Research Issues in Contemporary Education

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Research Issues in Contemporary Education

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Research Issues in Contemporary Education (RICE) is a double-blind, peer-reviewed online journal that publishes educational research studies, literature reviews, theoretical manuscripts, and practitioner-oriented articles regarding issues in education. Views expressed in all published articles are the views of the author(s), and publication in RICE does not constitute endorsement. Submission of an article implies that it has not been published and is not currently under review for publication elsewhere. RICE article submissions must be between 3,000 to 10,000 words, including references, and must follow the most recent edition of the APA Publication Manual. Authors can submit manuscripts electronically in Microsoft Word at rice@leraweb.net. Please remove all author identification in the manuscript. Include in the submission a separate cover page with complete author identification, affiliation, and contact information.

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FOREWORD

I am greatly honored and humbled to present the Spring/Summer Issue of Research Issues in Contemporary Education (RICE). This is a special issue with tributes written by friends, colleagues, and mentors in memoriam of Dr. Brad Wedlock. Following the thoughtful tributes, Dr. Wedlock's literature review from his dissertation is published posthumously in this issue as a co-authored article with his doctoral chair Dr. Mitzi Trahan. The Louisiana Educational Research Association (LERA) is grateful for the opportunity to preserve Dr. Wedlock's memory through the publication of his scholarship in our journal. Many people affiliated with LERA knew Dr. Wedlock as a promising scholar in the field of educational technologies.

Following Dr. Wedlock's in memoriam and posthumous publication, this issue of RICE includes three articles representing current educational research and scholarship at several institutions in the State of Louisiana. Dr. Leigh Tolley's article explores the role of preservice teachers' decision-making processes, specifically evaluative thinking, in the context of formative assessment practices. Next, Dr. Dale Norris contributed a position paper that describes barriers faced by second and third career nursing students that is well-supported by an analysis and review of literature. Finally, Dr. Rutledge presents qualitative research on the role of intrinsic motivation among African-American Male Student Athletes who obtained graduate degrees.

I would like to announce RICE is now accepting proposals for special themed issues on a wide range of education-related topics. Interested editors or co-editors should submit a proposal with the editor or co-editor's contact information and institutional affiliation, a working title for the special issue, a 1-2 page double-spaced explanation and rationale for the special issue, and a tentative schedule for publication. RICE article submissions for special issues must be between 3,000 to 10,000 words, including references, and must follow the most recent edition of the APA Publication Manual. Editors or co-editors can submit special issue proposals electronically in Microsoft Word at rice@leraweb.net.

Finally, I would like to sincerely thank the RICE Editorial Board and our peer reviewers for their feedback and assistance with the production of this issue. Specifically, Maggi Bienvenu spent numerous hours perfecting the layout for this issue. Her meticulous skills contributed greatly the production of this issue of RICE.

Sincerely,

Natalie Keefer
Managing Editor,
Research Issues in Contemporary Education

BRAD COLBY WEDLOCK, Ed.D., IN MEMORIAM

Tributes

Colleagues from
the University of Louisiana at Lafayette

Mitzi's Thoughts

For me, the best way to describe Brad is that he was an old soul! Being an old soul refers to how you view and approach life. Indeed, there were many conversations where we both acknowledged how he approached everything as an old soul. He was always a joy to talk with, whether we were pontificating about academics, statistics, travel, life experiences, his future plans, and/or balancing it all. Those that knew him well would agree that he could put out a tremendous amount of work. For sure this was true, but more so I could always tell he was driven by quality rather than quantity. As an old soul, he knew in his heart – and simply his way of being – that the key to success was to keep clam and carry on. If I were to capture his essence, I would say he approached all aspects of life by stopping, waiting, listening, then and only then taking the next steps. Now granted, this was often a split second turnaround but that was what made him a natural. His life views and wisdom generally mirrored that of someone well beyond his years.

As his doctoral chair and in terms of academics, I loved how he was always willing to try new things; he understood the importance of going word for word over every single survey item; he wholeheartedly agreed to co-present and co-write; and he wanted to do everything under the sun with his dissertation research. In fact, at one point I did rein him back which he didn't really like but it became an inside joke with many. Hey, most doctoral chairs will tell students, a good dissertation is a finished one! But seriously, here again, he was the ideal student!

On a personal note, many of his peers to this day talk about how they, without hesitation, trusted his judgement and advice. Brad truly loved meeting new people and enjoyed listening to new perspectives. I never heard one negative word from Brad about the amount of work he did, commitment to family and friends, or the demands of a doctorate. There was also a deeply spiritual side to Brad. He was confident and he was the type of person who would rather get things done than sit around stressing the small stuff. All of these things together made Brad who he was and how he was able to juggle so much.

Simply, Brad genuinely cared for others and would truly give you the shirt off his back. He loved learning, music, and experiencing all he could! He was destined for greatness and taken much too soon from all of us. Dr. Brad C. Wedlock, you will always have a place in my heart and memory!

With respect and warmest regards, it was a true pleasure knowing you.

Dr. Mitzi Trahan, University of Louisiana at Lafayette

Donna's Tribute

Brad provided so much joy and inspiration to many persons in my immediate circle. When he first shared with me his desire to work on becoming a teacher of children with and without special learning needs before he assumed any type of educational leadership position, my response was that is great goal but that will take so much more work. He was already pursuing his doctorate. I quickly learned how committed he was to reaching those goals. In his special education classes, he displayed a special passion, commitment to practice love, tolerance of diversity, and patience. Brad's commitment to caring and supporting others to succeed included not only children and his peers but faculty, too. His enthusiasm was an inspiration to his peers and faculty alike. His spirit continues to impact many lives.

Dr. Donna Wadsworth*, University of Louisiana at Lafayette*

Ashley's Sentiments

Upon the reflection of my dear friend, Brad C. Wedlock's life, one thing stood out and always would shine bright like a diamond - his love for anyone he met. It didn't matter if you were his friend, relative, coworker or colleague... he was so whole-heartedly interested in what you were pursuing, whether it was personally or academically. The respect and genuine interest and effort he showed in everything he took part in was the best definition of his character.

If one was lucky enough, they had the privilege to spend time with Brad outside of his academic studies. A witty, imaginative, and so-caring human being he was. Our world lost a great soul when he departed it on that warm and sunny April afternoon. The sun shines a little dimmer without Brad here, but yet seems to shine almost brighter with the legacy he left behind. Lucky doesn't begin to describe how we felt to have him so ever-present in our lives.

Until we meet again, my sweet friend.

Ashley R. Veillon, MAT, Martial F. Billeaud Elementary (Broussard, LA)

Martha's Reflections

Brad was a colleague and friend. I would characterize him as a person who loved life, loved people, loved learning and loved sharing his love of learning with others. He was a genuine teacher at heart. The world was Brad's classroom and we, his friends and colleagues, were his students. He was always willing to share with me a scholarly article or information on a statistical method that might work best for our study. He spoke often about bootstrapping; he was devastated when Dr. Trahan would not allow him to conduct bootstrapping for his study! We spoke often about our research in the field of technology. Brad and I discussed how we hoped that our research could assist other educators in building a bridge for the future of online learning.

Brad had many positive, impactful leadership qualities. I would describe one of his greatest leadership traits as servant leader. A servant leader can best be described as a person who focuses on the well-being and growth of others. They put people's need first above their own. They help to develop their community to perform at its best. If we consider ourselves as Brad's community, he was always seeking to assist us in achieving our best. Brad was always willing to help me; to put my needs first above his own. It always amazed me how he would arrive during my greatest time of need. He had impeccable timing! I could always count on him to have information on the constructs for our study, to create our presentation slides or to find a Mac adapter! Yes, he was a Mac lover; just like me! I still miss our talks, our excitement about research and most importantly his beautiful gentle nature and smile.

I seek to live a little like Brad would have lived each day.

Dr. Martha Bryant, University of Louisiana at Lafayette

Maggi's Thoughts

Brad's reputation preceded him. I met him briefly more than once through a few of our friends. His name came up often as a guy you just had to know. I didn't know what to make of him...he seemed almost too nice to be genuine. When he showed up in my master's level teaching classes, I was surprised. Wasn't he a doc student? How many hours does this guy take? What was he trying to prove? I had no idea that his infectious energy would derail my career down a path I could not have imagined.

Gradually I got to know him and enjoyed sharing classes with him. He was a great guy with whom to discuss ideas - with just enough competitiveness to push me to do better. He was always talking about conferences and articles in the works. When he presented at a conference in Hawaii, I made a comment that he was "living the life." That may have been the first time he told me that I could do it, too. Nah, I couldn't stand up and pretend I was an expert in a room full of actual experts. He laughed it off and said that half of them felt like they were pretending too. Start small, find the supportive audiences, but just get up and try it. I would have nothing to lose.

When he and Linda (Fairchild) published their TCR article together, I was with them to celebrate. He looked at me and said, "Ok, you're next." I left that conversation deciding to look into continuing on to my doctorate after I completed my master's degree. I would never have believed I could before, but there was something about Brad that

made everyone think that if he believed in you, you had to believe in yourself. I would soon see, at his memorial, how many people had been inspired by him along the way. He was everyone's cheerleader.

Today I find myself a year into the Educational Leadership doctoral program, his program. I am sitting next to the cubicle where he worked, a graduate assistant like he was. I swear I can feel him on the other side of the wall. I can still hear his words of encouragement and I hear his teasing laughter when I start to doubt myself. We all have to be successful, especially now, because he believed in us. With every word we write, with every presentation we give, he lives on in us.

A spirit like that doesn't fade away easily, nor will we let it.

Maggi Bienvenu, MAT, University of Louisiana at Lafayette

Linda's Memories

I first met Brad Wedlock in the first class for my doctoral degree. We had a mutual friend, so I ended up talking to him that class. Brad and I hit it off because we both were a little competitive when it came to our grades. We continued to take a few classes together, but he was much further along than I was. The more I learned about Brad, the more I wanted to be his friend. Brad pushed me to be just a little bit better each time. Whenever I had a question or a problem, he'd just break it down because he'd been there before. Brad wanted everyone to shine; he wanted everyone to succeed. One day I was complaining to Brad (he often let me do that) about a new policy becoming popular in K-12 education. He told me to stop complaining and to write about it, so we did. What I didn't realize is that Brad would have written four pages by the time I even got off of work. That's the type of person Brad was. He had a plan and stuck to it, usually beating everyone else to the punch. He called me later that night and we finalized our submission to TCR. He put me as first author, and I told him, "No, you need to be it; you worked harder." And he said that he wanted it to be my first "first" publication. Later, that stuck with me.

The more I got to know Brad and hung out with him outside of class, the more my other friends gravitated towards him, too. He was always so busy, but he made time for everyone. Perhaps my favorite memory of Brad and me was when we were studying to take the test to become certified in special education. Brad was not only close to finishing his doctorate in education, but also a master's degree to be certified to teach elementary special education. I like tests, so we both thought it would be fun to take the test as a challenge. We went all out. We made flash cards and study groups and exam guides. We met almost every day to see who could list the IDEA categories the fastest.

One day, we were studying at a local coffee shop, and I was scrolling through social media. I saw the famous Oscar Mayer Wienermobile would be in Lafayette. I immediately got off-task and wanted to go. I expected Brad to say "Linda, we need to study. The test is soon." Instead, we both packed up and went to see the famous vehicle. Brad laughed the entire time. He was fascinated by the van, the job, the perks. It's one of the times I think of when I miss him, and I hope you can remember him this way, too.

Dr. Linda Fairchild, University of Louisiana at Lafayette

Marquia's Reflection

Music is the aspect of life that can bring two totally different people together, regardless of their cultural background, race, or gender. It is something that can be used as a conversation starter or a relationship builder. For us, it was both. Besides education, music was the thing that Brad and I shared. I already thought Brad was a pretty cool dude. Once we started discussing music, and he told me that he was a DJ, I knew we would be friends! I recall talking about some of my favorite rap artists and old school songs. Guess what? Brad knew each one. We would discuss all genres, no matter the artist. We found that to be our common theme. Yes, education was our thing, also. Music… music was our vibe! I like to believe he was pretty fond of me, also. We had plenty of inside jokes. He just reminded me of one of the guys I grew up with. I smile as I think about the memories we shared, including him bringing a plate of fried fish to the lunch table one day. As I smile, I also continue to grieve.

The day that I heard about the accident was actually the day before my final dissertation defense. I did not tell him about it because I wanted to surprise him the next morning at work, as we were both Graduate Assistants. When I defended the other parts, he said, "I didn't expect anything less form you." The night of his death, I started

getting texts from classmates asking if I was ok. I didn't understand why they kept asking that. Then, I heard the news. It hit me. I didn't know if I wanted to just sit and cry or continue practicing. He just e-mailed us earlier that day. I had to think about Brad! It's like he whispered in my ear: "Kia, you already know what to do! Don't let me down." I kept pushing! The next day I successfully defended my dissertation. I cried at the end, not just because I was done and this was a huge accomplishment, but also because I was finally able to release the emotions that were bottled inside from the day before. Brad even placed a new friend in my life, Linda. Our first encounter was a hug the morning after his death, the morning of my dissertation. I did not know her, she did not know me. I did know that she needed a hug as she stood in tears. To this day, she is still in my life.

It was hard to face reality. Honestly, it didn't hit me until I walked into our area and his cubicle only consisted of his thinking and planning boards. It didn't hit me until I couldn't call out his name from around the corner, making jokes about small things. It didn't hit me until I was viewing him the day of his funeral. I cried, but I did not want Brad to call me "soft" (lol), so I continued to remember him in the same essence the day before the accident. To this day, he is still my inspiration. As I continue to flourish in my career in higher education, reaching those underrepresented students, I think about his philosophy and so much he would have become. Yet, he lived a life that many people double his age never have and will never see. Brad may not be here physically, but please know that he lives through many of us! He has taught me to live life without any regrets. Take trips. Present at conferences. Start businesses. Research new information. Write articles. Talk to everyone. Above all, just listen to music and let it soothe my soul.

We love you, Brad!

Dr. Marquia Whitehead, University of Louisiana at Lafayette

Revisiting the Unified Theory of Acceptance and the Use of Technology (UTAUT) Model and Scale: An Empirical Evolution of Educational Technology

Brad C. Wedlock, Ed.D.
Mitzi P. Trahan, Ph.D.
The University of Louisiana at Lafayette

Abstract

Over the years, the Unified Theory of Acceptance and Use of Technology (UTAUT) model has been widely adopted for technology research dealing with intention and behavior. More currently, with the advancement of educational technology, the constructs embedded in this model and survey instrument can be easily applied to this setting. The UTAUT draws upon eight previously validated models: the theory of reasoned action; the technology acceptance model; the motivational model; the theory of planned behavior; the theory of planned behavior; the model of PC utilization; innovation diffusion theory; and social cognitive theory. This paper revisits the constructs of the UTAUT model and scale examining its conceptualization and validation. While doing so, users are presented with a historical evolution of technology research that can be used to further examine educational technology.

