

Promoting Students' Learning through
Constructive Feedback Strategies

A doctoral thesis presented by

Yaser Rezk

to

The Graduate School of Education

In partial fulfillment of the requirements for the degree of

Doctor of Education

in the field of

Curriculum, Teaching, Learning, and Leadership

College of Professional Studies

Northeastern University

Boston, Massachusetts

March 2021

ACKNOWLEDGEMENTS

This study helped me to be more knowledgeable about assessment and learning, in particular the role of e- assessment strategies in the learning acquisition process. I thank my adviser, Dr. Lynda-Beltz, for her assistance in guiding me through this study. Her guidance and instruction will always be the lead for my teaching career and future. I also thank my second reader, Dr Kristal Clemons, and my third reader, Dr. Lynn Hudson, for their guidance in the completion of this thesis.

~

“Tell me and I forgot, teach me and I may remember, involve me and I Learn”

—Benjamin Franklin

Table of Contents

ACKNOWLEDGEMENTS.....	2
Abstract.....	8
Chapter 1: Introduction.....	9
A Brief History of Online Education.....	10
Significance of the Problem.....	12
Justification for the Research Problem.....	13
Deficiencies in the Evidence.....	17
Reflexivity, Perspectives and Biases.....	18
Enhancing Reflexivity: Positionality Statement.....	20
Enhancing Reflexivity: Other Strategies.....	22
Research Purpose and Question.....	23
Theoretical Framework.....	23
Self-Efficacy.....	24
Self-Efficacy and Learning.....	25
Self-Efficacy and Online Learning.....	26
Summary.....	28
Chapter 2: Review of the Literature.....	29
Assessment History and Origin.....	30
Definition of Assessment.....	30
Early Work on Formative Assessment.....	31
Later Work on Formative Assessment.....	33
Benefits of Formative Assessment.....	35
Formative Assessment Studies in the New Millennium.....	42
Summative Assessment.....	45
Summative and Formative Assessment Correlation.....	46
Summary.....	48
Teacher Evaluation in Schools and Higher Education.....	49

	4
In Schools: Historical Overview	49
Teacher Evaluation in Higher Education	51
History of Distance Learning.....	55
Correspondence Education	55
Distance Education Through Radio and Television and Teleconferencing	58
Distance Learning and Computers.....	60
Conclusion	62
Chapter 3: Methodology	63
Research Question	63
Research Design and Tradition.....	64
Research Paradigm	65
Theoretical Rationale.....	66
Recruitment and Access.....	66
Institutional Review Board (IRB) Approval.....	67
Protocols and Consents.....	67
Participants.....	67
Data Collection	68
Data Analysis	69
Coding.....	70
Trustworthiness.....	72
Summary	72
Conclusion	73
Chapter 4: Results.....	74
Participants.....	75
Participant Biographies.....	75
Povo	76
Biography.....	76
Philosophy of Teaching.....	76
Online Learning	77

	5
Blended Learning.....	77
What is Assessment?.....	78
Effective Feedback.....	78
Romero.....	81
Biography.....	81
Philosophy of Teaching.....	81
Online Learning	82
Blended Learning.....	83
What is Assessment?.....	83
Effective Feedback.....	84
David.....	85
Biography.....	85
Philosophy of Teaching.....	86
Online Learning	86
Blended Learning.....	87
What is Assessment?.....	87
Effective Feedback.....	88
Mike.....	89
Biography.....	89
Philosophy of Teaching.....	90
Online Learning	90
Blended Learning.....	91
What is Assessment?.....	92
Effective Feedback.....	93
Liza	93
Biography.....	93
Philosophy of Teaching.....	94
Online Learning	95
Blended Learning.....	96
What is Assessment?.....	97
Effective Feedback.....	97

	6
Samira	98
Biography.....	98
Philosophy of Teaching.....	99
Online Learning	100
Blended Learning.....	101
What is Assessment?.....	101
Effective Feedback.....	102
Mona	104
Biography.....	104
Philosophy of Teaching.....	104
Online Learning	105
Blended Learning.....	106
What is Assessment?.....	106
Effective Feedback.....	107
Laila	108
Biography.....	108
Philosophy of Teaching.....	108
Online Learning	109
Blended Learning.....	109
What is Assessment?.....	110
Effective Feedback.....	111
Summary	112
Common Themes and Findings	112
Online Learning	113
Online Learning Perspective and Perceptions	113
Blended Learning.....	114
Class Size	116
Teacher Readiness.....	117
Introduction Class	117
Assessment.....	118
Assessment Concept and Definition	118

	7
Characteristics of Effective Feedback and Strategies	119
Peer Assessment and Review	121
Assessment Tools: Rubric, Syllabus and Learning Objectives.....	123
Rubric.....	123
Syllabus and Learning Objectives	124
Discussion Board	126
Summary	127
Chapter 5: Discussion	129
Significance of This Study.....	129
Theoretical Framework.....	131
Discussion of the Key Findings	132
Participants' Overall Perception of Assessment in Online Learning.....	132
Class Size and Assessment.....	134
Assessment: Formative Feedback.....	135
Peer Assessment.....	139
Assessment Through Discussion Boards	140
Key Findings in Relation to Theoretical Framework	142
Limitations and Recommendations for Future Research.....	144
Conclusion	145
References.....	147
Appendix A: Recruitment Announcement	190
Appendix B: Recruitment E-mail	191
Appendix C: Informed Consent.....	193
Appendix D: Interview Questions	198

Abstract

Instructor feedback strategies play a key role in the learning acquisition process, especially in online environments. In addition, educational improvement and reform cannot occur without timely and effective assessment approaches. This study, grounded on Bandura's 1967 *self-efficacy and social cognitive theory*, focused on identifying such effective feedback strategies from the perspectives and experiences of graduate online learners. In this qualitative study of the lived experiences of students enrolled in an online doctorate of education program, participants were interviewed about their experiences with and attitudes toward assessment strategies employed by faculty, including formative feedback and peer review. Other interview questions focused on participant preferences in regard to e-assessment strategies, rubrics, learning goals and discussion board postings. Findings suggested that to be effective, feedback must be timely, tailored, and personalized, and that students must be provided with a detailed action plan and suggestions for improvement. Students reported they preferred face-to-face assessment through multi-media tools, and more frequent and in-depth teacher engagement on discussion boards. Recommendations for improving online formative assessment are included.

Keywords: assessment, online assessment, online learning

Chapter 1: Introduction

The World Health Organization declared the coronavirus a pandemic on March 11, 2020. In response to this event, Benedict Carey of *The New York Times* reported on the disease's impact on higher education. He included the most recent pre-pandemic online learning statistics available from the National Center for Education Statistics: "One-third of all US undergraduates are enrolled in online classes now. Thirteen percent are learning exclusively online. Online course-taking has increased for 14 consecutive years, even as overall enrollment has declined" (Carey, 2020).

Online education had been growing, even before the onset of Covid-19, but the coronavirus brought a new urgency to the trend. According to UNESCO (n. d.), an estimated 70% of students worldwide were affected by a pandemic-related disruption to their education. In the US, more than half a million college students were unable to return to campus after the 2020 spring break (Kamenetz, 2020). Colleges and universities that planned to reopen for the 2020 fall semester closed again after a few days, or cancelled on-campus classes. The *Chronicle for Higher Education* (2020) has maintained tracking data for fall re-openings of 3000 institutes of higher education; as of September, 2020, only 21.3% planned to resume classes wholly or primarily in person.

The most obvious solution to the problem of maintaining learning continuity for students who are unable to attend in-person classes was moving classes online (Consortium for School Networking, 2020). Almost 50% of the colleges in the *Chronicle of Higher Education* database previously cited planned fully-online or hybrid classes for the fall 2020 semester.

However, moving classes online was not easily accomplished. Colleges faced myriad challenges in rushing to adapt the curriculum to remote learning. According to the Consortium

for School Networking, these challenges included teachers who are were unprepared to deliver course content online, students who lacked access to technology or have had little experience with online learning, and issues of cybersecurity (Consortium for School Networking, 2020). In addition to these systemic issues, educators faced another problem critical to online course design: assessment (Daniel, 2020). This is not merely a recent pandemic-driven concern. Tamm (2019) compiled a list of “Disadvantages of E-Learning.” The first disadvantage Tamm listed was this: “Online student feedback is limited.” Even earlier, in 2008, Sull had surveyed 300 online students and reported results in an article titled: “Overcoming the #1 Complaint of Online Students: Poor Instructor Feedback.”

The goal of this study is to explore students’ attitudes toward feedback, and, based on their interview responses, identify assessment strategies that will improve the effectiveness of online learning, with a theoretical rationale informed by the work of one of psychology’s seminal researchers, Albert Bandura.

A Brief History of Online Education

Since the evolution of Web 2.0 technology began (the term was first used in 2004, according to Delgado Rodriguez, 2019), allowing users to interact with web content and to collaborate online with each other as opposed to simply viewing content, new and revolutionary technology has emerged, including newly-developed software and social media. These changes also created more interactive virtual learning opportunities for adult learners, which encouraged students’ collaborative learning, facilitated communications with instructors, and created a new era of digitally mediated learning (DML) (LeNoue et al., 2011). The Internet became a new learning agent in the form of online learning (also known as *e-learning*, *virtual learning*, *distance learning*), i.e., the offering of courses and programs via the World Wide Web in

universities and other higher education institutions (Ferdousi, 2016; Kearns, 2012; Berridge et al., 2012), and an efficient tool that met the swift changes of globalization and job market demands. Tapscott and Williams (2010) described it as “the dominant infrastructure for knowledge—both as a container and as a global platform for knowledge exchange between people” (p. 6). Thus, a large number of universities and colleges started to offer online learning programs and degrees, trying to attract more learners (Ferdousi, 2016; Bawa, 2016; Fedynich et al., 2015; Jacobs, 2014).

The growth in online learning programs since the turn of the 21st century has been phenomenal (Ferdousi, 2016; Stack, 2015; Allen & Seaman, 2013). In 2002, the number of online registered students in U.S. higher education institutions was 1.6 million (ca. 9.6% of total enrollment), but by 2011 the number had jumped to 6.7 million (32%). Moreover, enrollment in online classes is increasing at a higher rate than enrollment in traditional classes (Parker et al., 2011): Between 2011 and 2012, the percentage of online higher-education students increased by 9.3% compared with a 2% increase in traditional students (Allen & Seaman, 2013). From 2012–to 2015, more than 35 million students enrolled in online programs (Bersin, 2016); by 2018 one-third of students were enrolled (Carey, 2020). Virtual learning is expected to flourish even more in the upcoming years due to economic turndowns (Ferdousi, 2016), as well as to its flexibility and the lack of physical attendance requirements (Croxtton, 2014; Allen & Seaman, 2013, 2010). It is the new concept of “anytime and anywhere” access to higher education (Ferdousi, 2016, p. 2). In fact, it is considered the real addition to the 21st educational system (Jacobs, 2013, p. 2).

Clearly, there is a need for higher education institutions to meet the educational requirements of their online learners, not only with respect to offering degree programs and courses but also with respect to enhancing students’ opportunities to learn. An integral aspect of

helping students learn is to provide them with clear, guided instruction; positive interaction with instructors; and effective, personalized feedback so that they can accomplish their learning goals. A lack of any of these factors can result in an increase in the dropout rate of distance learners. To this end, the purpose of this study was to investigate the role of feedback in online learners' learning acquisition process. In particular, the study attempted to identify what constitutes “effective” feedback strategies—especially formative feedback strategies—from the perspectives and experiences of online learners themselves. It is hoped that the findings will help scholar practitioners to understand and better address their online learners’ formative assessment needs, which in turn can enhance the students’ overall learning. In light of the rapidly-growing numbers of online students in the country, addressing the educational needs of this population will become increasingly important in years to come.

Significance of the Problem

Assessment is defined as collecting data about learners to measure their learning and to enhance their performance (Carver, 2017), and its role in teaching and learning is considered so important that it has been described as “the bridge between teaching and learning” (William, 2013, p. 15). Guàrdia et al. (2017) described four types of assessment: (a) *diagnostic assessment* occurs before the learning process begins and serves as a way to check students’ prior knowledge and skills to identify the suitable learning activities suiting their proficiency levels; (b) *formative assessment* occurs during the learning process, guiding learners with feedback aimed at improving their academic performance; (c) *summative assessment* occurs upon the completion of the learning process to measure students’ achievements through activities, quizzes, and standardized exams; and (d) *integrative assessment* aims to improve learners’ progress toward future learning goals by examining the strategies they followed during specific assignments. The

focus of this research is formative assessment—also referred to as assessment *for*, as opposed to *of*, learning—in the form of feedback to students.

Justification for the Research Problem

As a specific component of assessment, the provision of feedback plays a central role in empowering learning and increasing motivation in all learning situations (Black & Wiliam, 2010; Gamlem & Smith, 2013; Ferguson, 2011; Hattie & Timperley, 2007), and formative assessment is considered to be one of the top factors impacting on students' academic achievements (Hattie, 2009), particularly in weaker learners (Black & Wiliam, 2010). But the effectiveness of feedback relies on how it is provided and received (Hattie et al., 2011; King et al., 2009). Feedback should be delivered in ways that help students learn to self-assess, self-regulate and self-monitor enough to become more autonomous learners (Frey & Fisher, 2011; Hattie, 2012; Johnston, 2012) so that they can: (a) be more in control of their learning; (b) become more aware of final learning goals and outcomes and the necessary steps to accomplish them; (c) increase their motivation and expectations; (d) understand their next step; and (e) reach a satisfactory level of self-efficacy (Cauley & McMillan, 2010).

But there is a wide gap between system priorities and assessment and learning goals, and a critical need for an assessment role model for teachers (DeLuca et al., 2012). In addition, there is an indispensable need for a serious transition from standardization where tests and grades are the priority to personalization where assessment is tailor-based for students' academic needs (Robinson & Aronica, 2015). This may be especially critical for e-learning programs: To meet the learning demands of 21st century globalization, including critical thinking, problem finding, and problem solving, will require effective teaching and formative assessment strategies different from the traditional approaches (Baleni, 2015; Vonderwell & Boboc, 2013). Faculty need to be

aware of the nature of distance learning and to be able to use technology efficiently to be able to provide effective assessment guidance (Vonderwell & Boboc, 2013; Jacobs, 2014). And as e-learning may soon replace the majority of higher education programs, the need to develop and apply different, and tailored, task-based instructional as well as assessment strategies for that particular venue becomes increasingly critical.

To begin to develop such strategies, it is important not only to study existing models of assessment but also to listen to our students' perspectives and interpretations of the feedback they have traditionally received, in order to examine and reflect on our teaching practices (Best et al., 2015) and evaluate the effectiveness of the assessment models we use, as well as how effectively we use them. Only then can we begin to formulate more effective methods of assessment as well as teaching. This, as mentioned, is the purpose of this research.

At broader levels, education contexts can play a fundamental role in the learning process (Zirkel et al., 2015) and, therefore, in assessment practice. The need for identifying more effective strategies for delivering feedback to students can be seen at all educational levels. For example, during past decades national political forces imposed high-stakes K–12 standardized testing that put teachers under tremendous pressure to improve students' learning and proficiency levels (Black & Wiliam, 2010; Dixson & Worrel, 2016). In one of those efforts, the No Child Left Behind Act of 2001 (NCLB), students had to take many tests and school districts needed to show adequate yearly progress (AYP) towards specific academic goals, putting a heavy burden on teachers and students and leaving no room for students' innovation and creativity. Schools became test preparation cells (Robinson & Aronica, 2015; Sahlberg, 2011; Hess, 2006; Kozol, 2005) in which grades were of higher priority than learning. This created a culture in which formative assessment encompassed only testing and test preparation, and in which teaching's

final goal became good test scores rather than the enhancement of learners' academic proficiency level (Tomlinson, 2014). As Price et al. (2010) stated, "Limiting feedback to justification of the grades...reinforced the belief among students that feedback has no feed-forward opportunity" (p. 285).

In higher education, students continually express the need for meaningful and constructive feedback (Evans, 2013; Ferguson, 2011; Nicol, 2010), and this may be especially true with online students. Many online learners express dissatisfaction with the feedback they receive (Fedynich et al., 2015) and with the low level of interactions with their online instructors, which can make them feel disconnected (Glassmeyer et al., 2011). A survey by Fedynich et al. (2015) of 249 online graduate students revealed the lack of clear and detailed feedback they felt they received, and the low level of interactions they reported as having with their online instructors. Another phenomenological study by Glassmeyer et al. (2011) examined online mathematics graduates' perceptions and experiences of formative assessment in two different universities and showed (a) the critical need for better formative assessment strategies, and (b) the lack of communication between learners and instructors that pushed students to feel disconnected. Interactive communication between teachers and students is necessary for learning (Reio & Crim, 2013; Cui et al., 2013; Boston et al., 2011); however, faculty are overly occupied with students' assignments, do not have time to provide them with feedback, and or lack effective feedback strategies (Berridge et al., 2012; Kearns, 2012). The limited-time factor may be especially true for e-learning, as class sizes can be much larger than traditional ones. Studies by Berridge et al. (2012), Kearns (2012), and Olson et al. (2014) at a university level revealed that faculty experienced difficulty in providing online learners with constructive and

personalized feedback due to their assigned workload, and students express the high need for more online interactions with their instructors.

Further, formative assessment is often looked at as gathering information from learners rather than tailoring instruction to student progress based on that information (Cauley & McMillan, 2010). Especially in the online environment, teachers need to be equipped with different assessment skills to suit new transformational learning approaches (Davis & Dargusch, 2015; Darling-Hammond, 2010). Adult learners need ongoing feedback to be able to know if learning is taking place or not (Ferdousi, 2016; Leibold & Schwarz, 2015; Jacobs, 2014). This means that teacher education and professional development opportunities also need to take into account new, advanced assessment strategies and requirements (Davis & Dargusch, 2015; Grainger & Adie, 2014).

The need to address the nature, effectiveness, and timeliness of feedback has become a noticeable concern for learners as well as faculty all over the world, including the United Kingdom (Blair et al., 2013; Rossiter, 2016), Australia (Olson et al., 2014), Malaysia (Meerah & Halim, 2011), and other nations. Teachers understand the important function of assessment in empowering learning but fail to employ it efficiently (Lam, 2013). Taras and Davies (2013) described current assessment practices in higher education as “a hurdle” requiring more attention and focus (p.52). Recent market and globalization changes require competent graduates who are able to use technology tools effectively and who have the potential for continued learning and professional development. This, in turn, requires teachers who can effectively use assessment strategies to promote student learning, and reforms aimed at this goal have begun in a number of countries besides the U.S. including Finland, Norway, Canada, and England (Fullan & Boyle, 2014; Gamlem & Smith, 2013; Sahlberg, 2011).

Provision of effective feedback can be as important to teachers as it is to students. For example, students' evaluations of faculty can be an important measure in faculty tenure, promotion, and salary increases at all levels and across the nation (Eng et al., 2015; Dodeen, 2013; Goe, 2010). Providing students with efficient and personalized feedback along with a clear action plan positively reflects on student-teacher relationships and students' evaluations of teachers. But for faculty to provide effective feedback, they need to know what it is, especially from the perspective of the students they teach.

Deficiencies in the Evidence

Despite the importance of effective feedback strategies as a part of formative assessment, few studies have examined how students interpret feedback and to what extent they implement any feedback they do receive (Gamlem & Smith, 2013; Hattie & Gan, 2011), and almost none have studied how students use feedback as “the servant of learning” (Carver, 2017, p.13). There still exists a need for more research to study the factors that can lead to self-regulated and self-monitored learners who can effectively reflect on and assess their own learning (Chung & Yuen, 2011).

This is especially true for e-learning as, despite the latest massive changes in Information and Communication Technologies (ICT) in higher education, very limited research has examined assessment approaches for e-learning and how they could or should be different from those used in traditional learning (Stack, 2015; Kearns, 2012; Oncu & Cakir, 2011; Goldstein & Behuniak, 2012; Guàrdia et al., 2017). There is still a need for more studies to elicit and address learners' perspectives and experiences of teaching and learning, i.e., to hear students' voices (Best et al., 2015), specifically with respect to feedback strategies (Hyland, 2013; McCord, 2012; Hattie, 2011).

In summary, the significance of this study is that new, revolutionary technology as well as the impact of globalization has changed the mission of higher educational institutions, and it is necessary now to develop and apply different task-based teaching instruction and tailored assessment strategies aimed specifically at enhancing learners' academic performance. One major way to do this is to listen to our students' perspectives and interpretations of the feedback they receive in order to examine, reflect on, and improve our teaching practices (Best et al., 2015) in ways that help students learn to be self-regulated learners (Chung & Yuen, 2011; Hattie, 2012).

Reflexivity, Perspectives and Biases

Reflexivity and positionality have raised a dialectic debate among anthropologists, and postcolonial and feminist geographers since the 1980s (Foote & Bartell, 2011, p. 125). Reflexivity essentially is a rigorous self-analysis of the researcher's own "personal and theoretical commitments to see how they serve as resources for selecting a qualitative approach, framing the research problem, generating particular data, relating to participants, and developing specific interpretations" (McMillan & Schumacher, 2010, p. 332), and it is based on the assumption that they cannot be neutral or objective. Such personal and theoretical commitments would include factors such as the researcher's age, gender, ethnicity, class, country and culture, political leanings, life experiences, education, and social and research issues they consider important—in short, the lenses the researcher has evolved over their lifetime. These lenses serve as filters such that researchers are likely to interpret what they see and hear using their own context, rather than that of the research subjects/participants (Noble & Smith, 2015; Bourke, 2014; Peters, 2013; Thuo, 2013; Foote & Bartell, 2011; Muhammed et al., 2015; Turner, 2010), which can bias research findings and interpretations.

Because of this potential for bias, it is necessary to take precautions to enhance reflexivity during the research process (Noble & Smith, 2015; Bourke, 2014; Mikecz, 2012; Thuo, 2013). And although some degree of bias may be inevitable, there exist strategies for attempting to minimize its influence on the research. One major strategy is to acknowledge one's positionality at the outset of the study, i.e., to lay out to the reader the researcher's own background, standpoints, potential biases, etc., which allows readers to understand the context, or lenses, through which the research study was developed, implemented, and interpreted especially if the researcher's background differs considerably from those of participants. In short, researchers should indicate what they will do to "bracket" their own potential biases to enable them to hear participants' real voices and interpret them the way the participants intend for them to be understood. Not doing this would violate the participants' rights as well as invalidate the research itself, as biases can shape the entire research process (Noble & Smith, 2015; Bourke, 2014).

In addition to stating one's positionality, numerous other strategies for enhancing reflexivity are described in research textbooks (e.g., McMillan & Schumacher, 2010), and include the following: (a) a detailed field log to document the quantity and quality of time in the field; (b) a reflex journal to trace the researcher's decisions, ideas, and personal reactions as fieldwork is conducted; (c) a peer debriefing during which the researcher can discuss preliminary analyses and findings, and can ask probing questions to guide analysis; (d) a record of data management techniques including all codes and themes used in data interpretation (aka "audibility"); and (e) a formal confirmation of initial findings using interviews or surveys of people not selected as participants, in order to corroborate patterns found in participants' data. Use of at least some of these techniques can help maximize the potential for research to be

conducted, and for data to be analyzed and interpreted, from the perspectives of the participants instead of the researcher.

In my own case, I am beginning with a statement of my positionality; I also recognize that, although some aspects of positionality may be more static—e.g., ethnicity, culture, class—others, such as political leanings, experiences, etc., may be more changeable and can even be influenced by the subjects the researcher is studying (Mikecz, 2012).

Enhancing Reflexivity: Positionality Statement

I am a male Egyptian-American from a middle class Egyptian family. My father was an agriculture engineer and my mother was a housewife. My family, specifically my father, was always encouraging me to read about other cultures, and since my childhood this has always been a driving force in my interest in different people and places. I earned a Bachelor of Arts degree in Teaching English as a Foreign Language (EFL) from Tanta University, Egypt in 1990, and taught courses in EFL at a public preparatory school (equal to a U.S. middle school).

I first came to the United States in July, 1995 with a group of 35 teachers from different countries in a Fulbright-sponsored Teacher Initiative Program based at the National Academy of Education in Washington D.C. and the University of California at Los Angeles (UCLA). At that time, the Teacher Initiative Program was designed to train teachers in modern foreign-language teaching pedagogy, and our group was to observe classes in English as a Second Language (ESL) in different schools in Washington, DC and in southern California. When I immigrated to the U.S. that same year, I taught English as a Second Language to Iraqi refugees in Detroit, Michigan. I also worked as an interpreter and cultural consultant at the International Institute of Flint, Michigan, which is an organization aimed at promoting intercultural understanding and

providing help to immigrants seeking to join the community, which helped me interact with people from different cultures and ethnic backgrounds.

I am currently employed by the Defense Language Institute (DLI) in Fort Walton Beach, Florida, where I teach Arabic to military linguists, military attachés, and federal civilian employees enrolled in the DLI's intensive foreign language training programs. I began teaching at the DLI in March, 2004, where I also participated in writing the MSA (Modern Standard Arabic) listening and reading end-of-course tests for DLI from 2007–2009. During this time, I noted that DLI students' evaluations of their Arabic instructors revealed a lack of effective feedback and academic counseling, as well as the lack of a consistent assessment approach among DLI faculty across both traditional and e-learning classes; I also learned that the DLI provided little or no assessment training for faculty. At that point I began to engage in feedback assessment research to bridge this academic gap and improve my teaching performance as well as my students' learning, ultimately increasing my skills in understanding effective feedback approaches, supporting learners' acquisition, and enhancing my assessment skills. My interests in assessment and in diverse cultures led me to enroll in the Master of Arts degree program in Education at California State University at Monterey Bay, with a focus on multicultural education and social justice, and I was awarded my degree in 2009.

I am aware that being a teacher can impact my positionality as a researcher in the classroom, and that avoiding bias while conducting academic research is not easy. I have taken steps to address this potential conflict during both data collection and analysis. First, I have made a concentrated effort to listen intently to participants and understand their views, and not insist on wearing the teacher's hat while I am interviewing them. Second, I have analyzed and interpreted any commonalities in student responses within the context of existing research rather

than my own experience. Once I had begun to formulate the underlying themes suggested by my data, I used my own teaching expertise and experiences to help develop an action plan to address educational needs implied by the themes.

Enhancing Reflexivity: Other Strategies

In recognition that simply acknowledging and then trying to bracket one's own biases is insufficient to maximize reflexivity, I also have incorporated additional strategies, including: (a) a detailed field log, combined with a reflex journal, to document the quantity and quality of my time in the field as well as to trace my decisions, ideas, and personal reactions as I conduct my fieldwork; and (b) a peer de-briefer, not connected with my research in any way, with whom I could discuss preliminary analyses and findings, and who was tasked with asking me probing questions to guide my ongoing analysis and interpretations. The nature and need for these strategies will be explained further in Chapter 3.

Overall, I believe that my experiences in teaching foreign languages, creating curriculum and tests, developing assessments and providing feedback, as well as my in-depth work with multiple and diverse cultures, have helped prepare me for a study such as this one and have enhanced my reflexivity in ways to help me see and hear participants' views from their perspectives more than from my own. For example, the lessons and assessments I have developed for my various courses have addressed diverse ethnicities, religious beliefs, and sociocultural and political perspectives of different minorities; further, I have exerted a great deal of effort to learn from curriculum developers of other languages to help create and edit my own lessons, as well as to analyze student feedback to improve my lessons.

Research Purpose and Question

As stated earlier, the purpose of this study was to investigate the role of feedback in online learners' knowledge acquisition process and to identify effective feedback strategies based on students' own perspectives and experiences. The learners in this study consisted of recent (within 5 years) education doctoral graduates from online programs at U.S. universities. The overarching research question was: What are effective e-assessment feedback strategies, and what makes them effective? This overall question included four sub-questions, as follows:

- What type(s) of feedback was provided to learners?
- What type(s) of feedback best helped students learn, and how?
- What type(s) of feedback most hindered the learning acquisition process, and how?
- In what ways, and to what extent, did students interpret and implement feedback?

Theoretical Framework

This research is grounded in Bandura's interrelated theories of self-efficacy (1977) and social cognition (1986). Albert Bandura is one of psychology's most eminent researchers, ranked fourth among the top 20th century psychologists, as well as the fourth most cited author of books in the humanities (www.albertbandura.com, n. d.). Self-efficacy essentially is confidence in one's own ability to succeed in accomplishing a task, or meeting a challenge. Social cognitive theory posits that people learn by observing others, mediated by dynamic interactions between a triad of factors including: (a) personal factors such as cognition, biological events, and level of self-efficacy; (b) behavioral factors including feedback received after attempting to master the task or challenge; and (c) environmental factors that can influence one's efforts and/or ability to master the task or behavior (Bandura, 2011; Schunk & Pajares, 2009). Self-efficacy is a central concept of this theory as it affects how we approach challenges and tasks (Bandura, 1977). Higher levels

of self-efficacy facilitate learning of the task or new behavior. As such, self-efficacy greatly affects our choices, learning experiences, outcomes and career paths (Usher & Pajares, 2008; Schunk & Pajares, 2009).

Self-Efficacy

Social cognitive theory emphasizes self-efficacy as a fundamental contributor to strengthening learners' perseverance when they encounter difficulties (Bandura, 2001; Usher & Pajares, 2008; Zimmerman, 2000). The term self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). People's beliefs about their self-efficacy and ability determine their success or failure, in that those with strong self-efficacy do not give up when they are faced with a challenge but instead view it as a learning opportunity (Alqurashi, 2016), whereas those with a low level of self-efficacy tend to focus more on obstacles and their perceived lack of ability to overcome them (Bandura, 1994). A strong sense of self-efficacy assists in making tasks achievable by lowering anxiety and raising confidence (Bandura, 1997).

Students' self-efficacy develops from four principal sources: enactive mastery experiences; vicarious experiences; psychological and affective states; and verbal persuasion (Bandura, 1997). Enactive mastery experiences, that is, experiences of learner mastery of a task, are the most important because they provide actual evidence of success. Vicarious experiences are successes modeled by others, such as a teacher or coach or peer; their potential for successfully impacting a learner's self-efficacy depends on how the model is perceived by the learner. Psychological and affective states can include things like stress, fatigue, fear, etc., which can negatively impact self-efficacy if they are perceived by the learner to be a result of personal inadequacy. Verbal persuasion is the conveying of evaluative feedback to the learner, and is most

effective in raising self-efficacy when it is provided early, highlights the learner's capabilities and improvements, and encourages the learner to measure success with respect to self-improvement rather than in comparison with others (Schunk & Pajares, 2009; Usher & Pajares, 2008; Zimmerman, 2000)

Some studies have suggested that self-efficacy is even more predictive of student success than factors such as self-concept and locus of control (Smith, 1989; Zimmerman, 2000); therefore, focusing on the factors that most positively impact on self-efficacy may well promote students' level of learning. In particular, the provision of quality formative assessment can positively influence learners' competencies, skills and motivation (Ekholm et al., 2015; Schunk & Pajares, 2009; Van Dinther et al., 2015); further, participants' *perceptions* of the feedback they receive can correlate with self-efficacy (Zumbrunn et al., 2016). Overall, learners' confidence is increased when they get well-structured support from a person (a model) close to them, such as a teacher or a family member; thence, teachers' instructions and feedback on academic work is fundamental to learner self-efficacy development and academic success (Usher & Pajares, 2008).

Self-Efficacy and Learning

Some studies have demonstrated correlations between high levels of student self-efficacy and academic success, e.g., in overall mathematics performance (Pajares & Kranzler; 1995; Siegel et al., 1985) as well as in mathematics performance accuracy and participants' choices of arithmetic tasks (Bandura & Schunk, 1981). Self-efficacy also has been found to be an effective predictor of student performance on the writing portion of the Scholastic Aptitude Test (Zimmerman & Bandura, 1994). In addition, self-efficacy has been shown to increase children's interest in writing (Zimmerman & Kitsantas, 1997, 1999), to have a positive influence on

academic motivation and learning (Multon et al., 1991), and to assist college students in selecting their majors (Hackett & Betz, 1989; Lent et al., 1984; Salomon, 1984).

Self-efficacy is believed to assist learning efforts by lowering one's anxiety and stress level (Bandura, 1997), as well as by powering learners' self-regulatory and self-monitoring assessment (Zimmerman, 2000; Zimmerman & Bandura, 1994). Self-efficacy motivates learners to utilize learning strategies (Zimmerman & Martinez-Pons, 1990) and inspires them to set and achieve personal goals (Schunk, 1985). Efficacious learners are more competent in accomplishing higher goals than inefficacious learners (Usher & Pajares, 2008; Zimmerman, 2000; Zimmerman et al., 1992). Overall, efficacious learners are more capable of overcoming academic challenges and are more likely to engage in difficult tasks (Bandura, 1977; Zimmerman, 2000), and this is important in any learning situation.

Self-Efficacy and Online Learning

The origin of research on self-efficacy preceded the origin of online learning by many years (Hodges, 2008), and so research on self-efficacy in e-learners is necessarily more limited. Self-efficacy in virtual learning is a broader term, encompassing not only academic but also technological efficacy; i.e., it refers not only to learners' confidence in mastering academic tasks but also their level of confidence and capability of interacting with and using the Internet successfully.

