and quizzes (See Figure 4). Giving verbal feedback allowed the participants' students to ask follow-up questions resulting in a deeper, more authentic understanding of the material. Students did not have the same opportunity to ask clarifying questions when feedback was delivered in written form. This resulted in much of the written feedback being reiterated and clarified further in face-to-face interactions with the participant during office hours or in the classroom the next day. A significant portion of the feedback delivered was corrective addressing student needs over their strengths. The participants believed and hoped this would create a self-reflective mindset in their students.

Figure 4. *Instructor Feedback*



Source: Williams, 2022.

It was clear from the interviews and focus group that all the participants were diligent in giving feedback to students because they were invested in their students' success which was described by one participant "I've done all kinds of crazy things to make sure that students succeed and sometimes it works and sometimes it doesn't". Some of the participants spent the time giving feedback even when they suspected the students were not going to act on it or even read it. There was a mindset of not giving up on their students even with their frustration of trying to figure out how to motivate their students. One of the participants explained the frustration well:

> The ones who know they don't understand are actually way easier to work with . . . I will try to explain it to them in a different way . . . try to work with their learning style a little bit. But those are the ones who are trying and get that they don't understand. That's the trick that I'm still trying to figure out, how do I get them to understand [that] they don't understand (Williams, 2020).

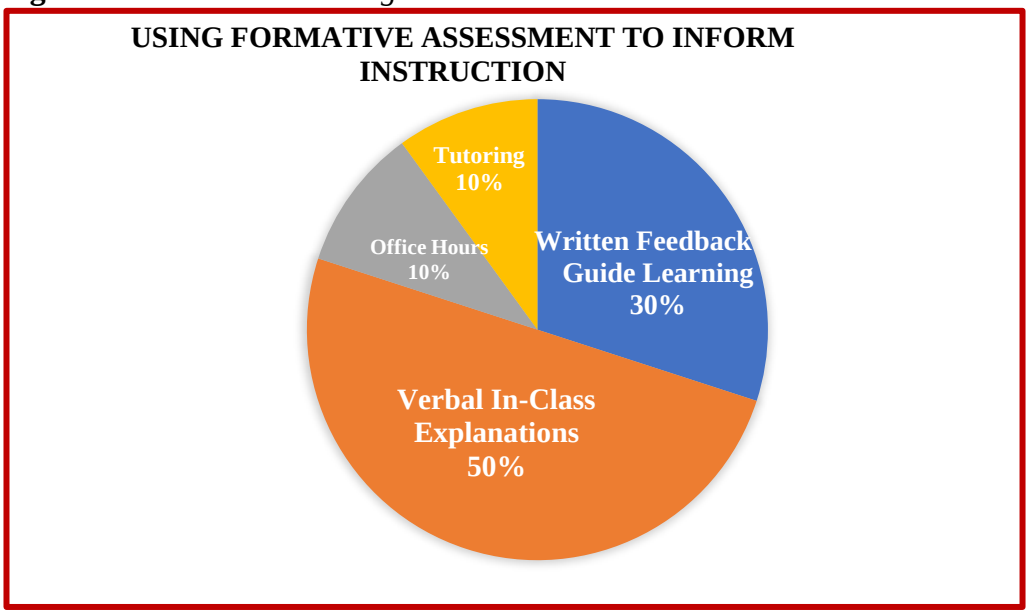
Instructor Reteaching

Some of the participants used the feedback they delivered as the primary means to clarify or explain any misunderstandings or confusions with the concepts (see Figure 5). Other participants described how they used the data gathered from the different formative assessments to inform their instruction for the next lesson. All the participants found there were times when it was necessary to reteach a significant portion of a lesson if most of their students were struggling to understand.

A couple of the participants kept referring to the students' grades as a form of feedback but also recognized the need to reach out and deliver additional support if the grades were substandard. The grade or score a student receives is only a recording of the quantification of the data received from the evidence gathered through assessments. I asked each participant what steps they took, if any, when

they realized a student was not on track to succeed in the course. They described having regular office hours for additional help and some referred students to the various campus resources for tutoring.

Figure 5. *Instructor Reteaching*



Source: Williams, 2022.

Discussion

Implications for Policy: Improve Faculty Training and Support

One recommendation resulting from this study was the need to provide more faculty development and training in effective teaching and learning strategies to non-education collegiate instructors to fulfill the mission of educating students in preparing them for their future. Improving the teaching practices in higher education can support students to get the most out of their higher education experience, creating relevancy while not exceeding the point of diminishing returns. This study was not limited to one discipline or one institution because, as an instructor in teacher education in higher education, teaching new knowledge and concepts, and facilitating the comprehension of both is the underlying definition of pedagogy regardless of discipline.