Introduction

Since its introduction, the Unified Theory of Acceptance and Use of Technology (UTAUT) model has been widely validated and used as a theoretical lens for adoption and diffusion research, looking at user intention and behavior within multiple contexts. Currently, the induction of technological innovations has prompted researchers to concentrate on examining adoption and diffusion factors and rates bringing this area of academia to fruition (Venkatesh, Morris, Davis & Davis, 2003; Williams, Rana & Dwivedi, 2015). Subsequently, the existence of several technology models prompted Venkatesh et al. (2003) to unite multiple theories into one overarching model to explain technology adoption and usage. In the educational arena, these theories and models have been applied to traditional online and distance learning formats. More currently, blended or hybrid learning, along with MOOCs or Massive Open Online Courses delivery systems, have brought new opportunities to empirically examine the effectiveness of technology assisted learning modalities.

The UTAUT model was originally developed through the combination of eight dominant technology theories to form one universally accepted model for the use of technology: the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational Model, the Theory of Planned Behavior (TPB), a combination of the TBP/TAM, the Model of PC Utilization, Innovation of Diffusion Theory (IDT), and Social Cognitive Theory (SCT) (Williams et al., 2015). To develop and test the UTAUT model, Venkatesh, et al. (2003) conducted validation procedures for the combined scale, which resulted in an overall adjusted R^2 of 69%. This validation study not only established the relevance of the UTAUT model but its dominance in regard to previous theories. Fast-forward 12 years later, Williams et al. (2015) study found that the UTAUT model is still widely used today especially in the areas of e-government, e-banking, e-learning, and e-commerce. In this paper, e-learning is used broadly as an encompassing term for the use of technology via the internet, computer based learning, on-line learning, or web-based teaching, learning, and training modalities. Practitioners and researchers generally agree that technological advances have been dramatically altering the global landscape of teaching, business, and everyday lives; this paper reviews the historical literature on e-learning which can be used by both practitioner and researchers alike.

Review of the Literature

By combining the previously stated theories, Venkatesh et al. (2003) ultimately identified four direct determinants of acceptance and usage behavior: performance expectancy, effort expectancy, social influence, and facilitating conditions. Used in real world situations, researchers are able to determine an individual's intent to use a specific system, thus identifying the key influences of acceptance (Williams et al., 2015). Each of the eight underlying social and psychological theories that comprise the UTAUT model are examined and discussed in the following literature.

Model of PC Utilization (MPCU)

The dawn of research on information systems (IS) began approximately thirty years ago with Thompson, Higgins, and Howell (1991) proposing one of the first models of computer use. Previously, Davis, Bagozzi, and Warsaw (1989) conceptualized two theories on user acceptance of computer technology and Cooper and Zmud (1990) published research on technology innovation and diffusion. The early beginnings of technology research drew from social psychology theories such as Fishbein and Azjen's (1975) theory of reasoned action. Additionally, Thompson et al. (1991) based their technology research on PC utilization primarily on Triandis' (1971) theory of behavioral intention. While Thompson et al. (1991) modified and refined Triandis' original constructs to fit the context of technology, the foundation of their Model of PC Utilization (MPCU) was grounded on the idea that immediate emotions drive future actions. The final MPCU included social factors, affect, and perceived consequences as predictors of intentions resulting in final behaviors. One final factor, facilitating conditions, was hypothesized to directly influence behavior rather than being mediated by intentions.

In 1991, Thompson et al. further redefined Triandis' (1971) social norms construct into a broader social factor category whereby an individual's prior experiences in social situations determine ultimate behaviors. Four aspects of culture include societal norms, group and systems roles, and internalized values, which strongly influence an individual's decision to behave in a particular way. Thompson et al. (1991) arguably had strong justification for incorporating social factors within the context of technology as prior research regarding the relationship between innovation and adoption had already been tested and established (Davis et al., 1989; Fishbein & Ajzen, 1975).

As conceptualized by Triandis (1971), affect was defined as, "an idea charged with affect, that predisposes class actions to a particular class of social situations" (pg. 2). Perceived consequences influencing behavior mirrors Vroom's (1964) motivational expectations theory; Thompson et al. (1991) extended these ideas and hypothesized that perceived PC complexity, consequences, and job-fit would all impact PC utilization. Finally, Thompson, et al. (1991) included facilitating conditions as another important criterion for PC use. This construct also originates from Triandis (1971) theory that objective environmental factors influence behaviors. The environment surrounding technology behaviors can be seen through training, assistance, and other supportive conditions allowing someone to more easily do their job or overcome difficulties and barriers.

Motivational Model (MM)

A number of studies in psychology support the theory of motivation as an explanation for behavior (Venkatesh et al., 2003). Most motivational models include three constructs: extrinsic and intrinsic motivation and amotivation. Preliminary research found that extrinsic motivation involves behaviors used to achieve goals, avoid consequences, or obtain rewards. In contrast, intrinsic motivation involves self-performed behaviors to experience pleasure and satisfaction from an activity (Deci & Ryan, 1980, 1985). Most technology users that engage in activities that benefit themselves are using extrinsic motivation (Davis, Bagozzi & Warshaw, 1992). The authors continue that individuals who are intrinsically motivated take part in activities that have no apparent reinforcement other than performing the process itself (Davis, Bagozzi & Warshaw, 1992). Individuals who experience amotivation tend to lack purpose in respect to the current activity (Vallerand, 1997). Amotivation further refers to individuals' absence of motivation and lack of intentionality (Deci & Ryan, 1985; Koestner,

Losier, Vallerand & Carducci, 1996). For these reasons we refer to the hierarchical model of intrinsic and extrinsic motivation developed by Vallerand (1997) as it provides a fundamental review of these constructs as they differ in nature.

Vallerand's (1997) hierarchical model of intrinsic and extrinsic motivation provides a fundamental review of these constructs as they differ in nature. From a theoretical perspective, intrinsic and extrinsic motivation are vastly different. Intrinsic motivation rests in the process itself, whereas extrinsic motivation lies within the benefits an individual may obtain through participation (Vallerand, 1997). For example, if we were to ask an intrinsically motivated person to continue working if they won the lottery, more than likely they would continue with their career. From a phenomenological perspective, Vallerand (1997) asserts that intrinsically motivated individuals tend to experience pleasant emotions contrary to the emotions of tenseness and pressure from extrinsic motivation. On the other hand, amotivation, is the lack of intention to engage in a behavior or simply the absence of motivation. Deci and Ryan (1985; 2002) furthered the definition of amotivation to stress that individuals who are amotivated are not able to perceive the relationship between their behavior and that particular behavior outcome. Amotivated behaviors tend to be executed for unknown reasons or not executed at all (Legault, Green-Demers & Pelletier, 2006).

While motivation and amotivation are segmented by their differences, each is also multi-dimensional. Previous social psychologist researchers postulate that there are three types of intrinsic motivation as well as four types of extrinsic motivation. Intrinsic motivation includes: (1) intrinsic motivation to know, (2) intrinsic motivation toward accomplishments and (3) intrinsic motivation to experience stimulation (Vallerand et al., 1989, 1992, 1993). The distinction is useful as it may take the lead in predicting specific activity engagement (Vallerand & Briére, 1990). The four distinct extrinsic motivation categories include: (1) external regulation, (2) introjected regulation, (3) identified regulation and (4) integrated regulation (Vallerand, 1997). Further, Deci and Ryan (1985) suggest that extrinsic motivation varies in terms of self-determination. Finally, drawing upon the work of Deci and Ryan (1985), Skinner (1995), Seligman (1975) and Pelletier and his colleagues (Pelletier, Dion, Trison & Green-Demers, 1997; Stewart, Green-Demers, Pelletier & Tuson, 1995; Tuson & Pelletier, 1992) all suggest there are four types of amotivation: (1) amotivation due to capacity-ability beliefs, (2) amotivation that results from the individual's conviction that the strategy will not bring the desired outcome, (3) amotivation resulting from the belief that the behavior is too demanding and the individual does not want to put forth the necessary effort and (4) helplessness beliefs.

Motivation has long been a major concern of educators and its role in teaching and learning has been widely examined. Motivation, within the context of education, is directly applicable to technology acceptance. As we shift more and more to learning with technology, educators are challenged to find ways to keep students motivated with digital tools. As early as 2000, research is indicating that digital natives, who are already familiar with technology, are responding well to technology-infused activities and tools such as videos, podcasts, and web pages; in the classrooms some have found these strategies are more effective than traditional methods (Granito & Chernobilsky, 2012; Miller, 2009; Prensky, 2001).

Diffusion of Innovations Theory (IDT)

Diffusion of Innovations Theory (DOI) offers the foundational framework for studying the processes of adoption of innovations from agriculture to organizations in a variety of technology applications (Rogers, 1962). Rogers defined *innovations* as ideas, practices, or objects perceived as new by an individual or culture. *Diffusion* is a communication process over time among members of a social system resulting in individual or social change. Specialized interpersonal communication channels are also necessary for diffusion as social systems ultimately decide to modify an innovation to fit their culture. *Adoption* is predicated on the decision of, "full use of an

innovation as the best course of action available" and rejection is the decision "not to adopt an innovation" (Rogers, 1962, p. 177).

Conceptions of diffusion, innovations, and subsequently, adoption were originally grounded in economics, sociology, and communication theories (Yousafazai, 2012). Rogers adapted these theories and proposed a new DOI theory which includes five innovation characteristics: relative advantage (RA), compatibility (CO), complexity (CP), trialability (TR) and observability (OB). RA relates to the belief that an innovation is better than the existing structure and a significant predictor of behavioral intention to use an innovation (Tan & Teo, 2010). Yousafazai (2012) proposes that CO is "consistent and congruent" with one's current social and individual technology understanding, based on experience. As such, the complexity of a new innovation is somewhat mediated leading to increased compatibility. Rogers further proposes that the rate of adoption is influenced by multiple perceptions of relative advantage over a previous technology, compatibility with existing needs, complexity and perceived difficulty of use, and available triability and observability to experiment and see the results of the innovation. A final component offered by the DOI theory is a classification structure of adopters. Innovators tend to rapidly embrace a technology followed closely by early adopters who readily accept change. Alternately, early majority adopters typically need more time, whereas, late majority adopters openly express skepticism but will eventually buy-in to the innovation once the majority has accepted the change. Lastly, individuals more comfortable with the status quo are termed laggards (Rogers, 1962, 2003).

In 1991, Moore and Benbasat adapted and renamed Roger's DOI model to Innovation Diffusion Theory (IDT) to more closely connect to the adoption of information systems and technology. The final constructs of IDT included relative advantage, ease of use, image, visibility, compatibility, visibility, results demonstrability, and voluntariness of use.

Technology Acceptance Model (TAM; TAM2; C-TAM-TPB)

In response widespread growth in technology use by organizations, Davis, Bagozzi, and Warshaw (1989) began questioning why people use or reject technology. Their research goal was to develop a measure of user acceptance to explain, identify, and predict the underlying psychological and social drivers of behavioral intention. The result of their research was a conceptual model grounded in previously established measures of attitudes and subjective norms, and perceived usefulness and ease of use related to technology, the Technology Acceptance Model (TAM). Over subsequent years, Davis, et al. extended their research and proposed the TAM2 and another model combining the original TAM with the theory of Planned Behavior (C-TAM/TPB).

As organizations introduced new end-user computing tools into the work environment, they naturally saw an unwillingness of their employees to immediately embrace these innovations. Even with the hope of improved productivity and capacity to make informed business decisions with potentially powerful information systems (IS), the success of technology could not come to fruition if designers did not overcome the associated technical barriers (Alavie, 1984; Gould & Lewis, 1985).

Simultaneous to the growth of technology hardware and software, several researchers began studying the influence of personal attitudes and internalized social beliefs influencing on behavioral intentions, acceptance, and use of IS (Alavi, 1984; Benbasat, Dexter, & Todd, 1986). However, some researchers felt that original measures were not always grounded in sound theoretical underpinnings which generally resulted in mixed findings. Davis, et al. (1989) started their research by looking into various behavioral theories such as Fishbein and Ajzen's (1975) theory of reasoned action (TRA) and later, the theory of planned behavior (TPB) by Ajzen (1985) to support their technology acceptance model. The TRA constructs were already widely accepted as an evidence-based model for understanding human behavior; that is, individual behavioral intention (BI) is determined by subjective norms (SN) attitude (A). Davis, et al. modified the TRA by adapting the constructs to

be computer specific and proposed that computer usage behavior is predicated on perceived usefulness and ease of use, user attitudes toward technology, intentions, and eventual adoption behavior.

In 2000, Venkatesh and Davis extended the original TAM instrument and model by including multiple sub-constructs of Perceived Usefulness (PU). In addition, these authors hypothesized that experience and voluntariness would also impact the Intention to Use construct. Theoretically, the TAM continued to measure both cognitive processes and social influences of usefulness and usage intentions (UI). Social influences such as norms, image, and voluntariness were now thought to directly correlate with PU; subjective norms also directly influenced Intention rather than only through PU. The underlying cognitive instrumental processes were extended to include job relevance, output quality, and result demonstrability. The final model constructs explained approximately 40%-60% of the variance in PU and 34%-52% of variance in UI (Venkatesh & Davis, 2000).

Another modification of the TAM occurred as Taylor and Todd (1995) posited that the expectancy-value approach and behavioral control constructs of the theory of planned behavior (TPB) should be combined with the TAM. The findings of this study resulted in the belief that the combined model, C-TAM-TPB, more fully explained behavioral intentions. Weighted average structural equation methods were conducted to test the hypothesized paths and model fit as well as R2 indices for explanatory significance between the scale items. Overall, Taylor and Todd (1995) believe that the benefit of incorporating TPB variables toward the understanding of behavioral intentions outweighs the negative complexity aspects of the combined model.

Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA) has been one of the foundational theories used in predicting individual behavior and/or intentions (Madden, Ellen & Ajzen, 1992). As one of the most fundamental theories in social psychology, Madden, et al. postulate that behavioral intention is predicated on the probability that performing the behavior will lead to a precise outcome (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). Fishbein and Ajzen (1975) propose that behavior is divided further into two distinctive sets: behavioral and normative. Attitude toward behavior is defined as "an individual's positive or negative feelings (evaluative affect) about performing the target behavior" (Ajzen & Fishbein, 1975, p. 216). Subjective norm is defined as "the person's perception that most people who are important to him think he should or should not perform the behavior in question" (Ajzen & Fishbein, 1975, p. 302). Madden, et al. (1992) assert that the behavioral beliefs are the primary influence on the attitude towards executing the behavior, while normative beliefs guide an individual's subjective norm about executing the behavior. Consequently, information affects intentions while behavior is influenced by suggestive norms. In addition, Fishbein and Ajzen (1975) note there are three conditions that affect the relational magnitude between behavior and intentions: (1) the degree to which the measure of intention and behavior correspond with their levels of specificity, (2) stability of intentions between time measurement and behavior performance and (3) the individual's volitional control of carrying out the intention.

Years after the development of TRA, Sheppard, Hartwick and Warshaw (1988) conducted a meta-analysis and concluded that the TRA model could be used to accurately predict behavioral intentions as well as identifying behavior-changing strategies. TRA was originally founded on the assumption that behaviors were under full volitional control, however, after Sheppard's, et al. findings, Ajzen (1985) proposed an extension to TRA to include perceived behavioral control as a forerunner to behavioral intentions. With this extension, researchers could now account for individuals who lacked full volitional control over their behaviors.