Online learning self-efficacy is determined by prior online learning experiences and success, prior online course training, teacher feedback, and level of e-learning and technology stress (Bates & Khasawneh, 2007). As might be expected, these four factors reflect Bandura's (1997) four sources of academic self-efficacy, i.e., enactive mastery experiences, vicarious experiences including modeling, verbal persuasion, and psychological and affective states (Lin et

al., 2013). Not unexpectedly, then, a number of studies have shown that Internet self-efficacy has a significant role in e-learning success (Alqurashi, 2016), in that learners who have had previous online courses tend to have better learning strategies and higher academic success (Wang et al., 2013). More specifically, Internet self-efficacy has a major influence on participant's motivation, satisfaction, Internet interactions, readiness, and performance (Lim, 2001; Womble, 2007; Wu et al., 2010; Yilmaz, 2017) which, in turn, have a positive impact on learners' performance and grades (Wang et al., 2013) as well as learner engagement, emotional and metacognitive ability (Pellas, 2014).

Self-efficacy plays an important role in online learning, especially with respect to online teaching instruction and technological tool awareness (Wang et al., 2013); however, most research on e-learning concentrates on the environment and/or the technology, rather than on self-efficacy as a fundamental factor of online learner success (Alqurashi, 2016; Zimmerman & Kulikowich, 2016). But as discussed earlier, prior online learning experiences and successes (enactive mastery experiences), prior online course training (modeling), lack of technology stress (affective states), and teacher feedback (verbal persuasion) all contribute to building self-efficacy in learners. And, learners with a strong sense of efficacy are capable of accomplishing their learning goals and interacting with others. As also mentioned earlier, provision of quality formative assessment feedback—along with learners' perceptions of the feedback they receive—can positively influence learners' competencies, skills and motivation. Therefore, it is important that teachers develop not only online activities that will assist learners to develop and/or improve their self-regulating learning strategies—e.g., online discussions, journals, and collaborative projects—to help them experience successes, but also to develop ways to provide them with effective and timely feedback designed to promote those successes. To ensure that the feedback

is in fact effective, teachers also need to learn how their students are interpreting and using that feedback to enhance their learning.

Summary

This study's aim was to understand learners' perspectives with respect to what constitutes efficient online feedback approaches, attempting to bridge the gap between teaching faculty and online higher education learners.

Effective feedback strategies, as part of building learner self-efficacy, play a key role in the learning acquisition process, including in online environments. Educational reform will not occur without real assessment approaches that assist learners in acquiring different skills and being able to compete technologically in this revolutionary globalization era. This thesis, then, was focused on identifying effective feedback strategies from the perspectives and experiences of online learners. It is hoped that the findings will help scholar-practitioners in understanding the formative assessment needs of online learners, which are expected to lead higher education enrollments in the upcoming years. Enrollments in online classes have been dramatically increasing, but are threatened by lack of, or poor, faculty feedback that serves to increase dropout rates of distance learners. Therefore, virtual learners need guiding instructions, positive interaction with instructors and efficient, personalized feedback to be capable of accomplishing their learning goals, and this study represents a step towards the realization of those goals.

Chapter 2: Review of the Literature

The concept of “checks for understanding” has been applied for a very long time in the pedagogical world but during the last 50 years a new approach in effective instruction has arisen, considering “checking for understanding” as a form of assessment (Wiliam, 2014). “A check for understanding (CFU) is any method used to inform the teacher about the student’s current level of knowledge and understanding” (Model Teaching, 2019).

The idea of assessment has been shifted from only evaluating educational programs to being “the bridge between teaching and learning” (Wiliam, 2014, p. 1), a significant tool in improving the learning process and teaching instruction and a good vehicle to help higher education students be prepared for the “super complex world” (Barnett, 2007). Formative assessment plays a significant role in enhancing learners’ academic performance (Clark, 2011; Hattie, 2011; Kwon et al., 2017, Lam, 2013; McCarthy, 2015) and developing learner’ self-regulating systems (Wiliam, 2012). In fact, formative feedback is the second contributor in students’ learning success after teaching instruction (Hattie, 2011). Interaction between teachers and learners has a great value in the advancement of the learning process; however, formative assessment can be an effective vehicle in the learning acquisition process only if it has been employed constantly in classrooms (Tomlinson, 2014). We cannot understand formative feedback’s influence on learners without looking to the learning context where feedback is provided (Wiliam, 2011). In order to accomplish this, the relevant literature, especially the contributions of seminal researchers, will be reviewed.

The purpose of this literature review is to provide an overview about the nature of assessment in general and formative assessment in particular. It sheds light on assessment’s historical background and its impact on education as a fundamental means of learning. A large

body of research views feedback as a fundamental key-role in empowering learning (Best et al., 2015; Black & Wiliam, 2010; Evans, 2013; Hattie, 2011; Hattie & Timperely, 2007; Stiggins, 2008; Tomlinson, 2014; Wiliam, 2012) and in reaching a satisfactory level of self-efficacy, only if it is personalized and suits learners' academic needs (Aasen, 2015). Assessment becomes a pivotal factor for learner's success and motivation and a central part of curriculum and teaching instructions (Lau, 2016; Taras & Davies, 2013). In addition, the issue of student evaluation of teachers will be briefly addressed. Finally, this literature review examines online learning as an important new domain expected to be more dominant in the educational world during the upcoming years.

Assessment History and Origin

Definition of Assessment

Fifty years ago, the American educational psychologist David Ausubel (1918–2008) stated that one of the most important factors empowering learning is what the learner already knows, and that the role of the teacher is to recognize this knowledge and teach based on it (Wiliam, 2011). This is now known as assessment. For a very long time, assessment meant evaluation of the teaching process. In France, assessment was looked at as one of the basic components of the learning process. In English research literature, it was defined as an essential part of effective teaching (Wiliam, 2011). According to the frequently cited paper by Taras, in the UK (and in this dissertation), assessment refers to the process of judging learners' works and evaluation is the judgment of courses or a program's effectiveness. In the US, the word evaluation was typically used to refer to the process of assessment of student learning (Taras, 2005, p. 466-467).

Early Work on Formative Assessment

In 1912, Frederic Burk (1862–1924) designed “Individual System” tutoring in San Francisco (SF) elementary schools to raise the academic proficiency of SF students. Burk and his co-worker Mary Ward developed instructional materials for kindergarten to sixth grade. They also trained other teachers on this new educational system (Wiliam, 2011). In 1919, the superintendent of Winnetka Public Schools in Illinois developed the “Winnetka Plan,” adapting John Dewey’s (1859–1952) progressive education ideas, which focus on developing learners’ skills and talents through tasks and activities instead of textbooks only. This program took into consideration individual differences and put the struggling students in separate classes. The plan also focused on individual competence, so, for example, fifth grade students who pass a mathematics test can take the sixth grade mathematics class without waiting until the next year. Later, Helen Parkhurst (1886–1973) designed The Denton Plan in Dalton, Massachusetts schools, focusing on tailored instruction for disabled students, where students were grouped based on their individual skills and worked together in monthly assignments instead of the traditional curriculum (Parkhurst, 2013). The plan aimed to encourage collaborative learning and recognized individual differences and skills.

In the 1960s, Benjamin Bloom’s (1913–1999) works emphasized that teaching instruction should take into account individual learning differences and how they impact learning (Wiliam, 2011, 2014). He believed that tailored instruction has an important role in improving learners’ academic performance (Bloom, 1984). Bloom indicated that tutoring should identify learners’ errors and correct them (Guskey, 2010). Bloom referred to this process as “feedback” and “correctives,” which become common terminology in the academic domain later (Wiliam, 2011). Bloom (1968) stated that the main goal of assessment is helping students to achieve specific

goals by dividing the curriculum into instructional units based on planned objectives and the teacher's role should be focused on providing students with formative assessment through each of those units. He believed that the main goal of FA is providing learners with useful feedback to improve their learning proficiency. This feedback should be accompanied with specific corrective activities using different type of resources, which may be beneficial to their learning.

In 1963, the American educational psychologist Lee Cronbach's (1916-2001) works emphasized the importance of improving curriculum content through evaluation. In 1967, the Australian-British philosopher Michael Scriven (1928–present) devised the term “Formative Assessment.” Scriven's formative assessment term was consistent with Cronbach's approach to the evaluation of educational programs and curricular teaching materials and instructions (Clark, 2011); however, most academics tend to use the term assessment instead of Scriven's formative evaluation in evaluating students' learning (Allal & Lopez, 2005).

Michael Scriven. Michael Scriven was the first to distinguish Summative Assessment (SA), which typically refers to traditional exams, and Formative Assessment (FA) (Clark, 2011; Stiggins, 2005; Taras & Davies, 2013; Taras, 2005; Wiliam, 2014). Scriven (1967) believed that assessment is a judgment based on specific goals and criteria and interpreted into a numerical rating (p. 40), and an ongoing process we undertake in our daily life activities (Taras, 2010). Taras (2005) stated,

Scriven gave us a very powerful tool with the distinction of SA and FA—he permitted us to add the dimension of assessment for learning. He did not wish to create a dichotomy, and clearly indicates that the dimension of FA can only be in addition to SA for assessment. (p. 476)

Taras (2005) suggested that we cannot understand the term assessment without recognizing the relation between summative and formative assessment.

Later Work on Formative Assessment

Sadler (1989) identified FA as the judgement of the quality of student's responses such as performance, pieces, or work which can be used for improving their competence (p. 120). Sadler (1989) confirmed that instruction cannot be effective without formative assessment; as he stated, "Formative assessment is concerned with how judgments about the quality of student responses (performances, pieces, or works) can be used to shape and improve the student's competence" (p.120). Roskos and Neuman (2012) described FA as "a gap-minder" since it draws teachers' attention to the gaps in students' learning to alter their teaching instructions (p. 535); as Gikandi et al. (2011) described it, "the iterative process of establishing what, how much and how well students are learning in relation to the learning goals and expected outcomes...in order to support further learning" (p. 237). Academics view FA differently; some see it as all the ongoing interactions between teachers and their students, while others see it as periodic tests measuring learners' success (Tomlinson, 2014; William, 2013). Taras (2010) described FA as the most "contentious" and "varied of all the definitions of assessment" (p. 127). Generally, though, formative assessment is a process where teachers gather evidence about students' learning to adjust their teaching instruction (Cauley & McMillan, 2010; Black & Wiliam, 2010). Frohbeitter et al. (2011) described FA as a process where assessment is used formatively (p. 3). William (2013) stated that any assessment can be used formatively as teachers grade students' exams and provide them with feedback. In essence, the important distinguishing feature of FA is that it is combined with feedback (Taras, 2010, 2005).

Feedback. Feedback has been addressed in literature since the emergence of behaviorism. In Kluger and DeNisi's meta-analysis (Hattie, 2011), feedback is defined as "an action taken [to] provide information regarding some aspect(s) of one's task performance" (p.235). In their important and frequently cited article "The Power of Feedback," Hattie and Timperley (2007) defined feedback as information provided by an agent such as a teacher in regard to learners' academic performance. They developed a feedback model to assess learners by posing the following questions: (a) Where am I going? (b) How am I going? and, (c) Where to next? The first question focuses on learning goals; the second on feedback about the past, present and how a learner progresses; and the third question aims to specify the challenges the learners may experience to be more self-regulated and autonomous (p.4-5). Thus, there is no successful learning without efficient feedback; it is the learner's guide to the next learning step.

Scriven had stated that feedback is a basic part of the learning process (Taras, 2005). Ramaprasad (1983) defined feedback as "information about the gap between the actual level and the reference level of system parameter which is used to alter the gap in some way" (p.4). Taras (2005) adopted Ramaprasad's definition and used the term "formative feedback." Sadler (1989) focused on a definition of feedback as "Knowledge of Results" or KR (p.122). Sadler (2010) also characterized feedback as a "statement of performance" of students' work by their teachers to do better" (p. 538). Sadler (1989) specified the necessary component of feedback as "knowledge of the standards or goal, skills in...development of ways and means for reducing the discrepancy between what is produced and what is aimed for" (p.142). Scriven's, Sadler's, and Ramaprasad's definitions of feedback included improving students' levels to achieve the required academic goals.

Feedback Loops. Both Sadler and Ramaprasad stressed that feedback is implicitly part of a complete system (Wiliam, 2011). In 1940, Norbert Wiener and his team were designing automatic range finders for anti-aircraft guns. They saw that any real effective action needs a closed system to be assessed or adjusted for future actions (Wiener, 1948). Wiener described the loop which pushes the system toward the planned direction as a positive feedback loop, and the one that goes against the system direction as a negative feedback loop. He saw that positive feedback loops can cause instability while negative feedback can cause stability because it pushes the system to its original condition (Wiliam, 2011). In general, the suffix “back” refers to the orientation of the information; however, today any information provided about performance is labeled as feedback. Examples include thermostats, the body’s temperature regulation, and radar traffic signs displaying the driver’s speed (Wiliam, 2011).

Adopting this perspective, academics such as Sadler, Ramaprasad, and Black and Wiliam do agree on only using the term feedback if it has a real effect on performance (Wiliam, 2011). Thus, information cannot be considered feedback unless it is within a system, and therefore, behaviorists look to feedback in a system (Wiliam, 2011). Wiener’s feedback loop system added a new dimension to the learning process. It emphasizes the importance of providing feedback within a well-developed system (Wiliam, 2011), and it opened the door for more future research on assessment and learning.

Benefits of Formative Assessment

FA is not associated with a specific learning theory (Wiliam, 2010) but more with the instructional situation and learners (Black & Wiliam, 2009). FA is the mechanism of the learning process (Roskos & Neuman, 2012), and “the bridge between today’s lesson and tomorrow’s” according to Tomlinson (2014, p. 1).

Between 1886 and 1998 many researchers and educators began to realize the positive influence of assessment on learning, and the findings of these researchers drew the attention of policy makers to assessment practice as a key-role of successful learning (Wiliam, 2011).

Schimmel (1983) performed a meta-analysis on feedback in programmed and computer-based instruction. His review focused on reports from 15 studies of experimental and control groups, who studied the same written material. His review found that feedback is more effective in computer-based instruction than in programmed instruction. He was not able to determine the reason for this.

In 1986, Fuchs and Fuchs's meta-analysis reviewed 21 studies on the role of formative feedback in the learning of students with disabilities from pre-school to 12th grade. Feedback was provided to or by teachers two to five times a week. Their meta-analysis review showed that providing feedback to students with disabilities enhances their learning achievement, especially for students with a mild disability. Fuchs and Fuchs recommended that teachers focus on a long-term goal instead of just focusing on the temporary instructional context; a goal can help in developing learners' skills. They recommended more future research on feedback and its role in developing self-efficacy.

In 1987, Natriello developed a model for student performance evaluation in the classroom consisting of eight elements:

1. determining the main goal of evaluation in schools and classrooms,
2. assigning tasks to students in the classrooms with measurable outcome/s and clear instructions,
3. setting the criteria for students' evaluation,
4. setting the standard or the scale for students' evaluation,

5. collecting sampling information of students' performance through testing,
6. appraising student performance,
7. providing students with evaluative feedback on their performance, and
8. following up on the findings of the students' evaluation.

Natriello believed that studies focused on one or two elements of the students' evaluation process rather than the comprehensive features of successful evaluation. Natriello's review shed light on the importance of setting clear goals and criteria for the students' evaluation process (Natriello, 1987).

Another major meta-analysis was conducted the following year. Crooks (1988) reviewed 14 studies on the relationships between classroom evaluation practices and student performance. His review affirmed that student evaluation is focused more on grades than learning. He added that this emphasis "lowered self-efficacy for learning in the weaker students, reduced use and effectiveness of feedback to improve learning" (p.468). Crooks's review identified instructional practices in classrooms and how they can negatively impact students' academic achievements.

More reviews and studies of formative assessment were conducted around this time. Kulhavy developed "response perseveration theory." He suggested that students are likely to simply persevere their errors on "test-like items;" thus, feedback should aim to correct students' errors instead of only providing or confirming the right answers. Students will look for feedback if they know that their answers are not correct, especially if they were not sure about their answers at the beginning (Kulhavy & Stock, 1989). Kulhavy stated that providing students with feedback after giving correct answers allow them to know that they fully comprehend a specific part of the content; however, providing feedback after errors is more beneficial for learning. Kulhavy recommended ongoing feedback during the course or a teaching lesson.

A review of quantitative studies on classroom assessment by Bangert-Drowns, Kulik and Kulik (1991) revealed that students who took a test every 15 weeks scored 0.5 SD higher than the students who had not been tested. They found that testing could improve academic achievement but not when students were tested more often than once every couple of weeks. These reviews revealed that the main goal of assessment and classroom instruction was not academic achievement but grades, therefore, testing was more like summative assessment without feedback.

Other reviews of teaching instruction, feedback, and error corrections appeared during this period. Studies by Bangert-Drowns et al. (1991); Dempster (1991, 1992); and Elshout-Mohr (1994) showed that the effectiveness of feedback relies on teaching instruction and feedback approach, through pre-tests and/or after teaching instructions, and that providing detailed feedback can develop better responses. Their reviews revealed the need for providing feedback after giving a test rather than just pointing to the correct answer to develop students' "conceptual framework" (Bangert-Drowns et al., 1991, p.234).

Kluger and DeNisi. Most of these studies shed light on the role of assessment in learning and the negative impact of the emphasis on grades but no attention was paid to the theoretical basis of assessment's impact on performance. In 1996, Kluger and DeNisi proposed Feedback Intervention Theory (FIT) after they reviewed 3000 studies from 1905 to 1995. Their primary intention was to examine the influence of feedback performance. They examined the impact of feedback in schools, colleges and even worksites. They defined feedback intervention as an "action taken by (an) external agent(s) to provide information regarding some aspect(s) of one's task performance" (p.255). They recognized that feedback intervention is not efficient if the agent focuses only on the self rather than the focal task and this intervention will be more

effective if it is detailed and goal oriented. To them, feedback intervention can determine (a) how performance did not meet the expected goals or (b) how performance exceeded the planned goals. They identified four responses a person can make after receiving feedback: (a) changing behavior to achieve the desired goal, (b) changing or modifying the goal, (c) abandoning the desired goal, and (4) rejecting feedback. Each feedback type has a different impact on individuals, for example, changing behavior to reach the desired goal requires exerting more effort from the person whose performance was below expectations, but less effort from one whose performance exceeds the planned goal/s. They implied that the feedback effect is not always continuous; however, if its aim is to increase motivation, more effort needs to be exerted to maintain the motivation level.

In summary, FIT drew more attention to feedback's influence on performance; it embraced the emphasis on the correlation between the learning task and the desired goals. It showed the importance of providing feedback focusing on a task and triggering motivation. It specified feedback intervention types and goals and it referred to the feedback agent as "teacher" or "moderator" (Wiliam, 2011).

Paul Black and Dylan Wiliam. Black and Wiliam (1998) reviewed Natriello's (1987) and Crooks's (1988) work between 1987 and 1997. Their review was in the top ten of the list of the most-read articles in assessment journals with more than 56,000 views (Hopfenbeck, 2018). They identified two main functions of feedback: *directive* and *facilitative*. Directive or specific feedback aims to inform learners what area/s they need to revise, improve, and work on. Facilitative feedback employs comments and ideas, recommendations, and suggestions. Their works not only emphasized the significant role of formative assessment but also the importance of making it beneficial through teaching pedagogy and class interactions.

Black and Wiliam (1998) confirmed that assessment is formative if it is provided with feedback, and the role of teacher is providing students with useful feedback can be implemented. Wiliam (2007) identified two factors for successful assessment (a) clear evidence about learners' current performance or as he described it "instructionally traceable" to assess the gap between the learner's current performance and the desired level; that evidence should reveal the instructional tasks the teacher can utilize to help learners to bridge this gap, and (b) real interaction and involvement from learners as learners have to take the suggested tasks or activities by the their teachers seriously. For example, they can share and reflect on teachers' feedback with a peer, if they see pair work is helpful for them, simply because "best designed feedback is useless if it is not acted upon" (Wiliam, 2011, p. 12). Wiliam emphasized the importance of the context where feedback is provided, hence, students will definitely ignore feedback such as "you are no good" (Wiliam, 2011). In general, assessment can be effective if it recognizes (a) where the learners are in their learning, (b) where they are going, and (c) how to get there, relying on the three important agents of assessment: teacher, learner and peer (Wiliam & Thompson, 2008). Assessment can also be impacted by students' motivation for learning and their perspectives of the feedback they received (Wiliam, 2011).

Perrenoud (1998) explained that Black and Wiliam's article is important because of its focus on learners' perspectives of formative assessment in order to improve learning. Their reviews provided an important paradigm of formative assessment which goes beyond theories, concepts, and boundaries of learning practices and contexts (Hopfenbeck, 2018; Wiliam, 2011). This model has lasted for almost 25 years, and their names have been frequently used as a reference in assessment studies (Hopfenbeck, 2018).

In summary, reviews by Black and Wiliam (1998), Crooks (1988), Bangert-Drowns et al. (1991), and Natriello (1997) showed that not all feedback is considered effective and beneficial for learning (Wiliam, 2011). Feedback should be followed by detailed plans with activities to assist students to improve learning and achieve the learning objectives. Feedback is not only about identifying errors but rather assisting students in enhancing their academic performance (Boekaerts, 2006; Wiliam, 2011). Assessment has the potential to empower learners' engagement and motivation (Harlen & Deakin-Crick, 2002).

Biggs. John Biggs (1998), a British researcher who has served for decades as a professor and consultant in the UK, Australia, and Hong Kong, believed that Black and Wiliam disparaged summative assessment in their review. Biggs believed that summative and formative assessment are equal in learning without excluding one or the other (Lau, 2016). Biggs, in a frequently cited 1998 article, described both as “intrinsic” in assessment pedagogy. He saw SA as more influential in learning than formative assessment because it is more correlated to students' grades and future. To him, SA is not judged fairly, and educators need to change any students' negative emotions towards SA to more positive. Biggs suggested the “backwash “and “constructive alignment” idea, where learners focus on what they are going to be tested on and not the whole curriculum to achieve curricular goals. This approach aims to avoid the poor alignment of the educational system where teachers focus on teaching the curriculum rather than students, instead of helping learners avoid looking at SA as a devilish strategy to diminish their learning (Biggs, 2003). This alignment between curriculum goals and assessment was described by Biggs as “criterion-referenced assessment,” a tactic to encourage students to see SA more positively.

In short, Biggs's suggested models resemble Dewey's (1910) description of the effective pillars of a successful education as a “supply conditions that make for cultivation and training of

mind” (p.28) and Barnett’s (2007) strategy of giving room in the curriculum to the students for research and self -achievement/s. Unlike Black and Wiliam who looked to summative and formative assessment as “two different trees,” Biggs considered both as a “backside of an elephant;” they should be balanced so that the elephant can walk (Taras, 2007a). Barnett (2007) indicated that the link between curriculum and assessment is significant but giving the ownership of assessment to students is highly encouraging. Biggs switched educators’ old view of assessment as measuring intelligence to the evaluation of the students. His models also connected assessment to curriculum and final learning outcomes (Lau, 2016).

Formative Assessment Studies in the New Millennium

A new wave of assessment reviews and studies appeared in this modern era, identifying different concepts and meanings of formative assessment from 2002 to 2004. The Organization for Economic Cooperation and Development (OECD) began a wide-ranged research project, “What Works in Innovation in Education.” The project examined formative assessment practices in lower secondary schools in eight countries (Looney, 2005), they also included studies of formative assessment in the French language (Allal & Lopez, 2005) and in German (Koller, 2005). Allal and Lopez reviewed 100 studies of assessment during the last 30 years, they found that assessment practices in French classrooms in Switzerland, Belgium and Canada depend most on Black and Wiliam’s (1998) assessment concept. They included analogous terms for assessment such as Bloom’s “redemption” or “feedback + correction,” while Francophone countries identified it as “regulation” or “feedback +adaptation” (p.245). Their review also indicated that French studies focused more on these developments: (a) “instrumentation” or assessment tools such as testing systems, (b) “search for theoretical frameworks” or “theories that can offer conceptual orientation for conducting assessment” (p. 249), (c) “studies of existing

assessment practices in their contexts” in classrooms, and (d) “development of active student involvement in assessment” such as student self-assessment, peer assessment and teacher guidance. Allal and Lopez’s concept met the Anglo prospective of formative assessment which looks at formative assessment as information can be utilized for teaching instruction and improving students’ learning and achievements (Brookhart, 2007; Wiliam, 2007).

Koller (2005) reviewed German studies of assessment and educational reforms from 1980 to 2003. His review reported Rheinberg’s (1980) study that students can learn more if their teachers compare their performance with their previous performance and not with their peers’ performance. Koller realized that even though there were a large number of German studies of assessment, there was still no tangible evidence on students’ academic performance. Koller believed that providing students with grades is not the only path for success, but rather, that more instructive guidance is indicated. He included Meyer’s works which concurred with Kluger and DeNisi’s belief that overpraising students could impact negatively on their performance but blaming or criticizing might be more beneficial.

Research of feedback then began to focus more on the specific features and models of feedback as three remarkable studies were published in 2007: First, Dylan Wiliam’s small-scale study of formative assessment practices divided the teacher participants into 16 pairs, each pair having a second-year teacher as a “mentor;” or a co-teaching pair mixed between new teachers and veterans. Each pair had an assessment action plan for their classes before the school year and agreed to write a journal about their teaching instruction and assessment and conduct class observations of each other. The study showed that the development of assessment for learning can be a great asset in improving students’ academic achievements only when it is endorsed by school district staff. It also showed that changing teaching practices for veteran teachers was

difficult to some extent but learning a new approach of pedagogy might be easier for novices; nevertheless, teachers did not underestimate the benefit of assessment in learning, but they lacked the right model of assessment to follow. Wiliam (2007) believed that the central concept of formative assessment of this study matched assessment development in the French literature on regulating learning and assessment described previously.

Second, Hattie and Timperley (2007) summarized their extended program review of studies of influences on student learning. In 1999, Hattie reviewed 500 meta-analyses; he reported 450,000 effect sizes from 180,000 studies of 20 million participants. Seventy-four meta-analyses in this review found feedback had an average effect size of 0.56 SD across 13,370 effect sizes (Hattie & Timperley, 2007). The average effect size of feedback in 5755 studies was 0.95 standard deviations. Hattie and Timperley believed that at the goal of feedback is to fill the gap between students' performance and the required learning objective by both planning more doable goals and changing instructional approach or by exerting more effort to achieve the desired goals, which supports Ramaprasad (1983). They developed a model of feedback relying on three main questions: (a) Where am I going? (b) How am I going? and (c) Where next? Each question consists of four stages: (a) feedback about the task (FT), (b) feedback about the processing of the task (FP), (c) feedback about self-regulation (FR), and (d) feedback about the self as a person (FS). They noted that FS is the least influential factor and FR and FP are "powerful in terms of deep processing and mastery of tasks" (pp 90-91). They also recognized that FT is powerful only if it supports self-regulation or is employed to improve the process of the task.

Third, in 2008, Valerie J. Shute reviewed 141 studies and a large body of literature on feedback to learners. Her review could not reveal what feedback works; however, her review did

not support the other reviews' findings of the standardized effect size of feedback ranging from 0.4 to 0.8. Shute identified a preliminary framework for the characteristics of effective formative feedback: (a) guidelines to enhance and improve learning where feedback aims to explain specific parts of the task and (b) assisting students through recommendations and ideas instead of comparing them to their peers or blaming and criticizing or overpraising them. She believed that feedback should be directed on "what, how and why," manageable and simple so that learners can comprehend it and implement it.

To sum this up, Shute's review shed light on scaffolding and feedback; she saw scaffolding as important vehicle in facilitating learning, identifying problems, problem solving and critical thinking, or as she described, like "training wheels...to do more advanced activities" (p.162). Shute believed that there is no certain feedback formula which fits every learner; however, formative feedback should be "receptive and the feedback on target (valid), objective, focused, and clear" (p.182). On the other hand, Hattie and Timperley gave a clear and specific strategy of feedback, guiding educators on their next instructional step: Where is the learner now, how are they doing and what exactly is the next step? Shute's review revealed that the effect size of formative feedback is 0.4 to 0.8 while Hattie and Timperley found an average 0.96 standard deviation of feedback impact.

Summative Assessment

Summative Assessment began to get more attention than FA at the beginning of the 21st century (Black & Wiliam, 2003; Guskey, 2005; Shavelson et al., 2007). In higher education, it is still seen as highly important due to certifications and degrees standards (Lau, 2016). Harlen (2005) believed that teachers tend to look to SA from only one lens, "teaching to the test."

Taras (2005) identified SA as the process leading to an assessment where there is evidence that can be used to reach a judgment (p.468). Scriven (1967) had affirmed that SA is the evaluation process of learners in regard to a specific item and time through a rating grade and feedback. He also pointed to the final curriculum evaluation as “summative evaluation” (Lau, 2016). SA is always linked to exams (Lam, 2013; Taras, 2010) but providing feedback on a graded task makes SA and FA more correlated and beneficial for learning (Taras, 2010). Some academics consider SA as stressful and demolishing to learners (Taras, 2008, 2007b, 2005). For example, Broadfoot (2008, 2007, 2002) labeled SA as Frankenstein’s monster. SA aims to measure students’ progress through exams and/or assignments (McCarthy, 2015). Teachers employ SA to summarize student learning at the end of a course or a teaching cycle (Lam, 2013). Teachers use rubrics and set specific goals and expectations to scale learners’ performance and provide them with feedback (McCarthy, 2015). SA is a tangible tool of measuring, monitoring and following learners’ success (Lau, 2016; McCarthy, 2015; Lam, 2013; Taras, 2010) and it can be an effective vehicle in learning only if it is planned effectively (Shepard, 2006; Rohrer & Pashler, 2010; Bennett, 2010). It can damage the learning process, if it is seen only through a testing lens (Harlen, 2005; Lau, 2016).

Summative and Formative Assessment Correlation

There is confusion among educators on the SA and FA theories and practices (Lau, 2016; Taras & Davies, 2013; Gulikers et al., 2013). This confusion tends to be an obstacle to successful assessment practices (Gulikers et al., 2013; Taras & Davies, 2013). Lau (2016) likened the dialectic debate between SA and FA to George Orwell’s (1945)’s quote in his novel *Animal Farm* “Four legs good, two legs bad,” referring to animals’ rebellion against humans. FA is always seen as useful, but SA is awful, thus, teachers should focus more on FA and minimize SA (Taras,

2005). Sadler (1989) stated that SA comes at the end of a course or a semester but FA is constant. SA does not have a direct influence on the day-to-day learning process, but decisions are made based on its results, for example, failing a course. Scriven (1991) noted that summative and formative evaluation are connected, the same as one person making soup and another person drinking it (p.19); however, his 1967 work referred to FA as the finalizing process of a curriculum and SA as the piloting or summative evaluation of it. Bloom et al. (1971) referred to the terms SA and FA as a fundamental part of learning. They described SA as judging and grading and FA as a significant tool for learning and teaching adjustment (Lau, 2016).

SA and FA are viewed according to their function, SA for testing and FA for learning (Lam, 2016). SA can come first to summarize learners' achievement and then FA; however, SA can be followed by feedback as well (Taras, 2010). There is no conclusive evidence revealing that FA is more important than SA, in fact, SA can be beneficial only if it is well planned (Bennett, 2011; Rohrer & Pashler; 2010; Shepard, 2006). Lau (2016) confirmed that Scriven's (1967) and Bloom et al.'s (1971) models revealed that the separation between SA and FA in the literature is not for the benefit of effective assessment in higher education, because both work together in supporting learning (Taras, 2010, p. 125). Dixon and Worrell (2016) affirmed that the focus on standardization and high-stakes tests is the reason for this confusion between SA and FA even though each has different goals.

In conclusion, SA and FA are a central element of learning and they are correlated to each other. FA cannot occur without being preceded by SA (Taras, 2005). Black and Wiliam (1998) believed that SA is the implicit part of assessment while FA has the explicit focus even though both can be explicit (p.8), while Sadler (1989) thought that SA always needs explicit expression (p.2). Taras (2005) believed that FA's significance is greater than SA's because FA has to include

SA. Second, FA informs SA and it contributes to the learning process by delineating the next step for learners' academic improvement. Bloom et al. (1971) defined SA as the process of grading and evaluating what the learner acquired but FA as "assessment that aids both the teaching and learning process" (p.20). Barnett (2007) believed that formative assessment has more impact though summative assessment is more influential in motivating higher education students. Barnett believed that summative assessment can be formative in higher education when students are motivated and test themselves in order to progress and improve their performance (p.36). Accordingly, we cannot separate these two types because both are fundamental elements of successful assessment practices (Scriven, 1996).

Summary

Reviewing the literature on assessment revealed teachers still tend to have trouble in implementing effective formative assessment practices in the classrooms. To understand and implement effective assessment pedagogy, we need to take into account the whole context of the learning process and all the aspects of assessment (Wiliam, 2018). The reviewed literature emphasized also that assessment can only be effective if it is communicative and interactive through a dialogue between an assessor/agent or a teacher and a learner (Black & Wiliam, 2009, 2016; Kawalkar & Vijapurkar, 2013). Yet, more research on how sociocultural factors such as students' culture and background affect formative assessment will be needed in the next 25 years (Hopfenbeck, 2018). It is becoming recognized that students from working-class families may not be familiar with "the learning discourse of the classroom," as opposed to their everyday language (p. 545). More research is also needed on the role of professional development in raising teachers' awareness of formative assessment best practices (Andersson & Palm, 2018).