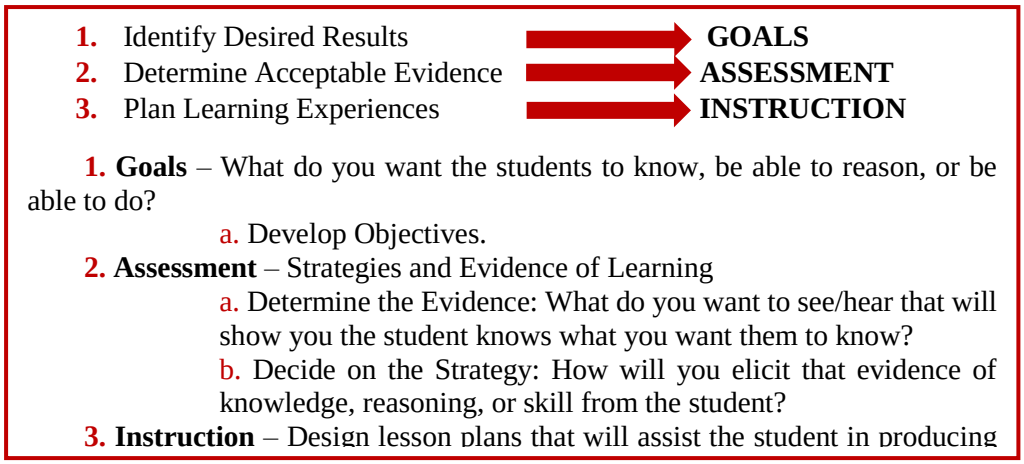
Implications for Practice: Assessing What Was Taught

The training and support recommended should include how to develop valid assessments designed to align with course objectives. The participants understood the importance of having course objectives but were not as familiar with how to align their assessments and teaching activities to their objectives. However, as one participant stated, “half the trouble is, we make objectives that make so much sense when we wrote them and then it comes time to teach . . . and you’re like, who the

hell wrote this, this doesn't make any sense" (Williams, 2020). Another participant relayed a conversation he had with an instructor from a teacher education program. He believed that he needed to give weekly quizzes, yet when asked by the education instructor why his answer was because he just thought he needed to. The education instructor then asked what evidence he expected to gather from the quizzes, and that is when he understood the importance of having purposeful assessments to collect goal-oriented evidence of learning. While all the participants in this study believed they were teaching their course's stated objectives, they did not seem to understand the importance of planning their lessons with predetermined evidence.

At the conclusion of each interview, I asked the participants if they had heard of the phrase backwards design (See Figure 6) (Wiggins & McTighe, 2005). A couple of them had read about it while looking for different ways to teach their content successfully. I explained the concept of designing their instruction beginning with their goal, then determining the evidence they wanted to see to know their students met the goal, and then planning their instruction so that the students would produce the evidence as a result of their teaching. In the subsequent focus group, the participants were asked if they had any thoughts from the prior interviews, a couple of them mentioned how they had subsequently been more purposeful in making sure their assessments aligned with what they had taught the students.

Figure 6. *Backwards Design*



Source: Williams, 2022.

Implications for Theory: Application of General Pedagogy

Lastly, the results of this study can add to the growing body of literature addressing the need for instructors in higher education to develop a teaching and learning environment on research-based pedagogical practices (Kaynardağ, 2019). Theories of teaching and learning have been around for millennia; however, teaching is an active process and not just the transference of knowledge from one to another. Learning is also an active process that is defined by the understanding of new knowledge, the application of that knowledge using reasoning and critical

thinking skills, and the ability to combine newly attained knowledge with reasoning to create something new (Bloom, 1956). This study supports the theory of transformative learning as an adult, for students learn through discourse and integrating self-reflection thereby enhancing their critical thinking skills (Mezirow, 2000). There has been extensive research on teaching and learning to continually seek new and more effective ways to support student academic achievement, modify and accommodate students with specific learning needs, and to discover how the social and emotional state of students influences their ability to learn (Robinson, 2011). However, most of this research has been focused on the primary and secondary classroom environments. Much of the research on the same aspects in higher education classrooms has been limited to either specific disciplines or how students parlay their degree from higher education into a successful career path. It could follow that this is because students in higher education should have already learned how to learn because of their secondary experience, advocate for themselves if they need accommodations, and be in charge of their own social and emotional state, after all, they are adults in the legal sense (Dužević, 2015, Mezirow, 2000). "Learning is a highly complicated process that depends upon interactions among various individual and environmental factors" (Wang et al., 2013).