Theory of Planned Behavior (TPB)

The theory of planned behavior (TPB) was developed in 1985 by Icek Ajzen as an extension of TRA by adding perceived behavioral control. In TPB, perceived behavioral control is theorized to be a determinant of behavior and intention (Venkatesh et al., 2003). To predict behavior performance TPB uses the factor of intention (I). Mathieson (1991) explained that intention is predicted by three factors: attitude toward the behavior (A),

subjective norms (SN) and perceived behavioral control (PBC). The conceptual definitions of attitude toward behavior and subjective norms for TPB were adopted from TRA, but with the addition of perceived behavioral control. Ajzen (1991) defines perceived behavioral control as "the perceived ease or difficulty of performing the behavior" (p. 188). The origin of TPB was developed as an extension of theory of reasoned action (TRA) (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) as the original TRA model did not account for behaviors for which individuals did not have complete control (Ajzen, 1991). To predict these nonvolitional behaviors, the TPB incorporated perceptions of control over behavior performance as an additional predictor (Ajzen, 1988, 1991). These perceptions of control considerations are important as they extend the theory's applicability from volitional behaviors to multifaceted goals and outcomes that are contingent upon other intricate behaviors (Conner & Armitage, 1998).

In the beginning of the TPB there were very few empirical tests of its effectiveness. To ensure the theory's applicability, Schifter and Ajzen (1985) successfully applied TPB to weight loss behavior. Later, the TPB was tested again to predict students' decisions on class attendance and earning good grades (Ajzen & Madden, 1986). There have been more empirical tests of the TRA model, being that the TPB model is based on it. The key difference between the models is that TRA does not consider perceived behavioral control (Mathieson, 1991). The TRA model predicts behavior strictly from attitudes and subjective norms and is predictive in situations where there are no barriers to behavioral performance (Fishbein & Ajzen, 1975). Sheppard, Hartwick and Warshaw (1988) conducted a meta-analysis of 87 studies and established that there was "strong support for the overall predictive utility of the Fishbein and Ajzen [TRA] model" (p. 336).

Social Cognitive Theory (SCT)

Social cognitive theory is based on a model of emergent interactive agency signifying that humans make their own contributions to their own behaviors and motivation through a system of triadic reciprocal causation (Bandura, 1989). Bandura continues in that the reciprocal causation system, both cognitive and affective factors, along with other personal factors and environmental events, operate as interacting elements. Therefore, any determinants of human action must include self-generated influences including beliefs of self-efficacy (Bandura, 1989). Self-efficacy beliefs normally contribute to cognitive functioning through the influence of motivation and information processing. In turn, Bandura (1989) asserts that people's belief in their own self-efficacy determines their level of motivation. The stronger a person believes in their own capacity will determine how persistent they are in their efforts (Bandura, 1988).

In social cognitive theory, human behavior is motivated and regulated by self-influence and other self-regulative factors (Bandura, 1991). These factors include self-monitoring of one's behavior, judgment of behavior and self-reaction. Together, these self-regulatory systems rest at the core of causal processes and thus provide the basis for purposeful action (Bandura, 1991). Individuals possess various capabilities, some of which are self-reflective and self-reactive, which in turn exercise control over thoughts, feelings, motivation and actions (Bandura, 1991). As individuals grow and observe other standards of behaviors, these actions are then regulated and modified through the self-reactive process. Bandura (1991) supports this assumption in that "human functioning is, therefore, regulated by an interplay of self-generated and external sources of influence" (p. 249). The structure of self-regulation is carried out through psychological sub functions that must be developed over a period of time. However, Bandura and Simon (1977) contested that intention and desire have little effect if people do not have the capability to influence their own behavior and motivation.

Social cognitive theory is composed of various constructs such as outcome expectations-performance, outcome expectations-personal, self-efficacy, affect and anxiety. Compeau and Huggins (1995) define outcome expectations-performance as the consequences of the behavior, specifically the expectations that deal with the outcomes related to jobs. The authors continue in that outcome expectations-personal are also consequences of

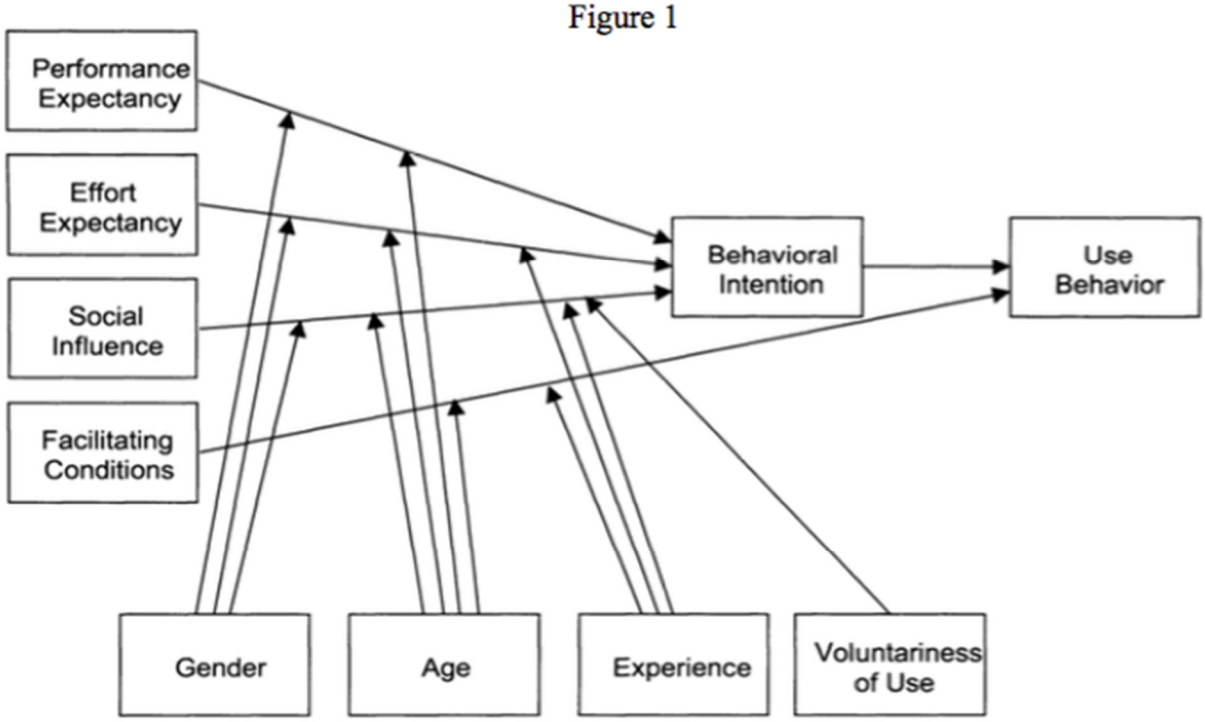
behaviors but relate to personal senses of accomplishment and self-esteem. For the construct of self-efficacy, Venkatesh et al. (2003) defined it as the "judgment of one's ability to use a technology (e.g. computer) to accomplish a particular job or task" (p. 432). The authors continue in defining the last two constructs; affect, "an individual's liking for a particular behavior" and anxiety as "evoking anxious or emotional reactions when it comes to performing a behavior (e.g., using a computer)" (p. 432).

Empirical Validation and Conceptualization of the UTAUT

The final UTAUT model (Figure 1) and measurement scale consists of four major predictor constructs of behavioral intention (BI) and, ultimately, use behavior (UB): (1) performance expectancy; (2) effort expectancy; (3) social influence; and (4) facilitating conditions. The construct, behavioral intention, has been used as both a dependent variable of the first three constructs and as an independent variable predicting use behavior. Use behavior, as conceptualized in the UTAUT model, is influenced by behavioral intention and only one of the four major constructs, facilitating conditions.

Methodology: Validation of the UTAUT. In order to validate the combined theoretical scales and create the final UTAUT scale, Venkatesh, et al. (2003) began by creating an instrument comprised of previously validated items. Original items from the following scales were adapted as needed during the process: TAM/C-TAM, TPB/DTPB; MPCU; IDT, MM, and SCT as well as constructs of BI, perceived voluntariness; the variable, usage behavior was a measure of frequency. The program PLS Graph: Partial Least Squares Structural Equation Modeling (PLS/SEM) was used to validate and assess the UTAUT's reliability. Specific indices included lower loading limits of .70; internal consistency values greater than .70; and communalities. Several iterations of PLS were run including three separate time intervals, controlling for voluntariness, and a series of tests including moderators of gender, age, and experience. Venkatesh, et al. (2003) initially examined the direct predictive relationships of seven independent variables to behavioral intention (BI) rather than intercorrelations between the constructs (Venkatesh, et al. 2003). Constructs representing computer self-efficacy, computer anxiety, and attitude toward technology were at first included in the model but later removed as insignificant predictors of behavioral intention. Lastly, use behavior as a dependent variable was examined based on its relationship to behavioral intention and facilitating conditions. The final results indicated that four constructs were found to directly predict behavioral intention and, subsequently, use behavior. The UTAUT model (Figure 1) identifies the relabeling of the four final constructs of performance expectancy, effort expectancy, social influence, and facilitating conditions as theoretical predictors of BI and UB. The final model, including moderating influences, accounted for 70% of the variance in Use Behavior.

Figure 1



Source: Venkatesh et al.

In addition to these theorized determinants, Venkatesh, et al. (2003) specified four key moderators influencing overall technology acceptance including gender, age, experience, and whether or not the use of the new technology was voluntary. The UTAUT model and scales were created using adapted items from the eight original theories discussed above. Each of the major determinants, along with the originating theories and constructs, will be presented in the following sections. We recommend that researchers fully consider the more complete underlying theories of each construct when conceptualizing future research studies.

Performance Expectancy (PE). Venkatesh et al. (2003) conceptually defined the first independent variable of the model, performance expectancy, as "the degree to which an individual believes that using the system will help him or her to attain gains in job performance" (p. 447). Performance Expectancy was created using items from the following constructs, perceived usefulness from the TAM/TAM2 and C-TAM-TPB; extrinsic motivation from the MM; job-fit (MPCU); relative advantage (IDT), and outcome expectations from the SCT scale. Table 1 shows the conceptual definitions form the original constructs leading to the final conceptual and operational definition of performance expectancy. While Venkatesh, et al. (2003) define PE within the parameters of *expected gains*, expectancy theory is broader and takes into consideration attitudinal dimensions related to perceived consequence, rewards, values, motivation, and likelihood of positive outcomes (Porter & Lawler, 1968; Vroom, 1964).

Table 1: Performance Expectancy

Original Constructs	Original Scale	Conceptual Definition	Source
Perceived Usefulness	TAM/TAM2 C-TAM-TPB	The degree to which a person believes that using a particular system would enhance his or her job performance.	Davis, 1989; Davis et al. 1989
Extrinsic Motivation	MM	The perception that users will want to perform an activity because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself, such as improved job performance, pay, or promotions.	Davis et al. 1992
Job-fit	MPCU	How the capabilities of the system enhance an individual's job performance.	Thompson et al. 1991
Relative Advantage	IDT	The degree to which using innovation is perceived as being better than using its precursor.	Moore & Benbasat, 1991
Outcome Expectations	SCT	Personal expectations related to the consequences of the behavior.	Compeau & Higgins, 1995b; Compeau et al. 1999

Effort Expectancy (EE). Effort Expectancy is conceptually defined as, "the degree of ease associated with the use of a system" and includes the constructs of perceived ease of use (TAM/TAM2), complexity (MPCU), and ease of use (IDT) (Venkatesh, et al. 2003, p. 450).

Table 2: Effort Expectancy

Original Constructs	Original Scale	Conceptual Definition	Source
Perceived Ease of Use	TAM/ TAM2	The degree to which a person believes that using a system would be free of effort	Davis, 1989; Davis et al. 1989
Complexity	MPCU	The degree to which a system is perceived as relatively difficult to understand and use	Thompson et al. 1991
Ease of Use	IDT	The degree to which using an innovation is perceived as being difficult to use	Moore & Benbasat, 1991

Social Influence (SI). Social Influence is comprised of items from the original TRA, TAM2, TPB, and C-TAM-TPB and is conceptually defined as, "the degree to which an individual perceives that important others

believe he or she should use the system" (Venkatesh, et al., 2003, p. 451). SI and subjective norms of a culture including values, behaviors, and group expectations are thought to be internalized over time and have been recognized as strong affective predictors of behaviors (Porter & Lawler, 1968). Venkatesh, et al. (2000) propose further that, "social influence has an impact on individual behavior through 3 mechanisms: compliance, identification, and internalization" (p. 452).

Table 3: Social Influence

Original Constructs	Original Scale	Conceptual Definition	Source
Subjective Norm	TRA; TAM2; TPB/DTPB; C-TAM-TPB	The person's perception that most people who are poor into him think you should or should not perform the behavior in question.	Ajzen, 1991; Davis, et al. 1989; Fishbein & Azjen, 1975; Mathieson, 1991; Taylor & Todd, 1995a, 1995b
Social Factors	MPCU	The individual's internalization of the reference group's specific interpersonal agreements that the individual has made with others, and specific social situations	Thompson et al. 1991
Image	IDT	The degree to which use of that innovation is perceived to enhance one's image or status and one's social system.	Moore & Benbasat, 1991

Facilitating Conditions (FC). Conceptually, the UTAUT construct facilitating conditions for PC use is, "the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system" (Venkatesh, 2003, p., 453). Originating theories regarding environmental conditions speak to organizational support - management, technical, and implementation - assistance designed to alleviate difficulties; positive facilitating conditions enhance the likelihood of use behaviors (Schultz & Slevin, 1975). Thompson et al. (1991) adapted items from Amoroso (1986) regarding facilitating conditions in terms of technology support; the resulting MPCU items were geared toward the availability of specific resource personnel.

Table 4: Facilitating Conditions

Original Constructs	Original Scale	Conceptual Definition	Source
Perceived Behavioral Control	TPB/DTPB, C-TAM-TPB	Reflects perceptions of internal and external constraints on behavior and encompasses us self-efficacy, resources, facilitating conditions, and technology facilitating conditions.	Ajzen, 1991; Taylor & Todd, 1995a, 1995b
Facilitating Conditions	MPCU	Objective factors in the environment that observers agree make an act easy to do,	Thompson et al. 1991

		including the provision of computer support.	
Compatibility	IDT	The degree to which an innovation is perceived as being consistent with existing values, needs, and experiences of potential adopters.	Moore & Benbasat, 1991

Behavioral Intention (Independent and Dependent Variables)

Studies of Behavioral Intention (BI) have their roots in social psychology literature beginning with general determinants of BI and extensions of predictors of BI to use technology. Throughout this paper we have reviewed the theoretical history of human behavior models and instruments that predict BI. We have also explored how BI subsequently directly influences user adoption and acceptance of technology; as such, BI has been studied as both and independent and dependent variable. Findings from each of the studies support the conclusion that BI has important direct and indirect impact on use. Each of the eight original technology acceptance models has also contributed to the development of a unified approach, UTAUT, to understanding and predicting BI and use. As a review, BI is predominantly influenced by perceived usefulness, performance and effort expectancy, social influences and facilitating conditions. Underlying these major constructs are concepts of subjective norms, system complexity, perceptions of value and usefulness, willingness to commit the required effort to engage with the innovation, self-efficacy, and other attitudinal measures.