Teacher Evaluation in Schools and Higher Education

In Schools: Historical Overview

Shinkfield and Stufflebeam (1995) published a comprehensive guide to teacher evaluation funded by a grant from the US Department of Education. (It should be noted that Daniel Stufflebeam chaired the Joint Committee discussed later in this section.) The first chapter offers a historical perspective of the practice, which the authors organized into three chronological periods:

1. Pre-World War II. In 1659, Charles Hoole (1610–1667), an English grammar school headmaster, crafted a pamphlet asking teachers to be good role models for their students and maintain a good relationship with them and their parents. It also focused on collaborative work among schools' headmasters and faculty; however, the first movement to evaluate teachers nationwide was in England during the late Victorian era (1837–1901) through the payment by results approach. This was a trial to make teachers more accountable for students' learning (Shinkfield & Stufflebeam, 1995).

The main criteria for evaluating teachers was their character, behavior, and appearance until Bobbitt's 1912 idea of an analogy of schools as factories and students as products, with need to learn based on society's needs and teacher evaluation based on shaping this raw product. A report by the National Education Association in 1925 indicated that 75% of school districts used different measurements for evaluating teachers but the most common criteria were instructional tactics and professionalism (Shinkfield & Stufflebeam, 1995).

2. Post World War II–Mid-1970s. During the time of post-Second World War until the mid 1970s, teacher evaluation gained more attention because the public called for increased teacher accountability. However, empirical studies and data were lacking (Shinkfield &

Stufflebeam, 1995). In the mid-1970s, studies addressed teacher attitudes toward teacher evaluation, suggesting that teachers distrust evaluations. Also during this period, researchers recommended that evaluation should focus on professionalism, and that teachers should be constantly evaluated.

In general, this time is characterized by more focus on teachers' quality and improvement through systemic evaluation that measures teachers' competency and accountability (Shinkfield & Stufflebeam, 1995). Thus, studies by Stemnock (1969), Inglis (1970), National Education Association (NEA) (1972), and Gage (1973) paid more attention to teacher evaluation and annual appraisal by highlighting accountability and competency. Inglis's analysis (1970) indicated that appraisal and evaluation of teachers should aim to show areas that need improvement and the main goal should be improving the quality of instruction. Teachers' competency was the main focus during this era, and it was defined as "any action taken by a teacher that contributes to the cognitive, affective, or motor-skill development of the student" (Shinkfield & Stufflebeam, 1995, p.290). In other words, teacher competency started to be measured based on the quality of their products' (i.e., students') skills.

Real change for teacher evaluation was prompted by Scriven's (1967) formative assessment approach because up to this point evaluation in general was more summative, aiming to achieve the goals of the school district, rather than formative, soliciting students' perspectives and feedback. But a landmark event did not occur until the 80s: the *A Nation at Risk* report.

3. Late 1970s–Present. *A Nation at Risk* in 1983 was "the most significant educational document to confront educators and the general public during this period" (Shinkfield & Stufflebeam, 1995, p. 23). Prompted by a growing public realization that schools were failing to prepare students to join a competitive workforce because of poor performance on international

tests, it shifted policy makers' interest toward education reforms. Between 1983 and 1998, school districts started to give more attention to teachers' appraisal, evaluation, and instruction quality (Shinkfield & Stufflebeam, 1995); however, the real landmark for teacher evaluation effectiveness was in 1988 when the Joint Committee on Standards for Educational Evaluation released standards aiming to frame evaluation at universities and in schools. The national Joint Committee was "a project of 14 educational, psychological, and measurement organizations, chaired by Daniel L. Stufflebeam of Western Michigan University" (Shinkfield & Stufflebeam, 1995, p. 66). The standards were a checklist with questions focus on fulfilling the education mission and adherence with the state law.

To sum this up, in the 1970s literature on teacher evaluation started focusing on teachers' character and conduct. Teacher's evaluation by students and school administration was highlighted in the literature from authors' personal perspectives, not by studies and data. The *Nation at Risk* report played an important part in shifting the interest into teaching instruction quality. Evaluation shifted to the competency of teachers instead of curriculum and school management (Shinkfield & Stufflebeam, 1995, p. 26).

Teacher Evaluation in Higher Education

Formative Assessment of Teaching. Students' engagement in the evaluation of teaching has received more attention in higher education recently. Colleges and universities began using student evaluations approximately 30–40 years ago, and they have become more important now. They have been used as mirror for teachers' performance in universities and higher education institutions. It is believed that students' formative evaluation of teaching (SET) develops the sense of ownership of their own learning. It drives students to feel that that they are active participants of the learning process, and that their perspectives and ideas are valued and can

improve the schooling process (Mariano et al., 2017). Studies show SET plays an important role in improving the quality of teaching (Brown, 2008) and it is considered a good lens of students' perspective of teaching instruction (Brown, 2008). Mariano et al. (2017) believed that SET is useful in developing critical thinking such as identifying any academic problems, analyzing them, and recommending solutions. Mid-term evaluations give an idea about how the class is proceeding, and the final evaluation will shed light on the course in general. This will give teachers a chance to re-evaluate their own teaching practices and re-consider any reinforcement and/or improvement in the future. The general acceptance of the philosophy behind SET is reflected in the rise of Centers for Teaching and Learning which began more than a decade ago. The original purpose of the Centers was to provide technical support for teachers implementing new instructional technology. Now their mission has expanded to helping teachers improve their instruction through a variety of innovative pedagogical techniques (Lieberman, 2018).

Students' evaluation of higher education teachers based on quantitative surveys and formative feedback is an acknowledged system in the US, UK, and Australia (Chalmers, 2007; Harvey, 2003; Knapper & Wright, 2001). Students 'satisfaction and opinions assessed by those surveys became unquestioned and vital in determining faculty's careers (Darwin, 2016). Education started to be viewed as a commodity and students as consumers whose satisfaction is necessary, which presents a risk to the delivery of high-quality, as opposed to quick-and-easy, instruction (Coledrake & Stedman, 1998; Marginson, 2009). Nevertheless, these easy-to-administer surveys began to play a key-role in SET (Chalmers, 2007) or as a quality assurance tool for programs (Bowden & Marton, 1998; Walker, 2001).

Origins of Student Feedback. Students' voice on education started informally in the medieval universities in Europe. Teachers were given a schedule of topics within a time frame

and disciplinary actions were taken against those who missed a deadline (Centra, 1993).

Teachers' payment at this time was connected to student's attendance (Knapper, 2001).

The first formal attempt at this evaluation was at the University of Washington in 1924, followed by Purdue University in 1925 (Centra, 1993; Flood, 1974; Kulik, 2001; Marsh, 1987). Not much is known about the University of Washington's trial, but many universities followed Purdue's path later. The work of Remmers and his colleague at Purdue in the 1920s originated an evaluation system in higher education (Centra, 1975, 1993; Kulik, 2001). *The Purdue Rating Scale for Instructors* instrument is designed to determine if student's evaluation of teaching agrees with those of their peers and alumni (Berk, 2006). Smalzreid and Rammers (1943) stated that Rammers' Purdue scale measured "Empathy and Professional Maturity" of teachers. Creager (1950) described it as measuring "Rapport and Professional Impression," and Bendig (1954) as "Instructor Empathy and Instructor Competence." In the 1950s around 40% of US college and universities were using this instrument for student evaluation (McKeachie, 1957) but a study in 1961 showed that only 24% of a broad sample of US colleges and universities still used Remmers' quantitative survey (Flood, 1974). The Purdue scale opened the door for a systemic SET (Centra, 1993) and by the end of the sixties, almost all US universities began to use a teacher evaluation system (Centra, 1993; McKeachie et al., 1971).

In the late 1960s the US university student movements had expressed students' frustration and anger about the Vietnam war, gender inequality, and quality of education. They demanded social justice and education reform; as Centra (1993) noted, "They want to improve the education they were receiving" (p.50). Students asked to be heard and their voices to be valued; thus, they developed their own evaluation system through informally compiled and distributed

handbooks. In response to student movements, decision makers to pay more attention to teachers' evaluation in higher education (Darwin, 2016).

SET became an important lens for promoting faculty and granting tenure. It was also used to meet the demands of student movements and demonstrations, and it gained more attention from researchers. More studies started to investigate the areas teachers needed to be evaluated on, and the focus changed to formative evaluation of teachers.

SET gained more attention in the nineties, specifically, formative feedback provided by students (Bloom et al., 1971). More focus was also placed on faculty behavior and data from students' surveys were aggregated to examine teaching quality. For example, Gibb's (1955) study had highlighted teacher's behavior in terms of (a) democratic behavior, (b) communication behavior and exchanging information, (c) organizational behavior, which mirrors good planning, and (d) academic emphasis. Isaacson et al.'s (1964) SET survey confirmed Gibb's standard but described them as (a) rapport, (b) structure, (c) overload, and (d) feedback. Studies by McKeachie and Lin (1975), Turner et al. (1969), Turner (1970), and Hartley & Hogan (1972) agreed with Gibb's SET dimensions but labeled them as (a) evaluation, (b) structure or organization, and (c) student-teacher-interaction. More studies refined this SET quantitative survey throughout the period, such as Biggs and Collis (1982), Biggs and Tang (2007), Marsh (1982, 1987), Ramsden (1991, 1992), Centra (1993), Prosser and Trigwell (1999), Toohey (1999), and Laurillard (2002).

In summary, student evaluation of teachers has roots in an attempt to meet the demand of student movements during the sixties but later was developed into one of the main criteria for ranking US universities. An instrument to measure teaching and learning quality, despite the fact that it has negative impact by imposing more pressure on faculty and is often used against them,

still became widespread during the last two decades (Darwin, 2016). As Mariano et.al (2017) described it, “This type of assessment...is an innovative way to not only encourage critical thinking skills among students, but also engage students in the assessment process” (p.106).

History of Distance Learning

The goal of the current study is to explore students’ attitudes toward online assessment. A comprehensive review of the literature on must include the history of distance learning as background for this issue.

Correspondence Education

Online learning is not a new fad in the educational world, and it has deep roots going back to the 1700s and 1800s (Casey, 2008; Harting & Erthal, 2005) when shorthand teacher Caleb Philips put an ad in the *Boston Gazette* on March 20, 1728 offering to send shorthand lessons to students by mail (Holmberg, 1995; Verduin & Clark, 1991). In 1873, Anna Eliot Ticknor established the “Society to Encourage Studies at Home” inspired by her father who established the Boston Public Library, which was highly beneficial to the society (Bergman, 2001). This society was the first real distance learning school though mail. Elizabeth Cary Agassiz, the co-founder and the first president of Radcliffe college described it as the “silent university” (Bergman, 2001, p.48). This society was established mainly to assist women in learning from home, offering courses in English, history, science, French, German and art; the applicants had to enroll in only one course (Bergman, 2001; MacKenzie & Christensen, 1971). Books and instructions, assignments and exams were all sent and received by mail to students, and the school was remarkably significant for women who relied more on self-learning because of their family commitment. This type of school was an effective new approach of learning, helping learners to overcome geographical and distance difficulties and class boundaries. It came

at a time when higher education in the US started to aim toward co-education and women's rights in learning (Bergman, 2001). This silent school gave the opportunity to learn to 7000 women (Bergman, 2001) and encouraged them to dedicate time for learning along with their family commitments (Caruth & Caruth, 2013). It was the first endeavor attempting to achieve gender learning equality and overcome class and distance boundaries.

In addition to the empowerment of women, another factor contributing to the rise of distance education was the improvements in transportation. Most universities invested in the railway networks, which brought reliable and cheaper transportation to the country. Thus, many universities started vocational courses sending lessons based on their occupation to home or worksites to learners (Moore & Kearsley, 1996). The main goal of those courses was to reach learners who were not able to go to schools and were left out (Nasseh, 1997). In the UK Isaac Pitman (1813–1897), an English language teacher, offered shorthand courses through mail, as did Foulkes Lynch with correspondence accounting lessons (Keegan, 1990; Moore & Kearsley, 1996). In Germany during the mid-1850s Charles Toussaint taught French language to Germans in Berlin through correspondence, then later, with the help of the publisher Gustav Langenscheidt, he designed a language learning exchange program, then a language correspondence school (Moore & Kearsley, 1996; Watkins, 1991).

In 1882, William Rainey Harper (1856-1906) designed Hebrew language courses through correspondence in Chautauqua, New York and his program was recognized by the state of New York (Moore & Kearsley, 1996). This prior experience in correspondence education benefitted Harper when he became the first president of the University of Chicago and designed the first university correspondence education program where students were able to take one-third of their courses by mail. Harper was an important figure in American higher education, and was

instrumental in developing the concept of community colleges as well as lifelong learning through extension courses.

It was at this time that US universities launched the extension movement, which aims to give all American learners the opportunity for learning, no matter their age or status (Caruth & Caruth, 2013). Learning by correspondence expanded due to its capability to reach a very large number of learners anywhere and everywhere (Larreamendy-Joerns & Leinhardt, 2006), with the advantage of reaching disadvantaged students and/or unserved students (Crauth & Crauth, 2013; Larreamendy-Joerns & Leinhardt, 2006). In 1891, Thomas J. Foster, the editor of the *Mining Herald* newspaper in eastern Pennsylvania, designed correspondence courses to help in raising safety awareness about mining accidents. He assigned a number of tutors to grade their assignments on those pamphlets; later this program grew into the International Correspondence Schools (ICS) to train iron, mining, and railroad workers. The number of ICS learners in 1900 was 225,00 and jumped to 2.5 million by 1923 (Moore & Kearsley, 1996).

More universities and higher education institutions started to recognize correspondence education in the 1900s; for example, Cornell University developed a special correspondence education program for women in the rural areas of upstate New York (Cornell University, 2001). By 1930–1939 American universities designed subject-specific correspondence education programs (Bittner & Mallory, 1933). By 1943 correspondence education spiked among universities and even in military schools, as the United States Armed Forces Institute offered it and more than seven million military personnel were enrolled (Watkins, 1991).

In conclusion, correspondence education was the fundamental pillar of distance learning with the simple tools of print shop and postal services. It was successful in serving women, blue collar workers, farmers in rural areas, and immigrants (Bozkurt, 2019), an important vehicle for

passing boundaries such as gender and class, and geographical distance. Thus, it helped in decreasing illiteracy in the U.S and achieving more social justice for marginalized people who have no access to education. It has been described an early “catalyst of globalization” (Bozkurt, 2019, p. 254).

Distance Education Through Radio and Television and Teleconferencing

A new era of distance learning emerged, and live educational radio replaced correspondence education to a large extent because it saved the postal delivery time and because of its lively nature (Casey, 2008). The audio technology through radio and the audio-visual technology of television was a great asset in speeding up the schooling process though the student- teacher interaction was still limited. This radio-television technology was successful in reaching a large number of learners. It is true it was teacher- centered; however, it motivated research and autonomous learning (Bozkurt, 2019) since libraries were ordered to provide learners with the books that were mentioned during those programs (Holmberg, 1995).

Radio. By 1921, American higher education institutions were giving permission for educational radio (Casey, 2008; Saettler, 1990) and between 1918-1946, the Federal Communications Commission (FCC) licensed more than 200 higher educational institutions (Casey, 2008; Pittman, 1986a) and Iowa State University had its first five licensed educational radio stations (Pittman, 1986b). By 1930 the US Department of Education became more involved in distance learning and financed and managed different educational radio programs in a variety of subjects (Laine, as cited in Bozkurt, 2019). In the UK the British Broadcast corporation (BBC) was highly active in educational broadcasting during the fifties (Holmberg, 1995). Radio educational broadcasting enriched distance learning and the audio feature helped in

decreasing distance for learners, e.g. in Canada, Athabasca university provided audio tape courses with books to part-time correspondence students (Byrne, 1989).

Television. By the 1930s television educational broadcasting trials started, and in the 1950s credited courses by higher education institutes began. In 1956 Chicago launched the first college TV station (Moore & Kearsley, 1996). During the early sixties, Airborne Television Instruction (Midwest Program on Airborne Television Instruction: MPATI) started its first “flying classroom” on an airfield near Purdue University in Indiana serving 4000 students (Gordon, 1990). Later in 1963 the FCC came up with the Instructional Television Fixed Service (ITFS) of 20 channels for educational purposes. A year later, the University of Wisconsin launched the Vocalized Educational Media (VEM) as the first trial of systematic distance learning instruction using multimedia tools. By the seventies, the US had 233 educational T.V stations (Gooch, 1998). Later, many other countries such started to follow U.S

Teleconferencing. During the eighties a new technological revolution began with satellites and educational TV, accessible everywhere in the US (Saba, 2013). In 1982, the National University Teleconference Network used satellites for its programs serving 40 institutional members. A cornerstone of distance learning was in 1985 when the National Technology University (NTU) started online courses using satellite signals for downloading its course materials for undergraduate and post-graduate students. In 1989 it was followed by the University of Phoenix with online classes open to learning institutions to suit learners’ academic needs (Casey, 2008). Satellite and TV technology gave opportunities for both adults and young learners (Zigerell, 1991) and was the precursor to e-learning.

Distance Learning and Computers

Online education which came into existence during the early 1990s is now a fundamental part of the US educational system (Caruth & Caruth, 2012; Hyman, 2012; Lei & Gupta, 2010). Online learning has become widespread among US university and higher education institutions, (Caruth & Caruth, 2012; Harting & Erthal, 2005; Hyman, 2012; Lei & Gupta, 2010), and it has become an essential part of mainstream education, providing new learning opportunities to learners (Bozkurt, 2019, p.252). Many universities designed online programs to encourage learning acquisition, providing learners everywhere the opportunity to enjoy the flexibility and the rich resources of this technological evolution (Lei & Gupta, 2010). Some universities have even required mandatory online classes in their programs to achieve the concept of “global scholar” (Caruth & Caruth, 2012; Larreamendy-Joerns & Leinhardt, 2006, p. 570) because of the richness of the resources and research on the Internet from different global perspectives. There has been an ongoing effort to improve distance learning (Caruth & Caruth, 2013). Unlike in traditional classes, teachers can supply courses with more audio and video materials to help poor performing learners, filling any pedagogical gap (Harting & Erthal, 2005). Many studies have revealed that online learning is as effective as traditional learning and others show that it is more effective than traditional face -to-face learning (Caruth & Caruth, 2013). Online education is sure to expand even more in the future because of its capability to accommodate every learner’s needs; “Online education appears to be here to stay” (Caruth & Caruth, 2013, p.147).

Historical Background. The use of computers for educational purposes began in the late 1970s and the beginning of the 1980s (Minoli, 1996). Virtual learning started to flourish during 1990s as a result of the digital revolution of the 1990 and the new millennium, and the emergence of newly developed computer software and fiber optics. The concept of distance was

no longer significant. Teacher-centered classroom strategies decreased, and student-centered classrooms were more needed (Daniel, 1996). New York Times reporter/columnist Thomas Friedman described a “flat world platform” defined as a:

product of a convergence of the personal computer [which] allowed every individual suddenly to become the author of his or her own content in digital with ... software [that] enabled individuals all over the world to collaborate on that same digital content from anywhere, regardless of the distances between them. (Friedman, 2005, p. 4).

Friedman’s book, *The World is Flat*, became a best seller during the early years of the 21st century because it addressed the contentious topic of globalization in a reader-friendly style. Consequently, a new online/virtual learning arose, focusing on student-teacher interaction and achieving the same results as the face-to-face traditional class (Bozkurt, 2019). During the nineties, new teaching instruction strategies began, aiming to assist learners to read beyond the text through discourse analysis and guiding students through academic counseling and one-on-one interviews (Saba, 2000); qualitative studies received more focus (Bozkurt, 2019). The web became more available and many universities started to offer undergraduate and graduate programs to different type of learners (Harting & Erthal, 2005).

The National Center for Education Statistics reported that in 2000-2001 90% of higher institutions offered virtual education with computer-based instruction employing audio and/or video features (Waits & Lewis, 2003). Many organizations began to offer educational training courses for employees online and the idea of virtual learning grew, as Harting and Erthal (2005) described, into “universities without walls.” Levine and Sun (2002) predicted that higher education institutions would be three types: “brick,” “click,” and “brick-click;” the first is the

traditional campuses, the second is virtual, and the third has both traditional and virtual features and it is the one which would achieve more success.

Conclusion

Online learning flourished because it overcomes geographical, economic, and environmental barriers, confirming Friedman's (2005) idea of the flat world platform. In addition, computer and Internet students in the 21st century grew up with digital tools which are essential in their lives, where research and open resources are readily available (Jacobs, 2013). Second, bachelor's degrees became necessary to get a decent job and because of that many full-time workers started to turn to virtual classes. In 2020, because of the worldwide spread of the Covid-19 plague all schools, universities, and higher educational institutions changed their courses to online classes in a serious attempt to slow down the spread of the deadly coronavirus. At the start of the 2020–21 academic year, Harvard and other major universities went mainly online. Consequently, many higher education help-wanted ads were posted for remote teachers and university professors to help during this pandemic time. This is a new challenge for teachers who are reluctant to meet technological change's demands. Teachers will need to adapt new instructional assessment strategies to suit the academic needs of virtual learning, and, therefore, professional development is an incredibly important vehicle to prepare teachers and educators for this new era. It is expected that online learning will increase as more and more universities start online courses because it is as Jacobs (2013) described "lifelong learning" (p. 2).

Chapter 3: Methodology

This chapter addresses the overall selected research qualitative methodology and the rationale for identifying the participants, the study procedures, data collection, storing data, data coding and analysis, and the steps that were taken to ensure trustworthiness and confidentiality.

The purpose of this study was to gain insight into effective diagnostic formative feedback strategies—assessment used to monitor student learning to provide ongoing feedback that can be used by instructors to improve their teaching, and by students to improve their learning—from the perspectives and experiences of eight Ed.D. graduates whose degrees were completed online within the last 5 years, between May, 2013 and May, 2018. The study's aim was to understand how online Ed.D. graduates perceived, implemented, and benefited from diagnostic formative feedback provided to them when they were students in a doctor of education program. The study relied on an illustrative case study researching methodology approach to be able to examine e-assessment practices and recognize online learners' assessment experiences and their role in their *self-efficacy* and in overall learning.

Research Question

In this study, I sought to understand the answer to this overarching research question:
What are effective e-assessment feedback strategies, and what makes them effective?

This overall question included four sub-questions, as follows:

- What type(s) of feedback was provided to learners?
- What type(s) of feedback best helped students learn, and how?
- What type(s) of feedback most hindered the learning acquisition process, and how?
- In what ways, and to what extent, did students interpret and implement feedback?

I intended to understand and describe the participants' experiences in terms of the formative assessment they were provided during their doctoral learning journey to identify the online formative assessment strategies which seem to be most valuable in online courses. The findings of this research may be used to improve formative assessment in online programs, in particular Ed.D. courses.

Research Design and Tradition

This study was grounded, based on the qualitative research approach because it focused more on perception, points of view, and experiences. To investigate this topic, I employed qualitative research methods because, per Creswell (2013), utilizing qualitative methodology helps to examine learning strategies and to hear learners' voices and understand their experiences. Rubin and Rubin (2012) stated, "Qualitative researchers focus on depth rather than breadth; they care less about finding averages and more about understanding specific information, individuals, groups, or moment in time that are important or revealing" (p.2). Thus, qualitative methodology is more beneficial when investigating social and educational phenomena (Ponterotto, 2005). That is, the qualitative method helps in listening, exploring and understanding different perspectives and opinions and motives of others through responsive interviewing (Rubin & Rubin, 2012). Creswell (2013) noted that qualitative methodology is an inductive approach collecting data based on persons' real experiences and perspectives and interpretation, similar to an intricate fabric composed of minute threads, many colors, different textures and various blend of materials" (Creswell, 2013, p.42). This enables the researcher to build at the end a complex, word-based and holistic picture of the problem being studied.

This dissertation employed case study research methodology since it suits the nature of this research in investigating a particular case of a group of people (Yin, 2013) within a real li-

life context or setting (Yin, 2009). The case study technique is “not a methodological choice but a choice of what is to be studied (Stake, 2005, p. 438); a *bounded system* by time and place (Creswell, 2013); a comprehensive research inquiry (Merriam, 1998; Yin, 2009); and an adventurous approach due to its flexibility and varied sources of data (Moriarty, 2011). Yin (2003) identified case study requirements: (a) a focus on answering “how” and “why” questions, (b) no manipulation of the behavior of those involved in the study, and (c) a desire to examine and investigate specific context to the phenomenon being studied.

Accordingly, a case study research inquiry suited the nature of my study because it examined formative assessment practices within a specific system bounded by time and place for the specific population of a group of online learners during their long learning journey. This descriptive case study relies on narrative experiences and stories about a specific phenomenon (Yin, 2003) with a genuine intent to examine current assessment practices and come up with an action plan that may contribute to the improvement of e-learning in general and higher education in particular.

Research Paradigm

The study relied on constructivism-interpretivism, since it is one of the best research orientations in understanding individuals' perspectives and views (Merriam, 2008; Ponterotto, 2005), and it is aligned with the qualitative research approach (Ponterotto, 2005). As Rubin and Rubin (2012) noted, qualitative research tends to often follow a naturalistic approach, instructed by constructivism which relies on how “people construct their own realities based on their experiences and interpretations” (p.3) and “the expectations and the meanings that they bring to a situation” (p.19) to share it with each other as a group. Therefore, a naturalistic research paradigm depending on interpretation of real authentic experiences is one of the foundations of

the research world; it is often more powerful in understanding a specific situation or a problem than a quantitative survey, which relies on mere numbers (Rubin & Rubin, 2012). It helps individuals to make real meanings of their experiences and to be capable of understanding the world they are living in (Creswell, 2013).

Theoretical Rationale

The rationale for this study is based on the self-efficacy theory, which becomes an essential part in understanding learners' motivation and academic accomplishment. Bandura's (1977) *self-efficacy* theory is a pivotal vehicle in increasing learners' motivation and enhancing their academic accomplishment through assessment, and in particular formative feedback. It is known that self-efficacy plays a major role in learners' acquisition of knowledge and it often determines their success (Zimmerman, 2000). Implementing effective assessment strategies is a significant factor in the success of the learning process. Consequently, the study attempts to understand in what way provided feedback assists in either raising or decreasing online learners' self-efficacy and learning motivation, and how this reflects in general on their learning.

Recruitment and Access

Participants were recruited through a support network for students pursuing a doctorate of education. Potential participants contacted me via email, then I emailed them a written request addressing the study goals and the detailed procedures. I asked the participants to email or call if they had any question/s or a need for clarification about either the research purpose or the process. I also emailed them a consent form prior to our first interview. After I answered any questions, and once they signed the consent form and emailed them back to me, we arranged our first interview time. I also read the consent out loud during the first meeting to make sure that

they were comfortable with the study's nature. It was made clear to participants that they would be able to withdraw at any time/research stage.

All the interviews were scheduled at a time convenient for the participants, and they were conducted through Skype or Zoom applications, based on their personal preferences. The interviews lasted between 45 and 60 minutes. All the interviews were recorded on two recording devices, a digital recorder, and a tape recorder, for backup in case of any technical issues.

Institutional Review Board (IRB) Approval

An IRB application was filed with the research committee of Northeastern University, highlighting the rationale of the research and all the steps intended to be taken to ensure participants' confidentiality and safety. All necessary editing was done based on the NEU IRB feedback and the application was approved (see Appendix). Prior to filing the IRB application, I had to pass an online Human Protection course to obtain the required Human Protection certificate based on the NEU requirement. The course addressed the required steps and procedures to protect the human subjects' safety.

Protocols and Consents

An interview protocol was developed, reviewed, and approved by the IRB committee of the NEU. This protocol was edited and changed based on the NEU IRB recommendation as well. Participants' signed consent forms stated clearly that their participation in this study was voluntary and they had the right to withdraw at any time during the research stage (See Appendix).

Participants

Participants were recruited from different states and demographic regions, which will help ensure privacy. Diversity was one of my main criteria for recruitment in the purposeful

sampling procedure, which employed a maximum variation approach. I received many voluntary acceptance emails asking to participate in my study; but I tried to ensure participants' ethnic and gender diversity. After contacting potential participants and arranging the interview times, I was able to interview eight participants. All the participants earned their education doctorate online between 2013 and 2019. I interviewed four females and four males to ensure different gender perspectives. All the participants were between 30 and 60 years old. The females were one African American, two European-Americans, and one interracial American. The male participants were two African Americans, one Mexican-American living in Europe, and one European-American. The coordination with the Mexican American took a longer time due to his relocation to Europe and the time difference with the U.S. Based on their descriptions all of them are physically active and they are teaching either online and/or in the traditional face-to face university; however, they all turned to online teaching due to the COVID pandemic virus. All of them showed remarkable enthusiasm towards learning strategies in specific assessment approaches and they expressed their strong beliefs in feedback's benefits in enriching and enhancing learning. As new Ed.D. graduates and university professors, they stated that they are interested in learning and research as well as attending higher education conferences to learn from veteran teachers.

Data Collection

The study relied on in-depth interviews because this technique is commonly used in the educational world (Rubin & Rubin, 2012). Eight interviews were conducted using the approved interview protocol. Each interview took between 60–80 minutes. I explained the objectives of the research and recited an introductory protocol prior to the start of the interview. All of the participants agreed to be recorded, and I used different software applications such as Skype,

Zoom and Google Hangouts according to each participant's preference and flexibility. All of the interviews were transcribed and coded. Field notes were written during the interviews.

During the interviews I asked divergent (open ended) questions related to assessment in general and e-assessment in particular. My questions mainly focused on participants' experiences and how the feedback they received was provided. I listened to their narratives, trying to find out how the provided feedback helped and/or hindered their learning experiences. I also aimed to explore their previous experiences and their perspectives as learners and future higher education teachers, attempting to find out the most beneficial feedback strategies that might benefit their online learning. I used Rubin and Rubin's (2012) *probe* interviewing tactic of either encouraging the interview to continue through verbal hints such as "good" and /or "great" or rewording my questions if the interview went off track.

I had many follow-up questions during the interviews, trying to explore participants' concepts of online learning and assessment compared with the traditional face-to-face learning, and virtual learning with blended (online and face-to face) learning, as well as their preferred learning approach to develop a road map for my analytical interpretation and common themes.

To ensure a quality interview, I applied Creswell's (2013) peer review/debriefing technique. I piloted all the interview questions on two of my co-workers, and added more questions based on their feedback. The peer debriefing was a highly beneficial and authentic experience which raised my motivation, self -confidence and readiness as a researcher (Creswell, 2013).

Data Analysis

All of the data were coded at first using "In Vivo" software for Microsoft Windows, but due to my inexperience at the beginning of the researching and coding learning curve, the

application froze at the final phase. Emails were exchanged with other classmates who stated that they experienced the same difficulty. Saldaña (2013) affirmed that a novice researcher's attention can sometimes be deviated by focusing on the software during the coding process, rather than the coding itself. Therefore, a different Microsoft application was used to code the interviews' transcriptions (see Appendix).

Coding

Charmaz (2008) pointed out that coding is the link between the collected data and their significance. In a word, coding is the mechanism that makes real meaning of the collected data; as Saldaña (2013) affirmed, “A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (p.3). Therefore, coding is the bones of the collected data analysis (Charmaz, 2006, p. 45).

Saldaña (2013) identified three coding strategies: (a) coding for patterns, where a researcher looks for similar patterns; (b) coding filters, where a researcher looks at data with analytical eyes; and (c) coding as heuristic, where a researcher analyzes and links the collected data. The interview transcriptions were coded based on identifying similar patterns and ideas to develop a complete holistic picture (Saldaña, 2013; Bernard, 2011). Coding was done based on my personal judgment, and determination of similar ideas (Sipe, 2004; Lincoln & Guba, 1985).

Transcriptions were categorized into tables according to question sequence. Each transcription was coded separately (Saldaña, 2013), using a line-by-line strategy to identify any similarity and/or contrasts, and create a reliable analysis (Charmaz, 2008). The analysis focuses on social and cultural phenomena, human interaction, discourse, motives, beliefs, and notions (Hammersley & Atkinson, 2007, p. 7).

The first coding cycle relied on using In Vivo for initial coding. In Vivo coding is suitable for beginner qualitative researchers (Saldaña, 2013). It employs the participant's actual language or phrases (Strauss, 1987), and identifies the participant's perceptions of specific phenomena or actions (Charmaz, 2006). Initial coding or "open coding" links the small parts of qualitative data into a final summative conclusion or theme, as Charmaz (2006) mentioned, "to remain open to all possible theatrical directions indicated by your reading of the data" (p.46). Accordingly, initial coding can employ In Vivo coding, and suits interview transcripts, memos, and field notes (Saldaña, 2013). It enables the researcher to look at data with an analytical lens (Glaser, 1978).

The second cycle revisited the findings of the first cycle using Axial coding or "Focused Coding" to conceptualize the final common themes from the first cycle coding (Saldaña, 2013; Charmaz, 2006). Axial coding is well-suited to interview transcripts, journal, artifacts, and document. It is a transitional vehicle between the first and second cycle (Saldaña, 2013). Boeije (2010) believed that Axial coding has a major role in specifying, which codes the first cycle as more significant than the others. All the first cycle initial codes of each transcript were categorized into a table in order to recognize similar patterns and identify the final themes. Combining all these codes, analyzing them, and identifying contrasts or commonalities ultimately found similar patterns or themes (Creswell, 2013).