I maintain that learning is a lifelong activity that should be nurtured beyond the primary and secondary classroom, into the arena of higher education (Kaynardağ, 2019; Mezirow, 2000). This study supports the concept of applying the pedagogical components of formative assessment in higher education classrooms to increase student academic achievement. As instructors assess their students' learning throughout the course, they then have the opportunity to correct student misconceptions, assist struggling students, and adjust their teaching based on the evidence they collect. While each student enters higher education with different motives and intentions, I would argue that they do not come to be frustrated or fail. Students apply themselves to their education with varying levels of effort and some succeed despite any lack of effort. On the flip side, each instructor teaching in higher education has different motives and intentions, but I would again argue that they do not set out to fail students. Instructors apply themselves to their task of teaching with varying levels of training and skills and some succeed despite any lack of training or skills. Purposefully integrating methods of formative assessment in higher education classrooms will ameliorate the students' lack of motivation and the instructors' lack of skills and enrich the student/instructor dynamics for an improved academic outcome (Huba & Freed, 2000; Jacoby et al., 2014). Mintz (2016) described the importance of creating a learning environment that addresses multiple pathways for students to succeed, stating:

> as learning designers, instructors must specify what they want a student to know or to be able to do and, then, design activities that will help students attain that objective and devise assessments to measure whether the students have actually achieved mastery. (para. 9)

Recommendations for Further Research

This study was limited in scope to the formative assessment practices collegiate instructors were currently implementing in their classrooms. The interviews and focus group included questions about how and why they chose the methods they used and if they believed they were effective in improving student academic achievement. Extending this research affords instructors the opportunity to continue to improve their teaching and create a more effective learning environment that is conducive to increasing student academic achievement (Brownell & Tanner, 2011). I have three specific recommendations for further research into formative assessment practices in higher education.

First, I suggest using a hermeneutic phenomenological study to gather data from the students' perspective of formative assessment practices in higher education (Gadamer, 1975). This study explored the instructors' perceptions of their students' perspectives based on how their students used the feedback they received and the subsequent adjustments the students made to their learning practices. Teaching and learning is a collaborative activity that requires the input and understanding of the process by both the instructor and the student (Marzano et al., 2001; Mascolo, 2009; Piaget, 1971; Vygotsky, 1962).

My second recommendation for future research useful to administration in higher education would be to gather data from instructors before and after they have participated in faculty development and training sessions for formatively assessing student learning during a course. This would be a phenomenological before-and-after case study to determine the changes instructors make in their classrooms after participating in a training session (McDonald, 2010). This would assist administrators in designing faculty development courses for new faculty hires as well as periodic training opportunities addressing specific pedagogical applications.

My third recommendation is a more in-depth look at how formative feedback is delivered by instructors to their students, the mode of delivery, the focus of the feedback, and the students' use of the feedback. More reliable data could be gathered over a span of time, surveying both instructors and students using a hermeneutic phenomenological approach, to determine and compare each participant group, and their perceptions of the feedback (Darling-Hammond et al., 2003; Vygotsky, 1962; Wormeli, 2006).

Lastly, additional research could be focused on whether instructional activities and course expectations are issues that impact student retention in higher education (Crosling & Heagney, 2009). Conducting exit interviews with students may reveal existing institutional gaps in academic support or provide insights for individual programs in better tracking of student achievement. The data gathered from the interviews could contribute to institutional policy decisions and further inform the faculty in higher education in developing strategies to improve student academic success.

Conclusion

The goal of this study was to build on the body of knowledge to support instructors in higher education by answering the research question: How are collegiate instructors using methods of formative assessment to inform their instruction? Effective teaching and learning is a cycle where formative assessment spans both teaching and learning. After an instructor teaches, formative assessment should occur to determine if their teaching was effective and if students learned. If the assessment evidence reveals sufficient learning did not occur, reteaching should then follow. Formative assessment, instructor feedback, and reteaching is a fluid and dynamic engagement of the teaching and learning process between the instructor and the student.

Each participant demonstrated a passion for their students to do more than simply learn the material presented, earn a grade, and move on to the next class or next phase of their life. These participants showed they cared about whether their students learned because they see the bigger picture of their discipline and the potential for each student to apply their learning to future life endeavors. Effective teachers take a big picture philosophy into the classroom environment they create (Weimer, 2017). Teachers who are passionate about their discipline should apply the same passion in facilitating their students' success. The best way to facilitate that success is by making adjustments in their teaching based on evaluating their students' learning using formative assessment.

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Appendix A: Individual Interview Guide

1. How do you measure or determine student success during your course?
    a. Please describe the methods you use.
2. What is your purpose for giving feedback to your students?
    a. How do you expect your students to use it?
3. When do you give feedback to your students?
    a. Is it during class instruction, on assignments, or on exams before the end of the course?
4. How do you think the feedback is working?
5. If you discover your students are not on track to succeed, what do you do if anything?
6. Describe the reasons why it may be difficult to conduct interim assessments or checks on your students' understanding?
7. Describe what helps you in conducting interim assessments and why?

Appendix B: Focus Group Agenda

Introductions
Purpose of the focus group
Follow-Up Thoughts from Instructors regarding the Individual Interviews
Questions for Group Discussion - Instructors
1. What ways have you found the most useful in determining your students' level of understanding of the material?
2. How do you respond to students when they express their frustration in grasping a critical concept even after you have taught it to them?
3. Do you believe that the success of your students may differ depending on the subject matter and if so, how?