Discussion

The UTAUT model highlights the importance of contextual analysis and how it helps in the development of organizational technology implementation (Venkatesh et al., 2003). Granted, each original model within UTAUT is able to predict behavior usage, but UTAUT's model provides direct determinants of intention to use (i.e. performance expectancy, effort expectancy, and social influence) as well two direct determinants of usage behavior (i.e. intention and facilitating conditions) (Venkatesh et al., 2003). Together, Venkatesh et al. (2003) found that the model accounted for 69% of the variance in usage intention, which was substantially more than any of the original eight models could have done alone. We assert that a holistic view of individual perceptions about technology only emerge if the complex range of possible moderators is considered and examined. With the development and validation of UTAUT, it has become the superior model that incorporates multiple aspects of intention and behavior; thus, the model has become the theoretical groundwork for future research in the area of technology acceptance in e-learning.

The UTAUT model captures the evolution of intention and behavior related to technology over time as well as moderating extraneous variables such as race, age, and gender. Previous research also suggests multicollinearity between gender and age; thus, these interactions need further examination (Levy, 1988). Venkatesh et al. (2003) also found that age alone moderates all of the primary relationships in UTAUT, however, attention to the correlation between age and technology acceptance is sparse. These authors also note that future studies exploring the influence of race, age, and gender with these variables should shift its focus to three areas: (1) identifying the "magic number" for age in which effects appear, (2) identification of underlying influential mechanisms, and (3) the importance of gender roles as a root cause for observed effects. Future research should also consider boundary conditions such as user groups, different organizational contexts, or different technologies. Investigations using additional extraneous variables may yield greater insight to technology adoption and usage.

Future research could also focus on the refinement of UTAUT scales and/or construct further validating the model and instrument with new and modified measures.

Without a doubt, computers affect the way that educators and their students teach and learn. In addition, technology is impacting how individuals manage and process vast amounts of available knowledge. The benefits to education have already been remarkable. Still, the expansive growth of educational technology represents significant changes to the traditional ways of communicating knowledge. Most importantly, educational technologies have the potential to meet the increased global demands for accessible education, to provide cost-effective education, and to enhance the quality and effectiveness of teaching and learning (Christensen, Horn, & Johnson, 2011). For instance, internet access has brought a world of information to us with a click of the mouse. Currently, multiple course delivery systems include all-inclusive educational websites, packaged software products, and communication tools, such as Blackboard, that allow students to connect and collaborate with others instantaneously (Cheung & Vogel, 2013; Ismail & Idrus 2010).

Even though the traditional face-to-face learning model continues to dominate education, society appears to have welcomed all things digital both in the classroom and beyond. However, while these innovations appear to offer enormous potential, they have also been met with resistance, frustration, and skepticism. As the use of educational technologies continue, there becomes a parallel need to uncover instructional and curriculum approaches that effectively unite the student with the technology tools. Naturally, it is not sufficient to invest in computers and technological equipment without thoughtful implementation plans and evidence-based empirical research to support learning. Instead, Jonassen (2003) suggests that the most efficient use for technology is when the device itself encourages active engagement in an activity and simultaneously enhances thinking and learning. Educational technology can contribute greatly to student learning. However, educators must be responsive to the increased demand for technology and its implications for teaching and learning. Educators need research that informs and allows them to recognize, acknowledge, and address distinctive instructional needs for student success with computer assisted learning modalities.

When it comes to educational technology, we may know where we are and what we want to achieve. The difficult question is how can we get there? Nationally, there is concern about the prudent use of educational technology. Technology has rapidly, maybe too rapidly, been positioned at all levels of education. The literature on change and diffusion of innovations has prepared the way for educators and scholars to study adoption, in general, and specifically with technology integration (Fullan, 2002; Rogers, 2003). The ultimate goal of any research is to achieve a clearer and more in-depth understanding of how individual perceptions influence the nature of behaviors over time. In regard to educational technology, educators must, first, clearly define the goals of using technology in learning. For instance, questions to ponder could include, is the intent to teach technology skills or content knowledge? Is the ultimate goal of implementing technology systems to infuse technology into current teaching practices? Is the goal to promote student-centered learning, effectiveness and student success?

In conclusion, current research suggests that educational technology programs can be designed to influence students' self-concepts and understanding of the value of technology. Models such as this can be used in various research settings to test the relationships between antecedent and posterior constructs of technology usage, user attitudes, integration intentions, and post adoptive behavior. Survey instruments can be used to augment attitude-based success measures such as user satisfaction. The provision of early feedback and remediation could result in students persisting in a course.

An important direction for future research is to examine acceptance and adoption within academic disciplines and newer online learning environments. Further, education researchers are beginning to layer the idea of social integration as a critical aspect of online learning. Researchers should examine whether certain educational platforms that may be perceived as useful are effective from an organizational perspective. Examples of these platforms could be the use of learning management systems (i.e. Blackboard, Moodle, Canvas, MOOCs).

The importance of this research track is clear as e-learning, online learning, and hybrid/blended learning course delivery in K-12 and higher education institutions has become a global phenomenon.

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Valuing Teachers' Evaluative Thinking: The Role of Teacher Knowledge and Practice in Formative Assessment

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Abstract

On a daily basis, PreK-12 teachers make countless decisions about how to best meet their students' needs through assessment and instruction. However, their ability to justify these decisions is not frequently used as a resource for accountability measures or the evaluation of educational programs. The research presented here, which draws from a sequential explanatory mixed methods study of seven secondary English/language arts teachers' formative assessment practices, delves into how teachers' evaluative thinking occurs in the classroom. Data were collected using the experience sampling method with a series of weekly self-report checklists, as well as semi-structured interviews. Through examining emergent themes from this study and investigating the role of evaluation in education, implications are made for the importance of valuing this process and making this implicit teacher knowledge more explicit.

Keywords: educational evaluation, teacher knowledge, formative assessment

Introduction

In teacher preparation programs, preservice teachers rely upon their cooperating teachers to provide guidance on management, lesson planning, instruction, and assessment. Conversations that allow for open discussion about classroom practices are essential to new teachers' development. Likewise, experienced teachers, whether acting formally as instructional coaches or more informally as peer feedback providers, often participate in reciprocal learning that benefits all involved in their professional growth. While conducting a study with a focus on secondary English/language arts (ELA) teachers' formative assessment practices (Tolley, 2016), I observed that teachers' evaluative thinking emerged as an unanticipated theme. This article draws from that prior research and builds upon the idea of valuing teachers' capacity and skill for evaluative thinking, both through the lens of examining formative assessment in a secondary ELA context and in the field of education as a whole.

Theoretical Framework

The theoretical framework that guided this research was grounded in the fields of evaluation and education, specifically drawing from elements of program evaluation, conceptions of teacher knowledge and practice, and formative assessment in the classroom. Each of these concepts can be fairly broad in scope, especially the term "formative assessment" and how it may be operationalized in practice. By bringing the three areas together to create a unified and specific perspective through which this research could be studied, there was a targeted focus on understanding teachers' evaluative thinking in a secondary ELA context. A brief review of relevant literature from each of these areas is presented below.

Understanding Evaluation

Evaluation is primarily defined as "the process of determining the merit, worth, or value of something, or the product of that process" (Scriven, 1991, p. 139). As a field, evaluation applies to all contexts and subjects,

and has therefore been noted for its "multidisciplinarity." Its focus on the investigation of myriad aspects of what is being evaluated—known as the *evaluand*—differs from the directed hypothesis-testing nature of social science research (Scriven, 1991). One form of evaluation, *program evaluation*, is frequently used in education through the collection of data to better understand a program in which teachers, students, administrators, and other stakeholders are involved, as well as products and processes involved in the program, and how well it serves its intended audience. The terms "formative evaluation" and "summative evaluation" were introduced by Scriven (1967) to describe two different evaluation types. The former is used to describe an evaluation that occurs during the development or improvement of a program, product, or person, often conducted more than once, with the intent to improve. The latter refers to an evaluation conducted after completion of the program for the benefit of an external audience or decision-maker (Scriven, 1991). Both of these terms have been adapted into education through the terms *formative assessment* and *summative assessment*. Formative assessments are meant to guide and improve student learning as well as teachers' instructional practice, while summative assessments are used for reporting purposes (Black, 2013; Bonner, 2013).

The importance of context. In the evaluation of educational programs, the context in which a program is being implemented greatly impacts its outcomes (Tolley, 2011). For example, there may be contextual variance at the administrative level, which may include perceived pressure to meet external accountability measures (e.g., Black & Wiliam, 2005; Nelson & Eddy, 2008); at the school level, in terms of professional development and collaboration time allotted to staff (e.g., Frey & Fisher, 2009; Nelson & Eddy, 2008; Wiliam, 2006); at the classroom level, which may include pedagogical differences and teacher fidelity of implementation to a program (e.g., Crossouard, 2011; Yin et al., 2008); and at the student level, such as demographics and individual achievement (e.g., Crossouard, 2011; Frey & Fisher, 2009; Nelson & Eddy, 2008; Yin et al., 2008). Each of these differences must be accounted for when evaluating a program's merit, especially those that occur within a classroom.

Evaluative thinking. In their classrooms, teachers analyze and use the results of their informal and formal assessment data to guide instructional decision making, and these choices are a form of evaluative thinking (Nelson & Eddy, 2008). Evaluative thinking in the past has been defined as "essentially critical thinking applied to contexts of evaluation" (Buckley, 2015, as cited in Patton, 2018, p. 12), but it has more recently been argued that critical thinking is one of many components of this concept. These diverse aspects include the ongoing evaluation associated with Freirean pedagogy; the strengthening of democracy as education, a concept supported by Dewey and other thought leaders; the skills and abilities associated with higher-order thinking in Bloom's *Taxonomy of Educational Objectives*; and its use in the field of evaluation as a whole through logic, argument, and rigorous thinking (Patton, 2018). The principles of evaluative thinking, which include the need to be clear, intentional, accountable, specific, and systematic; to focus and prioritize, and make assumptions and criteria and standards for judgment explicit; use data-based statements of fact and limit generalizations and causal explanations to what data support in order to draw appropriate conclusions; and the need for cultural sensitivity and cultural competence (Patton, 2018) can all quite easily be connected to what are considered to be effective best practices in teaching.

Conceptions of Teacher Knowledge and Practice

When considering teachers' classroom practices, it is imperative to take their knowledge into account. Teachers' decision making is often an implicit process, and capturing and making this knowledge explicit would allow teachers to learn from their peers and share their ideas with others, including preservice teachers that are being mentored by them.

What does teacher knowledge entail? According to Shulman (1987), teacher knowledge, at a minimum, includes: (a) content knowledge; (b) general pedagogical knowledge, including classroom management and

organization; (c) curriculum knowledge; (d) pedagogical content knowledge; (e) knowledge of learners and their characteristics; (f) knowledge of educational contexts, from classroom through culture; and (g) knowledge of educational purposes and values and their philosophical and historical grounds. Of particular note is pedagogical content knowledge, "that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding" (p. 8). Shulman asserted that teachers' knowledge is developed from at least four major sources, which he identified as scholarship in content areas, the materials and structure of teaching, ongoing research in the field, and the wisdom that comes from conducting the practice itself.

How do we learn from this knowledge? Expert teachers, or those with strong practical knowledge, have a certain set of features that is similar to experts in other fields. In part, these features include excelling within particular contexts, being more opportunistic and flexible in their teaching than novices, and perceiving more meaningful patterns in the domain in which they are experienced (Berliner, 2001). Although the time for the development of expertise may vary, "a reasonable estimate for expertise to develop in teaching, if it ever does, appears to be 5 or more years" (p. 479). When studying teacher practice, written questionnaires may reveal relevant data, but more in-depth information can be gleaned from teachers in narrative form, such as through interviews where teachers reflect on their practice (e.g., Clemente & Ramírez, 2008; McMillan, 2003) to learn about their decision-making processes.

Formative Assessment in the Classroom

Formative assessment (FA) is a term "encompassing all those activities undertaken by teachers, and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged" (Black & Wiliam, 1998, pp. 7-8). Four major components of FA have emerged from studies of the effectiveness of this concept. The first component is questioning students appropriately in ways that engage their thinking strategies, allow for response time, and act as a means of gathering evidence to inform instruction (e.g., Black, Harrison, Lee, Marshall, & Wiliam, 2003; Shermis & Di Vesta, 2011). The second component, feedback, whether from teachers to students, students to peers, or students to themselves in the form of self-regulation, is another important piece of effective FA (e.g., Black et al., 2003; Heritage, 2010; McManus, 2008; Popham, 2008; Sadler, 1989; Shermis & Di Vesta, 2011). The third and fourth components both address assessment materials: the construction of effective assessments and the analysis and use of assessment data to drive instructional decision making (e.g., Birenbaum, Kimron, Shilton, & Shahaf-Barzilay, 2009; Griffin, 2009; Nelson & Eddy, 2008; Phelan, Choi, Vendlinski, Baker, & Herman, 2011; Yin et al., 2008).

In an attempt to operationalize the complex construct of FA within education, I conducted a literature review of 25 different studies on professional development for teachers in grades K-12. Although definitions and implementations of FA varied, common elements included: (a) teachers setting and making explicit clear learning goals, (b) the use of questioning and feedback from teachers and students, (c) data collection, analysis, and use; (d) teacher revision/modification of instruction, (e) the development of student academic autonomy, and (f) evaluation to determine if a gap between the learning goals and current student performance exists (Tolley, 2012). Like evaluation practice, FA implementation in the classroom varies based on the context in which it takes place.

For FA in a secondary English/language arts (ELA) context, there are anecdotal reports of practices that teachers use with their students, but a lack of empirical data about FA implementation. In part, this is due to assessment within ELA being more individualized, organic in nature (Marshall, 2007), and in-the-moment, without as many pre-planned responses and feedback opportunities when compared to more structured, sequential content areas such as math and science (McMillan, 2010). A stronger base of empirical data—and the reasoning behind them—would help future educational research and evaluation endeavors to be grounded in what actually occurs at the classroom level.

Bringing together Program Evaluation, Teacher Knowledge, and Formative Assessment

By uniting the three concepts of program evaluation, teacher knowledge, and formative assessment for this study, a unique lens was used to view this research in a way that was context- and content-specific. This particular approach was focused on what secondary ELA teachers use in practice in constructs that are otherwise fairly nebulous and challenging to clearly define, with an aim of contributing to empirical research in these areas.

Methods

The study from which this research emerged used a sequential explanatory mixed methods design (Creswell & Plano Clark, 2011; Ivankova, Creswell, & Stick, 2006), with the qualitative phase built upon the quantitative phase to help to explain the findings (Ivankova et al., 2006). The larger study addressed the following four research questions:

1. What assessment practices do secondary ELA teachers use?
2. How do secondary ELA teachers determine what assessment practices to use and when to use them?
3. What are secondary ELA teachers' perceptions of the effectiveness of the assessment practices that they use?
4. How do secondary ELA teachers determine the effectiveness of their assessment practices?

For this study into teachers' evaluative thinking, an additional research question was addressed by examining the findings from questions 2 and 4, above:

5. How does secondary ELA teachers' discussion of their assessment practices show evidence of evaluative thinking?

Participants

Study participants were ELA Instructors in a long-standing concurrent enrollment program that partners secondary schools with a private university in the northeastern United States. The Instructors are teachers in the schools that are trained by the program, and high school students can earn college credits through successful completion of program coursework. To be an Instructor in this program, teachers must have applied for and hold specific credentials, including at least a master's degree, and participate in both initial and ongoing training and professional development.