In addition, I also sought advice from my classmates who are in the same research phase and/or graduated before me. I showed them the transcriptions of my interviews, and my final themes analysis. Their feedback helped me to develop the final roadmap for my study's themes. All the themes are explored and discussed in detail in the next chapter.

Trustworthiness

All the recorded files were saved on my personal computer and locked with a special password. I also took field notes during the interviews. I transcribed all the interviews and emailed them to each participant for member checking, asking for any corrections and/or additions for any misunderstood answers. Two of the participants emailed the transcription back with some corrections. The participants' identity, names, physical address, or worksites were confidential. Pseudonyms were chosen for all the participants. I am the only person who holds the records of transcripts. The collected data are specifically for this study only. After the study the analysis and data will be transferred to a flash drive and stored in a locked cabinet for 3 years. After 3 years, signed consent forms and the data will be destroyed.

Summary

In this chapter I detailed the main goal of my study, the qualitative research method I employed, and the data collection and the data analysis approach I used. I also addressed the divergent open-ended questions used during the interview. I exerted a great deal of effort to eliminate my biases and avoid any type of stereotyping, following all the recommended ethical and neutral approaches as a researcher by listening to my interviewees' stories and respecting their opinions and views and opinions.

Overall, using the qualitative methodology was suitable to my research questions to elicit as much as I could of statements, experiences, and narratives and perspectives from my participants. It also aligns with my interview approach and analysis and the kinds of data I am collecting.

Conclusion

This study employs a case study methodology based on the literature review, and the study's focus on descriptive content. The purpose of this study is to examine assessment practices in general and e-assessment in particular at the higher education level through the experiences and perspectives of an online learners group, investigating how feedback was provided and the assessment strategies used during their learning journeys, and how this either positively or negatively reflected their online learning, learning skills, motivation, and self-efficacy. The main goal of this study is bridging the gap between the traditional face-to face assessment practices and online/ blended assessment practices. In the next chapter I present the results of my data collection and analysis.

Chapter 4: Results

Technology has become an essential part of higher education. Overhead slides and blackboards have been replaced by presentation software and interactive whiteboards in college classrooms; on-campus classrooms themselves are no longer the only option for degree seekers. Online learning has revolutionized higher education.

Virtual learning attracts a large number of learners all over the world, who benefit from accessibility and the revolutionary technology which emerged during the last decades. Online learning has proven to be an effective vehicle for research, information, and mass communication (deNoyelles et al., 2014). Online learning is offered everywhere, anywhere, and is available to any interested learner. In 2020, due to COVID-19, almost all universities and higher educational institutes worldwide adapted their courses for online learning to ensure student and faculty safety. It is expected that online learning will spread more widely in the educational world, especially in times of emergency and natural crisis but during ordinary times as well (Hodges et al., 2020; Crick et al., 2020; Mohammed et al., 2020).

A significant factor influencing online learning success and learner satisfaction is student/teacher and student/student interaction, along with a well-planned course with clear objectives (Hodges et al., 2020). A key context for student/teacher (and sometimes student-student) interaction is assessment. Effective assessment helps tremendously in the success of distance learning and consequently online learners' satisfaction, especially because learners always see the assessment element of the course as a key role in their success (Van Wart et al., 2020). Students' perceptions, ideas, and suggestions are highly important in improving e - assessment as well as the educational process in general.

This study aims to examine practices of online formative assessment, which is conducted during the learning process rather than after the completion of a course, to gain insight into effective strategies from learners' experiences and perspectives. Effective feedback is an important pillar in guiding learners and raising their self-efficacy. This chapter presents the stories of eight online students who have graduated from U.S. universities during the last 5 years. Interviews and graduates' narratives yielded common themes which will be presented in this chapter.

Participants

The goal of this study was to examine online learners' experiences and expectations regarding the e-assessment they were provided during their doctoral learning journey. Participants represented different genders, ages, and ethnic backgrounds to ensure more diversity and cultural richness in the sample. After responding to the email invitation to participate in the study, communication about scheduling an online video interview was carried out through emails, phones, and Skype. All the participants signed consent forms and their questions about the study were answered prior to their interviews.

Participant Biographies

In the next sections, participants will be presented in detail. Common themes, based on selective coding and word frequency counts, will be identified. Themes are characterized in terms of (a) participant autobiographies, (b) philosophy of teaching and education, (c) online doctoral learning journey, (d) blended/hybrid learning, and (e) effective feedback strategies. After analyzing and coding the interview scripts, I discuss the common themes which have emerged from different areas of specific assessment, and assessment tools.

Povo***Biography***

Povo is an African American in his forties. He lives on the east coast of the U.S. He works as an advisor in a university and teaches educational leadership courses as an adjunct professor as well. He likes American football, jazz music, and reading books in different domains especially in education and teaching pedagogy. He is married with three children, two boys and a girl of different ages and grade levels. He believes that education is the only route for them to reach their dreams and a good standard of living. He did not think of pursuing a doctoral degree until he heard about online doctorate programs from one of his friends. He said that pursuing his education a long time after earning his master's was a challenge. He is enthusiastic about education and enjoys online discussions and forums about teaching.

Philosophy of Teaching

Povo mentioned that his online program guided him in his future teaching career. He was able to observe best practices as well as substandard teaching strategies from the perspective of a student. He began to appreciate the importance of feedback. Povo said, "Being a student and doing all these things and now being an instructor and seeing the students do similar stuff, I found myself giving probably more feedback in [the class he was currently teaching] than [his students] probably got in any other class they had." This experience makes him more responsive to students' needs and more understanding of the importance of assessment in the learning acquisition process. He believes that teacher-student communication is very important for assessment, which is not, as he stated, merely using Microsoft Word's comment function to mark up an assignment. His idea was that successful online learning should be well-organized and include good effective assessment tools and instructions.

Online Learning

Prior to starting his online program, Povo had a different idea about online learning. He believed that it is not as “serious” and provides a poor quality of learning. He stated “I started the program in 2013 and had much trepidation about online study. I think before I became immersed in it, I sort of thought of it as possibly not as well-respected as, say, face to face learning or being in the classroom.” However, Povo changed his idea completely after he became immersed in the program. He found out that online education demands a self-motivated student, and it is a real challenge. As he indicated, “So I came in with that bias. But very quickly, I would say within the first week, I realized that was really not the best way to think about this online experience. As a matter of fact, I think it was much more difficult than it would have been if I was just sitting in a class where you can be passive.” He mentioned that in the traditional face -to-face class, he prefers sitting in the back of the class. But for an online class, students have to be active, post on discussion boards, and participate in the discussion on a regular basis. Povo prefers online classes because sometimes in a traditional class, one or two students hijack the discussion and other students do not have the chance to participate. In online classes, though, all students have an equal opportunity to produce and participate. This contrast was a surprise to him.

Blended Learning

To Povo, communication and building a network are remarkably important to a successful online learner; without this network, he believes, loneliness and isolation could kill your motivation to proceed. Accordingly, meeting his classmates and professor during the one-week yearly residential programs was really beneficial. He successfully built a good network, and it encouraged his engagement and raised his confidence. He started to trust more in the program. He said “It was something different when we were all online, and then we met for that

week, and then we went back online. I felt like my performance and my engagement and just the acceptance of online was actually validated by just meeting everybody face to face,” and he added “It just gave me more confidence that there is somebody on the other side of the computer screen that's a real person.” So, to him, hybrid classes are a more authentic experience, encouraging learning and helping to overcome any academic barrier or difficulty more easily than a solely online course would. The social network he built enhanced his learning and inspired him to move forward.

What is Assessment?

To Povo, assessment is a significant tool in enhancing and improving learners’ academic skills and capabilities. He believes that formative assessment is very important for online learners more than for a face- to-face class. He said “I think it is. And I think if I was, say, right now building an online degree program from scratch, I feel like it’s probably even more important—more so important on the online format to have constant feedback throughout the process than it would be if you were meeting people face to face.”

Povo mentioned that online classes “can be a lonely experience if somebody's just looking at their laptop, submitting whatever they're submitting and just kind of waiting for someone to respond.” He also said that this can occur “if you don’t meet the person, [if] you don’t have video chats with them. Or sometimes you may have a phone call, but it’s a very distant process. And so if you’re not getting that consistent feedback, then it’s almost like a pass through.”

Effective Feedback

Povo emphasized that feedback should not be just an email and/or a Microsoft Word comment, but rather a really good conversation with learners because it is a kind of mentoring

and guiding for individuals. He mentioned that to some professors, feedback is just giving grades in the form of letters or numbers, similar to correspondence courses where students used to send their test through the mail and the teacher graded and mailed the result back with no reasons for achieving or failing the test given. This approach does not help to point learners in the right academic direction, Povo said.

Povo cited a variety of student motivations for enrolling in an online course. He mentioned, “[The class] could [result in earning] a real credential—other times it can be just this thing you do but it doesn’t really attach to getting a better job or a promotion or anything like that.” He also said, “So it’s essential for anyone standing in line to have that level of feedback and understanding of whether or not they’re going in the right direction, and honestly, just measuring their abilities of whether or not they’re grasping the information.”

Povo considered this tactic to be a setup for failure, not success, because students will carry on their negative practices from one class to another if they were not advised to change them. He specified effective feedback as:

1. Clear and specific because some teachers do not give clear feedback or they say “good paper,” “great job,” “I like this.”
2. Submitted in a timely manner, since some teachers provide feedback on assignment one while students are working on assignment three and so logically they would repeat the same errors. As he said “The feedback was not helpful because the house had already burned down” and “It is misplaced feedback in terms of the timing.” In order for students to improve and to implement teachers’ feedback, timing is a significant factor.

3. Provided even if students excel and scored A or 100 so they would know what they should emphasize in next assignment. As he said about an instructor who failed to provide this feedback, “Like you have no comment whatsoever, no suggestion. I found that hard to believe because I’m learning this and I didn’t feel like I was at a level of mastery that I should be getting 100 with no comments” and he added, “This paper is 100 because you did this, this, this and this. Or this paper is a 94, it could have been 100 if you had done X, Y or Z.” This type of feedback will be more efficient in guiding them for their next step.

Povo pointed out that feedback is a remarkable factor of success in doctoral programs in general, but it has more value in the dissertation process. He believes that communicative feedback is necessary for online doctorate students: “In the dissertation, it’s not about the written remarks. It’s about the conversation. The meetings you have with your advisor and then the feedback you get.” Also, “So once you start moving into that relationship where it isn’t [simply between] the advisor and you as the person writing a dissertation, that level of feedback has to be different.” Thus, on this level feedback cannot be just emails but more communicative, didactic, and instructive and tailored to the individual.

Accordingly, feedback to Povo is a significant guiding tool to grow and progress. It should not be simply a score or a letter grade, rather an ongoing dialogue with his teacher to improve his academic performance. It has to be delivered in a reasonably timely fashion, clear, detailed, and to the point. It is feedback to move forward.

Romero***Biography***

Romero is Mexican-American and in his late thirties. He used to live in a southern state in the U.S. After earning his doctorate degree he moved to Europe to teach Spanish there. He likes soccer, reading, and salsa music, and going to movies and cultural festivals. His area of interest in education is using games and technology to motivate students and encourage learning. He is married with no children. During the interview, he mentioned his relocation to Europe was a good step because he likes to get to know new people and learn about other cultures and traditions. He also mentioned that doing his doctorate program online suited his needs because he used to travel a great deal between the U.S and Mexico; therefore, taking online classes was an ideal option for his situation. He believes that education is a great vehicle to bridge the cultural gaps among nations and people.

Philosophy of Teaching

Romero believes that online learning is going to expand more widely in higher education in the coming years and therefore, teachers who are reluctant to teach online should change their teaching approach to adapt to the new generation's learning style. Today's students prefer to be kept busy and to learn with puzzles and games, otherwise they find education boring. He thinks that engaging students in projects and hands-on learning is the only way for them to stay interested. He said that assessment is a very important evaluation process, enabling both teachers and learners to progress. He tries to understand his students' academic needs, providing them with formative feedback to grow academically and progress. His main idea of the educational process is based on communication and interaction and thus employing technological tools to

enhance students' learning, and motivating them rather than just reading and preparing for exams.

Online Learning

Studying online was an ideal option for Romero's situation and constant frequent travels. Furthermore, it fits his introvert learning style because he prefers studying alone and not getting involved that much with other learners, since he had done this since his early childhood. However, this negatively impacted his motivation to learn and the desire to discover the unknown. As he said "Self, yes. Definitely self-motivated. I like to work alone" and "I like to study alone. I like to read alone." This does not mean that he is anti-collaboration or avoids group work because he added, "When I have a question, I ask a classmate or a teacher but I'm very self-motivated and, and in my case that is the reason I prefer online courses."

Romero believes that the traditional school is going to be eradicated, and online learning will replace it or as he described, "The brick and mortar school where students sit down passively and receive all the information," which he did for many years when he was a little child, will disappear. Another advantage of being an online learner is taking your laptop and studying in a public library or anywhere. As he mentioned, "As an online student, I decide my time. When, how, how many hours I can invest in my studies, where to study, if I want to be at home or in a coffee shop or in front of the beach. So, that is the reason I prefer online courses." To him, online learning has more flexibility, but it is not for everyone; you need to be more dedicated and self-motivated and a good planner. He stated:

[Online learning provides] more flexibility and, of course, it's not for everybody. As I mentioned, you have to be self-motivated. If you are not, you will never be able to finish

an online course. You have to have your goals. You have to have a schedule and you have to follow that schedule.

In sum, online learning is the perfect domain for Romero's learning style, personality, and his current circumstances.

Blended Learning

When he was asked about blended learning, Romero mentioned that it is highly beneficial for learning. He stated that it does not mean that he is a Type B introvert learner who rejects working in groups; in fact, meeting classmates during the residential week was a very useful experience to build a network and exchange information with classmates for future work. He said, "It was totally different than sitting behind your computer; now you meet everyone and decide which one you will ask when you need help or have a question." This experience was important to fulfill the social part of learning. As he said, "It helped me to get to know people from a different background, exchanging emails and phone numbers with them" and "Basically socializing with them motivated me more, I started to believe that I am not alone." This also made his second residential week easier, as he became involved in more group work presentations and research. Thus, he advocates blended learning and believes that solely online learning cannot work alone in encouraging learning.

What is Assessment?

Romero believes that assessment is highly important, especially when it comes to online learning. He defined assessment as an ongoing evaluation process which helps the learner in identifying their strengths and weaknesses and determining how familiar they are with the discussed topic. He added that it is the teacher's job to "collect evidence about his students' academic performance, evaluate and analyze them to be able to come up with the right plan to

improve and enhance [their] academic skills,” and that is why teachers’ assessment practices play a significant role in the learning acquisition process. Therefore, teachers need to keep up with the latest approaches to benefit their online learners, using all type of available assessment tools. As Romero said, “Assessment is like a vehicle—you can drive it safely or you can do it irrationally, causing accidents and trouble. It is an important, actually very important tool teachers need to educate themselves about to guide their student to academically improve and success.” He believes that assessment is very important, so teachers can know if the students understand the topic of the lesson or not, and with assessment teachers can determine whether students are doing the work they are assigned or not.

Effective Feedback

Formative assessment is essential to guide learners and highlight the areas they need to work on. Romero mentioned that some teachers did not provide him with feedback but only grades. He said that he values feedback and he believes that it is always recommended, especially in online learning. He stated,

You always need your teacher’s feedback. Otherwise, you will feel alone. It is like you wrote a paper expressing your perspectives and opinion, presenting your research, and no one pays any attention to it. Getting an A is always great, but you need to know your weaknesses in academic areas to work on them and be ready for your next assignment.

Romero prefers the video conferences some teachers provided during his online learning journey to highlight most common errors and inquiries or to answer students ‘questions. He said that it was a part of the enhanced technology he prefers to use because it creates a more lively and authentic learning context. A video conference or a phone call session with teachers provides one -to-one personalized feedback. He indicated that this type of formative assessment motivates

and encourages his learning; it shows a sense of caring and direct guidance. He emphasized the importance of feedback even for teachers themselves as he stated:

It is for both parties; it is very important. The professor provides the information to students. It is also useful for teachers because sometimes they have to go back to their resources and read before providing any feedback to students, so it benefits both parties.

In other words, formative assessment is also beneficial for teacher development practices. Romero believes that effective or useful feedback should (a) be direct, (b) be clear, (c) be detailed, (d) be personalized and (e) above all highlight the strongest and the weakest academic areas of the learner to enhance and/or improve learning.

David

Biography

David is a European-American in his late fifties. He lives on the east coast of the U.S. He taught English as a Second Language (ESL) in different countries; he has an ESL teaching certificate from a college in London, England. He likes travelling, meeting people from different backgrounds, and learning about other cultures. He prefers classical music, playing piano and camping. He likes reading specifically about teacher development and the latest teaching and assessment theories. He believes that education should encourage freedom of research and knowledge. His ideas and concepts were developed primarily through travel experiences and meeting people from different regions of the world. He thinks that education is a good vehicle to make people more acquainted. He believes that professional development is the best way for teachers to excel.

Philosophy of Teaching

David's philosophy of education in general relies on creativity, not standardization of education and assessment. He prefers research and assigning his students to group work activities, for example, going to museums, going to libraries, going shopping, wherever they can engage with a real-world environment. This lets them gain experience, which is a very important part of learning. Performing such independent research is an area in which online learning is strong. He also believes that teachers need to be proactive with students and get to know them. If he teaches any online course, he usually meets with his students every 2 weeks. He said that it is important for students to feel that they are part of an academic active social network, because the social aspect of learning is very important. To him, it is important for teachers who teach online in a doctorate program to understand their students' capabilities. As he described it, "We all have different abilities and personality traits. In a doctoral level program, students have diverse abilities, interests, personalities; every individual is unique."

Online Learning

To David, online learning has great value; however, he believes that online learners need to build a communicative network, or they will feel lonely and cannot continue, especially younger students. He explained, "I read an article that loneliness in online learning is the number one reason that most students drop out or don't continue their programs. One shortcoming of online learning is in the human development skills, particularly in younger students." David thinks that online learning is more "intellectual" because it has an academic focus of pushing you to do more online reading and researching. He thinks that online learning is conducive to conducting independent research rather having somebody make you do busy work all of the time. However, from his perspective, online learning is not for everyone because it lacks the

human aspect to help and guide learners, and therefore, building a network with others and being self-motivated are necessary.

Blended Learning

To David, a hybrid/blended program is academically beneficial and a better format for education because the human aspect is significant and essential in learning. Thus, he found the yearly on campus sessions a great learning and socializing opportunity. He said, “I enjoyed them. It gave us a chance to have human contact with other students and to meet our advisor.” He thought the week long in-person meetings were beneficial not only for students but for teachers as well because it gave them a chance to meet the students and work in the classroom. It was important to him to experience the school he went to, and to become part of that academic environment. He added, “I learned as much from the experience of being on campus as I did from the online readings and writings.” David believes that doctorate programs should not be 100% online and that hybrid classes are more suitable to create an efficient learning context. As he described it, “Education students have to learn how to teach. That must be done in the classroom, for example [by] watching your professors teach. I would move towards hybrid blended learning.” To David, hybrid learning allows for a combination of the two—for the students to work and live their lives while pursuing their education, and for teachers, to get to know their students more closely. It also helps the human and social growth aspect of going to the school, to become part of the school, an important aspect of the educational experience and academic culture.

What is Assessment?

Assessment to David is something that has to be done on an individual basis, particularly at the doctoral level; however, he does not believe in a standardized format that can be used

when dealing with every human beings' assessment. He sees any standardization as a form of discrimination. He said, "So I don't agree with standardized assessments. Assessment should be done to complement student growth, and that's going to be different in each student." To him, assessment should be tailor-based for each learner's academic needs and not a standardized, one-form-fits-all because he believes that each learner has a different learning style. Teachers as assessors should find the learning style of each of their students and come up with a suitable plan for them. David thinks that formative assessment is an important key role in learning success, specifically when it comes to online learning and more specifically for doctoral students who always need instructive guidance.

Effective Feedback

David believes that feedback is important for both the teacher and the student; it helps them to work with each other. Feedback helps them to know each other. He identified effective feedback as (a) positive, (b) constructive, (c) designed to help the student, and (e) delivered in a timely manner. Asked about a suitable strategy in providing feedback, he mentioned, "I prefer the in-person feedback. I liked to meet with my teachers. So any type of feedback I liked as long as it was positive and constructive." He said this about the feedback he does not value: "The type of feedback that I did not like was if feedback was negative or overemphasized grades." In other words, he prefers detailed and personalized feedback aimed at growth, not to emphasize grades and numbers. He also mentioned that he does not endorse feedback that requires him to limit or change the work to fit the teacher's agenda or to "twist" his assignments: "Or, you know, the students tried to say something or provide a specific point or idea, and the teacher's trying to change and manipulate."

David had the same experience as Povo—his first advisor did not provide him with detailed instructive feedback. He had two advisors. His first advisor did not provide him with helpful feedback; however, the second advisor was more communicative and her guidance was more helpful to him to finish his dissertation in a timely fashion. As he described it, “I feel that the second advisor that I had did that very well. The second reader adjusted the way she dealt with students, which matched my dissertation, as my dissertation itself dealt with that issue. She worked with the concept of my dissertation.”

He prefers giving students space for expressive research and letting them work without any restrictions or limitations on their ideas, topics, or expression. As David noted, “Feedback should be positive. Even if there's something the student's doing that may have to be adjusted. The teacher should guide positively not manipulate or to threaten the student.” Late feedback is not useful to David: “If a teacher is contacting a student within a reasonable length of time with constructive feedback it is respectful of the student, whereas if the teacher takes two months to contact the student, that's just disrespectful.” Constructive, positive, communicative, tailored and personalized are the characteristic of effective feedback. He also mentioned that he prefers feedback via Skype, video conferencing, and one-on-one meetings.

Mike

Biography

Mike is a Black American in his mid-thirties who lives in a southern state in the U.S. He teaches educational leadership. His area of interest is education equity and social justice. As a Black American he likes to raise people's awareness of issues related to people of color and therefore, he is active in social media, and an active participant in forums, symposiums, and conferences. He is proud of his African heritage and culture, including history, music, and

traditions. Most of his scholarly writing focuses on eradicating racism and ending White supremacy and prejudice. He likes American football, jazz, and modern music. He believes that anti-racism means doing the exact opposite of racism over and over again, until racism is dead. He likes to address issues related to minorities in the U.S., expressing their voice to other communities.

Philosophy of Teaching

Mike believes that the connection between teachers and students is very important for learning, especially for virtual learning, because engagement is an essential factor in online learning success. Every class should have clear outcomes or goals which teachers try to reach by the end of the course, and which students need to be aware of. He stated, “I think what's important is, you have your materials, right? And you want to have your students be able to work with a level of understanding. I think goals and objectives are okay, and I say that because I'm someone who believes in active learning engagement.” Mike believes that teachers should not restrict students' creativity by setting narrow goals or limiting their skills; they should be more flexible so that students have a relaxing atmosphere. As he says, “Goals, programs, expected outcomes are all somewhere to begin at least but they should not prohibit you from going where could possibly go. As a teacher you should allow some level of space.” Thus, in Mike's concept of education, key words are (a) communication, (b) engagement, (c) diversity, and (d) creativity as main elements of the success of learning.

Online Learning

Mike values online learning and employing the latest revolutionary technology in education. He believes online learners should be self-motivated because you get out of online learning what you put into it. He said that people who are critical of technology the ones who are

not good at it, whether as a learner or as a teacher. Mike thinks that to be a successful online learner, you need to form a good network: “So, online education, it's important to have a connection, not only to them, but also to my colleagues, my classmates, my peers, the professors, the administrators.” To Mike, the key role of online learning success is to be a collaborative sociable learner to benefit from the experiences of others. He mentioned that this connection helps individuals to excel as he stated, “And oftentimes, because of those experiences, it may allow us to fully grasp or understand particular instances, if, like, you tell me about your experience, or I tell you about mine.” Thus, online learners can overcome the sense of being alone behind a PC by bonding with classmates, and exchanging information and perspectives, since each person has a different lens. As he said, “But if I provide actionable...an actionable way of seeing that everybody's looking at it sort of from the same lens, because you have the same information, and you're able to address it the same way.” Diversity and real authentic culture to Mike are important because they are a genuine learning environment, and, thus, online learning gives students a great opportunity to know different cultures having classmates from different ethnic backgrounds or even different parts of the world. Mike said, “I felt like I went above and beyond” crossing all the geographical barriers pursuing a terminal degree.

Blended Learning

The social aspect of learning is a significant agent of success to Mike; therefore, being with classmates and teachers at the time of the residential on-campus week was a rewarding learning experience. Observing how teachers handle classes in real-life situations, having access to different resources on campus, and doing group research and presentations helped him to deeply understand more of the program's content. He mentioned:

I feel like a lot of people are critical of online learning simply because they couldn't do it. But as somebody who, who did my terminal degree in a hybrid style, meaning I went to campus, I stayed on campus, I took classes. I stayed in the residence hall, and I did a lot of my classes virtually. I applied a-all the things that I learned to be able to land myself in a position at a traditional space, right?

Immersing himself in a real academic learning context encouraged learning and being with others motivated him to continue and excel: "And if it's something that you wanna gain from an experience, then you will allow nothing to stop you from gaining that experience. If you wanna say, 'Well, I'm not successful because it's online,' then you're not gonna be successful because it's online, right?"

What is Assessment?

Assessment is a fundamental tool of learning to Mike. He said that it is about where learners are and what their next step is, what their next goal is and how to achieve it. Effective online assessment to Mike is a guarantee of success: "It is the guidance and the compass of success" when teachers assess, exchanging ideas, identifying the weak areas learners need to be aware of, and providing them with suggestions to succeed. This facilitates the learning acquisition process and, as he indicated, "more skills will be acquired and learned." To Mike, assessment needs to have goals to achieve a road map for students to follow. As he noted, "Assessment should focus on 'Where do we, where do we meet in the middle, to get this project done?'" Assessing students even by giving harsh critiques is beneficial because it will make them "a better writer" and "a better strategic learner" when they craft their next paper.

Effective Feedback

Mike stated that feedback is so important on a regular basis. Some professors did not have the habit of providing weekly feedback or post assignments early. He describes this phenomenon as “like kind of you left us on our own.” He categorized formative assessment as “active learning engagement,” a necessary learning tool between teachers and learners that any learning process cannot go well without. Feedback helps learners to go forward, to improve and proceed—“You were able to get actual feedback on where you were in the process, how efficient you were in the process, how effective you were in it.” Mike indicated that feedback should be specific and straightforward, to the point, not a generic highlight. For example, he mentioned “Like, try not to do this...this is a valid point...you need to work on your APA style ... proofreading or grammar” about his experience with a teacher. “He didn't really go into detail, like, ‘Watch your margins. This is a run on. Look for grammar and syntax.’ He didn't really do that.” Mike said this type of feedback was not purposeful to him and less helpful. When he was asked about online feedback strategies, he said that he preferred video conferences or lively one - on -one sessions more than a dull comment on a Word bubble because the former type of strategy will create follow up questions and ongoing dialogue with his teachers. Consequently, Mike advocates (a) clear feedback, (b) personalized feedback, (c) detailed feedback with examples (d) one-to-one feedback sessions, and (e) communicative through either video conference or a telephone call.

Liza

Biography

Liza is an interracial woman in her early fifties, married with two children. Her husband used to be in the U.S military and she lives in a state in the northeast U.S. She teaches higher

education administration as an adjunct professor in a university which is not associated with her doctoral program. Her family and her daughters and grandchildren are an important part of her life; when she is not teaching or grading papers, she likes to work in her garden, adding something new all the time. Recently, she started a new business of education coaching and editing for post graduate students who need help in crafting their final thesis. She likes this new business and she dedicates many hours to it. She likes reading, listening to music and attending or presenting at educational conferences. Recently, she has published some articles related to different education topics. She is active on social media and higher education teachers' forums.

Philosophy of Teaching

Liza believes standardized formats such as rubrics and/or any type of pattern restrict students' creativity. She believes that formative assessment is more beneficial than standardize rubrics or other structured formats: "So for me, I don't use a rubric. By labeling them as excellent, fair, average, or poor, could diminish their involvement, so I rather just give them narrative feedback, meaning a sentence to a paragraph of why they were successful or what they needed to be more successful." So the key element of success, in her opinion, is eliminating standardization, which killed education in the U.S, instead giving the student the space and the freedom for research and knowledge. Second, she thinks that students, specifically online students, should be more self-motivated. She said, "As an instructor you can provide all the guidance, instructions, you can provide your phone number, your email, and if the students would like not to use those resources as a way to be successful, then there's not much you can do beyond that." In other words, students possess the genuine motive and drive to learn through reading and research.

She also believes that students need to be aware of the final goals of the class and understand the teachers' mechanism to reach them. She said, "If you're teaching one class, you want to keep it, so that everybody understands those expectations, so that it's not confusing and that you want to make sure that people will meet those expectations in a timely manner." To her, teachers should be devoted in their work, because that shows the student that you care about their success and that you're willing to work with them outside of the confinement of an online setting. There should be as much interaction online as if you're teaching in a traditional format, and that's where the instructors' office hours are incredibly important, and that's where people need to sort of make that connection with the instructor.

Liza has acted in the roles of both teacher and student, and both roles have contributed to the development of her philosophy. As an instructor, she believes that being devoted to the coursework and the objectives, and being willing to meet with the students to explain what is needed and how they can be successful is paramount. As a student, Liza recommends being more proactive about interacting with the instructor to make sure that you understand the assignment, and reaching out to the instructor for answers is critical. To sum up, Liza's philosophy of teaching relies on (a) communication, (b) reliability and truth with students, and (c) caring and devotion.

Online Learning

To Liza, online learning is a great and unique experience especially because of the latest technological developments and inventions coming out every day, and embedded deeply in many applications and software in online learning. However, if the online learner does not have a desire for learning and success, then it will not be an enjoyable experience to some. As Liza said, "The problem is in an online environment, you can't mandate this, so it's really on a volunteer

basis in how people want to work, and so it's really, to the discretion of the learner.”

Accordingly, it is up to online learners if they want to learn and succeed or not. She added that some people are still reluctant to become involved in online learning, but now, due to COVID 19 the whole world has turned to online instruction. People must accept it, deal with it, and change their mindset to succeed in it. In her opinion, the interaction with her teachers during her online program helped her a great deal to earn her doctorate degree.

Blended Learning

When asked about the difference between online classes and face-to-face classes, her idea was that it is not about the platform of learning, but rather the learner's motivation, personality, and the genuine will and desire to succeed: “It's really about self-determination and how that person is going to apply themselves, regardless whether it's a face to face or online. Because some people can come into a traditional format and continue to be isolated, not participate, not engaging in groups.” Liza added that for the traditional class you assess students on how well they are engaged, so you are observing their behaviors and their interaction, and you grade on participation in that way; whereas, in an online format, your only source for grading would be written assignments.

Liza thinks that hybrid learning is highly beneficial because it gave her the chance to meet her classmates and teachers. She said that she was able to build a good social network which helped her for the rest of the program. By attending the residential program, she knew who she would call if the teacher was not available and she had an inquiry or a question. The residential time to her was a great learning opportunity to visit the university campus and get involved with group work activities. She thinks that a solely online program is not enough for learning because collaboration in a real academic context is different from sitting behind a

computer. It helped in creating a sense of encouragement and self-motivation to immerse herself with others.

What is Assessment?

Liza believes that assessment should be about how a person is able to work collectively in scenario that is evaluated, but more importantly is understanding how you can meet those needs: “So the assessment, if it provides clear measurement such as rubric then I think people will be able to work in a great format that way.” She added that assessment is important to point out to students where they are in the learning process and direct them. She stated, “I think the professor has a social responsibility as well to see if somebody’s not headed in the right direction or they’re missing assignments. Because it could be that they just don’t understand the content.” She thinks that teachers should employ all the available online assessment tools such as rubrics, discussion boards, and even sharing a video or Zoom with students informing them about the weekly goals of the provided materials, highlighting how they are going to grade the assignments so that students feel that they are a part of the process and possess their own learning. She added it is most important to avoid giving students the impression that assessment means grades alone, “but more importantly how will you work to improve.”

Effective Feedback

Feedback to Liza is tremendously valuable if it is detailed, direct, and clear, informing students exactly what they need to do to be better learners, highlighting the area needed to be improved. She mentioned about her online course:

I think it was important for the instructor to give weekly feedback, so it was mainly given in a narrative form. And sometimes that was helpful, and then other times it was a little

confusing. I think somehow the instructors might provide more detail in giving feedback in this format.

So, feedback should not be vague so that the person can comprehend what the instructor is trying to convey.

Liza also mentioned that some teachers just gave grades without providing feedback and without spelling out what was missing in the assignment, how could she had been better or why she achieved this grade, and even if it was an A, she still needs feedback, as she stated,

Just to sort of think about—*How did I get that A?* I found that some courses you received an A, but you never understood how you achieved it. And maybe to some people that does not matter, they have an A, they have an A, but it's really important.

Thus, constructive feedback was what Liza needed to have a better assessment of her level, not just scores. She aimed for a clear constructive criticism of how she could have done better and what areas need improvement, not just grades, which was to her not beneficial. She prefers one-on-one feedback sessions through remote meetings or even a phone call, not just comments on papers. So, in her opinion, having this type of feedback by some teachers fit her learning style and academic needs. In conclusion, Liza values feedback and to her effective feedback (a) is detailed, (b) is personalized, (c) is directive, (d) is so clear that it does not require different interpretations, and (e) is constructive, aiming at improvement and academic growth. Liza identified effective feedback strategies as employing any one-to-one audio or visual tools.

Samira

Biography

Samira is a Black woman in her late thirties who lives in a state on the east coast of the U.S. She teaches educational leadership at a university there. She does not teach online but due

to COVID-19 all her classes were changed to virtual. She is married with no children. She likes listening to music, going to movies, and attending educational conferences. Unlike most of the other participants she is not very active on social media, but she likes to read articles on the latest development in teaching and learning and assessment. She said that she is connected with her family, gathering together, watching movies, and discussing all the issues related to their Black heritage, especially on weekends. She enjoys teaching especially when she receives good feedback or compliments from her students, indicating that she is on the right track.

Philosophy of Teaching

Samira believes that teachers should have clear goals for their courses and students should be informed about them and discuss them with their teachers. She stated, “I’ll post my goals for my students and be like, ‘Okay, these are the goals for the class, or everybody else will pay with these goals. Do we need to make any changes in these goals? Or would you like to add to these goals?’” Samira said sharing the goals with her students is important because it is a learning experience for them, and it is vital to make sure that the students know they are an essential part of the learning process and decision making, so that they are motivated and more productive in that course. She believes that teachers need to have an ongoing dialogue and interaction with students, and occasionally, they have to ask the students at least every other week, “How's everything going? Does anybody have any questions on anything? Did you find the information discussed today irrelevant? What would you improve?” or “What did you like about this class? What did you not like about this class? What would you change?” In a word, teachers do not have to wait to receive students’ surveys at the end of the course, but should be more in touch with students to address any difficulties or barrier as early as possible. It also conveys that teachers care about students’ learning and success. She also mentioned that teachers

need to be ready and students should have all the materials ahead of time. She believes that actual learning is not only about reading books and articles, but rather applying this information in research and presentations, thus creating an effective academic learning context and productive discussion. She added that the key element for effective teaching is learning how to motivate students and encouraging them to be more engaged.

Online Learning

Samira sees virtual learning as a great chance for individuals who work full time. They can still seek a good education for a better career—virtual learning can overcome all geographical and distance barriers. She thinks that online learners should be equipped with different skills from those in traditional face-to-face classes, especially because they are on their own behind a computer. Thus, they should be ready for that challenge. They should be motivated and not give up easily:

I think the biggest difference is that the fact that it is online, and that you don't have immediate access to your professor; you're really working independently. In a traditional classroom, I could easily raise my hand, but in an online format, you're really tackling things on your own.

In sum, students have to reach out to classmates for assistance if they have time and they are willing to help; therefore, students have to build a good network of friends for academic support. As Samira described it, online is “a different beast.” She said when it comes to online learning, students have to be very self-motivated and more dedicated as well as a good time manager, skills different from those needed in the traditional format. Samira added, “In the traditional class in campus, I can easily walk over to the professor's office during their office hours asking for help—this is not available in an online format.”

Samira mentioned that her experiences with online learning during her doctoral program varied because she benefited from some of her teachers, not others. As she described it,

Let me say, I think some people who are really good with online learning, they really work hard to make their classes very interactive. When I was a doctoral student, I would say that we had some professors that did a good job of making classes interactive and doing touch points.

Accordingly, it is important for teachers to come up with lessons plans that can make online learners more engaged and interactive; as Samira said, they should use a variety of assessments.

Blended Learning

Samira stated that when people pop into online learning they think they can just work on their own and decide to manage their own time, but, after a while, it gets very lonely and they either drop out or they became frustrated. Thus, blended learning is a good cure for loneliness; Samira met classmates and teachers during the 2 weeks of the residency. She was able to build a good social network of classmates, helping each other, doing research together, and exchanging information when it was necessary. She thinks that hybrid learning is more highly beneficial than a completely online format, and that universities should lengthen the residency to at least 3 weeks. She emphasized the importance of the social aspect of the learning process, which helps to enhance learning and encourage interaction.

What is Assessment?

Samira stated,

I guess I would say I look at assessment as something as...I guess, viable feedback in order for me to progress. So, what type of information do I need in order to better answer

a question or to better understand what is being taught. That's kind of feedback, but I guess when you talk about assessments, is kind of the same thing, what information am I trying to gain from an assessment.

So, to Samira, assessment is not about grades, numbers or letters, it is about how she can improve as an online learner to understand the curriculum content and be able to answer any content questions. Samira believes assessment in online classes is more important than it is in the traditional class because learners do not have the same chance of face-to-face interaction and they are missing an important component of the learning process. Students always need to be assessed and given constructive guidance, or as Samira described it, "a tool informs you how to progress."

Effective Feedback

Samira mentioned that feedback in her classes was mostly written, because usually teachers simply emailed her their feedback on assignments; whether it was for a paper or discussion board, it was always written. If Samira requested a phone conference, some teachers were willing to do a phone conference with her.

To her, feedback is a significant vehicle for growth; however, some teachers were not effective in providing clear feedback. As Samira said,

When they write that, is harder if their feedback is vague, then you don't know what to do next. So, you're exchanging emails back and forth, trying to get a better understanding of what they want from you. I feel like the feedback needs to be concise, but it also needs to be detailed especially if it's going to be in the written format.

To Samira, feedback needs to be clear and it should not have room for many interpretations, but be direct. When providing feedback, positivity is highly important to Samira; she said,

I think it's very important...I like positive feedback before you start being critical. Like, "This paper was well thought out, duh, duh, duh." I like to start with the positive first or like to hear the positive first before they start on the negatives"

This is a good strategy to motivate your students, not frustrate them. Samira identified effective feedback as providing an improvement plan, such as "I think you need to work on grammar or you have to follow the assignment prompts or you did not do this and that, you did not write in detail about this element." This type of feedback prompts learners to go further, rather than "This is good," "This is a great paper," or "This is not good." As she said, "A kind of feedback tells me if I am going in the right direction." Samira mentioned that she received unclear feedback many times from some teachers, and she had to ask her classmates what the feedback meant exactly, or ask them "What I am missing?" or "What does he want?" She also emphasized the importance of personalized one-on-one feedback sessions, even a phone call to understand and clarify her first academic steps. The upshot of all this is that, to Samira, it is extremely important that feedback should be (a) clear, without multiple interpretations, (b) personalized, (c) directive, explaining what the learner needs to improve, (d) informing learners of the next step that needs to be done, and (e) if possible, delivered through a phone call and /or online meeting session.

Mona***Biography***

Mona is a European American in her late fifties who lives on the west coast of the U.S. She is a retired engineer, and earned her master's in engineering from a university on the west coast as well. Mona joined the doctorate program because she wanted to improve her leadership skills and therefore, educational leadership was her main interest. Currently, she teaches in an engineering school close to her house as well. She is married with one daughter who has recently graduated from a journalism school. She likes reading, listening to classical music, watching TV comedy shows, and keeping up with the latest in education, especially in regard to teaching minorities because the city she lives in is highly diversified. She described herself as an analytical learner, like most who are interested in engineering and science; she tends to know the rationale and theories for everything she learns. Mona found in the program a great opportunity to discover more about education and learning theories, and educational leadership as well.

Philosophy of Teaching

Mona's philosophy of teaching relies on communication with students and successful assessment and evaluation, particularly if a person is teaching online. She teaches environmental technology courses and she mentioned this requires ongoing assessment and guiding. She added that online teaching needs more focus from teachers than in a face-to-face classroom, where teachers can see from the students' body language and expression whether they understand the lesson content or not. Therefore, formative assessment is more important online. Because of that Mona said, "I do that, I try to communicate with the students, more frequently and openly." She tries to use all available sources and platforms to communicate with students, such as Zoom, Skype or even WhatsApp because she has international students overseas as well. She said that

students need to be informed about where they stand and what they can they do to improve; therefore, ongoing dialogue with students is her priority. She suggested that teachers should employ the “exit ticket” assessment approach by posting questions at the end of the teaching session to ensure that students comprehend the lesson well, and go over the answers with them. She also recommends the brainstorming/lead-in method where teachers can check what students know about the lesson topic prior to beginning the lesson. With these techniques students can benefit, learning from each other. In short, her approach to teaching relies on open dialogues and communication with students so they will be more engaged in learning.

Online Learning

Mona believes that online learning was a great learning platform for her because she lives on the west coast and she was able to connect from her house with a university on the other side of the U.S.; however, she pointed out that online learning demands different skills and dedication from teachers because they must be able to use the available technology sources and connect with their students as much as they can. In her case, not all teachers were able to do that. Mona said that she is against the traditional stereotype that virtual learning can hinder learners or teachers as she stated,

Well, I, disagree. I think that, anything that you can do face-to-face, you can also do online, but the, difference, for me, I think is that, you can give students a chance to think of something before they answer.

Mona believes virtual learning is beneficial especially for shy students who do not raise their hands quickly as is done in an old traditional classroom setting. Online learning provides great opportunities, but teachers need to be prepared with efficient professional training in

technology and effective assessment techniques to be productive. Not all her teachers were up to that challenge.

Blended Learning

To Mona, residential time was a great chance to meet people and benefit academically from them. She believes in collaborative learning as a key role in the learning acquisition success. She stated,

Online or a hybrid class where it's both online and face to face gives students the opportunity for collaborative learning where they learn from each other, do projects or research together...collaborative learning is the key factor for any learning program success.

Mona said that the residency weeks were a good chance to exchange papers with classmates, getting their thoughts on her work before posting online. Peer review helped her a great deal to improve her grades because everyone can see the written work through a different lens, or interpret an article differently, and this helped her build a good academic network. Blended learning motivates learners more than solid online programs because "you need to meet people." Mona called it "more interactive" and "more authentic."

What is Assessment?

Mona defines assessment as an ongoing evaluation process to find out if students understand the teaching material. Assessment can be written and formal, or through Skype meetings or phone calls, which are informal. She said that assessment is a necessary tool to be able to "track what a student is doing and how much they're learning on a regular basis." To Mona, assessment is not about grades, as some of her teachers believed; it is about informative guidance and using every available tool to help students, particularly in the online format,

because students are alone and do not know if what they are doing is beneficial or not. She said that some of the teachers focused on the summative form of assessment, such as scores or grades, not the formative type; or they were not prepared or trained well to provide it properly. Mona understands that one of the successful assessment components is clear and achievable objectives of the course as well as a good interaction and orientation from teachers. She mentioned that no online learning course can survive without effective assessment practices.

Effective Feedback

Mona stated,

Some professors were better at feedback than others. The ones that helped me the most were the ones that gave me specific information and had specific rubrics, but I was surprised that at the doctoral level in education, that some of them weren't doing that I thought at that level, everyone would be the best and some, some words been [just] words. I mean, they all gave feedback, but some of it really didn't mean anything. You know, it was too general."

She mentioned that she dropped the first class because she did not get enough and efficient feedback to learn the necessary skills in the program such as APA style or what specifically was wrong about her written journal, whether it was transitional paragraphs or proofreading. Mona specified that feedback cannot be "pretty general" but must be more personalized and specific, informing her how she can improve academically, not "you are doing well" or "this is great." Mona gave an example of specific feedback:

I like specific things that tell me that I need to work on my style your writing, or I need more elaborative introduction, or if they wanted three paragraphs in the middle and a

conclusion and references in APA, that would be the more specific I meant. I need feedback to progress not just grades or general vague comment.

Laila

Biography

Laila is a White American in her fifties who lives in the northeast of the U.S. She works as an academic advisor in a university there and teaches as an adjunct professor in other universities. She likes watching TV, listening to different kind of music, reading books specifically about higher education, participating in teachers' forums, and attending educational and technology conferences. Her point of interest is how virtual learning is going to be the future with new technology coming every day. In her leisure time, she likes to travel or take care of her pets. She thinks that living in a diverse community enables teachers to deal with students from different backgrounds, understand and appreciate different cultures, and work well with others.

Philosophy of Teaching

Laila's philosophy of teaching can be summarized as assess, evaluate, and reinforce. She said that teachers should have clear goals in every teaching session and they should tell the students what they will be able to do at the end of the class. Teachers need to ask questions about the previous class to assess students' understanding. The most important thing to Laila is reinforcing correct answers, "giving clear directions and reinforcement." She believes in the behaviorist psychology school where teachers always praise the right answer or a good academic discussion to reinforce learning. Laila believes that communication with students is tremendously important to successfully establish a successful learning environment. She also mentioned that her strongest area of expertise is curriculum development; thus, she indicated that good curriculum and supplemental materials ensures a successful learning acquisition process.

Online Learning

To Laila, virtual technology is a good learning platform, especially because of the latest developments in software application. Many universities and higher educational institutes turned toward virtual learning due to the COVID-19 pandemic, and therefore, teachers needed to adapt their teaching approach to accommodate this critical situation. Laila said that teachers must prepare for even more online application in the future, because she thinks this is not going to be a temporary fad. Online education will always be part of higher education.

Regarding her doctoral courses, Laila said that assessment was not employed effectively sometimes because some teachers did not make sure students comprehended the weekly materials with questions such as “Do you understand?” or “Do you understand what I asked?” As Laila described it, “So it would not be only a verbal written, but like a face-to-face contact.” Laila believes that online learning is not for every type of learner unless they are good time managers and organized. Teachers need to adjust their way of teaching to suit online learning, and it is the university’s job to provide training opportunities and professional development. She added that graduate students need to balance their work and studies, which may be a distraction or difficult to accomplish, thus, time management in this situation is significant: “So it gave us a better balance of work, life and school. But we were adults that had careers. That had two degrees under our belts.” In short, to Laila, online learning was a great opportunity but in her opinion, both teachers and learners need to have good organizational skills for success. For teachers, *assess* and *reinforce* are the key factors for success.

Blended Learning

When she was asked if hybrid learning was a good learning experience during her doctoral courses, Laila stated,

I was in the group that got to do hybrids at residency. So I enjoyed it. I could see how the one-week on campus sessions is hard for some individuals, but I enjoyed going up, and that's how I met the group that turned the class around. Going up and seeing the professor, talking to them, and it made the class more enjoyable.

She added that this gave her a face-to face learning opportunity where she can have direct contact with teachers, asking them for any clarification for any assignments she did not understand. So, this gave her as she described “one little push.” It also encouraged collaborative learning, research, and group projects and presentations, and to her all are essential elements of learning. Laila believes that adding more on-campus weeks to the programs will encourage learning, despite the geographical barrier and workload for students. Blended learning is an authentic context and she benefited from it.

What is Assessment?

To Laila, assessment is a fundamental vehicle which aims to direct learners to the right route. It should be constant with clear and achievable learning objectives. She said some of her teachers looked to assessment as grades alone, but this would not be good for her. Laila cares more about the formative aspect, the direction to progress. She said, “All right. as a student, assignments need clear parameters before the start of the assignment,” and “Assignments should be clear and specific to the class” so that students know what is expected of them. Teachers need to explain the action plan students need to follow to improve, not just issue grades. So, assessment to Laila is a strategy for helping students to go forward using all online technology sources including email, phone calls, and online meetings; as she said: “No assessment then no progress, no growth.”

Effective Feedback

The formative aspect of assessment is more important to Laila than the summative and grades part. She said that it is so important as a learner to know that you are on the right track. It is also beneficial to reconsider the academic level you reached, re-assess yourself and as she said “to look this direction a little more and push yourself this way.” She said that some teachers wrote vague generalities. This was not useful at all, but others were more specific: “Some were very good at doing that, and pointing directly to where you need to fix it. Others would just write a bubble and say, ‘Fix it. I don't like it.’ So it depended on the instructor.”

Laila said that feedback should be similar to when you give directions to a place, saying “Turn right on the next street” or “straight ahead.” In that way learners know exactly what they need to do. Laila thinks that providing feedback is not about writing comments but as she elaborated, “To me feedback is a give and take, with each time a teacher offered a specific assignment to a class.” In the case of online learners, she mentioned that feedback is an essential element because online learners are alone and they always need coaching, a motivation drive. Laila said that during her dissertation journey, she did not get directive feedback from her chairperson but, more effectively, from her second advisor. This was a surprise to her as she said:

She came on way earlier than usual, and I'm so glad she did. But it was more in my field, it made me be true to the paper, where I could do a surface presentation with my advisor. She made me do the deep dive, which I knew I had to do, I just was doing a surface. She made me go back in and dig, and go to down deep.

Thus, formative feedback to Laila is more detailed, specific and diagnostic, a good helping recipe for improvement and excellence.

Summary

All the participants value online learning as a great platform which can overcome geographical and even class boundaries but they all agree that both teachers and students need to be ready and equipped with specific skills to be successful in using it to its full capacity. Learners must be self-motivated, good organizers, and good time managers, and be able to balance job duties and virtual learning. Teachers need to be trained well to provide effective feedback and be able to use all online assessment features. Second, they endorse hybrid learning because it encourages the social aspect of learning. Third, the philosophy of teaching of all the participants changed. They benefitted from their online doctoral journey because it included ongoing assessment and evaluation, communication, and interaction to help learners.

The next section addresses in depth the themes which emerged from the interview transcripts. Themes were based on selective quotes and word frequency and pertain to assessment tools which were used on their program as well as their experiences and perspectives of them.

Common Themes and Findings

I analyzed all of my data and I assigned codes to all responses and patterns of responses that I found significant in answering my research question. I then analyzed these patterns looking for differences and similarities. I combined all codes and analyses to yield four overall themes:

1. Online Learning

- Online learning perspectives and perceptions
- Blended learning
- Class size

2. Teacher Readiness

3. Assessment

- Concept and definition of assessment
- Characteristics of effective feedback and strategies
- Peer review

4. Assessment Tools

- Rubric
- Syllabus
- Learning objectives
- Discussion board

Online Learning

Online Learning Perspective and Perceptions

Analyzing the interviews data showed that many of the participants joined the online learning program with a prior biased perception that it is not really difficult, and/or it lacks the elements of “real learning,” but later they found out it was not easy, and it needs a self-motivated learner, working hard to accomplish the program. Participants changed their traditional stereotyped idea of online learning, for example, Povo’s idea and biases and how he had to change them: “I came in with that bias. But very quickly, I would say within the first week, realized that that was really not the best way to think about this online experience.”

All the participants agreed that online learning is serious, and learners must possess special preparation and organizational skills—as David mentioned online learning lacks the “human aspect that would help and guide you properly.” (By *human aspect* he meant times when the learner needs immediate access, help, contact, or response from teachers.) Thus, learners must have those skills already or develop them. As Mike stated, “Many people are critical to

online learning because they cannot manage it, what you get out of it based on the effort and time you are willing to invest in it.” Virtual learning is not a lower quality of education than the traditional face-to face classes; as Mona stated “Everything you can do in a face-to-face class you can apply in online learning. It is not about being an online learner rather the quality of the program, assessment and teachers.” Samira said, “It depends on how teachers know how to engage you on the classes.” Online learning does not dehumanize learning, in fact, online learning encourages developing the habit of efficient self-management and self-efficacy (deNoyelles et al., 2014; Ketelhut, 2007; Ketelhut et al., 2010; Nelson & Ketelhut, 2008).

Unfortunately, virtual learning was looked at as an inferior platform of lower quality than face-to-face classes for a long time (Todhunter, 2013); however, this idea has been changed, and enrollment in online courses has jumped lately, especially because distance learning becomes a mandatory feature of globalization and advancement. As Michael (2012) suggested, it is “no longer an option for universities but a requirement in the pursuit of globalization” (p.157). Studies by O’Shea et al. (2015) and Picciano et al. (2010) revealed that this old bias about online learning has no place in higher education now, and that the quality of virtual learning and students’ satisfaction depends on how the program is designed, the assessment provided, and teacher quality (Van Wart et. al, 2020).

Blended Learning

All the participants agree that hybrid learning is a great opportunity for effective assessment during the time of residency, because they were able to meet their teachers and classmates. At the time, it was easier for them to get tailored face-to face formative feedback on their written assignment and research. They did group PowerPoint presentations which were easier to provide immediate feedback for. It was also the social aspect and the assessment

process which positively influences learning. As David said, “Residencies are essential because we met people in person, you have human contact, and social learning. So I think residencies are important and blended learning is the best format for virtual learning.”

Povo said,

I had two residencies...after that face-to-face experiences, they just gave me more confidence and they made me more engaged, and of course my classmates because that's another piece of the feedback is that it's not just you alone out there.

Liza stated, “Blended learning especially during the first residency in my first class was beneficial. I exchanged my written assignments with my classmates, getting their insight and feedback before posting.” Mona said, “It is necessary to build your networking.” Medina (2018) suggested that hybrid is an effective format of online learning due to the fact that it accommodates the social interaction aspect of learning and learners’ different learning styles, and it combines the traditional instructional approach and e-instruction methods to suit the needs of all learners (Reay, 2001; Rooney, 2003; Sands, 2002; Ward & LaBranche, 2003; Young, 2002). Medina’s 2018 study showed the importance of blended learning in emphasizing tailored and personalized instruction. Benefits of blended learning include Sathy’s (2008) findings that it ensures (a) good interaction and conversations, (b) personalized and tailored guidance to learners, (c) employing technology, (d) developing the habit of research and learning, and (e) promoting collaborative learning and improving student’s academic performance. Accordingly, the hybrid format of virtual learning is beneficial, as Samira mentioned, “a great opportunity to deal face-to-face-with people and get the feedback and the assistance you would need.”

Class Size

All the participants indicated that the main barrier to providing timely formative assessment or effective feedback on their written assignments and/or research and presentations was their teachers' online class load. Laila described the dissertation phase where some advisers have to teach and coach doctoral advisees: "There were big lags. And the quantity of the students does affect the ability, to get feedback to the students in a timely manner." Romero described this situation: "I understand they have their teaching load. But some balance has to be developed that either, somebody who's working with doctoral students in their thesis mode does not teach." Mona added, "I do realize that when a professor has 40 students, that they can't do that every week, but to have that done sometimes helps a lot." Povo confirmed that by saying "I think for some of the professors depending on their class load, it might just impact their ability to provide timely feedback or to be really engaged with the course." David described how "some of the advisers have 25 mentees, when most doctoral programs will limit the number of mentees to five or six students." Consequently, the large number of students was an obvious obstacle which prevented teachers from engaging with the class, providing the required assessment on a timely fashion, or giving the detailed diagnostic feedback the students need and/or the one-to-one that all of them articulated they preferred to have.

It is important that online courses provide the same quality of teaching as the traditional face-to-face class to be successful (Ausburn, 2004; Swan et al, 2014). Interaction and engagement are significant factors of online learning success (Callahan et al., 2013; Dahalan et al, 2013; Domun & Bahadur, 2014; Kearney, 2006); timely feedback and the quality of teaching instruction are important for online students' progress and learning (Lister, 2014; Van Wart,

2004). This cannot possibly be achieved with a large class size, which hinders effective assessment by teachers and their interactions and engagement with students.

Teacher Readiness

Analyzing interview data showed that some teachers were ready for virtual teaching, while others were not efficient dealing or employing online resources, for specific, formative assessment. For example, David stated that his second advisor gave detailed feedback and she tended to be more devoted and helpful; as he mentioned, “The second advisor, her assessment was adjusted for the individual, to work with the individual students’ skills and interests.” He also pointed out that feedback sometimes took 6 or 8 weeks. Povo confirmed that as well by saying some teachers were either not dedicated, or the size of the class was too big, or teachers were not trained sufficiently for the assessment challenges of online learning. Liza stated on many occasions she had to email some teachers because the feedback was not clear or the assignment prompts needed clarification. Mona was surprised that at a doctoral level some teachers did not provide useful effective feedback or any feedback at all. Others confirmed the unavailability of some teachers and the difficulty of communication with them. Laila, Povo, and Samira described vague feedback or unclear assignment prompts or rubrics as “so you just weren’t quite sure what they were looking for.”

Introduction Class

All the participants emphasized the importance of the introduction class in terms of developing the basic skills which would help them to continue in the program, but, still, this varied based on teacher readiness. For example, Povo was happy with the introduction class’s teacher because she provided timely and detailed feedback that helped him to be equipped for the program. He said that he needed this kind of help coming back to education, assignments, and

school after a long time. On the other hand, Mona had to drop the introduction class because she did not get the same help. She was struggling with APA style and what was required for assignments, a scholarly writing style was required from her and no useful guidance was provided.

Van Wart (2004) stated that the quality of instruction, assessment, and teacher's readiness and practices play a fundamental role in the success of virtual learners, and teachers need to be ready for online teaching challenges, adapting their tactics to online learners' needs (Brinkely-Etzkorn, 2018; Sun et al., 2008; Asoodor et al., 2016). The orientation class is highly important in motivating students, forming their learning strategy and acquiring the necessary online skills (Chan, 2017; Liu, 2019). Students' online learning readiness determines their academic accomplishments (Mosa et al., 2016; Yilmaz, 2017), and their self-efficacy is impacted by the level of the support they get (Hart, 2012).

Assessment

Assessment Concept and Definition

Analyzing and coding the interview transcripts showed that participants considered assessment a significant component of successful distance learning programs. Word frequency counts showed the significance of assessment; terms such as *progress*, *growth*, *going forward* and *to proceed* were mentioned. To participants, assessment is not just the summative part, scores, or letter grades, rather it is evaluative feedback with an achievable action plan for improvement to delineate the gap or the area/s that they need to improve. Mona stated,

To assess, to evaluate someone is to know if you as a teacher is doing the job well, and if students understand the materials you developed and provided. It is about what they are doing and how much they are learning.

David does not believe in standardization or a specific recipe for assessment because assessment should be tailored and adjusted based on each learner's academic needs and demands. To him, assessment will work if it is more personalized. Povo sees assessment as not about written comments or remarks but as dialogue between a learner and a teacher who meet halfway and come up with the right improvement plan. Mike agrees with Mona, saying that assessment yields information: "If learners gain something of the reading or the assigned research or not," or as Samira said, "a way to check learners' understanding of what is being taught."

In short, all the participants see assessment as a valuable tool for progress for both teachers and learners. Furthermore, they believe that assessment is not a check mark or grades but guidance and direction. And in an online learning situation, effective e-assessment is needed more than in traditional classes since there is no face-to-face immediate interaction. Boud (2000) and Boud & Soler (2016) identified the goals of assessment as (a) to evaluate what students have already learned, (b) to examine if students are ready and equipped with the knowledge to meet the program demands, (c) to help students to reach the overall goal of a program, providing them the formative feedback they need, and (d) finally to help students to assess their own work by providing them with all the assessment tools they need. Thus, effective assessment strategies mean great academic achievements and learning outcomes (Boud, 2020).

Characteristics of Effective Feedback and Strategies

Liza said, "It is important for the instructor to give weekly feedback; it was mainly narrative format which was helpful but sometimes confusing." Mona asked for "specific feedback such as 'You need to work on your APA style or proofreading grammar or write more in the introduction paragraph and add a conclusion after the end of this theme.'" Timely feedback was mentioned by many of the participants; for example, Povo stated, "A teacher didn't

give feedback until the end of the class.” Mike confirmed that saying “Some classes we have heavy load of assignments and projects and very rarely we got feedback, timely feedback.” Liza stated,

I think timeliness is the key. Is really understanding, when the person needs the feedback, how is one essential resource going to impact another? And how do you sort of tie that together, so that there’s not a major gap.

The quality of feedback was an issue to some interviewees as well. Samira said that sometimes she got unclear feedback and she had to either email the teacher back asking for more clarification or ask her classmates to explain what the teacher was trying to say. She said “I want clear feedback with no room for interpretation, with no negativity” but “clear and constructive.” Laila indicated that feedback should be detailed with an explanation or a plan for personalized improvement. Analysis of the aggregated data showed that effective feedback was identified as (a) specific, (b) tailored and personalized, (c) detailed, (d) with an action plan for improvement, (e) clear without a variety of interpretations, and (f) not negative but aimed at improvement. Moreover, all the participants prefer one-on-one remote session feedback or a phone call or weekly addressing the common errors found post-grading and the areas that need improvement. As Liza said, “A remote session or a video communication is always more lively interaction.”

In general, higher education students’ dissatisfaction with the quality of provided feedback has becomes well-recognized in this field (Molloy et al., 2020). Many studies and reviews include recommendations for the improvement of feedback (Hattie & Timperley, 2007; Dunworth & Sanchez, 2016), the delivery of the feedback (Bennett et al., 2017; Ryan et al., 2019; Mahoney et al., 2019), and providing feedback through effective interaction between learners and students (Carless, 2006; McLean et al., 2015; Winstone et al., 2017). Still, what is

obvious is what participants such as Mona, Liza, Povo, Romero, Samira, and Lila stated, that they want feedback about their current level, how they can improve their weak areas and what the next step is. This supports Hattie's 2009 assessment model which relies on three questions: (a) Where am I going? (b) How am I going? and (c) Where to next? A clear model of assessment strategy enables teachers to instruct, orient and direct learners.

Peer Assessment and Review

Peer assessment encourages students' learning and through this interaction, students exchange experiences and lenses, providing each other with feedback and feeling that they have ownership of their own learning. Studies on online peer assessment are scant (Pereira et al., 2017). Peer assessment is an important vehicle for self-learning and formative assessment. As Povo stated, it helped him to build an effective academic network and the feedback and reviews he received from his peers before submitting his assignments and projects was highly beneficial, especially specific comments such as "Why did you choose this?" or "If you add this, your paper will be more interesting" or "You need to explain this in another clear statement."

Romero said peer review was positive when peers commented, "You need to investigate or examine this more." He added that there was another social or psychological element: Students sometimes feel embarrassed to show their ignorance about a certain academic issue, and they would be more relaxed dealing with their peers than teachers. Liza and Mike said that peer assessment was a good way of learning during their online journey; however, Mike expressed that sometimes being Black and addressing issues such as racism or prejudice was not welcomed during his peers' reviews. He said that peer review is a great way to learn but peers should just comment on how to improve the work, not on the nature of the topic if they do not agree with it. Still, as he said, it was beneficial as he sometimes did not understand the assignment prompt and

he had to ask his group stating, “Hey, I am trying to write this paper. I’m confused—somebody please help.” Mike believes that people need to understand the function and the aim of peer reviews because as he described, “I think peer review works if everybody understands how to peer review. Um, I think that if, if people are not properly trained on what peer review is, it could be damaging.” Samira said it was great to exchange papers and receive peer feedback, but negativity sometimes occurred when peers commented as though they were trying to say, “Hey, my paper is better than yours!” and this should not be the main rationale for peer review. Mona, David, Liza, and Povo said that peers’ feedback was very helpful during their courses because everyone can see your project or work through a different lens and having all these lenses helped to produce a good work at the end. Povo believes it was a good way of assessment and “a good way to open a conversation.” David typically judged every issue from the basis of the social aspect of learning and therefore, peer review to him was a very important component of engagement. As he described it, “As a human being, we learn from our peers and we learn with our peers.”

In short, peer review was seen by all the study participants an important and useful formative assessment. Samira mentioned, “It is very important to have peer feedback because you would not have teachers give you feedback all the time; it is useful if people understand the way and the purpose of doing it.” As David stated, “Peer review is very good, useful if it's organized and designed well and giving each other positive feedback. And it's about the quality of work, not about the topic.” Peer review is an effective factor in the success of the learning process, because when students exchange their work together giving and receiving feedback, it helps to improve their work quality and create the sense of learning responsibility and teamwork (Li, 2019).

Assessment Tools: Rubric, Syllabus and Learning Objectives

Rubric

A rubric is an important guide or scale for teachers' scoring. It describes the measures teachers follow when they grade students' work (Popham, 1997). Rubrics resemble a framework teacher often consider when assessing their students' academic work (Dawson, 2017) and therefore, they should be clear so that students can be aware of what exactly is required from them. As Samira said, "A rubric is a very helpful because it gives you an idea of what a professor is looking for," or as Mike said, "It tells you where to go. Without it, you will be like someone trying to swim without tools...without a boat...without a compass. It tells you where to be directed."

When interviewees were asked about a rubric and syllabus, their answers varied. Mona said that there were some professors that use rubrics that were very unclear: "And so it was like a guessing game as to, how, how I was going to achieve that. And so I would probably write more if I was unclear so that I would still get full credit." She said some other professors provided a clear rubric with the specific things students need to cover when they were doing their assignment. However, she was sometimes frustrated: "But I, I found that at the doctoral level, there were rubrics that were not clear at all...so many points were not clear." Samira confirmed that saying sometimes she had very good and detailed rubrics but in some classes she was not sure what the teachers were looking for. Liza said that rubric was used efficiently as an assessment tool but she described some classes as "too loose." This was the same narrative from Romero and Mike, as the latter mentioned there some occasions when he followed the rubric closely but still lost points because the teacher believed he misinterpreted of some of the rubric elements. On the other hand, David said that all his teachers used rubrics, but he believed that

rubrics limited creativity and were “a model for a lazy teacher who wants everybody to fit their standard,” who does not want to work with students and does not believe in creativity. David thinks that rubric is a form of limitation and standardization and it lets the students doing the minimum to meet the requirements of the rubric still earn credits/points. Thus, it diminishes the work of diligent learners. Still, all the participants think that rubric is an important assessment guide and without it, the grading process will be without measurement or control.

When asked about their preference for rubrics, the participants said that they should be clear and detailed and not admit different interpretations. For example, Mona said, “It should tell me how many points I can get if I reference 20 articles or I follow the APA style,” or as Liza and Romero mentioned, “It has to inform me how many points I will get if I do this, how many I will lose if I do not do this and that.”