Instrumentation

There were three instruments that were all created for the purposes of the initial research: (a) a background questionnaire, (b) the English/Language Arts Teachers' Experiences (ELATE) checklist, and (c) a semi-structured interview protocol. More information about each of these instruments is presented below.

Background questionnaire. The eight-item background questionnaire asked for participants' gender and years of teaching experience as of Spring 2015, both generally and in the concurrent enrollment program, and their teaching load at the time of this study (2014-2015) in terms of students and sections/courses taught.

English/Language Arts Teachers' Experiences (ELATE) checklist. The ELATE checklist contained 25 items (see Appendix A)—a list of assessment practices related to questioning, discussion, and feedback—as well as space for Instructors to indicate other assessment practices that they used which were not included in the list. Participants were asked to complete one checklist per week, documenting their assessment practices from Friday through Thursday, for four weeks. These days were chosen instead of Monday through Friday so as to not overburden teachers at the end of the work week. This administration of weekly checklists was an experience sampling method (e.g., Hektner, Schmidt, & Csikszentmihalyi, 2007; Zirkel, Garcia, & Murphy, 2015), which allows for an understanding of individuals' experiences in context as they unfold.

Instructors were asked to indicate how many times over the past week they used each practice with their concurrent enrollment program students. For the practices that they used, the Instructors were asked to rate their perceived effectiveness of that practice to improve student learning with their lower-performing, average-performing, and higher-performing program students using a 6-point Likert-type scale (0 = *extremely ineffective*, 1 = *very ineffective*, 2 = *moderately ineffective*, 3 = *moderately effective*, 4 = *very effective*, and 5 = *extremely effective*). The checklist items were based on the previously-mentioned literature review of studies of professional development on FA (Tolley, 2012); Danielson's *Framework for Teaching* (2007, 2014), particularly the "using questioning and discussion techniques" and "using assessment in instruction" components of the instruction domain; the questioning techniques section of the SAIP Writing Assessment III Teacher Questionnaire (Hunter, Mayenga, & Gambell, 2006); and an earlier fieldwork study that had been conducted with this concurrent enrollment program.

Semi-structured interview protocol. An individual semi-structured interview (e.g., Rubin & Rubin, 2005) was conducted with participants after their completion of the weekly checklists. The interview protocol was finalized after the background questionnaire and ELATE checklists data (i.e., the quantitative data) were analyzed, and was created to include individualized questions specific to each Instructor (i.e., the qualitative stage of the study). The participant-specific questions added to the general protocol were intended to check the validity of ELATE checklist responses and request clarification of why certain assessment practices were used (or not) or deemed effective (or ineffective). In addition, questions were asked of participants to help them reflect on their perceptions of assessment in their teaching after having completed the series of ELATE checklists and thinking about their own practices.

Data Analysis

Data from the quantitative phase of this study (background questionnaires and ELATE checklists) were entered into Microsoft Excel and IBM SPSS Statistics, v. 22. Descriptive statistics (e.g., frequencies, means, and standard deviations) were calculated, as were chi-square tests, adjusted one-way repeated measures analysis of variance (ANOVA) with post hoc analysis, and Pearson correlations for the ELATE checklist items (Leech, Barrett, & Morgan, 2011; Morgan, Leech, Gloeckner, & Barrett, 2013; Sprinthall, 2007). Participants' responses to open-ended items of this phase were reviewed and coded for emergent themes.

For the qualitative phase of the study, all interviews were audio recorded with the participants' permission, and were transcribed verbatim into Microsoft Word format with the aid of Dragon NaturallySpeaking, v. 13. Once transcribed, the qualitative data were reviewed and coded for emergent themes (Creswell, 2008; Stake, 2010) using constant comparative analysis (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009; Strauss & Corbin, 1998).

Findings

Participants and Their Contexts

The seven Instructors in this study were all teaching the same semester-long college-level writing course in Spring 2015, and their characteristics are presented in Table 1. Of the seven teacher participants, six were female and one was male. Their total years of teaching experience ranged from 10 to 27 years (M = 18.14, SD = 6.23), with between 3 and 15 years (M = 8.14, SD = 3.77) of teaching in the concurrent enrollment program.

Although all participants were teachers in the same state in the northeastern United States, the context of their different schools varied. Table 2 presents the characteristics of the teachers' schools at the time of the study.

Table 1
Characteristics of Teachers, Spring 2015

Teacher	Gender	Total Years Teaching	Years Teaching in Program
1. Mia	Female	17	7
2. Helen	Female	27	15
3. Allison	Female	25	10
4. Charlotte	Female	20	6
5. Rachel	Female	15	3
6. Krystal	Female	13	9
7. Tony	Male	10	7

Table 2
Characteristics of Teachers' Schools

Teacher	School Locale	Grade Levels of School	Total Students in School	Enrollment by Gender		Students Eligible for Free/Reduced-price Lunch (% of Total)
				Male	Female	
1. Mia	Suburb: Large	9-12	1,659	858	801	124 (7.47)
2. Helen	Suburb: Large	9-12	2,186	1,149	1,037	54 (2.47)
3. Allison	Rural: Fringe	9-12	1,526	763	763	125 (8.19)
4. Charlotte	Suburb: Large	9-12	1,029	542	487	152 (14.77)
5. Rachel	Rural: Fringe	7-12	716	377	339	272 (37.99)
6. Krystal	Suburb: Large	9-12	2,263	1,163	1,100	575[a] (25.41)
7. Tony	Suburb: Large	9-12	1,600	788	812	99 (6.19)

Note. Data from CCD Public school data, 2013-2014 school year (National Center for Education Statistics, 2016).
[a] Data are from 2012-2013 school year, as 2013-2014 data did not meet NCES quality standards.

All of the students who were in the concurrent enrollment program ELA course taught by the study participants were in 12th grade. The prerequisites for the students to be in this course varied by school. For example, Mia, Helen, and Allison noted that there were prerequisite courses, and that the students that enrolled in the concurrent enrollment program ELA course typically took honors or Advanced Placement courses. Charlotte, however, stated that her school had an open enrollment policy, so any student that was interested in taking the concurrent enrollment program ELA course was permitted to do so.

Of the seven participants, all of them completed the series of ELATE checklists. However, Tony elected not to participate in the semi-structured interview.

Factors Impacting Teachers' Selection of Assessment Practices

The data from the ELATE checklists and semi-structured interviews indicated that there were four major emergent themes that affected teachers' selection of assessment practices to use with their students (Research Question 2). These were (a) the purpose of assessment, (b) the intertwining roles of assessment and instruction, (c) the teachers' own knowledge and experience, and (d) the classroom context as factors that influenced their decision making.

The purpose of the assessment. Teachers considered the end goals and objectives for their use of assessment practices. In interviews, several of the participants described the need to meet their students' needs, especially for improving student learning, or how they gauged student understanding within the classroom. Meeting short-term teaching goals for students and fairness in student evaluations were other factors that emerged.

Helen, one of the participants, defined assessment as "an honest attempt to evaluate how much learning has gone on." She also remarked that assessment "should never be hard and fast, it should never be definitive for the sake of being definitive" (interview dated June 26, 2015).

Assessment and instruction. Another major theme that emerged in the discussion of participants' selection of their assessment practices was the connection of the practice to instruction. Teachers reported using the information that they learned from their assessments to guide what they did with their students. In addition, they made distinctions between informal classroom assessments and higher-stakes assessments, such as those required by the state.

For example, Allison shared that "I use assessment in different ways. One is *diagnostic*, and, um, the other is *evaluative*, I guess, to determine how — how did they perform in this particular class" (interview dated July 1, 2015). She further explained how she used assessment in her instruction:

> a lot of assessment, you *don't* give a grade on, so, it may be — like, in discussion in class, you will realize that they haven't got a concept that you want them to get, or they didn't really understand a text that you read together. So, that maybe, is diagnostic [chuckles] in terms of even *my* teaching practices, so maybe I have to go back and spend more time making sure they get it. (interview dated July 1, 2015)

Teachers' own knowledge and experience. Teachers drew upon their knowledge as educators to make assessment decisions. At the time that this study was conducted, all of the teacher participants had been educators for at least 10 years and had been concurrent enrollment program Instructors for at least three years. Of these participants, Helen had the most teaching experience, having taught for 27 years overall, including 15 years as a program Instructor. In our interview, she discussed the kind of thinking about her students that has emerged from her experiences:

> I think all teachers probably, even before the first paper comes in you, you — you're figuring, you know, based on classroom performance and discussion and all that, you're kind of getting an idea of who's going to, you know — who's, who's going to be the better writers, who's going to have more to say, and all of that sort of thing. Um, I think…I think you just do a lot of, um, evaluating — I think you're evaluating all of the time. (interview dated June 26, 2015)

The other teachers expressed similar sentiments, especially when discussing student performance levels in their concurrent enrollment program ELA classes. Charlotte explained how her reflection on her practice and her teaching experience impacted how she thought about assessment:

> There are some things in the moment; after teaching long enough, you can usually figure out, 'If that's not working, what else can I do right now,' um, 'to try to achieve that?' And again, sometimes it's assessing how well my goal is met versus how well they are understanding or grasping something. There's a — I think a, a lot of multitasking happening with assessment: it's both, um, self-assessment, but also assessment of students. (interview dated June 29, 2015)

In addition, several of the interviewed teachers remarked that participation in the study made them more aware of their reflective practices, and more conscious of their decision-making processes. For example, when talking about her understanding of "formative assessment," Mia expressed how integral the study of and reflection on assessment was to her identity as a teacher, saying, "it's important to me […] I think it's just the nature of what I do" (interview dated July 17, 2015). Rachel remarked that as she was completing the checklists each week, she thought to herself, "OK, now, I'm cognizant of this, so I'm now sort of watching […] how many times [I'm] doing this, and what does this mean" (interview dated June 25, 2015).

The classroom context. During our interview, Helen said the following about the complex environment of education: "assessment never stands…you know, it's not like a scientific principle. It, it never stands outside of context" (interview dated June 26, 2015). The context of a classroom and its impact on how study participants chose which assessment practices to use was a fourth major emergent theme, and included the following minor themes: (a) how teachers established expectations for their students, (b) the rapport and collegiality that existed between individuals, (c) the interactions that occurred between students and their peers, and (d) the different types of student learners that were present in the classroom.

Here, too, knowledge of students and their abilities and preferences played a role in the teachers' assessment selections. Krystal discussed how she adjusted her assessment practices to meet her individual students' needs, and stated that for some of her learners, "I know they get it, and I know they can demonstrate things better orally" than in writing; at the same time, she had other students who "don't like to give me things in writing" and who might be better served by "at least check-in in terms of discussion." She explained that she learned the best methods for assessing students' learning progress based on her experiences with each person, saying, "I usually kind of start with the same approach at assessment, and then as I go throughout the courses, I get to know them better, and then I can kind of make adjustments as I need to" (interview dated July 9, 2015).

Factors Impacting Teachers' Perceptions of Effectiveness of Assessment Practices

There were four major themes that emerged from the data in the larger study about factors affecting teachers' perceptions of the effectiveness of assessment practices (Research Question 4). Three of these were students' understanding of content, student performance levels, and the potential benefits of the assessment practice to the students. Most relevant to the current research, however, is a fourth major emergent theme: teachers' knowledge of students. This particular theme is explained in more detail below in terms of (a) familiarity with individual students, and (b) ability to address students' needs through assessment and instruction.

Familiarity with individual students. All of the interviewed study participants discussed their knowledge of their concurrent enrollment program students and their backgrounds; this knowledge tended to be even deeper if the teacher had previously taught a particular student. For instance, Charlotte had many of her program students in her ELA courses the year before. She said of this, "I came in [to the program's ELA course], you know, with pre-existing relationships and already knowing something about a lot of them, not all of them, but a lot of them and their writing" (interview dated July 9, 2015).

Another example is Krystal, who when asked how she makes decisions about which assessment practices to use for her students, replied, "I kind of get a sense [of what each student's needs are] — and I'm, again, I'm reasonably lucky in [the program] that I've had many of them before" (interview dated July 9, 2015). Her familiarity with these students also permitted her to tailor her assessment practices to best suit them as learners.

Ability to address students' needs through assessment and instruction. Interviewed participants also indicated that they used their knowledge of individual students in both assessment and instruction. Helen remarked that "assessment, I think in the beginning, is — as much your, your gut instinct as to who you're talking to. You know, who your learners are […] So I think assessment is — it's never one-size-fits-all" (interview dated June 26, 2015).

In a similar vein, Krystal commented that "assessment's main function is, you know, kind of in that individual level of each kid, how well they're understanding, but more holistically." She further explained that

> If I have a lot of students in a given class who aren't getting a particular concept, well then, that's telling me that perhaps that's a concept I need to revisit, that something went wrong in my delivery, um, or in my setup, or in my scaffolding, you know, whatever it is, and that's something I need to revisit. (interview dated July 9, 2015)

Evidence of Evaluative Thinking

In addition to the findings above that demonstrated evaluative thinking in how study participants described their selection of assessments and the determination of their efficacy (Research Questions 2 and 4, respectively), more evidence of teachers' evaluative thinking (Research Question 5) emerged from the interviews through two other themes: (a) evaluative thinking that informed instruction, and (b) evaluative thinking internally and externally.

Evaluative thinking that informed instruction. Rachel described her approach to assessment as changing as she became more experienced as a teacher:

> early on, I think really for me […] assessments […] were more shaped for data collection, [and now] I, you know, *think* about them, I see them as a *resource.* I see them as a *guide*, I see them as very *useful* tools — not that they weren't useful before, but it's in *how* I look at what I'm getting from kids that causes me to change what I do. (interview dated June 25, 2015)

Rachel went on to add:

> I think in this whole data-driven society, it's more — […] we're looking at the numbers, we're looking at the numbers, but we kind of need to step away from that, and just say, 'OK, now — *what's* relevant, and how — *how* may I use this to assist students? How may I use this to help *me* as instructor?' […] I had to step away from 'This is the information that I'm getting,' to, it's not just about that; it's about 'How does the information that I'm getting *translate* to what maybe — you know, what I need to *say* again, what I need to *do* again, what, you know, *evidence*, do I talk to my colleagues about?' (interview dated June 25, 2015)

Mia also described how she used evaluative thinking in her own teaching of her students, stating "what I'm basically looking at is what *have* they learned? What have — what have they absorbed, and now, how can I *add* to that next time?" (interview dated July 17, 2015).

Evaluative thinking internally and externally. Charlotte gave examples of some of the questions that she asked herself as part of the assessment process:

> There are some things in the moment; after teaching long enough, you can usually figure out, 'If that's not working, what else can I do right now to try to achieve that?' And again, sometimes it's assessing how well my goal is *met* versus how well [the students] are understanding or grasping something. There's a —

> I think a, a *lot* of multitasking happening with assessment: it's both, um, self-assessment, but also assessment of students. (interview dated June 29, 2015)

Krystal described her internal evaluative thinking becoming explicit, or external, when working with a student teacher from the university supporting the concurrent enrollment program:

> when you have a student teacher, you are [says next few words slowly for emphasis] thinking out loud, constantly. And I think, in demonstrating the 'how' and the 'why I do what I do,' it really has made me more cognizant of my practice overall, whether I have a student teacher there or not: it makes me think about it more. […] When you have to think out loud, you're — I guess you knew why you were doing a thing, but explaining it to somebody else…? That's a whole different ballgame. (interview dated July 9, 2015)

Discussion

Making Teacher Knowledge Explicit

The teachers in this study, through discussing their FA practices within a secondary ELA context, were able to make their implicit knowledge explicit. Their years of experience as educators, as well as involvement in a program that included training and ongoing professional development, allowed them to develop methods that were well-suited to addressing their students' needs. This focus on students and ways to use assessment to improve their learning relates to Heritage (2013) and her explanation of how classroom teachers develop and use a learning progression for their students to help them learn content-specific knowledge and skills. She wrote that this progression

> is based on [the educator's] experience of teaching children. Their sources for developing the progression are curricula, their views of what is best taught when, and their knowledge of children's learning. In this context, validation involves working together, testing each other's hypotheses against their professional knowledge, making refinements accordingly, trying out the progression to see if their model actually predicts what happens in terms of student learning, and then making further refinements from this experience. A by-product of teacher-developed progressions is an associated deepening of teacher knowledge about learning in a domain, which can have considerable payoff for evidence gathering and use. (p. 189)

Teachers' Evaluative Thinking and Formative Assessment

Helen's comment that "I think you're evaluating all of the time" (interview dated June 26, 2015) seemed to be representative of the interviews with the other participants in this study and their thoughts about assessment. The continuous, reflective, and recursive processes that teachers experience in the classroom through FA practices involve many different of-the-moment decisions, all with an aim to increase student knowledge. As a result, teachers are likely more connected to the field of evaluation than is currently acknowledged. FA involves teachers using evaluative skills and strategies to improve student learning through timely feedback, it is akin to program evaluators offering recommendations for improvement (Ayala & Brandon, 2008). Continued study of FA practices, including teachers' evaluative thinking, questioning, discussion, and feedback, and how they inform teachers' instructional decision making—in ELA and other content areas—can ultimately help to inform educational program evaluation, especially for formative evaluation purposes.

Study Limitations

The primary limitations for this study were the small sample size and the use of self-reported data from teachers. Although there were only seven participants, six of whom participated in the interviews, the larger study was focused on researching a particular population as a means of determining the feasibility of learning about

secondary ELA teachers' assessment practices from expert instructors, rather than the generalizability of the results. The data from this study were self-reported by the participants, which raises concerns about the reliability and validity of the findings. The use of experience sampling methods (Hektner et al., 2007; Zirkel et al., 2015) alleviated some of these concerns, as this approach asks participants about something that just happened and serves to capture events and actions that would be challenging to capture otherwise. In addition, teacher self-reports that are focused (e.g., specified subject matter, class group, and time frame for retrospective reporting) can be used to gather reliable data about their practices (Koziol & Burns, 1986).

Conclusion

Evaluators and researchers that collaborate with teachers to evaluate, study, or even better understand programs can be more proactive in discussing evaluative thinking and FA practices under study, and benefit from the knowledge that teachers already have. Teachers, especially those that are experienced and continually involved in relevant professional opportunities to share and reflect on their practices, are well-suited to explain what may and may not work in a given instructional context. These teachers can more clearly explain the reasoning for selecting assessment practices based on their purpose and connection to instruction that would be contextually appropriate for their students. In addition, experienced teachers' use of their knowledge of their students to judge the effectiveness of assessment practices and their internal and external evaluative thinking processes related to both assessment and instruction would be beneficial to share and discuss with other stakeholders to best suit students' needs. By bringing together teachers, evaluators, and researchers to develop common means of discussing what goes on in the classroom, there will be improved understanding of pedagogy, teacher decision making and the reasoning behind those choices, and fidelity of implementation of programs in the classroom, which all will ultimately lead to improved student learning.

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Appendix A

English/Language Arts Teachers' Experiences (ELATE) Checklist Items

Item #	Item Text
In teaching [the concurrent enrollment course] this week (last Friday through Thursday), I…	
Questioning and Discussion	
1	Asked students questions to determine how well they understood a concept, idea, or strategy.
2	Asked questions of individual students by name.
3	Asked questions of the class as a whole.
4	Asked questions specifically of students I felt were not paying attention.
5	Asked questions of students I thought would be more likely to respond well.
6	Asked questions of reticent students to help improve their participation.
7	Asked questions requiring brief responses (e.g., a word or phrase).
8	Asked questions requiring more elaborated responses (e.g., a few sentences).
9	Asked questions intended to stimulate a general discussion.
10	Used paired or small group (2-4 students) discussion to determine how well students understood a concept, idea, or strategy.
11	Used large group (5 or more students) discussion to determine how well students understood a concept, idea, or strategy.
12	Used whole-class discussion to determine how well students understood a concept, idea, or strategy.
Feedback	
13	Reviewed and gave feedback (oral or written) on students' think/response papers.
14	Reviewed and gave feedback (oral or written) on students' dialogic journals.
15	Reviewed and gave feedback (oral or written) on students' portfolios of their writing.
16	Reviewed and gave feedback (oral or written) on students' ***draft*** versions of a writing assignment.
17	Reviewed and gave feedback (oral or written) on students' ***final*** versions of a writing assignment.
18	Used a rubric or rubrics for ***informal*** feedback to students on their writing.
19	Used a rubric or rubrics for ***formal*** feedback to students on their writing.
20	Gave students ***targeted*** written feedback about their writing, such as comments on certain parts of their assignment.
21	Gave students ***general or holistic*** written feedback about their writing, such as comments at the end of an assignment about how they did overall.
22	Wrote questions when giving feedback to students on their writing to help prompt their thinking and develop their writing skills.
23	Corrected students' spelling, grammar, and other mechanical errors when giving them feedback on their writing.
24	Gave oral feedback to multiple students at once about their writing (e.g., discussing strategies with groups or the entire class).
25	Conferenced with individual students about their writing to give them feedback and to review and discuss their work.

Assessing the Learned Learner When Using A Concept Curriculum in Nursing Education

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Preface

This position paper is intended to examine an assessment dilemma that is problematic to adult teaching in general but particularly problematic for the non-traditional learner wishing to enter the nursing profession. It is the position of this report that such dilemma is particularly problematic for the adult/non-traditional learner who enters the nursing education arena subsequent to post-secondary, collegiate education and particularly graduate/ professional school. Such problems that are going unaddressed by current faculty (1) create unnecessary barriers to entry / progression into the nursing profession; (2) create undue work and burden on nursing faculty and (3) create unnecessary strain on entire nursing programs that can be eliminated with some foresight and re-thinking on the part of nursing faculty.

As we are seeing an increase in mature Americans seeking a second or even third career choice there is much consideration today for the specific and particular learning styles and learning needs of the mature student. Although commonly used, the term "adult learner" can be interpreted so broadly that it can become non-meaningful. Therefore, for the purposes of this report I will refer to the adult learner / non-traditional student as the "Learned Learner." I have crafted the following model and defined the learned learner as the student who:

- Is pursuing nursing as a second or even third career
- Holds a college degree, or graduate/ professional degree
- Fits reasonably into any model of "professional"
- Has worked as a practitioner long enough to be considered "established, competent and self-sufficient" in their work.

In this manner we are able to create a broader inclusion of the nursing student who has not only life experience but also previous academic experience(s) in other areas, possibly not related to the biological or health sciences at all. Also, this report is intended to specifically address the learned learner returning to initial undergraduate study in nursing.

Theoretical Framework

The Theoretical Framework guiding this report speaks to the following questions:

1. Does the more contemporary Concept Curriculum bring to the field of nursing education attributes that the more traditional medical curriculum leaves behind?
2. Does the more contemporary Concept Curriculum pose advantages or disadvantages to the "learned learner"?
3. What does current nursing faculty need to know about the learned learner and the concept curriculum for a successful teaching endeavor?
4. What do we expect to see when the learned learner is being appropriately assessed?

Additionally, the Theoretical Framework of this report will speak to the following:

1. The literature is replete with references to the adult learner/ non-traditional/ advanced learner and how their learning differs from younger children.
2. There are subtle distinctions between the adult learner and the learned learner.

This theoretical framework creates a natural bridge to the method used for this study. While there is a significant body of literature speaking to the conceptual mode of teaching there is little specifically relating such

to the learned learner as I have defined it earlier in this report. There is even less literature connecting conceptual teaching, the learned learner and nursing.

Method

The methodology utilized for this report was a combination of (1) an extensive literature review spanning several decades leading up to the emergence of the concept curriculum in nursing education, (2) an analysis of literature review in relation to what is known as best practices in teaching and learning, focused on the relation to nursing education, and (3) an analysis of current literature relative to conceptual teaching both in general and nursing education.

Current Problematic State of Nursing Education

Like many service professions, the field of nursing education is in a problematic state where supply cannot meet demand. As societal problems and the knowledge base becomes more complex so does the need for services and the role/ scope of providers. Consequently, we find a huge gap between the need for practitioners and the available workforce. As the American workforce changes, Baby Boomers retire, and more attractive career options come about the need for nurses increases. The specialized nature of nursing creates a huge burden on the nursing education arena to balance supply and demand (Benner, 2012).

Systemic vs. Concept Curriculum

It is well noted that as the health-care professions become more sophisticated the requisite knowledge base for the health-care professions, including nursing, becomes more cumbersome. Consequently, nursing faculties and students are finding it impossible to complete program requirements in a realistic amount of time (Giddens & Brady, 2005). Nursing educators and professional nursing organizations have responded by re-thinking the scope, structure and content of nursing curricula in general (AACN, 2008 ; Hunt, 2017; Metzner & Bean, 1987; Nielsen, Noone, Voss & Mathews, 2013; NLN, 2005) Herein creates the curricular dichotomy of systemic vs. conceptual. In short, the systemic curriculum speaks to the very traditional medical model, based around the various bodily systems. The conceptual curriculum is built around bigger ideas that are explored/ explained (exemplars) in a real world context.

Since any reform must necessarily be met with compromise, such a re-thinking brings two inherently problematic points not peculiar to nursing, but relative to any such effort for re-design of teaching. First, teaching is a democratic process/ experience and therefore, like democracy, does not require everyone to agree but does require everyone to participate, participate meaningfully and graciously compromise. This brings us to problem two which is that when such curricular reforms come about in teaching and learning then everything about the teaching and learning must change with it. It is not sufficient to simply craft another design for curriculum and continue to schedule classes, arrange lessons, design instructional scope and sequence, deliver instruction and assess in the same way. Of all that must be considered in the implementation of reform, the most critical is *assessment* for it is here that we truly determine if our reforms have merit or have worked. The assessment piece of instruction (at any level) is becoming more critical as we see the push for increased data describing the observation / quantifiable reporting of "leaning outcomes" – (a.k.a data driven decisions) (Worthen, 2018).

While this report is intended to look at various problematic areas in nursing education specific to the learned learner it bears a brief, cursory look at similar dramatic educational reforms in the last fifty years that did not fare well. It is for similar reasons the concept based curriculum in nursing education may not fare well without some serious re-thinking of the teaching and assessment.

In the 1960s educational leaders across the country embarked on the idea of the "open school" or "open education". Like many educational reforms that are certainly well intended this broad, humanitarian idea of

making schools and learning less restrictive and more inclusive aligned nicely with the political leanings of the 1960's civil rights reforms in this country. The unfortunate corollary to any well-intended reform is that leaders and policy makers are seldom willing to wait a realistic amount of time for reforms to be systematically tested before being tried on a large scale. As scholars always see a lot of what is common, we often find those in charge pressured to create the illusion of grand changes that look entirely different from anything past. The idea of open education fell victim to this thinking when all over this country schools popped up with no walls. They were essentially large warehouses intended to contain groups of students engaged in unstructured learning activities and little direction. The failure of this idea can easily be pointed to the fact that we cannot build schools without walls and continue to function as though we had walls (Norris, 2004).

The concept curriculum ideology plays into the extreme schools of thought as described by Norris (2004) and others (Balla & Boyle,1994; Rowntree, 1987**)** as to question of "what exactly are students supposed to know?" Two extreme schools of thought have been the impetus behind this educational squabble for the last two centuries. At the one extreme there is a very *traditional* mode of thinking where every student is taught a particular body of content that is eventually useful as the student grows and develops. At the other extreme is a more *progressive* mode of thinking that abandons the body of content in favor of developing certain higher order thinking skills, critical thinking, problem solving abilities, etc. in the belief that when these higher skills are in place all the "traditional content stuff" will naturally follow. In a spirit of true intellectual honesty, it cannot be said that one idea is superior to the other because in truth it is only some semblance of balance between the two that will ever actually work. One extreme over another becomes problematic (a) when only the epitome of one ideology or the other is considered and (b) when one extreme or the other is not delivered well. It is fair to say the concept curriculum ideology definitely falls into the progressive end of the spectrum. The following table further explains:

Table 1
Extremes in Ideology

Curricular Question	One Extreme	The Other Extreme
What is to be taught?	A core body of information is emphasized. It is assumed that nurses must possess a common body of information in order to facilitate communication across the profession; a common language – aka body of understanding – is necessary.	The need for a core body of information is dismissed in favor of [theoretical] problem solving, higher level, critical thinking skills. Subjects/ content/ skills are integrated with virtually no skill or idea taught in isolation. There is much variation in what and how material is taught.
How is it to be taught?	The driving force behind the teaching is faculty knowledge, expertise and academic experience. Mainstream and current medical issues and problems drive instructional matters.	It is assumed that creating higher thinking individuals will subsequently produce competencies in skills and content. It is assumed that creating the proper environment for teaching and learning will allow all to succeed to potential.
How is the teaching to be measured for success?	Measurement/ assessment is by traditional tests focused on content and *use* of the content.	Measurement efforts that have more nebulous boundaries are the desired; the belief that focusing on higher taxonomical thinking supersedes the need for content to support such thinking.

The Concept Curriculum idea in many ways parallels the practice often seen in K-12 teaching known as "Thematic Teaching." Thematic Teaching attempts to integrate smaller pieces of content with larger, overarching themes (Funderstanding, 2011). Thematic Teaching is heralded as the desired based on a number of beliefs about motivation of students (Putwain, Whitely & Caddick, 2011), quality of learning, depth of learning, enjoyment of learning (Bolak, Bialach, & Dunphy, 2005) and various beliefs about instructional efficiency.

While the idea of a conceptual curriculum in nursing has been around for a number of years the recent literature is sparse and questionable. On the one hand are glowing reports issued by the textbook companies that have responded by publishing materials focused in that way, purporting how their materials *can* solve so many instructional problems, educate nurses to be critical thinkers, etc. (Elsevier, 2016). Unfortunately, such glowing reports must always be approached and interpreted with caution because:

1. Such materials are a for-profit proprietary product and
2. Such reports generally are laden with assertions, but no hard data based on scientific comparisons or systematic inquiry.

On the other hand, there are serious academic reports (Brooks, et al, 2015), position papers and even doctoral dissertations (Harrison, 2016) advising caution before going too far with this curricular idea. The unfortunate reality is that the current nursing faculties who have come on board with the concept curriculum have not produced a convincing body of literature speaking to its success or failure. There is a collection of somewhat repetitive academic writing that speaks to such points as how to design a conceptual curriculum (Giddens, Wright & Gray, 2012), needed changes in curriculum (Stanley & Dougherty, 2010), beliefs about a conceptual curriculum, possible benefits, how to transition from a traditional to conceptual curriculum (Baron, 2017), improved student abilities, etc. In short, the current literature base is replete with what progressive practitioners think and believe. Glaringly absent from the literature, minus a small number of anecdotal accounts, is adequate empirical evidence that the concept curriculum improves student learning and NCLEX pass rates.