Syllabus and Learning Objectives

Syllabus is an essential component of the curriculum, a tool designed by the course’s teacher to inform students about the policies, the purpose, the assignments, and the desired outcomes of the course (Chung & Kim, 2016). Thus, a syllabus with reasonable and achievable learning objectives is significant for the success of any course, as Provo described:

I think it's extremely important. Especially when you're going into a course where you kind of know what's going to be taught by the syllabus, but you don't really have a sense of just how it all comes together. So I think it's important to have that as kind of a guiding post or a milestone.

Laila thinks having a syllabus that aligns correctly with the expected learning goals and outcomes is a fundamental factor for course success. She said that she dropped out in the third week of a class because:

I signed up for one of the classes I was supposed to take, and at the third week they gave us the syllabus. And based on the syllabus, based on what they had aligned it was as an educator, impossible to complete within the timeframe. So, I had to withdraw from the class.

There were classes where the description said one thing, the objectives said another, and assignments were not aligned.

Romero believes that it is important to have a syllabus with clear learning objectives so that teachers can choose the assessment tools which suit those expected objectives. On the other hand, David sees that it is very important to have a syllabus with clear learning objectives ready prior to the start; however, those learning objectives need to be flexible to match all learners' learning style, skills, and abilities and disabilities—in other words, flexible and achievable. Mike agrees that it is important to align objectives with assessment to determine if the learners accomplish the desired objectives or not. He added that learning objectives are good but should not limit students' ability: "I think goals and objectives are okay, as long as they're loose and they're not a studying stone. Like you're unwilling to...or unable to work around them, or outside of them, or enhance them." Povo said that all his teachers provided a syllabus but he sometimes did not understand the learning goals of a class until the end of that class or when he reached the dissertation point. Liza said that it is not about setting goals alone but rather how much teachers are willing to work with students so both can achieve those desired goals. Samira and Mona believe that learners should have a say about these goals, and they should be subject to change based on learners' situation.

In summary, analyzing the interview transcripts showed that all the participants confirmed the importance of being provided with a course syllabus; however, they mentioned

that some learning goals did not align with the learning objectives or the course load, and/or the timeframe was not reasonable. It is highly important to have a syllabus at the beginning of a course with clear and achievable learning objectives, and which encourages critical thinking (FitzPatrick et al., 2015).

Discussion Board

Discussion boards have become a popular platform for online learners to exchange perspectives and point of views on academic topic; a good communication connection compensates for face-to-face course connection (Blackmon, 2012). Baglione and Nastanski (2007) stated, “Discussion groups allow students to participate actively and interact with students and faculty. As such, they supplement content delivery” (p. 139). It was important to ask the interviewees about their experiences with the discussion board as a tool that could be used for formative assessment; Samira said that discussion boards are a necessary interaction platform for online learners because students need to feel that there is “somebody on the other end of the computer.”

Mona believes that the discussion board is an important tool only if teachers provide feedback on posts. Without feedback, “We felt like we are on our own....How [could we know] if we were going on the right directions or floundering?” She suggested that teachers should read students’ discussions and post a video with a summary of feedback on students’ work on the discussion board, otherwise there would be no academic benefit from it. Romero confirmed this by saying that he liked the discussion board, but he believes that it needed more intervention from teachers. On the other hand, David liked the board as a useful platform to post grades and materials but the chatroom as he described it lack human contents, therefore, posted videos would be better interaction. Liza mentioned that discussion boards are useful in discussing the

assigned readings and weekly topics; however some students “felt that it was more of a competitive environment, like who could say the most, rather than the quality of what you were saying.” This means that some students either were not oriented about the main function of the board or they misunderstood the real function of the discussion board. Povo sees that discussion boards were beneficial in his program as an effective assessment vehicle where students read the materials and post their answers based on the professor’s prompts. They were graded on their ability “to communicate your knowledge of the material.” Ramon believed that discussion boards were sometimes dull because students had to answer mandatory questions or prompts. Liza also said that sometimes boards were useful and sometimes they “felt flat.” In contrast, Mike favored the discussion board as an interacting platform and a good assessment vehicle, examining students understanding of the content, but he favored using video more than text for more lively engagement.

In conclusion, interviewees considered discussion boards a good engagement platform only if there were more engagement from teachers and more feedback. A board also needs explicit instructions for students, because it should not resemble a social media forum and/or chatroom. It is an academic platform for discussing and exchanging perspectives on weekly reading materials. Adding more visual features would make it more interactive; giving the students the room to go beyond the prompts would make it more beneficial, exchanging ideas increases online learners’ academic achievements, giving them the chance to learn from each other (Dengler, 2008; Bliuc et al., 2009).

Summary

Analyzing the interview transcripts revealed that the study’s participants found great value in formative assessment, especially formative feedback, as all of them seek timely, detailed

and diagnostic feedback. They advocate the use of online learning assessment technology features such as video or audio in providing tailored and personalized feedback. They see online learning as an important platform that will prosper and advance more in the next decades adding more technological functions and goals. They were enthusiastic about employing assessment tools such as rubric and discussion board to exchange their academic views.

The next chapter will introduce a suggested action plan to enhance formative assessment practices in general and online education in particular.

Chapter 5: Discussion

Successful formative assessment practices are a fundamental pillar in the success of learning in general and online learning in particular. Assessment is the essence of effective learning, and feedback is a critical element of assessment. This study aimed to examine online feedback strategies through the narratives and experiences of online doctoral graduates during the last 5 years. It focused on the feedback provided to them during their online learning journey, how it was provided to them, and whether this was a beneficial learning factor or a hindrance. This research described the characteristics of effective formative assessment based on participants' stories, perspectives, and expectations to illustrate the general concepts of online assessment and the optimal approaches to implement it.

This chapter will address the major findings of this study and offer a suggested recommendation for each from the standpoint of the literature and the designated theoretical framework. The findings were generated based on the interviews' transcripts, and the codes emerged according to a word frequency analysis and/or selective response strategy and open coding. This process assisted in understanding participants' stories and experiences throughout their online learning program. The coding of data helped me to interpret and understand the narrative stories. The chapter will also shed light on the study's limitations and future research recommendations.

Significance of This Study

Higher education is trying to ensure diversity and accessible learning opportunities to the largest number of learners through different learning platforms (Boling et al., 2012; Napier et al., 2011; Schmidt et al., 2016). Those platforms included traditional face-to-face classes, online and blended (mixed) learning (Schmidt et al., 2016). Many universities and higher educational

institutes began to embrace virtual learning due to latest technology revolution and software advancement (Gregory & Salmon, 2013; Jaques & Salmon, 2007; Kirkwood & Price, 2014; Salmon, 2011, 2014). Apparently, online learners' enrollment has recently achieved remarkable growth (Allen & Seaman, 2015, Liu, 2019; Schmidt et al., 2016). Another factor of this significant movement toward virtual learning is the emergence of a new type of learner, who are more "digital native" than previous generations (Orlando & Attard, 2015; Prensky, 2001).

In 2020, and due to the spread of COVID-19 pandemic, almost all higher education sectors changed to online delivery. According to the *Chronicle of Higher Education*, many colleges eventually adopted models that allowed for a total or partial return to on-campus learning, but new outbreaks of the virus resulted in a reversion to virtual instruction. Even in the 2020-21 academic year, higher education institutions were not able to resume the traditional model of solely on-campus learning; they continued to be faced with the challenges of delivering fully comparable instruction online.

Overview of the Study

The traditional face- to-face teaching pedagogy may not be successful for virtual learning because the "one-size-fits-all approach" is not guaranteed to be applicable to all learning platforms (Swan et al., 2014). Orlando and Attard (2015) stated that "teaching with technology is not a one size fits all approach as it depends on the types of technology in use at the time and also the curriculum content being taught" (p. 119). A survey by Van Wart et al. (2020) on 397 business students in a major U.S. university revealed the factors which are important for online learners' success and satisfaction: assessment, instruction, and teachers' training. Studies by Arbaugh et al. (2008) and Bray et al. (2008) showed that direct instruction and interactions that include feedback play a key-role in virtual learning acquisition success. Teaching objectives

began to include encouraging new social involvement such as students' interaction and engagement, as well as cognitive skills suitable for a workplace setting and the demands of future careers. Feedback is a fundamental element in transforming learning and achieving those objectives (Van Wart, 2004).

This study examined assessment approaches and practices to get a deep insight into those practices. It focused on different aspects of formative assessment such as (a) formative diagnostic feedback, (b) online learning vs blended learning benefits, (c) peer assessment, (d) syllabus and rubric alignment with learning objectives, and (e) employing assessment in discussion boards. The study recognizes the significance of formative assessment in online learning and the need for improving its strategy to enhance students' learning. It also provides another rationale for improving teachers' professional development, especially because this expansion of technology in higher education demands different teaching practices than the old traditional face-to-face class (Song et al., 2004; Young & Duncan, 2014).

Theoretical Framework

This study aimed to examine e-assessment practices and how they helped in the learning acquisition process in terms of Bandura's (1977) self-efficacy theory. Literature indicated that learners with a high level of self-efficacy perform better and are able to overcome barriers more than learners with low self-efficacy levels (Gist & Mitchell, 1992; Marakas et al., 1998; Pajares & Valiante, 1997). Specifically, self-efficacy is a key factor in online learning success (deNoyelles et al., 2014; Ketelhut, 2007; Ketelhut et al., 2010; Nelson & Ketelhut, 2008). Self-efficacy does not only enhance learners' performance, but their cognitive ability and their engagement and motivation as well (Marakas et al., 1998; Pajares & Valiante, 1997). The current

study aimed to see how formative assessment can benefit learners in enhancing their online learning self-efficacy and readiness.

Discussion of the Key Findings

All the participants expressed their perspectives regarding (a) their perception of virtual learning prior to their learning journey and after it, (b) formative feedback, (c) peer assessment, and (d) assessment techniques such as rubrics. Their narratives focused on the formative assessment provided during participants' online programs. There was consensus with the literature that assessment practices in higher education still need more focus and improvement to suit learners' academic needs, providing a higher quality standard of learning (Boud, 2020). More changes are required to be implemented to match the rapid growth of technology and the overwhelming spread of distance learning.

Participants' Overall Perception of Assessment in Online Learning

Most of the participants started the program assuming that online learning was going to be easy, and not require a serious journey, but, later, they found out that it required more effort than the face-to face traditional class approach. They found out that virtual learning needs a self-motivated student with good time-management and organizing skills. In the traditional class, students can raise their hands and the teacher can ask questions but in online classes, the situation is completely different. Second, online learners may be on their own most of the time during their courses and, therefore, they need to be positively motivated and willing to take challenges.

The common perception that e-learning is not serious or real learning was changed for all participants. For example, Povo, David, Samira, and Laila confirmed that their perception and general concept of e-learning had completely changed after the start of the first class. This was

outlined by O'Shea et al.'s 2015 study in an Australian university, which showed that students' idea about online learning changed remarkably after they started their undergraduate online courses; they believed that they were enrolled in a real university, requiring real effort and concentration. In distance learning, students interact with teachers through technology, which sometimes leads to a wrong impression about virtual learning; however, in 2020 the COVID -19 epidemic arrived, and all higher education turned to online learning. This has led to acceptance from faculty and students that online learning is the future of higher education.

Blended Learning. All the participants stated that the blended learning they encountered during the brief residencies that were part of their online experience was the highpoint of their programs. They described the residencies as a great learning opportunity to build an academic network that benefited them during their doctoral journey, especially during the dissertation phases. Blended learning encouraged interaction and collaborative learning, giving them the opportunity to overcome the loneliness which online learners sometimes experience. The literature has addressed the online learners' isolation and the social aspect of learning, for example, Jaques & Salmon (2007), Little-Wiles & Naimi (2011), Rucker & Downey (2016), Schmidt et al. (2016), Swan (2017), and Thorsteinsson (2013).

Recommendations. David, Romero, Mona and Lila stated residency times are an important complement to online learning. During a residency, faculty have a better chance for assessing students and dealing closely with them, raising their awareness of the academic weakness points they need to work on and developing a plan they can implement when they return to full time online learning. Owston et al. (2013) indicated that blended learning has significant academic benefits in accommodating learning styles, providing different instruction and assessment methods. Medina (2018) suggested that blended learning is the optimal approach

for online learning, but universities are not ready to either accept it or implement it due to expense or logistic reasons; therefore, more consideration and coordination regarding this needs to be considered. Blended learning provides an ideal learning opportunity because it is a combination of the traditional face-to-face and virtual learning, applying both models of learning and enhancing the important social aspect of learning also (Medina, 2018; Reay, 2001; Rooney, 2003; Sands, 2002; Ward & LaBranche, 2003; Young, 2002). Accordingly, increasing the residency time at universities will benefit students in term of teaching instruction, assessment and student learning and success.

Class Size and Assessment

Class load has a tangible effect on instruction quality. Studies by Huxley et al. (2018), De Paola and Scoppa (2011), Monks and Schmidt (2011), Bandiera et al. (2010), Kokkelenberg et al. (2008), De Paola et al. (2013), and Gibbs et al. (1996) showed that large class size has a negative influence in higher education. It negatively affects teaching instruction quality and students' access to their teachers. Bandiera et al. (2010) and Gaggero & Haile (2020) indicated that postgraduate students' performance and grades are impacted by class size. Van Wart (2020) stated that quality of instructions and class size are important factors leading to online learners' satisfaction.

Participants of this study mentioned that one of the reasons for the late feedback they often received and the difficulty they sometimes had in reaching their professors was the large number of students in their classes. For example, David, Mona and Povo reported classes of 30 students, something they did not expect in a doctoral program. They felt this large number of students did not give teachers the chance to provide students with tailored and personalized

feedback. It also put more pressures on teachers, and it did not give them the chance to read, assess, and carefully evaluate students' assignments.

Recommendation. Universities should consider reviewing their enrollment policy and decreasing the assigned number of learners in their online doctoral classes. By doing this, teachers will be able to provide students with timely and detailed formative assessment.

Assessment: Formative Feedback

Assessment has a fundamental influence on learning. It guides students through their learning by showing them the academic weaknesses they need to improve and providing them with the necessary plan to overcome those difficulties. All the participants in this study showed great enthusiasm and recognition of the importance of assessment in learning in general and in their online postgraduate courses specifically; however, they pinpointed several assessment practices need to be reviewed and considered:

- Effective feedback characteristics
- Feedback strategies for online courses
- Peer assessment
- Effective use of the discussion board

Feedback is the essence of successful formative assessment. It has a tremendous significance on the learning acquisition success. Wiggins (2012) described feedback as “information about how we are doing in our efforts to reach a goal” (p.24). Yet, feedback approaches and practices are still a major concern in higher education, and learners have expressed their dissatisfaction with the quality of the feedback they were provided (Molloy et al., 2020).

Characteristics of Effective Feedback, Analyzing the data of this study reveals that learners look to assessment not as grades alone, but rather as detailed and diagnostic feedback, helping them to be better learners and accomplish their academic goals. Some of the participants expressed dissatisfaction regarding the timing of the feedback, and the lack of clarity and a detailed action plan for improvement. Carless and Boud (2018) and Molloy et al. (2020) confirmed that students' perspective of effective feedback is significant for learning success. Participants of this study specified the characteristics of effective feedback as (a) on time, (b) detailed, (c) clear, (4) tailored and personalized showing the academic area learners need to work on, and (d) having a detailed and doable plan for progressing and improvement. This finding supports Wiggins's (2012) recommendation that effective feedback should be (a) goal-referenced, (b) tangible and transparent, without being open to different interpretations, (c) actionable, providing information learners can benefit from, (d) user-friendly—comprehensible and applicable, (e) timely so learners are able to apply it to their next assignment, (f) ongoing so that learners will be able to adjust their performance before summative assessment, and (g) consistent and accurate because only high quality feedback can lead to learning progress.

Feedback plays a major key-role in learners' success. A survey of 406 staff and 4514 students from two Australian universities by Dawson et al. (2019) showed that students believe that effective feedback (a) identifies students' weakness and strengths, and (b) is positive to motivate students and encourage learning. Li and De Luca's (2014) review showed students prefer feedback which is "personal, explicable, criteria-referenced, objective, and applicable to further improvement" (p. 390). Feedback is not limited to information provided to learners but should specify tasks and activities which enable students to transfer this feedback from the first assignment to the second to be more beneficial (Dawson et al., 2019). Carless (2015) described it

as “a dialogic process in which learners make sense of information from varied sources and use it to enhance the quality of their work or learning strategies” (p. 192).

Feedback Strategies for Online Courses. Providing online learners with efficient feedback is a challenge to students and teachers; students may ignore their teachers’ comments on their assignments, and teachers may have communication difficulty (Wuensch et al., 2008). Technology can contribute to providing effective and personalized feedback through various platforms. All the participants of this study emphasized their preference of getting tailored feedback through multimedia tools, either audio and/or visual such as recorded videos, Voice Threads and/or wiki more than written comments on papers.

Yuan and Kim (2015) believed that online students feel isolated due to the lack of face -to -face connection with their online teachers and providing them with feedback through multimedia give them the sense of personalizing learning. When teachers provide feedback through multimedia platforms such as Voice Thread, an application which enables audio, text and voice recorded messages, it allows students to comment on their recorded feedback messages (Brinko, 1993; Evans, 2013). This will let the students have a sense of connection with their teachers rather than isolation (Alameen, 2011; Ching & Hsu, 2013). Creating a dialogue between learners and their teachers discussing the feedback provided will promote successful interactive learning and has been shown to increase online learners’ satisfaction with their courses (Nicol, 2010; van der Schaaf et al., 2013).

In general, students prefer one-on-one feedback meetings (Blair & McGinty, 2013; Case, 2007), emails (Blair & McGinty, 2013) and virtual platforms (Carless et al., 2011). In short, providing online learners with feedback will enhance their learning, motivate them, and create

their sense of building a learning community, which will positively mirror on learning (Yuan & Kim, 2015).

Recommendations. Teachers in general and online faculty in particular need to be aware of the characteristics of effective feedback. Feedback needs to be provided in a suitable timely manner so that online students can implement it in their next assignment or project. Teachers need to follow up on the feedback provided because analyzing the data showed that participants value this follow-up. This can be done through examining the next task to make sure that students implemented the feedback from the previous assignment. Students value teachers who follow up on feedback because they feel their care and encouragement (Yuan & Kim, 2015). Online teachers should encourage using different application and platforms in providing feedback because it benefits students' learning as well as social and psychological needs. Universities should provide online teachers with technology training and workshops to become familiar with the latest multimedia assessment software. It is the responsibility of the university administrations to provide their teachers with efficient professional development and resources to acquire the skills needed for online assessment (Schmidt et al., 2016).

Online teaching is different from the traditional face-to-face class and it requires different instructional approaches. Universities can also assign mentors and trainers for new instructors until they become familiar with online assessment tools (Schmidt et. al, 2016). Finally, universities need to review their student evaluations adding more questions related to teachers' assessment ability, for example, whether teachers provide detailed, tailored, and clear feedback, as well as the e-assessment strategies they are followed. This will identify the assessment areas teachers need to be trained on.

Peer Assessment

Feedback is not only from teachers to students, peer assessment or peer review has also a tangible potential on learning. In peer assessment students evaluate the academic performance of their classmates. This gives students the opportunity to view their peers from a different perspective (JISC, 2015). In this context, students can be both the assessor and the assessee (Li et al., 2010; Li et al., 2012). Peer assessment can contribute to creating an effective social collaborative learning community and encouraging critical thinking by identifying problems and problem solving (Brown et al., 1999; Burke & Pieterick, 2010; Harrison et al., 2015; Peng, 2010; Pope, 2001; Topping, 1998).

This study showed the importance of giving and receiving peer feedback. Mona described that it showed her own work from the perspective of the teacher/s. All the participants of the study confirmed the benefit of peer assessment; however, some of them such as Samira believed that some of her peers' feedback was made merely to prove that their work was better than hers. Michael mentioned that some of his peers were focusing more on the choice of the topic than the content, and Romero stated that some of the peer reviews he received were not beneficial, with no highlighting what he needed to add, delete and/or improve.

These findings support Li and Grion's (2019) online survey of 41 students at the University of Padova in Italy, which revealed that some of the students' peers were giving "unclear," "superficial," "general," or "ambiguous" feedback, often lacking good judgment and adequate evidence (p.14). Black et al. (2003) believed that guiding learners in providing their peers with effective feedback is a challenge because it is not easy for them "to think of their work in terms of a set of goals" (p. 49).

Recommendations. In order for this assessment strategy to be effective, peers need to know the main objectives of the peer review. Boon (2015), Topping (1998), Berg (1999), and Min (2005, 2006) asserted that providing students with the right training will help in successful peer review; peers must be aware of what they are looking for during their reviews. Boon's 2015 study showed that efficient training in peer assessment helps in providing clear and effective peer review. This can be done through a video recorded message posted online so that students know the main objective of peer review. Li (2019) and Jordan (2012) confirmed that peer assessment is more beneficial if it is provided by using recorded audio or video because that encourages peer engagement and interactions. Teachers can also provide samples of peer review to eliminate poor peer assessment (Mercer & Sams, 2006). During this peer review training, teachers should stress that peer review should not focus on the choice of the topic and the objectives should be stated clearly. Students must understand that peer review is an important assessment tool for learning, not a competition.

In summary, peer assessment is a valuable part of learning only if it is designed and implemented correctly. It helps in motivating and encouraging learning; it is an effective strategy for encouraging teamwork, collaborative learning, and problem solving, which are some of the main globalization demands and worksite prerequisites.

Assessment Through Discussion Boards

Discussion boards replace the traditional face-to-face discussions in the traditional class. A discussion platform encourages learning by creating an engaged academic community whose members can reflect and connect what they learned to their working life (Smith, 2015). Reflecting on thoughts and sharing ideas with others and perspectives with others is a beneficial learning experience. Dewey (1910) described reflection as an “active, persistent, and careful

consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends” (p. 6). It encourages problem solving and critical thinking and stimulates students’ synthesizing and analyzing skills. It is a good platform for peer assessment also (Rainsbury & Malcolm, 2003; Lockyer et al., 2004; Mauriano, 2006; Moon, 1999).

Teachers can also use discussion boards as an assessment strategy, but this requires their participation on the board. The participants of this study recognized the significance of academic discussion and sharing educational experiences; however, they felt during their learning journey that some of their teachers were isolated from their discussion board. For example, Samira and Mona mentioned that some teachers rarely commented on the discussion board, and Romero stated that in some classes, discussion board assignments were not organized well, or their task prompts were not clear and/or did not align with the course objectives. Mike values discussion boards but he recommends that they are remain under the guidance of the teacher.

Discussion boards can function in facilitating learning, or as Povo described, “validating your reading.” However, participants agreed that teachers asked students to answer questions about the reading materials but most tended not to provide feedback on students’ discussion posts. Jarosewich et al. (2010) suggested that discussion boards will not be a beneficial learning platform without faculty formative feedback.

Recommendations. Smith’s (2015) review recommended that (a) teachers post prompts on discussion boards requiring research, analyzing, and thinking, (b) grading students ‘work on discussion boards be based on clear criteria such as the length and the quality of writing, (c) samples be shared with students so they are aware of teachers’ expectations, (d) teachers wait to grade the discussion board in an introductory class at least until students become familiar with its

function, (e) teachers email the poorly performing students, describing how can they improve their posts, (f) teachers prevent online social learning isolation by encouraging peer sharing and direct emails to students who often post late, and (g) teachers divide students into groups to ensure active participation. The participants of this study expressed their preference for recording audio and/or video messages; teachers can provide their feedback on discussion board using any multimedia platform.

In summary, the discussion board is a highly beneficial academic platform only if it is organized, aligns with the course objectives, and used properly with teachers' guidance and feedback. It is different from a social media forum or symposium. It aims to encourage sharing and academic reflection. Professional development and workshops are recommended, especially for new faculty, because designing an online course is a challenge—each task should focus on promoting a successful critical thinking approach and metacognition (Bliuc et al., 2009).

Key Findings in Relation to Theoretical Framework

This study was grounded on Bandura's 1977 self-efficacy theory. Bandura (1977) stated that self-efficacy motivates and enables learners to accomplish tasks. DeNoyelles et.al. (2014) suggested that self-efficacy plays an essential role in helping online learners to deal with the technology in their online courses.

Yam and Rossini (2013) found that successful formative assessment approaches contribute to building learners' self-efficacy and self-regulation. Studies by Buchanan (2000), Burrow et al. (2005), Gardner et al. (2002), Henly (2003), Peat and Franklin (2002), and Velan et al. (2002) confirmed that effective formative assessment fosters self-efficacy and is the essence of online learning success.

Providing online learners with detailed and clear personalized feedback fosters self-efficacy and leads to learning and academic improvement. Feedback should highlight the areas students need to work on with a detailed action plan that students can apply to their next assignment. This motivates them, encourages their learning, and raises their self-efficacy and self-confidence. The collected data of this study reveal that some students did not receive feedback at all, and/or late or unclear feedback. As Samira described it, “Unclear feedback needs different interpretations,” or as Mona complained, “Grades not feedback.” Buchanan (2000), Henly (2003), Peat and Franklin (2002), and Wang (2008) emphasized the importance of timely and personalized feedback for online learners, especially because online learners need more guidance than traditional face-to-face-learners.

Online learners’ success is impacted by the quality of feedback they receive (Bates & Khasawneh, 2007). For example, Mona mentioned that she dropped out of a class due to the poor feedback quality she received, which affected her self-efficacy and self-confidence negatively.

In summary, self-efficacy in online learning relies on assessment. Self-efficacy is linked to assessment practices and strategies. The data of this study revealed that peer review influences students’ self-efficacy. Successful peer assessment helps in building an effective collaborative academic network setting. It increases students’ self-confidence and encourages learning.

In contrast, some of the participants mentioned that they dropped an introductory class due to the lack of support from their teachers. In particular, inadequate formative feedback and interactions negatively influenced their self-efficacy and motivation. Unclear rubrics, and vague learning objectives or task prompts were reported by participants such as Samira, Mona, and Romero. This resulted in demotivation and a decrease in self-efficacy.

Limitations and Recommendations for Future Research

This study aimed to discover how online formative assessment practices in higher education can be improved. Results may enhance assessment in higher education, highlighting the areas needed to be improved by teachers and universities. The study examined online assessment approaches through the narratives and experiences of graduates who completed their degrees during the previous 5 years, and included recommendations that may help in bridging educational gaps they found in their program. The research questions of this study focused on the way feedback was provided and the impact of that feedback on participants' learning with follow-up questions on various methods of assessment such as peer assessment. The characteristics of online and blended learning and their courses' learning objectives were highlighted.

The study was grounded based on the experiences of a purposeful sample of eight participants from different ethnic backgrounds. First, I did not interview any professors to hear their part of the story. For example, some of the participants were not satisfied with teachers' involvement with their discussion board posts. Some teachers may believe that the discussion board should be for students only and their intervention may restrict learners. Interviewing teachers at the universities would require more logistic procedures and correspondence, therefore, a future study examining online formative assessment strategies from the perspective of teachers as well as students is recommended.

Second, the study aimed to examine the role of formative feedback in promoting learning relying on self-efficacy theory. Results revealed that effective feedback helps in promoting online learning and self-efficacy and self-regulation. A study of the relationship between

teachers' self-efficacy and formative assessment, and/or the role of teachers' self-efficacy in encouraging students' self-efficacy through formative assessment is also recommended.

Third, students' feedback and evaluation of teachers has become one of the main criteria for teachers' performance and promotion, therefore, a study of newly suggested teacher evaluation assessment questions focusing on assessment practices would be beneficial. This study can rely on teacher and student views and perspectives of this new evaluation model.

Conclusion

Overall, this study was an attempt to improve feedback practices in higher education; however, as an educator, I learned a great deal through its different phases—research methodology, literature review, and specifically, analyzing the findings. The findings showed the value of formative assessment to learners and what they expected from their teachers. To me, it was important to listen to the interviewees describing and identifying the features of the feedback they desire. Listening to their perspectives and experiences and views was completely different from reading the literature. This real authentic experience will have a real impact on my future teaching instruction and research.

As an educator and scholar practitioner, this study inspired me to review my teaching instruction practices, and in particular formative assessment, because the findings emphasized the significance of formative feedback. As a researcher, I intend to examine and investigate more issues related to assessment in the future such as peer assessment, assessment correlation with self-efficacy, and the strategies to achieve the balance between summative and formative assessment. I will also exert a great deal of effort to update my knowledge of assessment through conferences and readings. At my work site, I will arrange for the presentation of my findings and

analysis to my dean and colleagues. It is hoped that sharing the results of this study will contribute to the improvement of assessment in online learning.

References

- Aasen, A. (2015). A teacher's guide to giving effective feedback. *Journal on Best Teaching Practices*, 2(2), 11–12.
- Alameen, G. (2011). Learner digital stories in a web 2.0 age. *TESOL Journal*, 2(3), 355–369.
- Allal, L., & Lopez, L. M. (2005). Formative assessment of learning: A review of publications in French. In *Formative assessment: Improving learning in secondary classrooms* (pp. 241–264). OECD.
- Allen, I. E., & Seaman, J. (2010). *Class differences: Online education in the United States*. Sloan Consortium. (NJ1).
- Allen, I. E., & Seaman, J. (2013). *Changing course: Ten years of tracking online education in the United States*. Sloan Consortium. (NJ1).
- Allen, I. E., & Seaman, J. (2015). *Grade level: Tracking online education in the United States*. Babson Survey Research Group.
- Alqurashi, E. (2016). Self-efficacy in online learning environments: A literature review. *Contemporary Issues in Education Research (CIER)*, 9(1), 45–52.
- Andersson, C., & Palm, T. (2018). Reasons for teachers' successful development of a formative assessment practice through professional development—A motivation perspective. *Assessment in Education: Principles, Policy & Practice*, 1–22.
<https://doi.org/10.1080/0969594X.2018.1430685>
- Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D.R., Ice, P., Richardson, J. C., & Swan, K. P. (2008). Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample. *Internet and Higher Education*, 11, 133–136

- Asoodar, M., Vaezi, S., & Izanloo, B. (2016). Framework to improve e-learner satisfaction and further strengthen e-learning implementation. *Computers in Human Behavior*, 63, 704–716.
- Ausburn, L.J. (2004). Course design elements most valued by adult learners in blended online education environments: An American perspective. *Educational Media International*, 41(4), 327–337.
- Baglione, S., & Nastanski, M. (2007). The superiority of online discussions: Faculty perceptions. *The Quarterly Review of Distance Education*, 8(2), 139–150.
- Baleni, Z. G. (2015). Online formative assessment in higher education: Its pros and cons. *Electronic Journal of e-Learning*, 13(4), 228–236.
- Bandiera, O., Larcinese, V., & Rasul, I. (2010). Heterogeneous class size effects: New evidence from a panel of university students. *Economic Journal*, 120(549), 1365–1398.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice–Hall.
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1–26.
- Bandura, A. (2011). A social cognitive perspective on positive psychology. *Revista de Psicología Social*, 26(1), 7–20.
- Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 41(3), 586.

- Bangert-Drowns, R. L., Kulik, C. L. C., Kulik, J. A., & Morgan, M. (1991). The instructional effect of feedback in test-like events. *Review of Educational Research*, 61(2), 213–238.
- Barnett, R. (2007). Assessment in higher education: An impossible mission? In D. Boud and N. Falchikov (Eds.), *Rethinking assessment in higher education learning for the longer term* (pp. 29-40). Routledge.
- Bates, R., & Khasawneh, S. (2007). Self-efficacy and college students' perceptions and use of online learning systems. *Computers in Human Behavior*, 23(1), 175–191.
- Bawa, P. (2016). Retention in online courses. *SAGE Open*, 6(1).
<https://doi.org/10.1177/2158244015621777>
- Bendig, A. W. (1954). A factor analysis of student ratings of psychology instructors on the Purdue Scale. *Journal of Educational Psychology*, 45(7), 385.
- Bennett, R. E. (2010). Cognitively based assessment of, for, and as learning (CBAL): A preliminary theory of action for summative and formative assessment. *Measurement*, 8(2–3), 70–91.
- Bennett, S., P. Dawson, M. Bearman, E. Molloy, and D. Boud. (2017). How technology shapes assessment design: Findings from a study of university teachers. *British Journal of Educational Technology*, 48(2), 672–682.
- Berg, E. C. (1999) The effects of trained peer response on ESL students' revision types and writing quality. *Journal of Second Language Writing*, 8(3), 215–241.
- Bergman, H. F. (2001). "The silent university": The society to encourage studies at home, 1873-1897. *The New England Quarterly*, 74(3), 447–47.
- Berk, R. A. (2006). *Thirteen strategies to measure college teaching*. Stylus.

- Bernard, H. R. (2011). *Research methods in anthropology: Qualitative and quantitative approaches*. Rowman Altamira.
- Berridge, G. G., Penney, S., & Wells, J. (2012). eFACT: Formative assessment of classroom teaching for online classes. *Turkish Online Journal of Distance Education*, 13(2), 119-130.
- Bersin, J. (2016). *Use of MOOCs and online education is exploding: Here's why*. Forbes.
<https://www.forbes.com/sites/joshbersin/2016/01/05/use-of-moocs-and-online-education-is-exploding-heres-why/?sh=7f9e82bd7649>
- Best, K., Jones-Katz, L., Smolarek, B., Stolzenburg, M., & Williamson, D. (2015). Listening to our students: An exploratory practice study of ESL writing students' views of feedback. *Tesol Journal*, 6(2), 332-357.
- Biggs, J. (2003). *Teaching for quality learning at university* (2nd ed.). Society for Research into Higher Education /Open University Press.
- Biggs, J. (1998). Assessment and classroom learning: a role for summative assessment? *Assessment in Education: Principles, Policy & Practice*, 5(1), 103–110. <https://doi.org/10.1080/0969595980050106>
- Biggs, J., & Collis, K. (1982). *Evaluating the quality of learning: The SOLO taxonomy*. Academic Press.
- Biggs, J., & Tang, C. (2007). *Teaching for quality learning at university* (3rd ed.). Open University Press.
- Bittner, W. S., & Mallory, H. F. (1933). *University teaching by mail: A survey of correspondence instruction conducted by American universities*. Macmillan.

- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7–74.
- Black, P., & Wiliam, D. (2003). ‘In praise of educational research’: Formative assessment. *British Educational Research Journal*, 29(5), 623–637.
- Black, P., & Wiliam, D. (2010). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan*, 92(1), 81–90.
- Black, P., Harrison, C., & Lee, C. (2003). *Assessment for learning: Putting it into practice*. Open University Press.
- Blackmon, S. J. (2012). Outcomes of chat and discussion board use in online learning: A research synthesis. *Journal of Educators Online*, 9(2), n2.
- Blair, A., & McGinty, S. (2013). Feedback-dialogues: Exploring the student perspective. *Assessment & Evaluation in Higher Education*, 38(4), 466–476.
- Blair, A., Curtis, S., Goodwin, M., & Shields, S. (2013). What feedback do students want?. *Politics*, 33(1), 66-79.
- Bliuc, A., Ellis, R., Goodyear, P., & Piggott, L. (2009). Learning through face-to-face and online discussions: Associations between students’ conceptions, approaches and academic performance in political science. *British Journal of Educational Technology*, 41(3), 512–524.
- Bloom, B. S. (1968). Learning for mastery. *Instruction and Curriculum*, 1(2):1–12.
- Bloom, B. S. (1984). The search for methods of instruction as effective as one-to-one tutoring. *Educational Leadership*, 41(8), 4–17.
- Bloom, B. S., Hastings, J. T., & Madaus, G. F. (1971). *Handbook on formative and summative evaluation of student learning*. McGraw-Hill.

- Boeije, H. (2010). *Analysis in qualitative research*. Sage Publications.
- Boekaerts, M. (2006). Self-regulation and effort investment. In K. A. Renninger & I. E. Sigel (Eds.), *Handbook of child psychology volume 4: Child psychology in practice* (6th ed., pp. 435- 377). Wiley.
- Boling, E. C., Hough, M., Krinsky, H., Saleem, H., & Stevens, M. (2012). Cutting the distance in distance education: Perspectives on what promotes positive, online learning experiences. *The Internet and Higher Education*, 15(2), 118–126.
- Boon, S. I. (2015) The role of training in improving peer assessment skills amongst year six pupils in primary school writing: An action research enquiry. *Education 3–13: International Journal of Primary, Elementary and Early Years Education* 43(6): 664–680.
- Boston, W.E., Ice, P., & Gibson, A.M. (2011). Comprehensive assessment of student retention in online learning environments. *Online Journal of Distance Learning Administration*, 14, 1593–1599.
- Boud, D. (2000). Sustainable assessment: rethinking assessment for the learning society. *Studies in Continuing Education*, 22(2), 151–167.
- Boud, D. (2020). Challenges in reforming higher education assessment: A perspective from afar. *Electronic Journal of Educational Research, Assessment & Evaluation*, 26(1).
- Boud, D., & Soler, R. (2016). Sustainable assessment revisited. *Assessment and Evaluation in Higher Education*, 41(3), 400–413.
- Bourke, B. (2014). Positionality: Reflecting on the research process. *The Qualitative Report*, 19(33), 1–9.

- Bowden, J., & Marton, F. (1998). *The university of learning: Beyond quality and competence in higher education*. Rogan Page.
- Bozkurt, A. (2019). From distance education to open and distance learning: A holistic evaluation of history, definitions, and theories. In S. Sisman-Ugur & G. Kurubacak (Eds.), *Handbook of research on learning in the age of transhumanism* (pp. 252-273). IGI Global.
- Bray, E., Aoki, K., & Dlugosh, L. (2008). Predictors of learning satisfaction in Japanese online distance learners. *The International Review of Research in Open and Distributed Learning*, 9(3), 1–21.
- Brinkely-Etz Korn, K. E. (2018). Learning to teach online: Measuring the influence of faculty development training on teaching effectiveness through a TRACK lens. *Internet and Higher Education*, 38, 28–35
- Brinko, K. T. (1993). The practice of giving feedback to improve teaching: What is effective?. *The Journal of Higher Education*, 64(5), 574–593.
- Broadfoot, P. (2002). Empowerment or performativity?. In R. Philips & J.Furlong (Eds.), *Education, reform and the state: Twenty five years of politics, policy and practice* (pp. 136–155). Routledge.
- Broadfoot, P. (2007). *An introduction to assessment*. Continuum.
- Broadfoot, PM. (2008). Assessment for learners: Assessment literacy and the development of learning power. In A. Havnes, & E. McDowell (Eds.), *Balancing dilemmas in assessment and learning in contemporary education* (pp. 213 - 225). Routledge.

- Brookhart, S. M. (2007). Expanding views about formative classroom assessment: a review of the literature. In J.H. McMillan (Ed.), *Formative classroom assessment: Theory into practice* (pp.43-62). Teachers College Press.
- Brown, C. C., Topping, K. J., Henington, C., & Skinner, C. H. (1999). Peer monitoring of learning behavior: The case of 'Checking Chums'. *Educational Psychology in Practice*, 15(3), 174–182.
- Brown, M. J. (2008). Student perceptions of teaching evaluations. *Journal of Instructional Psychology*, 35(2), 177–182.
- Buchanan, T. (2000). The efficacy of a World-Wide Web mediated formative assessment. *Journal of Computer Assisted Learning*, 16(3), 193–200.
- Burke, D., & Pieterick, J. (2010). *Giving students effective written feedback*. Open University Press.
- Byrne, T. C. (1989). *Athabasca University: The evolution of distance education*. University of Calgary Press.
- Callahan, C., Saye, J. & Brush, T. (2013). Designing web-based educative curriculum materials for the social studies. *Contemporary Issues in Technology and Teacher Education*, 13(2), 126–155.
- Carey, K. (2020, March 20). Everybody ready for the big migration to online college? Actually, no. *New York Times*. <https://www.nytimes.com/2020/03/13/upshot/coronavirus-online-college-classes-unprepared.html>
- Carless, D. (2006). Differing perceptions in the feedback process. *Studies in Higher Education*, 31(2), 219–233.

- Carless, D. (2015). *Excellence in university assessment: Learning from award-winning practice*. Routledge.
- Carless, D., & Boud, D. (2018). The development of student feedback literacy: enabling uptake of feedback. *Assessment & Evaluation in Higher Education*, 43(8), 1315–1325.
- Carless, D., Salter, D., Yang, M., & Lam, J. (2011). Developing sustainable feedback practices. *Studies in Higher Education*, 36(4), 395–407.
- Caruth, G. D., & Caruth, D. L. (2012). Significant trends in online education. *Journal of Online Education*, 14(4), 8.
- Caruth, G. D., & Caruth, D. L. (2013). Distance education in the United States: From correspondence courses to the Internet. *Turkish Online Journal of Distance Education*, 14(2), 141-149.
- Carver, M. (2017). Feedback, feedforward, or dialogue?: Defining a model for self-regulated learning. In E. Cano & G. Ion (Eds.), *Innovative practices for higher education assessment and measurement* (pp. 118). IGI Global
- Case, S. (2007). Reconfiguring and realigning the assessment feedback processes for an undergraduate criminology degree. *Assessment & Evaluation in Higher Education*, 32(3), 285–299.
- Casey, D. M. (2008). The historical development of distance education through technology. *TechTrends*, 52(2), 45–51.
- Cauley, K. M., & McMillan, J. H. (2010). Formative assessment techniques to support student motivation and achievement. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 83(1), 1–6.

- Centra, J. A. (1975). Colleagues as raters of classroom instruction. *The Journal of Higher Education*, 46(3), 327–337.
- Centra, J. A. (1993). *Reflective faculty evaluation: Enhancing teaching and determining faculty effectiveness*. Jossey-Bass.
- Chalmers, D. (2007). A review of Australian and international quality systems and indicators of learning and teaching. *Carrick Institute for Learning and Teaching in Higher Education*, 1(2), 1–122.
- Chan, M. (2017). Have you been oriented? An analysis of new student orientation and orientation programs at US community colleges. *College and University*, 92(2), 12.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage.
- Charmaz, K. (2008). *Grounded theory as an emergent method*. In S. N. Hesse-Biber & P. Leavy (Eds.), *Handbook of emergent methods* (p. 155–170). The Guilford Press.
- Ching, Y. H., & Hsu, Y. C. (2013). Collaborative learning using VoiceThread in an online graduate course. *Knowledge Management & E-Learning: An International Journal*, 5(3), 298–314.
- Chronicle of Higher Education (2020). *Here's our list of colleges' reopening models*. [Chronicle of Higher Education. https://www.chronicle.com/article/heres-a-list-of-colleges-plans-for-reopening-in-the-fall/?_ga=2.49035686.1071936708.1598729571-amp-2_1K1rEMEqMaDnJQ_IeVCQ&cid2=gen_login_refresh&cid=gen_sign_in](https://www.chronicle.com/article/heres-a-list-of-colleges-plans-for-reopening-in-the-fall/?_ga=2.49035686.1071936708.1598729571-amp-2_1K1rEMEqMaDnJQ_IeVCQ&cid2=gen_login_refresh&cid=gen_sign_in)
- Chung, H., & Kim, J. (2016). An ontological approach for semantic modeling of curriculum and syllabus in higher education. *International Journal of Information and Education Technology*, 6(5), 365.

- Chung, Y. B., & Yuen, M. (2011). The role of feedback in enhancing students' self-regulation in inviting schools. *Journal of Invitational Theory and Practice*, 17, 22–27.
- Clark, I. (2011). Formative assessment: Policy, perspectives, and practice. *Florida Journal of Educational Administration & Policy*, 4(2), 158–180.
- Coaldrake, P., & Stedman, L. R. (1998). *On the brink: Australia's universities confronting their future*. University of Queensland Press. <https://eprints.qut.edu.au/198437/>
- Consortium for School Networking (2020). COVID-19 response: Preparing to take school online. CoSN. [https://www.cosn.org/sites/default/files/COVID-19 Member Exclusive_0.pdf](https://www.cosn.org/sites/default/files/COVID-19%20Member%20Exclusive_0.pdf)
- Cornell University. (2001). *From domesticity to modernity: What was home economics?* Division of Rare and Manuscript Collections, Cornell University.
- Creager, J. A. (1950). A multiple-factor analysis of the Purdue rating scale for instructors. *Purdue University Studies in Higher Education*, 70, 75–96.
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.
- Crick, T., Knight, C., Watermeyer, R., & Goodall, J. (2020, September). The impact of COVID-19 and “Emergency Remote Teaching” on the UK computer science education community. In *Proceedings of the UK and Ireland Computing Education Research conference*. (UKICER'20). ACM.
- Crooks, T. J. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research*, 58(4), 438–481.
- Croxton, R. A. (2014). The role of interactivity in student satisfaction and persistence in online learning. *Journal of Online Learning and Teaching*, 10(2), 314.

- Cui, G., Lockee, B., & Meng, C. (2013). Building modern online social presence: A review of social presence theory and its instructional design implications for future trends. *Education and Information Technologies*, 18(4), 661–685.
- Dahalan, N., Hasan, H., Hassan, F., Zakaria, Z. & Noor, W., A.; W. M. (2013). Engaging students online: Does gender matter in adoption of learning material design? *World Journal on Educational Technology*, 5(3), 413–419.
- Daniel, J. S. (1996). *Mega-universities and knowledge media: Technology strategies for higher education*. Psychology Press.
- Daniel, S.J. (2020). *Education and the COVID-19 pandemic*. Prospects.
<https://doi.org/10.1007/s11125-020-09464-3>.
- Darling-Hammond, L. (2010). Teacher education and the American future. *Journal of Teacher Education*, 61(1-2), 35-47.
- Darwin, S. (2016). *Student evaluation in higher education: Reconceptualizing the student voice*. Springer.
- Davis, S. E., & Dargusch, J. M. (2015). Feedback, iterative processing and academic trust-teacher education students' perceptions of assessment feedback. *Australian Journal of Teacher Education*, 40(1), 10.
- Dawson, P. (2017). Assessment rubrics: Towards clearer and more replicable design, research and practice. *Assessment & Evaluation in Higher Education*, 42(3), 347–360.
- Dawson, P., Henderson, M., Mahoney, P., Phillips, M., Ryan, T., Boud, D., & Molloy, E. (2019). What makes for effective feedback: Staff and student perspectives. *Assessment & Evaluation in Higher Education*, 44(1), 25–36.

- de Paola, M., Ponzio, M., & Scoppa, V. (2013). Class size effects on student achievement: heterogeneity across abilities and fields. *Education Economics*, 21(2), 135–153.
- de Paola, M., & Scoppa, V. (2011). The effects of class size on the achievement of college students. *Manchester School*, 79(6), 1061–1079.
- Delgado Rodríguez, H. A. (2019). *Web 2.0 history, evolution and characteristics*. Akus.
<https://disenowebakus.net/en/web-2>
- DeLuca, C., Luu, K., Sun, Y., & Klinger, D. A. (2012). Assessment for learning in the classroom: Barriers to implementation and possibilities for teacher professional learning. *Assessment Matters*, 4, 5.
- Dempster, F. N. (1991). Synthesis of research on reviews and tests. *Educational Leadership*, 48(7), 71–76.
- Dempster, F. N. (1992). Using tests to promote learning: a neglected classroom resource. *Journal of Research & Development in Education*, 25(4), 213–217.
- Dengler, M. (2008). Classroom active learning complemented by an online discussion forum to teach sustainability. *Journal of Geography in Higher Education*, 32(3), 481–494.
- deNoyelles, A., Hornik, S. R., & Johnson, R. D. (2014). Exploring the dimensions of self-efficacy in virtual world learning: Environment, task, and content. *MERLOT Journal of Online Learning and Teaching*, 10(2), 255–271.
- Dewey, J. (1910). *How we think*. D. C. Heath and Company.
- Dixson, D. D., & Worrell, F. C. (2016). Formative and summative assessment in the classroom. *Theory into Practice*, 55(2), 153–159.
- Dodeen, H. (2013). Validity, reliability, and potential bias of short forms of students' evaluation of teaching: The case of UAE university. *Educational Assessment*, 18(4), 235–250.

- Domun, M., & Bahadur, G. K. (2014). Design and development of a self-assessment tool and investigating its effectiveness for e-learning. *European Journal of Open, Distance and E-learning*, 17(1), 1–25.
- Ekholm, E., Zumbrunn, S., & Conklin, S. (2015). The relation of college student self-efficacy toward writing and writing self-regulation aptitude: Writing feedback perceptions as a mediating variable. *Teaching in Higher Education*, 20(2), 197–207.
- Elshout-Mohr, M. (1994). Feedback in self-instruction. *European Education*, 26(2), 58–73.
- Eng, T. H., Ibrahim, A. F., & Shamsuddin, N. E. (2015). Students' perception: Student feedback online (SuFO) in higher education. *Procedia-Social and Behavioral Sciences*, 167, 109–116.
- Evans, C. (2013). Making sense of assessment feedback in higher education. *Review of Educational Research*, 83(1), 70–120.
- Fedynich, L., Bradley, K. S., & Bradley, J. (2015). Graduate students' perceptions of online learning. *Research in Higher Education Journal*, 27.
- Ferdousi, B. (2016). Addressing student retention and persistence issue in online classes. *Proceedings of the 2016 American Society for Engineering Education North Central Section Conference, Mt. Pleasant, MI*.
http://people.cst.cmich.edu/yelam1k/asee/proceedings/2016/faculty_regular_papers/2016_asee_ncs_paper_49.pdf
- Ferguson, P. (2011). Student perceptions of quality feedback in teacher education. *Assessment & Evaluation in Higher Education*, 36(1), 51–62.

- FitzPatrick, B., Hawboldt, J., Doyle, D., & Genge, T. (2015). Alignment of learning objectives and assessments in therapeutics courses to foster higher-order thinking. *American Journal of Pharmaceutical Education*, 79(1).
- Flood, P. C. (1974). *Student evaluation of teaching: The American experience*. Society for Research into Higher Education.
- Foote, M. Q., & Bartell, T. G. (2011). Pathways to equity in mathematics education: How life experiences impact researcher positionality. *Educational Studies in Mathematics*, 78(1), 45–68.
- Frey, N., & Fisher, D. (2011). Feedback and feed forward. *Principal Leadership*, 11(9), 90–93.
- Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century*. Farrar, Straus and Giroux.
- Frohbieter, G., Greenwald, E., Stecher, B., & Schwartz, H. (2011). *Knowing and doing: What teachers learn from formative assessment and how they use the information*. (CRESST Report 802). National Center for Research on Evaluation, Standards, and Student Testing (CRESST).
- Fuchs, L. S., & Fuchs, D. (1986). Effects of systematic formative evaluation: A meta-analysis. *Exceptional Children*, 53(3), 199–208.
- Fullan, M., & Boyle, A. (2014). *Big-city school reforms: Lessons from New York, Toronto, and London*. Teachers College Press.
- Gage, N. L. (Ed.). (1973). *Mandated evaluation of educators: A conference on California's Stull Act*. Educational Resources Division Capital Publications, Inc.
- Gaggero, A., & Haile, G. (2020). Does class size matter in postgraduate education?. *The Manchester School*, 88(3), 489–505.

- Gamlem, S. M., & Smith, K. (2013). Student perceptions of classroom feedback. *Assessment in Education: Principles, Policy & Practice*, 20(2), 150–169.
- Gardner, L., Sheridan, D. & White, D. (2002). A web-based learning and assessment system to support flexible education, *Journal of Computer Assisted Learning*, 18, 125–136.
- Gibb, C. A. (1955). Classroom behavior of the college teacher. *Educational and Psychological Measurement*, 15(3), 254–263.
- Gibbs, G., Lucas, L., & Simonite, V. (1996). Class size and student performance: 1984–94. *Studies in Higher Education*, 21(3), 261–273.
- Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. *Computers & Education*, 57(4), 2333–2351.
- Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, 17(2), 183–211.
- Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory*. Sociology Press.
- Glassmeyer, D. M., Dibbs, R. A., & Jensen, R. T. (2011). Determining utility of formative assessment through virtual community: Perspectives of online graduate students. *Quarterly Review of Distance Education*, 12(1), 23.
- Goe, L. (2010). *Evaluating teaching with multiple measures*. Washington, DC: American Federation of Teachers.
- Goldstein, J., & Behuniak, P. (2012). Can assessment drive instruction? Understanding the impact of one state's alternate assessment. *Research and Practice for Persons with Severe Disabilities*, 37(3), 199–209.

- Gooch, J. (1998). *They blazed the trail for distance education*. Distance Education Clearinghouse.
- Gordon, T. (1990). How can correspondence-based distance education be improved? A survey of attitudes of students who were not well disposed towards correspondence study. *Journal of Distance Education*, 5(1), 16–19.
- Grainger, P. R., & Adie, L. (2014). How do pre service teacher education students move from novice to expert assessors?. *Australian Journal of Teacher Education*, 39(7), 89–105.
- Gregory, J., & Salmon, G. (2013). Professional development for online university teaching. *Distance Education*, 34(3), 256–270.
- Guàrdia, L., Crisp, G., & Alsina, I. (2017). Trends and challenges of e-assessment to enhance student learning in Higher Education. In E. Cano & G. Ion (Eds.), *Innovative practices for higher education assessment and measurement* (pp. 36-56). IGI Global.
- Gulikers, J. T., Biemans, H. J., Wesselink, R., & van der Wel, M. (2013). Aligning formative and summative assessments: A collaborative action research challenging teacher conceptions. *Studies in Educational Evaluation*, 39(2), 116–124.
- Guskey, T. R. (2010). Formative assessment: The contributions of Benjamin S. Bloom. In H. L. Andrade & G. J. Cizek (Eds.), *Handbook of formative assessment* (pp.106-124). Taylor & Francis.
- Guskey, T. R. (2005). *Formative classroom assessment and Benjamin Bloom: Research, theory, and implications*. [Conference presentation]. The annual meeting of the American Educational Research Association, Montreal, April 11–15.

- Hackett, G., & Betz, N. E. (1989). An exploration of the mathematics self-efficacy/mathematics performance correspondence. *Journal for Research in Mathematics Education*, 20(3), 261–273.
- Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice*. Routledge.
- Harlen, W. (2005). Teachers' summative practices and assessment for learning—tensions and synergies. *Curriculum Journal*, 16(2), 207–223.
- Harlen, W., & Deakin-Crick, R. (2002). A systematic review of the impact of summative assessment and tests on students' motivation for learning. (EPPI-Centre Review, version 1.1). I: Research Evidence in Education Library. Issue 1. EPPI-Centre, Social Science Research Unit, Institute of Education.
- Harrison, K., O'Hara, J., & McNamara, G. (2015). Re-thinking assessment: Self- and peer assessment as drivers of self-direction in learning. *Eurasian Journal of Educational Research*, 60, 75–88.
- Hart, C. (2012). Factors associated with student persistence in an online program of study: A review of the literature. *Journal of Interactive Online Learning*, 11(1).
- Harting, K., & Erthal, M. J. (2005). History of distance learning. *Information technology, Learning, and Performance Journal*, 23(1), 35–44.
- Hartley, E. L., & Hogan, T. P. (1972). Some additional factors in student evaluation of courses. *American Educational Research Journal*, 9(2), 241–250.
- Harvey, L. (2003). Student feedback. *Quality in Higher Education*, 9(1), 3–20.
- Hattie, J. (2009). The black box of tertiary assessment: An impending revolution. *Tertiary Assessment & Higher Education Student Outcomes: Policy, Practice & Research*, 259, 275.

- Hattie, J. (2011). Which strategies best enhance teaching and learning in higher education? In D. Mashek & E. Y. Hammer (Eds.), *Claremont applied social psychology series: Vol. 3. Empirical research in teaching and learning: Contributions from social psychology* (p. 130–142). Wiley-Blackwell. <https://doi.org/10.1002/9781444395341.ch8>
- Hattie, J. (2012). Know thy impact. *Educational Leadership*, 70(1), 18–23.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112.
- Hattie, J., Gan, M., & Brooks, C. (2011). Instruction based on feedback. In P. Alexander & R. E. Mayer (Eds.), *Handbook of research on learning and instruction* (pp. 249–271). Routledge.
- Henly, D. C. (2003). Use of Web-based formative assessment to support student learning in a metabolism/nutrition unit. *European Journal of Dental Education*, 7(3), 116–122.
- Hess, F. M. (Ed.). (2006). *Educational entrepreneurship: Realities, challenges, possibilities*. Harvard Education Press.
- Hodges, C. B. (2008). Self-efficacy in the context of online learning environments: A review of the literature and directions for research. *Performance Improvement Quarterly*, 20(3–4), 7–25.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*, 27.
- Holmberg, B. (1995). *Theory and practice of distance education*. Routledge.
- Hopfenbeck, T. N. (2018) Classroom assessment, pedagogy and learning—twenty years after Black and Wiliam 1998. *Assessment in Education: Principles, Policy & Practice*, 25(6), 545–550, DOI: [10.1080/0969594X.2018.1553695](https://doi.org/10.1080/0969594X.2018.1553695)

Huxley, G., Mayo, J., Peacey, M. W., & Richardson, M. (2018). Class size at university. *Fiscal Studies*, 39(2), 241–264.

Hyland, K. (2013). Faculty feedback: Perceptions and practices in L2 disciplinary writing. *Journal of Second Language Writing*, 22(3), 240–253.

Hyman, P. (2012) The year of the disruptive education: As college tuitions soar, various online models vie to educate college students worldwide—at no cost. *Communications of the ACM*, 55(12). <https://doi.org/10.1145/2380656.2380664>

Ingils, C. R. (1970). Let's do away with teacher evaluation. *The Clearing House*, 44, 451–456.

Jacobs, P. (2013). The challenges of online courses for the instructor. *Research in Higher Education*, 21, 1–18.

Jacobs, P. (2014). Engaging students in online courses. *Research in Higher Education Journal*, 26, 1.

Jaques, D., & Salmon, G. (2007). *Learning in groups: A handbook for face-to-face and online environments*. Routledge.

Jarosewich, T., Vargo, L., Salzman, J., Lenhart, L., Krosnick, L., Vance, K., & Koskos, K. (2010). Say what? The quality of discussion board postings in online professional development. *New Horizons in Education*, 58(3), 118–132.

JISC (2015). *Why is peer review important? Transforming feedback and assessment with technology*. JISC. <https://www.jisc.ac.uk/full-guide/transforming-assessment-and-feedback>

Johnston, P. (2012). Guiding the budding writer. *Educational Leadership*, 70(1), 64–67.

Jordan, L. (2012). Video for peer feedback and reflection: Embedding mainstream engagement into learning and teaching practice. *Research in Learning Technology*, 20.

Kaminetz, A. (2020). *Six ways universities are responding to coronavirus*. NPR.

<https://www.npr.org/2020/03/06/812462913/6-ways-universities-are-responding-to-coronavirus>

Kawalkar, A., & Vijapurkar, J. (2013). Scaffolding science talk: The role of teachers' questions in the inquiry classroom. *International Journal of Science Education*, 35(12), 2004–2027.

Kearney, M. (2006). Prospective science teachers as e-learning designers. *Australasian Journal of Education Technology*, 22(2), 229–250.

Kearns, L. R. (2012). Student assessment in online learning: Challenges and effective practices. *Journal of Online Learning and Teaching*, 8(3), 198.

Keegan, D. (1990). *Foundations of distance learning*. Routledge.

Ketelhut, D. J. (2007). The impact of student self-efficacy on scientific inquiry skills: An exploratory investigation in River City, a multi-user virtual environment. *Journal of Science Education and Technology*, 16(1), 99–111

Ketelhut, D. J., Nelson, B. C., Clarke, J., & Dede, C. (2010). A multi-user virtual environment for building and assessing higher order inquiry skills in science. *British Journal of Educational Technology*, 41(1), 56–68.

King, P. E., Schrod, P., & Weisel, J. J. (2009). The instructional feedback orientation scale: Conceptualizing and validating a new measure for assessing perceptions of instructional feedback. *Communication Education*, 58(2), 235–261.

Kirkwood, A., & Price, L. (2014). Technology-enhanced learning and teaching in higher education: what is 'enhanced' and how do we know? A critical literature review. *Learning, Media, and Technology*, 39(1), 6–36.

- Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119(2), 254.
- Knapper, C. (2001). Broadening our approach to teaching evaluation. *New Directions for Teaching and Learning*, 88, 3–9.
- Knapper, C., & Wright, W. A. (2001). Using portfolios to document good teaching: Premises, purposes, practices. *New Directions for Teaching and Learning*, 88, 19–29.
- Kokkelenberg, E., Dillon, M and Christy, S. (2008) The effect of class size on student grades at a public university. *Economics of Education Review*, 27, 221–233.
- Köller, O. (2005). Formative assessment in classrooms: A review of the empirical German literature. In J. Looney (Ed.), *Formative assessment: improving learning in secondary classrooms* (pp. 265-279). Organization for Economic Cooperation and Development.
- Kozol, J. (2005). *The shame of the nation: The restoration of apartheid schooling in America*. Crown.
- Kulhavy, R. W., & Stock, W. A. (1989). Feedback in written instruction: The place of response certitude. *Educational Psychology Review*, 1(4), 279–308.
- Kulik, J. A. (2001). Student rating: Validity, utility, and controversy. In M. Theall, P .C. Abrame & L. A. Mets (Eds.), *New directions for institutional research* (pp. 9-25). Jossey –Bass.
- Kwon, S. K., Lee, M., & Shin, D. (2017). Educational assessment in the Republic of Korea: lights and shadows of high-stake exam-based education system. *Assessment in Education: Principles, Policy & Practice*, 24(1), 60–77.
- Lam, R. (2013). Formative use of summative tests: Using test preparation to promote performance and self-regulation. *The Asia-Pacific Education Researcher*, 22(1), 69-78.

Larreameindy-Joerns, J., & Leinhardt, G. (2006). Going the distance with online education.

Review of Educational Research, 76(4), 567–605.

Lau, A. M. S. (2016). ‘Formative good, summative bad?’—A review of the dichotomy in

assessment literature. *Journal of Further and Higher Education*, 40(4), 509–525.

Laurillard, D. (2002). *Rethinking university teaching: A conversational framework for the effective use of learning technologies*. Routledge Falmer.

Lei, S. A., & Gupta, R. K. (2010). College distance education courses: Evaluating benefits and costs from institutional, faculty and students' perspective. *Distance Education*, 616-631.

Levine, A., & Sun, J. C. (2002). *Barriers to distance education*. American Council on Education and EDUCAUSE

Leibold, N., & Schwarz, L. M. (2015). The art of giving online feedback. *Journal of Effective Teaching*, 15(1), 34-46.

LeNoue, M., Hall, T., & Eighmy, M. A. (2011). Adult education and the social media revolution. *Adult Learning*, 22(2), 4–12.

Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology*, 31(3), 356–362.

Li, L. (2019). ENGAGE Students in formative peer assessment to support learning. *Italian Journal of Educational Research*, 63–70.

Li, J., & De Luca, R. (2014). Review of assessment feedback. *Studies in Higher Education*, 39(2), 378–393.

Li, L., & Grion, V. (2019). The power of giving feedback and receiving feedback in peer assessment. *All Ireland Journal of Higher Education*, 11(2).

- Li, L., Liu, X., & Steckelberg, A. L. (2010). Assessor or assessee: How student learning improves by giving and receiving peer feedback. *British Journal of Educational Technology*, 41(3), 525–536.
- Li, L., Liu, X., & Zhou, Y. (2012). Give and take: A re-analysis of assessor and assessee's roles in technology-facilitated peer assessment. *British Journal of Educational Technology*, 43(3), 376–384.
- Lieberman, M. (2018). Centers of the pedagogical universe. *Inside Higher Ed*. <https://www.insidehighered.com/digital-learning/article/2018/02/28/centers-teaching-and-learning-serve-hub-improving-teaching>
- Lim, C. K. (2001). Computer self-efficacy, academic self-concept, and other predictors of satisfaction and future participation of adult distance learners. *American Journal of Distance Education*, 15(2), 41–51.
- Lin, Y. C., Liang, J. C., Yang, C. J., & Tsai, C. C. (2013). Exploring middle-aged and older adults' sources of Internet self-efficacy: A case study. *Computers in Human Behavior*, 29(6), 2733–2743.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). Sage.
- Lister, M. (2014). Trends in the design of e-learning and online learning. *Journal of Online Learning and Teaching*, 10(4), 671.
- Little-Wiles, J., & Naimi, L. L. (2011). Faculty perceptions of and experiences in using the blackboard learning management system. *Conflict Resolution & Negotiation Journal*, 4(1), 1–13.
- Liu, J. C. (2019). Evaluating online learning orientation design with a readiness scale. *Online Learning*, 23(4), 42–61.

- Lockyer, J., Gondocz, T., & Thivierge, R. L. (2004). Knowledge translation: The role and place of practice reflection. *The Journal of Continuing Education in the Health Professions*, 24(1), 50–56.
- Looney, J. (.d.). (2005). *Formative assessment: Improving learning in secondary classrooms*. Organization for Economic Cooperation and Development.
- Mackenzie, O., & Christensen, E. L. (Eds.). (1971). *The changing world of correspondence study: International readings*. Penn.
- Mahoney, P., S. Macfarlane, and R. Ajjawi. 2019. A qualitative synthesis of video feedback in higher education. *Teaching in Higher Education*, 24(2), 157–179
- Marakas, G. M., Yi, M. Y., & Johnson, R. D. (1998). The multilevel and multifaceted character of computer self-efficacy: Toward clarification of the construct and an integrative framework for research. *Information Systems Research*, 9(2), 126–163.
- Marginson, S. (2009). University rankings, government and social order: Managing the field of higher education according to the logic of the performative present-as-future. In M. Simons, M. Olssen, & M. A. Peters (Eds.), *Re-reading education policies* (pp. 584-604). Brill Sense.
- Mariano, G., Hammonds, F., Chambers, S., & Spear, G. (2017). Formative evaluations of teaching: Involving students in the assessment process. In *Research anthology on developing critical thinking skills in students* (pp. 874-891). IGI Global.
- Marsh, H. W. (1982). Validity of students' evaluations of college teaching: A multitrait–multimethod analysis. *Journal of Educational Psychology*, 74(2), 264–279.