When reading into the body of literature that does exist, certain familiar [progressive] terminologies emerge over and again.

- The term ***integrated*** pops up supporting the ideology that in this curricular mode no idea or phenomenon stands alone as its own intellectual entity. In this school of thought it is not necessary to divide or compartmentalize curricular aspects into segmented pieces that *eventually* fit together and create a common intellectual plane. Instead, the larger, overarching concept is fitted out with exemplars/ examples that in some way fall under this big umbrella (Deane & Asselin, 2015).
- The term ***seamless*** finds its way into the discussion as the progressive school of thought does not like to see content taught or skills practiced in isolation. This thinking insists that all curricular content must touch all other curricular content. In the same vein that reading is not something that elementary school children do first thing every morning at school but is part of everyday life, a collection of skills that touch every aspect every day, so it is with the "seamless" ideology. The thinking only becomes "bad" when nothing else is considered or when poorly delivered (Deane & Asselin, 2015).
- The terminology of ***content saturated*** seems to appear more in nursing curriculum literature than other areas (Diekelmann, 2002). The idea of "saturated content" might easily be explained as over-abundance or over-dependence on the "One Extreme" as explained in the chart above. The notion that there is "too much content" to realistically prepare practitioners is not peculiar to nursing, but is a common concern in many of the service professions. This is a common concern that is usually used in the call for curricular reform that is more focused in the direction of the "Other Extreme".

Characteristics of the Learned Learner

The learned learner brings to the teaching, learning and assessment environment a variety of experiences, which are both advantageous and disadvantageous. In the literature we find an abundance of models purporting to be "characteristics of the adult learner" and a reasonable review of this literature finds some consistent similarities (Kenner & Weinerman, 2011). Paraphrased, we find:

- The learned learner comes to the learning environment with a clearly developed sense of self. As such, there is an inherent desire to be in control of their learning because they are well aware of their goals and abilities but, most importantly, they understand *how* they learn best (Donnelly-Smith, 2011);
- The learned learner seeks the new learning environment for significantly different reasons than the traditional student. Such reasons tend to be quite internal, bridging from the point of values, beliefs, personal interests, desire for growth or simply desire for change (Anderson, 2016);
- The learned learner relates new learning to previous learning much more quickly than the traditional student because they have more life experience(s) with which to relate. Essentially, the learned learner is far more likely to see "the big picture" much sooner (Donnelly-Smith, 2011);
- The overall perspective of the Learned Learner will be far more cosmopolitan than provincial (Donnelly-Smith, 2011);
- The learned learner brings a maturity of thinking often not found in the traditional student. The learned learner is more able to distance their personal feelings, beliefs, values, mores and experiences from the issues and problems they will encounter in their studies. The learned learner presents with a much more mature understanding of professional boundaries. This is a critical attribute of what constitutes professional and is necessary for making professional decisions (Chen, 2014);
- The learned learner needs to be respected as an intelligent, competent adult who is capable of learning and well aware of his or her own learning styles and parameters. As such, instruction must consider the most efficient means of bringing the student to the requisite level of understanding (Berling, 2013);
- The learned learner typically learns more slowly but more *deeply*;
- The learned learner is generally not content with "lecture/ memorize/ test" instructional formats. Aside from the fact that this is known to be a poor teaching model at any level, the learned learner typically desires a deeper academic discourse with classmates and faculty (Chen, 2014).
- The learned learner may not be as tolerant or benefitted by the use of computer technology as a study tool or instructional supplement. In this information age the computer is as much a part of life as anything else. Textbook companies develop software programs to supplement their published materials often under the guise that its use causes students to learn faster, learn better, retain more, learn at deeper levels, etc. Software engineers, not pedagogues, propagate this mindset (McCoy, 2013).
- The Learned Learner typically arrives with a well-established command of spoken and written language. As such, the Learned Learner will be more sensitive to and aware of discrepancies, flaws, or possibly unintended/ problematic nuances in written language. It is these attributes that often make objective testing less than objective for the Learned Learner (Phipps, Prieto & Ndinguri, 2013).

Finally, the learned learner brings to the teaching/ learning/ assessment environment a previously developed and well utilized sense of critical thinking which may be a combination of their previous formal

education or a matter of simply having lived longer (Kenner & Weinerman, 2011). While the notion of critical thinking will be discussed much more in depth later in this report, Davis (2012) sums it best by saying:

> Adult learners' characteristics constitute the habits of mind that affect the way individuals approach the learning process. These habits of mind are shaped by both internal cognitive processes and external social contexts. Learning in adulthood is distinguished by its self-directed and critically reflective nature, as well as its rootedness in everyday experiences and the social roles associated with those experiences. (p. 216)

Realistic Assessment Within the Progressive Context

The unique characteristics of the learned learner make any valid assessment difficult and places an ethical burden on faculty. In a perfect world we would love to see all nursing students assessed by multiple sources of data which give a clear picture of what the nursing student knows, is able to do and believes about the practice of nursing. Unfortunately, faculty teaching loads, time and budget constraints typically do not allow for such and we are therefore [overly] dependent on objective testing that can be scored mechanically, quickly and provide *generally* useful information about students. But despite the burden of human limitations it is incumbent upon faculty to bear in mind that instruction and assessment is a very imperfect, inexact science. The "perfect" goal would be to have no student "fall through the cracks." Likewise, faculty must bear in mind that the instruction and assessment used for the traditional nursing student may not necessarily be appropriate or even fair for the learned learner.

In nursing, the student most likely to be disadvantaged by the inherent and unavoidable attribute of test item flaw/ bias is the learned learner. For example, it is well established that standardized/ objective testing test/ assessment design is frequently to the detriment of the adult/ learned/ advanced learner because the nature of objective testing looks for "one" correct answer. Such is typically based on the experiences, perspectives and beliefs of the item writer, not necessarily that of the learned learner, comparable practitioners in the field or even the accepted body of knowledge in the field (Benner, 2012; Norris, 2002).

The imprecise and not well agreed upon nature of the Concept Curriculum further complicates any realistic, valid or fair assessment of the learned learner because its nature denies that teaching and learning are scaffolded – aka Constructivist – phenomenon. Instead, like any other progressive curricular thinking, it attempts to turn learning into a linear process. The Constructivist ideology centers around the belief that rudimentary/ prior/ requisite learning must be in place before new learning can ever occur (Pelech & Pieper, 2010). As an oversimplified example of this ideology consider the plethora of minute skills (sounds, letters, vowel and consonant blends, left to right) that must be in place before a child will even come near starting to read. Various failed experiments (i.e. - Whole Language, Inventive Spelling) in bypassing the requisite and jumping to the higher level in the belief that the requisite will eventually fall into place have produced some problematic results. Many schools of nursing are experiencing similar problematic results when attempting to realistically assess the learned learner in the context of the progressive thinking.

Assessing the Learned Learner

When broaching the question of how best to assess the learned learner two critical points must be considered. First, the learned learner will come to nursing education with backgrounds, experiences, knowledge, perspective and formal education that will typically be far removed from, possibly significantly more advanced than the traditional learner. Second, such backgrounds, experiences, etc. will always influence their perspective and interpretation of what any assessment or assessment item is seeking. It is a safe assumption that the leaned learner "gets there" knowing how to think critically (Balla & Boyle,1994).

In a spirit of true intellectual honesty, one must approach the notion of "critical thinking" very cautiously as the idea can realistically mean different things to different people. The great educational philosopher John

Dewey (1910) described critical thinking as, "To maintain the state of doubt and to carry on systematic and protracted inquiry" (p.96). By this definition, critical thinking is a process, not the acquisition of an absolute answer.

In the call for nurses to demonstrate higher order thinking, critical thinking, problem solving skills, etc. we find a dependence on the taxonomical model of Benjamin Bloom. While there are other taxonomical models that can be useful to educators Bloom's has been the most popular for decades (Heick, 2019). Consequently, it is incumbent upon faculty to know and understand what Bloom's model is and is not.

It is the nature of objective assessment that the further up the ladder of Bloom's Taxonomy an item is intended to assess, the more likely the item can be intelligently and realistically argued. Likewise, the further up Bloom's ladder, the less likely to have only one correct answer. Speaking to the question of assessment convenience, Norris (2002) stated, "The convenience of universal applicability brings with it the burden of consistency (p. 108)." Consequently, nursing faculty cannot have it both ways. If we want educated nurses who think, reason and apply toward the top end of the Bloom model there must be room to come together and discuss what is really "evidence-based practice." Otherwise we do not have nurses who are educated, we have nurses who are trained.

Assessing the Learned Nursing Student

To the dismay of many in the nursing education arena, it is common practice to use first-time NCLEX pass rates as the determinant of program quality (Edwards, 2015; Carr, 2011). Across the profession as pressure builds to see favorable first time licensure test scores there are a number of tenets of the field of testing and measurement that may find themselves skewed, marginalized or disregarded altogether. Rather any profession shapes lives or saves lives, there is no excusal from psychometric standards for assessment. Rather one is teaching primary school, graduate school or nursing school all are held to the standards and tenets of testing and measurement because psychometric findings tell us the same things regardless of level or academic discipline.

The market holds an abundance of teaching and assessment materials designed for the purpose of educating new nurses, competent in practice and safety and prepared to meet the changing needs of the nursing world (i.e. - ATI, HESI, Kaplan). While never perfect, commercially available assessment materials are crafted to be well aligned with standard nursing curricula, across the profession are considered appropriate practice/ preparation for N-CLEX and are well established as psychometrically sound. Competent faculties know their curriculum, their program and their students. They are able to make educated decisions about assessment. Assessments must speak to what the future nurse knows, is able to do and believes about the scope, role and practice of nursing.

Rather a faculty chooses to use professional test banks or teacher made test items, several important issues which apply more so to the Learned Learner must always be in the foreground:

- Never allow the pride of authorship or experience to supplant medical truth (Brown & Knight, 2012; Rowntree, 1987);
- In circumstances of potential assessment impropriety, it is incumbent that faculty work to solve the problem(s) rather than to win every single battle. Standing your ground against questionably crafted assessment(s) does not constitute rigor, strengthen instruction or assessment and wastes intellectual time and energy (Rowntree, 1987).
- When assessment questions arise from the nursing student population of learned learners their perspective must be taken seriously for all the very reasons that make the learned learner unique and separate from the more traditional learner (Knight, 2012).
- Subtle, extreme and unnecessary nuances in assessment design do not challenge the learned learner, but instead frustrates and insults their intelligence. Such is not true rigor and does not make

for a better-educated or prepared nurse but instead pushes the scope of population validity far away from an acceptable or believable point (Brown and Knight, 2012).

- The science of teaching and assessment is very imperfect and inexact therefore faculty must constantly assess and re-assess if psychometric findings truly reflect what has been taught and learned. Part of this process, known as *item analysis,* must go far beyond simply percentages of correct vs. incorrect responses. A true item analysis uses student responses to determine the quality of the item and the test as a whole. When we see the word *analysis*, we are not seeing absolutes; we are seeing a judgment call (Knight, 2012).

Findings and Conclusion

In reviewing the literature and examining the question(s) posed in this report, several findings come forth:

1. The body of literature speaking to the learning attributes of nursing students needs to more closely align to the existing body of literature speaking to adult teaching in general.
2. Current nursing education literature seems to miss the point that nursing, like any other area of teaching, must be built upon constructivist thinking (Brandon, 2010). It is a misnomer to claim "higher thinking" when rudimentary aspects are not there.
3. It is clear from the literature that while a large percentage of nursing students across the nation are beyond the age of the typical "first time college freshman." Unfortunately, we are not seeing curriculum designed and delivered with those students in mind.
4. While N-CLEX asserts their standard to be that of a beginning nurse much of what happens in the nursing education arena speaks more to the experienced nurse. A meeting in the middle would be the desired.
5. The literature speaks to the assertion that if the more progressive curriculum is chosen the faculty must be prepared to deliver and assess.
6. While it is clear in the literature that a shortage of nurses exists and will continue, little is being done to attract learned learners to the profession. While some colleges offer alternative baccalaureate programs they are not hugely populated and therefore not filling gaps.

As nursing sees more and more mature individuals entering the profession there will always be concern for how to best meet their needs and see that their nursing education experience is as fair and valid as any other. As the demand for nurses and nursing expertise grows the problem of the axiomatic "content-saturated curriculum" is not going away. Therefore, it is incumbent upon nursing faculty to design, deliver and assess instruction in such a manner that the Learned Learner is not disadvantaged in any way.

Despite the meager body of literature in support of a concept curriculum we cannot assume it to be a bad thing. However, if a concept curriculum is adopted, implemented and delivered in a less than stellar manner it leads to a very "hit and miss" quality of teaching. When faculty choose the conceptual route for their nursing curriculum, they must be prepared with a thorough understanding of all that is involved. When choosing the "other extreme" (see Table 1) faculty must understand that this mode of teaching, while very desirable, requires much more time and effort to perform well. The unfortunate reality is that even one potentially good nurse lost to poorly aligned instruction and assessment reflects badly on our system as a whole.

Despite discrepancies in nursing education teaching in general it must be said that competent nursing faculties share the same burdens as any other instructional team(s). The act of teaching is an inexact science so our work must constantly be under review and seeking improvement. It is well known and discussed in casual conversation that nursing school curricula is rigorous and failure rates are sometimes higher than many would like. Constant improvement in teaching and assessment is the desired.

Like any other instructional teams, nursing faculty are under immense pressure to produce the needed nurses, competent upon entry and do so in a reasonable amount of time. The scope, role and practice of the nurse has grown exponentially in the last two decades. This further exacerbates the need for curricula that produces high quality nurses in the least amount of time. The conceptual curriculum is a noble effort in that regard, but the literature and NCLEX performance data does not make clear that it is working.

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Understanding the Importance of Intrinsic Motivation: An Analysis of Intrinsic Motivation and Positive Student Athlete Experience Integration

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Introduction

The statistics presented in Harper, Williams, & Blackman's (2013) manuscript, *Black Male Student Athletes and Inequities in College Sport,* captured the attention of athletic stakeholders, educators, and scholars regarding the plight of the intercollegiate, African American male student-athlete (AAMSA). The data revealed the graduation rates of AAMSAs in Power Five (i.e. Pac12, Southeastern Conference, Big 12, Big 10, Atlantic Coast Conference) National Collegiate Athletic Association (NCAA) athletic conferences. Institutions such as Northwestern University, which holds a graduation of 94% by AAMSAs (Harper et al., 2013), and Stanford University, which has an 89% graduation rate of AAMSAs (Harper et al., 2013), are great examples of how student athletes' harness both physical and intellectual prowess. However, the data also revealed a gap in athletic success and intellectual development for AAMSAs at consistent football national championship contenders and powerhouses. And although national championship contenders produce more professional talent, the current NCAA Academic Progress Rates (APR) for Football Championship Schools (FCS) and Football Bowl Schools (FBS) have the lowest averages out of the NCAA sports (NCAA, 2018). This metric is important to consider since it accounts for retention and eligibility of each student athlete for each academic term. It reflects an effective and timely assessment of academic success at colleges and universities (NCAA 2018).