- Marsh, H. W. (1987). Students' evaluations of university teaching: Research findings, methodological issues, and directions for future research. *International Journal of Educational Research*, 11(3), 253–388.
- Mauriano, P. (2006). Looking for critical thinking in online threaded discussions. *E-Journal of Instructional Science and Technology*, 9(2), 1–18.
- McCarthy, J. (2015). Evaluating written, audio and video feedback in higher education summative assessment tasks. *Issues in Educational Research*, 25(2), 153–169.
- McCord, M. B. (2012). Exploring effective feedback techniques in the ESL classroom. *Language Arts Journal of Michigan*, 27(2), 11.
- McKeachie, W. J. (1957). Student ratings of faculty: A research review. *Improving College and University Teaching*, 5(1), 4–8.
- McKeachie, W. J., & Lin, Y. G. (1975). Multiple discriminant analysis of student ratings of college teachers. *The Journal of Educational Research*, 68(8), 300–305.
- McKeachie, W. J., Lin, Y. G., & Mann, W. (1971). Student ratings of teacher effectiveness: Validity studies. *American Educational Research Journal*, 8(3), 435–445.
- McLean, A. J., C. H. Bond, and H. D. Nicholson. (2015). An anatomy of feedback: A phonomyography investigation of undergraduate students' conceptions of feedback. *Studies in Higher Education* 40(5), 921–932.
- McMillan, J. H., & Schumacher, S. (2010). *Research in education: Evidence-based inquiry*. Pearson Higher Ed.
- Medina, L. C. (2018). Blended learning: Deficits and prospects in higher education. *Australasian Journal of Educational Technology*, 34(1).

- Meerah, T. S. M., & Halim, L. (2011). Improve feedback on teaching and learning at the university through peer group. *Procedia-Social and Behavioral Sciences*, 18, 633–637.
- Mercer, N., & Sams, C. (2006) Teaching children how to use language to solve maths problems. *Language and Education*, 20(6), 507–528.
- Merriam, S. (2008). *Qualitative research and case study applications in education*. Jossey-Bass.
- Michael, K. (2012). Virtual classroom: reflections of online learning. *Campus-Wide Information Systems*, 29(3), 156–165.
- Mikecz, R. (2012). Interviewing elites addressing methodological issues. *Qualitative Inquiry*, 18(6), 482–493.
- Min, H. T. (2005) Training students to become successful peer reviewers. *System* 33(2): 293–308.
- Min, H. T. (2006). The effects of trained peer review on EFL students' revision types and writing quality. *Journal of Second Language Writing*, 15(2), 118–141.
- Minoli, D. (1996). *Distance learning technology and applications*. Artech House Inc.
- Model Teaching (2019). *The importance of ongoing checks for understanding*. Model Teaching. <https://www.modelteaching.com/education-articles/testing-strategies-prep/the-importance-of-ongoing-checks-for-understanding>
- Mohammed, A. O., Khidhir, B. A., Nazeer, A., & Vijayan, V. J. (2020). Emergency remote teaching during Coronavirus pandemic: The current trend and future directive at Middle East College Oman. *Innovative Infrastructure Solutions*, 5(3), 1–11.
- Molloy, E., Boud, D., & Henderson, M. (2020). Developing a learning-centered framework for feedback literacy. *Assessment & Evaluation in Higher Education*, 45(4), 527–540.

- Monks, J. and Schmidt, R. (2011) The impact of class size on outcomes in higher education, *The B.E. Journal of Economic Analysis & Policy*, 11(1), 1–17.
- Moon, J. A. (1999). *Reflection in learning and professional development: Theory and practice*. Kogan Page Limited.
- Moore, M. G., & Kearsley, G. (1996). *Distance education: A systems view*. Wadsworth.
- Mosa, A. A., Mahrin, M. N. bin, & Ibrrahim, R. (2016). Technological aspects of e-learning readiness in higher education: A review of the literature. *Computer and Information Science*, 9(1), 113–127.
- Muhammad, M., Wallerstein, N., Sussman, A. L., Avila, M., Belone, L., & Duran, B. (2015). Reflections on researcher identity and power: The impact of positionality on community-based participatory research (CBPR) processes and outcomes. *Critical Sociology*, 41(7–8), 1045-1063.
- Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology*, 38(1), 30–38.
- Napier, N. P., Dekhane, S., & Smith, S. (2011). Transitioning to blended learning: Understanding student and faculty perceptions. *Journal of Asynchronous Learning Networks*, 15(1), 20–32.
- Nasseh, B. (1997). *A brief history of distance education*. SeniorNet.
<http://www.seniornet.org/edu/art/history.html>
- National Education Association, Research Division. (1972). *Evaluating teacher performance*. ERS Circular No. 2, Washington, DC

- Natriello, G. (1987). The impact of evaluation processes on students. *Educational Psychologist*, 22(2), 155–175.
- Nelson, B. C., & Ketelhut, D. J. (2008). Exploring embedded guidance and self-efficacy in educational multi-user virtual environments. *International Journal of Computer-Supported Collaborative Learning*, 3(4), 413–427.
- Nicol, D. (2010). From monologue to dialogue: improving written feedback processes in mass higher education. *Assessment & Evaluation in Higher Education*, 35(5), 501–517.
- Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-based Nursing*, 18(2), 34–35.
- O’Shea, S., Stone, C., & Delahunty, J. (2015). “I ‘feel’ like I am at university even though I am online.” Exploring how students narrate their engagement with higher education institutions in an online learning environment. *Distance Education*, 36(1), 41–58.
- Olson, R. E., Burton, A., Byron, P., & Turnbull, M. (2014). *Exploratory comparison of providing formative assessment feedback in three different modes: Hardcopy, desktop and tablet*. 17th International First Year in Higher Education Conference, Darwin, NT Australia, 6-9 July 2014.
- Oncu, S., & Cakir, H. (2011). Research in online learning environments: Priorities and methodologies. *Computers & Education*, 57(1), 1098–1108.
- Orlando, J., & Attard, C. (2015). Digital natives come of age: The reality of today’s early career teachers using mobile devices to teach mathematics. *Mathematics Education Research Journal*, 28, 107–121.
- Owston, R., York, D., & Murtha, S. (2013). Student perceptions and achievement in a university blended learning strategic initiative. *Internet and Higher Education*, 18, 38–46.

- Pajares, F., & Kranzler, J. (1995). Self-efficacy beliefs and general mental ability in mathematical problem-solving. *Contemporary Educational Psychology*, 20(4), 426–443.
- Pajares, M. F., & Valiante, G. (1997). Influence of self-efficacy on elementary students' writing. *The Journal of Educational Research*, 90(6), 353–360.
- Parker, K., Lenhart, A., & Moore, K. (2011). *The digital revolution and higher education: College presidents, public differ on value of online learning*. Pew Internet & American Life Project.
- Peat, M. & Franklin, S. (2002). Supporting student learning: The use of computer-based formative assessment modules, *British Journal of Educational Technology*, 33(5), 515–523.
- Pellas, N. (2014). The influence of computer self-efficacy, metacognitive self-regulation and self-esteem on student engagement in online learning programs: Evidence from the virtual world of Second Life. *Computers in Human Behavior*, 35, 157–170.
- Peng, J. C. (2010). Peer assessment in an EFL context: Attitudes and correlations. In Matthew T. Prior et al. (Eds.), *Selected proceedings of the 2008 Second Language Research Forum*, (pp. 89-107). Cascadilla Proceedings Project.
- Pereira, A., Tinoca, L., & Oliveira, I. (2017). Peer assessment in an online context: What do students say?. In E. Cano & G. Ion (Eds.), *Innovative practices for higher education assessment and measurement* (pp. 248–270). IGI Global.
- Peters, R. (2013). A reflection on positionality and knowledge processes in transdisciplinary research. *Knowledge Management for Development Journal*, 9(2).
- Picciano, A. G., Seaman, J., & Allen, I. E. (2010). Educational transformation through online learning: To be or not to be. *Journal of Asynchronous Learning Networks*, 14(4), 17–35.

- Pittman, V. V. (1986a). *Pioneering instructional radio in the us: five years of frustration at the University of Iowa, 1925-1930*. [Conference presentation]. First International Conference on the History of Adult Education, Oxford, UK.
- Pittman, V. V. (1986b). Station WSUI and early days of instructional radio. The days of instructional radio. *The Palimpsest*, 67(2), 38–52.
- Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology*, 52(2), 126–136. <https://doi.org/10.1037/0022-0167.52.2.126>
- Pope, N. (2001). An examination of the use of peer rating for formative assessment in the context of the theory of consumption values. *Assessment & Evaluation in Higher Education*, 26(3), 235–246.
- Popham, W. J. (1997). What's wrong—and what's right—with rubrics. *Educational Leadership* 55(2), 72.
- Prensky, M. (2001). Digital natives, digital immigrants part 2: Do they really think differently? *On the Horizon*, 9(6), 1–6. <https://doi.org/10.1108/10748120110424843>
- Price, M., Handley, K., Millar, J., & O'Donovan, B. (2010). Feedback: all that effort, but what is the effect?. *Assessment & Evaluation in Higher Education*, 35(3), 277–289.
- Prosser, M., & Trigwell, K. (1999). *Understanding learning and teaching: The experience in higher education*. McGraw-Hill Education (UK).
- Rainsbury, E., & Malcolm, P. (2003). Extending the classroom boundaries—an evaluation of an asynchronous discussion board. *Accounting Education*, 12(1), 49–61.
- Ramaprasad, A. (1983). On the definition of feedback. *Behavioral Science*, 28(1), 4–13.

- Ramsden, P. (1991). A performance indicator of teaching quality in higher education: The Course Experience Questionnaire. *Studies in Higher Education*, 16(2), 129–150.
- Ramsden, P. (1992). *Learning to teach in higher education*. Routledge.
- Reay, J. (2001). Blended learning: A fusion for the future. *Knowledge Management Review*, 4(3), 1–6.
- Reio Jr, T. G., & Crim, S. J. (2013). Social presence and student satisfaction as predictors of online enrollment intent. *American Journal of Distance Education*, 27(2), 122–133.
- Rheinberg, F. (1980). *Leistungsbewertung und Lernmotivation (Achievement evaluation and learning motivation)*. Hogrefe.
- Robinson, K., & Aronica, L. (2015). *Creative schools: The grassroots revolution that's transforming education*. Penguin.
- Rohrer, D., & Pashler, H. (2010). Recent research on human learning challenges conventional instructional strategies. *Educational Researcher*, 39(5), 406–412.
- Rooney, J. (2003). Blending learning opportunities to enhance educational programming and meetings. *Association Management*, 55(5), 26–32.
- Roskos, K., & Neuman, S. B. (2012). Formative assessment: Simply, no additives. *The Reading Teacher*, 65(8), 534–538.
- Rossiter, J. A. (2016). Using an understanding of feedback processes to improve student learning. *IFAC-PapersOnLine*, 49(6), 57–62.
- Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data*. Sage Publications.
- Rucker, R., & Downey, S. (2016). Faculty technology usage resulting from institutional migration to a new learning management system. *Online Journal of Distance Learning*

Administration, 19(1).

https://www.westga.edu/~distance/ojdla/spring191/rucker_downey191.html

Ryan, T., M. Henderson, and M. Phillips. (2019). Feedback modes matter: Comparing student perceptions of digital and non-digital feedback modes in higher education. *British Journal of Educational Technology* 50(3), 1507–1523.

Saba, F. (2013). *Introduction to distance education: Telecommunications systems*. <http://distance-educator.com/in-1962-launch-of-a-beach-ball-sized-satellite-revolutionized-educationaltelecommunications/>

Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18(2), 119–144.

Saettler, P. (1990). *The evolution of American educational technology*. Libraries Unlimited.

Sahlberg, P. (2011). *Finnish lessons*. Teachers College Press.

Saldaña, J. (2013). *Coding manual for qualitative researchers*. Sage.

Salmon, G. (2011). *E-moderating: The key to teaching and learning online* (3rd ed.). Routledge.

Salmon, G. (2014). Learning innovation: A framework for transformation. *European Journal of Open, Distance and E-Learning (EUODL)*, 17(2), 220–236.

Salomon, G. (1984). Television is “easy” and print is “tough”: The differential investment of mental effort in learning as a function of perceptions and attributions. *Journal of Educational Psychology*, 76(4), 647–658.

Sands, P. (2002). Inside outside, upside downside: Strategies for connecting online and face-to-face instruction in hybrid courses. *Teaching with Technology Today*, 8(6).

Schimmel, B. J. (1983). A meta-analysis of feedback to learners in computerized and programmed instruction. (ED233708). ERIC. <https://eric.ed.gov/?id=ED233708>

- Schmidt, S. W., Tschida, C. M., & Hodge, E. M. (2016). How faculty learn to teach online: What administrators need to know. *Online Journal of Distance Learning Administration*, 19(1), 1–10.
- Schunk, D. H., & Pajares, F. (2009). Self-efficacy theory. *Handbook of Motivation at School*, 35, 54.
- Scriven, M. (1991). Beyond formative and summative evaluation. In M. W. McLaughlin & D. C. Philips (Eds.), *Evaluation and education: At quarter century (Part II)* (pp. 19–64). University of Chicago Press.
- Scriven, M. S. (1967). *The methodology of evaluation* (Perspectives of Curriculum Evaluation, and AERA monograph Series on Curriculum Evaluation, No. 1). Rand McNally.
- Sethy, S. S. (2008). Distance education in the age of globalization: An overwhelming desire towards blended learning. *Turkish Online Journal of Distance Education*, 9(3), 29–44.
- Shavelson, R. J., Black, P., Wiliam, D., & Coffey, J. (2007). On linking formative and summative functions in the design of large-scale assessment systems. *Educational Evaluation and Policy Analysis*.
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjSx8SK6_nvAhVGZN8KHYPpAK0QFjAAegQIAhAD&url=https%3A%2F%2Fweb.stanford.edu%2Fdept%2FSUSE%2FSEAL%2FReports_Papers%2FOn%2520Aligning%2520Formative%2520and%2520Summative%2520Fun
- Shepard, L. A. (2006). Classroom assessment. *Educational Measurement*, 4, 623–646.
- Shinkfield, A. J., & Stufflebeam, D. L. (1995). Historical perspectives of teacher evaluation. In *Teacher evaluation*. Springer, Dordrecht. https://doi.org/10.1007/978-94-009-1796-5_1

- Shute, V. J. (2008). Focus on formative feedback. *Review of Educational Research*, 78(1), 153–189.
- Siegel, R. G., Galassi, J. P., & Ware, W. B. (1985). A comparison of two models for predicting mathematics performance: Social learning versus math aptitude–anxiety. *Journal of Counseling Psychology*, 32(4), 531.
- Sipe, L. R. (2004). Developing conceptual categories in classroom descriptive research: Some problems and possibilities. *Anthropology & Education Quarterly*, 35(4), 472–485.
- Smalzried, N. T., & Remmers, H. H. (1943). A factor analysis of the Purdue Rating Scale for Instructors. *Journal of Educational Psychology*, 34(6), 363.
- Smith, D. N. (2015). Effectively using discussion boards to engage students in introductory leadership courses. *International Journal of Leadership in Education*, 14(2), 229.
- Smith, R. E. (1989). Effects of coping skills training on generalized self-efficacy and locus of control. *Journal of Personality and Social Psychology*, 56(2), 228–233.
- Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The Internet and Higher Education*, 7(1), 59–70.
- Stack, S. (2015). Learning outcomes in an online vs traditional course. *International Journal for the Scholarship of Teaching & Learning*, 9(1).
- Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (p. 443–466). Sage Publications Ltd.
- Stemnock, S. K. (1969). *Evaluating teacher performance*. (Educational Research Service Circular No. 3). NEA.

- Stiggins, R. (2005). From formative assessment to assessment for learning: A path to success in standards-based schools. *Phi Delta Kappan*, 87(4), 324–328.
- Stiggins, R. (2008, September). *Assessment for learning, the achievement gap, and truly effective schools*. [Conference presentation]. Educational Testing Service and College Board Conference, Portland, OR.
- Strauss, A. L. (1987). *Qualitative analysis for social scientists*. Cambridge University Press.
- Sull, E. C. (2008). *Overcoming the #1 complaint of online students: Poor instructor feedback*. Faculty Focus. <https://www.facultyfocus.com/articles/online-education/overcoming-the-1-complaint-of-online-students-poor-instructor-feedback/>
- Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, 50(4), 1183–1202.
- Swan, K., Day, S., Bogle, L., and Matthews, D. (2014). A collaborative, design-based approach to improving an online program. *The Internet and Higher Education*, 21, 74–81.
- Tamm, S. (2019). *Disadvantages of e-learning*. E-student. <https://e-student.org/disadvantages-of-e-learning/>
- Tapscott, D., & Williams, A. D. (2010). Innovating the 21st-century university: It's time. *Educause Review*, 45(1), 16–29.
- Taras, M. (2005). Assessment—summative and formative—some theoretical reflections. *British Journal of Educational Studies*, 53(4), 466–478.
- Taras, M. (2007a). Assessment for learning: Understanding theory to improve practice. *Journal of Further and Higher Education*, 31(4), 363–371.

- Taras, M. (2007b). Terminal terminology: The language of assessment. In M. Reiss, R. Hayes, & A. Atkinson (Eds.), *Marginality and difference in education and beyond* (pp. 52–67). Trentham Books.
- Taras, M. (2008). Assessment for learning: Sectarian divisions of terminology and concepts. *Journal of Further and Higher Education*, 32(4), 389–397.
- Taras, M. (2010). Back to basics: Definitions and processes of assessments. *Práxis Educativa*, 5(2), 123–130.
- Taras, M., & Davies, M. S. (2013). Perceptions and realities in the functions and processes of assessment. *Active Learning in Higher Education*, 14(1), 51–61.
- Thorsteinsson, G. (2013). Examining teachers' role in using virtual learning environment to support conventional education in Icelandic schools. *Journal of Educational Technology*, 10(2), 15–20.
- Thuo, A. D. M. (2013). Place of positionality, values, ethics and reflexivity in qualitative urban field work research. *Journal of Human and Social Science Research*, 1(1), 19–29.
- Todhunter, B. (2013). LOL—limitations of online learning—are we selling the open and distance education message short? *Distance Education*, 34(2), 232–252.
- Tomlinson, C. A. (2014). The bridge between today's lesson and tomorrow's. *Educational Leadership*, 71(6), 10–14.
- Toohey, S. (1999). *Designing courses for higher education*. McGraw-Hill Education (UK).
- Topping, K. J. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, 68(3), 249–276.
- Turner, R. L. (1970). Good teaching and its contexts. *The Phi Delta Kappan*, 52(3), 155–158.

- Turner, R. L., Evans, J. H., Hale, T. A., Cairns, S. G., & Maleski, F. D. (1969). How do student characteristics affect their evaluations of instructors? *Bulletin of the School of Education, Indiana University*, 45, 47–97.
- Turner, S. (2010). Challenges and dilemmas: fieldwork with upland minorities in socialist Vietnam, Laos and southwest China. *Asia Pacific Viewpoint*, 51(2), 121–134.
- UNESCO (n. d.) *Education: From disruption to recovery*. UNESCO.
<https://en.unesco.org/covid19/educationresponse>
- Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research*, 78(4), 751–796.
- van der Schaaf, M., Baartman, L., Prins, F., Oosterbaan, A., & Schaap, H. (2013). Feedback dialogues that stimulate students' reflective thinking. *Scandinavian Journal of Educational Research*, 57(3), 227–245.
- van Dinther, M., Dochy, F., & Segers, M. (2015). The contribution of assessment experiences to student teachers' self-efficacy in competence-based education. *Teaching and Teacher Education*, 49, 45–55.
- Van Wart, M. (2004). Training and development for productivity. In M. Holzer & S. Lee (Eds.), *Public productivity handbook* (2nd ed., pp. 529–550). Marcel Dekker.
- Van Wart, M., Ni, A. Y., Ready, D., & Shayo, C. (2020). Factors leading to online learner satisfaction. *Business Education Innovation Journal*, 12(1).
- Velan, G. M., Kumar, R. K., Dziegielewski, M. & Wakefield, D. (2002). Web-based self-assessment in pathology with question mark perception, *Pathology*, 34, 282–284.
- Verduin, J. R. Jr, & Clark, T. A. (1991). *Distance education: The foundations of effective practice*. Jossey-Bass.

- Vonderwell, S. K., & Boboc, M. (2013). Promoting formative assessment in online teaching and learning. *TechTrends*, 57(4), 22–27.
- Waits, T., & Lewis, L. (2003). *Distance education at degree-granting postsecondary institutions: 2000–2001*. (NCES, 17). US Department of Education. National Center for Education Statistics.
- Walker, M. (2001). Mapping our higher education project. *Reconstructing Professionalism in University Teaching*, 3–20.
- Wang, C. H., Shannon, D. M., & Ross, M. E. (2013). Students' characteristics, self-regulated learning, technology self-efficacy, and course outcomes in online learning. *Distance Education*, 34(3), 302—323.
- Wang, T. H. (2008). Web-based quiz-game-like formative assessment: Development and evaluation. *Computers & Education*, 51, pp. 1247–1263.
- Ward, J., & LaBranche, G. A. (2003). Blended learning: The convergence of e-learning and meetings. *Franchising World*, 35(4), 22–23.
- Watkins, B. L. (1991). A quite radical idea: The invention and elaboration of collegiate correspondence study. In B. L. Watkins & S. J. Wright (Eds.), *The foundations of American distance education: A century of collegiate correspondence study* (pp. 1–35). Kendall/Hunt.
- Wiener, N. (1948). *Cybernetics or control and communication in the animal and the machine*. Technology Press.
- Wiggins, G. (2012). Seven keys to effective feedback. *Educational Leadership*, 70(1), 10–16.

- Wiliam, D. (2007). Keeping learning on track: classroom assessment and the regulation of learning: in F.K. Lester Jr (Ed.). *Second handbook of mathematics teaching and learning* (pp.1053–1098). Information Age Publishing.
- Wiliam, D. (2010). An integrative summary of the research literature and implications for a new theory of formative assessment. *Handbook of Formative Assessment*, 18–40.
- Wiliam, D. (2011). *Embedded formative assessment*. Solution Tree Press.
- Wiliam, D. (2012). Feedback: Part of a system. *Educational Leadership*, 70(1), 30–34.
- Wiliam, D. (2013). Assessment: The bridge between teaching and learning. *Voices from the Middle*, 21(2), 15.
- Wiliam, D. (2014, April). *Formative assessment and contingency in the regulation of learning processes*. [Conference presentation]. Annual Meeting of American Educational Research Association, Philadelphia, PA.
- Wiliam, Dylan. (2011). What Is assessment for learning? *Studies in Educational Evaluation*, 37(1), 3–14.
- Wiliam, D., & Thompson, M; (2008) Integrating assessment with learning: What will it take to make it work? In C. A. Dwyer (Ed.), *The future of assessment: Shaping teaching and learning* (pp. 53–82). Routledge.
- Winstone, N., R. Nash, M. Parker, and J. Rowntree. (2017). Supporting learners’ agentic engagement with feedback: A systematic review and a taxonomy of recipience processes. *Educational Psychologist*, 52(1), 17–37
- Womble, J.C. (2007). *E-learning: The relationship among learner satisfaction, self-efficacy, and usefulness* [Doctoral dissertation, Alliant International University].
<https://www.learntechlib.org/p/119496/>

- Wu, J. H., Tennyson, R. D., & Hsia, T. L. (2010). A study of student satisfaction in a blended e-learning system environment. *Computers & Education*, 55(1), 155–164.
- Wuensch, K. L., Aziz, S., Ozan, E., Kishore, M., & Tabrizi, M. H. N. (2008). Pedagogical characteristics of online and face-to-face classes. *International Journal on E-Learning*, 7(3), 523–532.
- Yam, S., & Rossini, P. (2013). Formative assessment in property education: A comparison between blended and online learning. *Pacific Rim Property Research Journal*, 19(1), 101–127.
- Yilmaz, R. (2017). Exploring the role of e-learning readiness on student satisfaction and motivation in flipped classroom. *Computers in Human Behavior*, 70, 251–260.
- Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Sage.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th Ed.). Sage.
- Yin, R. K. (2013). *Case study research: Design and methods*. (5th Ed.). Sage.
- Young, J. R. (2002, March 22). “Hybrid” teaching seeks to end the divide between traditional and online instruction. *The Chronicle of Higher Education*.
https://www.chronicle.com/article/hybrid-teaching-seeks-to-end-the-divide-between-traditional-and-online-instruction/?cid2=gen_login_refresh&cid=gen_sign_in
- Young, S., & Duncan, H. E. (2014). Online and face-to-face teaching: How do students’ ratings differ? *MERLOT Journal of Online Learning and teaching*, 10(1), 70–79.
- Yuan, J., & Kim, C. (2015). Effective feedback design using free technologies. *Journal of Educational Computing Research*, 52(3), 408–434.
- Zigerell, J. (1991). *The use of television in American higher education*. Praeger.

- Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), 82–91.
- Zimmerman, B. J., & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. *American Educational Research Journal*, 31(4), 845–862.
- Zimmerman, B. J., & Kitsantas, A. (1997). Developmental phases in self-regulation: Shifting from process goals to outcome goals. *Journal of Educational Psychology*, 89(1), 29–36.
- Zimmerman, B. J., & Kitsantas, A. (1999). Acquiring writing revision skill: Shifting from process to outcome self-regulatory goals. *Journal of Educational Psychology*, 91(2), 241–250.
- Zimmerman, B. J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology*, 82(1), 51–59.
- Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal*, 29(3), 663–676.
- Zimmerman, W. A., & Kulikowich, J. M. (2016). Online learning self-efficacy in students with and without online learning experience. *American Journal of Distance Education*, 30(3), 180–191.
- Zirkel, S., Garcia, J. A., & Murphy, M. C. (2015). Experience-sampling research methods and their potential for education research. *Educational Researcher*, 44(1), 7–16.
- Zumbrunn, S., Marrs, S., & Mewborn, C. (2016). Toward a better understanding of student perceptions of writing feedback: a mixed methods study. *Reading and Writing*, 29(2), 349–370.

Appendix A: Recruitment Announcement

This announcement will be posted on Facebook and Twitter, Linked In, higher education list-serves, and sent to my personal contacts.

Month, day, 2018

For my Ed.D. dissertation research, I am looking for six to nine people who earned their Doctor of Education degree online within the past five years (May, 2013-May, 2018), and who are willing to talk with me about their experience. The main goal of the qualitative study I'm undertaking is to examine, describe, and analyze formative feedback strategies you encountered as an online student to determine which ones you found most effective and helpful.

The research will involve one interview either in person or via a phone call, Skype or Google Hangout based on your time, convenience, and personal preference. The interview will last between forty five to sixty minutes. All the interviews will be recorded (with your permission) and field notes will be taken, but your identify, workplace, and the university where you earned your degree will be kept confidential.

Your participation is entirely voluntary.

My study is for academic purposes only, and you can withdraw at any time in the research process if you wish. If you wish to volunteer to participate in my study or if you have any questions, please email me at rezk.y@husky.neu.edu or call me at (831)224-0029.

Best Regards,

Yaser Rezk

Doctoral Candidate, College of Professional Studies, Department of Education

Northeastern University, Boston

Appendix B: Recruitment E-mail

Dear _____,

I am currently in the dissertation research stage in my Ed.D program at Northeastern University, Boston, MA. I am inviting you to take part in my study of online formative feedback strategies, a tool used to promote successful online learning. The research attempts to examine, describe and analyze formative feedback strategies used when you were a student in an online Ed.D. program during the last five years. It is hoped that the findings of this study will suggest the most effective formative feedback strategies, improving online learning in general and Ed.D online programs in particular. It will be a great opportunity to reflect on your own doctoral journey experiences and to consider the formative feedback that most helped you complete the requirements of the online courses you took.

Interviews can be via phone calls, Skype or Google Hangout based on your time and personal convenience. Each interview will last between 45 to 60 minutes. Questions will focus on the feedback and the online assessment strategies your professors followed during your doctoral learning journey. Some questions will also address how (and if) you implemented the feedback you received and if it either hindered or benefited your learning. All the interviews will be recorded and saved on my personal computer with a locked password. I will also take detailed notes during the interviews and only I will transcribe any recordings. Your identity, workplace and the university you earned your Ed.D from will not be revealed, and a special pseudonym will be chosen for you in my analysis of my findings

This study focuses on assessment in an online environment, in particular effective formative feedback strategies and their role in promoting successful learning. It is intended to provide scholar practitioners and online learners with better insights into formative assessment, specifically when

used in online Ed.D programs. Thus, your voluntarily participation is really valued. If you volunteer to participate in this study, you can email me at Rezky@husky.neu.edu or call me at 831-224-0029.

Please do not hesitate to email or call if you have any questions.

Sincerely

Yaser, Rezk

Doctoral Student (Ed.D.)

Northeastern University

Appendix C: Informed Consent

Signed Informed Consent Form

.....
Northeastern University, College of Professional Studies, Doctor of Education

Investigator: Dr. Lynda Beltz, (Principal Investigator), Yaser Rezk (researcher)

Informed Consent

We are inviting you to take part in a research study. This form will tell you about the study, but the student researcher will explain it to you first. You may ask this person any questions that you have. When you are ready to make a decision, you may tell the researcher if you want to participate or not. You do not have to participate if you do not want to. If you decide to participate, the researcher will ask you to sign this statement and will give you a copy to keep.

Why am I being asked to take part in this research study?

We are asking you to be in this study because you are a recent graduate from an online Doctor of Education program.

Why is this research study being done?

The purpose of this study is to better understand the formative assessment experiences of Doctor of Education graduates who completed their degrees online between May, 2013 and May, 2018, and how they recall receiving feedback received in their coursework

What will I be asked to do?

If you decide to take part in this study, I will ask you to participate as follows:

1) At the start of our interview, which will last from 45-60 minutes, I will further introduce myself and ask for your permission to record our interview. Also, you will be asked to introduce yourself. I will read the consent form again, once again describe the study, and once again ask for your consent.

a) The main interview.

In this meeting (which will last about forty five to sixty minutes), I will ask you some general questions. All the questions are related to your experiences in learning online and the feedback you received on your academic assignments and research papers during your doctoral program.

1) Phone call

Within a few days of the main interview, I will send you a transcription of the interview by your choice of mail or email, or we can make arrangements for me to read it to you. In the phone call, which might be about 15 minutes in length, you can make any corrections or clarifications to what you said.

Where will this take place and how much time will it take?

You will be interviewed via phone calls, Skype or Google Hangout based on your preference and at a time that is convenient for you. The main interview will take about forty-five minutes to an hour. The follow-up on the phone to see if you would like to make any changes to the transcript will take about 15 minutes.

Will there be any risk or discomfort to me?

Will I benefit from this research?

There will be no risk to you. You can skip any questions that you are not comfortable answering.

There will be no direct benefit to you for taking part in the study. However, the information learned from this study may help teachers and students involved in online learning.

Who will see this information about me?

Your identity as a participant in this study will not be known.

I understand that it is important to protect the rights and privacy of the participants in the study.

As a participant, you will be given a pseudonym in the final draft of my dissertation, one different from your given name in the study so that your confidentiality is preserved. The information from the study will include recordings of interviews made on two recorders, transcripts, a field notebook, and a computer and a backup of data for the computer. All data will be stored in a locked file cabinet in the researcher's home. Data that links your name to my study name will be kept separate from other research data. Digital recordings will be password protected and encrypted on a computer. Transcriptions of digital recordings will be stored electronically on the computer. Backups will be stored weekly on an external hard drive device, which is stored in a locked metal cabinet. The data, including backups, will be kept for two years, after which all data will be destroyed.

What will happen if I suffer harm from this research?

There is little likelihood that you will be harmed in any way from this research.

Can I stop participation in this study?

Your participation in this research is completely voluntary. You do not have to participate if you do not want to and you can refuse to answer any question. Even if you begin the study, you may quit at any time.

Who can I contact if I have questions or problems?

If you have any questions about this study, please feel free to contact the student researcher, Yaser Rezk at (831)224-0029 and email rezk.y@husky.neu.edu. You can also contact Lynda Beltz, the Principal Investigator, at (724) 961-8663 and email l.beltzl@northeastern.edu

If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, Mail Stop: 560-177, 360 Huntington Avenue, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@neu.edu.

Will I be paid for my participation?

No

Will it cost me anything to participate?

No

Is there anything else I need to know?

No

I agree to participate in this research.

Signature of participant

Date

Printed name of person

**Signature of person who explained
study and obtained consent**

Printed name of person

Date

Appendix D: Interview Questions

Thesis Question: What are the most effective e-assessment feedback strategies from the perspective of an online adult Ed.D. student?

Meeting (45 to 60 minutes by phone or video conference)

I will describe my background and education, and the purpose of my study, and why I chose to perform it. I will state clearly that the participants may withdraw at any time if they wish.

Questions to participants:

How was feedback provided to you? Can you give examples?

- How would you define assessment, and specifically formative assessment?
- What is your opinion of the value of formative assessment in relation to online learning?
- In general, how important is it to develop a set of common learning outcomes that describe what learners should know or be able to do by the time they complete a course or program?
- To what extent do you think your professors considered these learning outcomes when they planned and delivered the courses you took?
- What are some of the ways you think assessment is used effectively in your program?
- Did your professors use tools such as rubrics to set the standard for assessment?
- What were some of the assessment features in rubrics you found most helpful?
- What feedback benefited your online learning the most? Why?
- What feedback did not benefit your online learning? Why?
- Was there any opportunity for peer review of your work also? What are some examples? How did the peer reviews impact your learning?
- How did you receive and implement the professor's feedback?
- Which formative e-assessment strategies do you prefer more? Why?
- If you teach online, what formative assessment strategies do you use? Why?
- What formative assessment strategies are more effective in an online course than in a typical course based on your experience?

Interview Checking (by phone). The participant will have an opportunity to review the transcript and add additional information if they wish.