There is a consistent debate regarding the academic capabilities, career choices, and decision-making skills of AAMSAs. Many studies highlight race as a direct threat to success and positive social influence at many colleges and universities. In the realm of race, prominent pieces of work (Cunningham & Welty-Peachy, 2010; Donnor, 2005; Edwards, 1975, 1985; Singer, 2005, 2008) have highlighted the image of the AAMSA through a critical, social lens, such as Critical Race Theory, in order to convey detailed images of realities within populations of color. There is also extensive research analyzing the academic motivations, successes, learning potential, intellectual capabilities, and likelihood of attaining learning disabilities of AAMSAs in relation to different student populations. While there are numerous higher education personnel attuned to the literature, many individuals hired in the athletic domain are not well-versed in education, behavioral studies, special education, and health-related fields in order to properly carry theory into practice as they work with AAMSAs. The individuals are not always adept to understand, educate, assess, and diagnose students with educational disabilities or behaviors. Thus, many individuals who work with this population classify them in terms of "at-risk", having learning disabilities, and having mental health issues (Carrington, 2010; Coakley, 1982; Donnor, 2005; Edwards, 1973; Singer, 2008, 2015). While some diagnoses and situations that students may encounter are valid and understandable, these diagnoses are often fail-safes for individuals who perceive the capabilities and potentials of student athletes through a deficit-oriented lens. As a result, the undesirable societal image of AAMSAs still persists (Donnor, 2005; Donnor & Ladson-Billings, 2017; Singer, 2015).

Harper et al. (2013) discussed the positive and negative characteristics associated with AAMSAs and beliefs about improvements needed in areas of academics. The research presented a picture of successful AAMSAs and a romanticized, pragmatic plan of closing the gap between athletic superiority and academic inferiority existing within the AAMSA population (Beamon, 2014; Travers, 2018). Research identified universities such as the University of Notre Dame, Villanova, Penn State, and Duke as institutions equipped with

personnel and support systems willing to help AAMSAs attain the skills necessary to benefit them as they seek to become successful individuals after expired eligibility (Harper et al., 2013). These universities graduate AAMSAs at the highest rates when compared to other universities (Harper et al. 2013). Decision-making skills, however, cannot be based on external factors, the university system, nor race alone. Indeed, race is a big part of their existence, however, race is a social construct of human existence (Carter & Larke, 2005; Donnor & Ladson-Billings, 2017; Ladson-Billings, 1995; Landsman & Lewis, 2006; Marrero, 2017; Moultry, 2014).

Accordingly, deficit-laden societal frameworks have historically been used to analyze and explain specific populations, such as AAMSAs, in a problem-focused manner, rather than focusing on assets, developmental achievements, and capabilities (Bobo & Charles, 2009; Ladson-Billings, 1998). Deficit-laden frameworks also highlight disguising forces, events, classes, and expressions of social and economic division (Ladson-Billings, 1998). In the case of AAMSAs, deficit-laden societal frameworks only contribute to the existing, deficit-oriented literature. Therefore, the goal of this study, if applied to a societal framework, would be to focus on AAMSAs and the support systems that help them thrive. Decision-making skills and life transitions, if analyzed positively, are associated with motivation and external forces which build and sustain pursuit, well-being, and success. They can be analyzed through theoretical frameworks capturing the psychological aspects of individuals within the sampled population of AAMSAs in order to understand their choices in the quest for success. Therefore, this study focuses on the positive psychological factors associated with the target population in an attempt to break away from research that is problem focused.

This study seeks to identify and highlight the influential intrinsic motivators of intercollegiate AAMSAs to obtain professional and graduate degrees.

Research Questions

Each participant received consent forms in order to participate in the study. After each participant signed the consent form, 45-90-minute, semi-structured interviews took place in order to obtain data pertaining to the following research questions:

1. In what ways do intercollegiate AAMSAs describe their athletic and academic experiences?
2. In what ways does participation in athletics influence the academic outcomes of intercollegiate AAMSAs?
3. In what ways do intercollegiate AAMSAs describe the influential experiences and factors needed to help them persist through graduate school?

Because much of the literature focusing on AAMSA's is problem-based, this study attempts to delve into the positive aspects of specific individuals that have defied the norms and stereotypes that cloud this population. The research questions that guide this study have the purpose of highlighting the influences, influencers, and experiences that have the potential to create change in the perceptions and realistic outcomes of AAMSA's.

Theoretical Framework

The life of a student navigating the university system is both positive and negative, as their experiences can be characterized as engaging and supportive, or challenging, demanding, and complex (Infurna & Infurna, 2017). If students encounter challenges, their struggles can vary from the lack of basic needs and wants to the pressures of success and social influence. While numerous students experience daily issues, the physical and psychological demands inflicted upon intercollegiate AAMSAs tend to be significantly greater than students who do not participate in demanding extracurricular activities such as intercollegiate football, basketball, baseball, softball, volleyball, and track. These activities require great amounts of physical and mental output. The literature associated with AAMSAs who participate in physically and mentally demanding sports highlights the experiences, academic outcomes, and post-eligibility concerns intercollegiate sport participation influences such

as coping mechanisms and life outlook (Miller & Kerr, 2002). Because of rigorous daily schedules and high visibility associated with their campus presence, the psychological demands of AAMSAs increase due to various needs, responsibilities, identities, and aspirations. For instance, many AAMSAs have difficulty navigating competing expectations of academic, athletic, and social identity. Hence, an understanding motivation and the enduring process to achieve success can lead to better understanding of how AAMSAs achieve athletic and academic success.

Additional challenges surface when expectations collide within the psyche of AAMSAs, including academic subconscious/awareness, social isolation, alcoholism, and drug use and abuse. Because of the added psychological demands AAMSAs must endure, a framework identifying psychological differences within the AAMSA population will guide this study. In this instance, Self-Determination Theory (SDT) is an appropriate theory to guide this study because it highlights the integrative factors and experience that shape their life outcomes. Because AAMSA's are in pursuit of multiple goals that stretch their capacities and express their talents and propensities, these individuals work to constantly and consistently actualize their potentials (Ryan and Deci, 2000). Within this perspective, synthesis, organization, and relative unity of both knowledge and personality are important to understand and analyze along with wholeness, vitality, and integrative tendencies (Ryan and Deci, 2000).

SDT states individuals have natural and constructive tendencies they develop throughout their lifespan (Adams, Little, & Ryan, 2017; Ryan, 2004, Ryan & Deci, 2000a, 2019). SDT is a metatheory comprised of four theories – Cognitive Evaluation Theory, Organismic Integration Theory, Causality Orientations Theory, and Basic Needs Theory -- which highlights the internal resources in the process of human development and personality and how they influence behavior and self-regulation. Within this metatheory, human motivational analysis is employed through organismic theories highlighting the importance of evolved inner resources for the development of behavioral self-regulation (Ryan & Deci, 2000a; Ryan, Kuhl, & Deci, 1997). Growth and psychological needs outline SDT as the basis of self-motivation, personality integration, and fostering growth conditions (Ryan & Deci, 2000a, Frederickson, 2001; Gill, Williams, & Reifsteck, 2018).

In addition, the descriptions within SDT apply to three important criteria for optimal attainment of psychological needs. Competence, relatedness, and autonomy provide the basis of categorizing environmental and supportive mechanisms vital human functioning (Deci & Ryan, 2016; Riley, 2016; Ryan & Deci, 2000a). Competence is associated with the effectiveness in ongoing interactions with social environments and interpretations of certain environmental contexts and tasks (Riley, 2016). Relatedness is associated to care and nurturement for others and by others (Deci & Ryan, 2016). Examples can include intimate relationships, community involvement, and familial commitment. This specific component creates a sense of belonging within the individual. Autonomy is the perceived origin and source of individual behavior (DeCharms, 1968; Deci & Ryan, 1985b; 2014, 2016; Reeve, 2014; Ryan & Connell, 1989).

Although SDT is associated with success, the assumption of growth and integration is not without opposition. Among the stauncher opponents of constructs concerning growth and integration have been operant behaviorists who assume there is no inherent direction to development and suggest behavioral regulation and personality are a function of reinforcement histories and current contingencies (Skinner, 1953, Deci & Ryan, 2014; Gagne & Deci, 2005; Ryan & Deci, 2000a, 2019). Intrinsic motivation and the relation it has on development cannot be integrative tendency, because relevant contingencies organize and create systems (Ryan & Deci, 2000a, 2019). Nonetheless, SDT is a mechanism based on the deconstruction of specific human phenomena.

Cognitive Evaluation Theory

Reward contingency is an important component of behavior and activity participation (Ryan, Mims, & Koestner, 1983; Gagne & Deci, 2005; Riley, 2016; Wlodkowski, & Ginsberg, 2017). Reward contingencies include task non-contingent rewards, which include participation rewards. Task-contingent rewards are based upon completion of activities. Performance-contingent rewards are based upon performance in specific activities. Accordingly, Deci (1972) found contingent rewards dramatically affect intrinsic motivation as opposed to non-contingent rewards and no rewards. This study in turn, is a foundational piece of literature which applies to various disciplines including psychology, education, and the physical and cognitive sciences.

Regarding motivation specifically, external events including rewards and communications must have two regulatory aspects of intrinsic motivation (Deci & Ryan, 1980, 2016). These aspects function and control how individuals perceive their environments. Information conveys feedback in the context of SDT and control refers to rewards and communication pressures which influence people toward specific outcomes (Deci & Ryan, 2014, 2016; Ryan & Deci, 2000a, 2000b; Ryan et al., 1983). Therefore, Cognitive Evaluation Theory predicts and interprets the effect external events have on intrinsic motivation by providing an analysis of information and control in the perception and navigation of activities (Gill, Williams, & Reifsteck, 2018; Riley, 2016; Ryan et al., 1983).

Organismic Integration Theory

Research in SDT focuses on how desirable behaviors are intrinsically motivating (Sheldon, Arndt, &Houser-Marko, 2003; Westrate et al., 2018). Thus, numerous studies have analyzed the relationship between positive human functioning and the achievement of optimal health and well-being (Linley & Joseph, 2005; Lopez, Pedratti, & Snyder, 2018; Seligman & Csikszentmihalyi, 2000; Snyder & Lopez, 2002). As a result, Organismic Integration Theory emerged as a criterion for growth and positive psychology (Germer, Siegel, & Fulton, 2016; Joseph & Linley, 2005).

Germer et al. (2016) analyzed how internal motivation is the result of progression through a continuum. Actions and behaviors on this continuum derive from external regulation to individual integration. Regulation can be operative and differ in autonomy (Deci & Ryan, 2012, 2014, 2016; Germer, Siegel, & Fulton, 2016; Mills, 2016, Ryan, 2009; Westrate et al., 2018). Autonomy is robust throughout research regarding SDT, due to its association with persistence, performance, and well-being at activities (Ryan, 2009; Westrate et al., 2018). In addition, the research of Deci and Ryan (2000, 2002, 2014, 2016) demonstrate internalization and integrative values through choice, efficacy, and connection.

Causality Orientations Theory

Causality Orientations Theory (Deci & Ryan, 1985, 2000, 2002, 2014, 2016) differentiates behavior, motivation, and psychological processes exhibited within individuals in social settings (Deci & Ryan, 1985, 2014, 2016; Koestner & Zuckerman, 1994). Control processes help an individual deconstruct and classify orientations (Deci & Ryan, 1985). Orientation classifications apply to autonomy, control, and impersonal orientation. Koestner and Zuckerman (1994) and Ryan and Deci (2019) found the relationship between causality orientation, personality, and autonomy is consistent with positive self-efficacy and self-esteem. Also, individuals who orient high in autonomy do not act out of guilt and are associated with attaining self-actualization (Vallerand et al., 1992). The control orientation identifies pressure and extrinsic forces as influencers of tasks, behaviors, and activities. Control influences the need to achieve certain results in an activity derived from the perception of external prompts from a significant other. When controlled individuals persist vigorously at an activity in the absence of external controls it reflects controlled self-regulation (Flunger, Mayer, & Umbach, 2019; Koestner, Bemieri, & Zuckerman, 1992; Ryan & Deci, 2019). The impersonal orientation is related to negative self-evaluations, amotivation, low self-esteem, depression, and eating disorders (Deci & Ryan, 1985; 2016; Vallerand

et al., 1992; Strauss & Ryan, 1987). In achievement settings, the impersonal orientation is predictive of helpless feelings, thoughts, and behaviors.

Basic Needs Theory

According to Nuttin (1984), psychological needs produce actions, behaviors, and control development. Basic Needs Theory, then, is a sub-theory of SDT grounded in human functioning outcomes derived from a combination of social environments, the pursuit of well-being, and need satisfaction. The amount of positive interactions an individual has with the environment results in an increase of competence. The increase in competence is independent and can apply across skills. Well-being relates to self-actualization and the degree of functioning a person exhibits in order to attain optimal performance (Flunger et al., 2019). In addition, Basic Needs Theory embraces the eudaimonic conceptualization of well-being (Adie, Duda, & Ntoumanis, 2008; Deci & Ryan, 2014, 2016; Krapp, 2005; Ryan & Deci, 2019).

To summarize, the SDT framework supports individual growth and development. SDT affirms positive human activity, attests humans are growth-oriented organisms, and innately seek and engage in stimulating activities and environments to master potentials, capabilities, and strengths. This tendency towards actualization represents an interface and concept within social environments needed to increase and decrease positive adjustment.

Method

In this case study, qualitative, ethnographic inquiry was used to convey the experiences of AAMSAs. In this inquiry, ethnographic representations of reality and the investigation of pedagogy and practice required cultural analysis with critical deconstruction techniques. According to Lincoln and Guba (1985), case studies increase understanding and opportunities to identify consistency and trustworthiness (Merriam, 1988). Also, case studies provide data worthy of migrating across different disciplines (Merriam, 1988). In order to develop an understanding of athletic and academic perceptions, this study investigated the experiences of former intercollegiate AAMSAs prior to college, through athletic careers, and through graduate school. As the researcher in this study, I employed ethnographic methods to create detailed examinations of four subjects to generate knowledge about Self-Determination Theory as applied to the AAMSA population.

Participants

This qualitative case study identified and highlighted the influential intrinsic motivators of four former intercollegiate AAMSAs to obtain professional and graduate degrees. Purposeful sampling techniques secured participants for the study who fit the criteria under consideration and from those whom the researcher can learn the most (Bogdan & Biklen, 1998; Merriam, 1988; Turner, 2004). In this instance, four individuals met the following criteria in order to participate in the study: African American, male, collegiate sport competitor at a Predominately White Institution (PWI) through their senior year, participated in revenue-producing sports and/or track, earned baccalaureate degree, entered graduate school, and earned graduate degree.

The participants exemplified the positive outcomes associated with the target population of African American Male Student Athletes. In addition, participants illuminated the positive forces of motivation which can be applied across cultures. Each participant received pseudonyms. Table 1 gives the background of each participant.

Table 1
Background of Participants

Name	Age	Parental Experience	High School	College Sport	Undergraduate Degree/Graduate Degree	Current Profession
Winslow Lawyer	30	Single Mother	City of Champions	Football	BA/JD	Attorney
Norris Jazz	29	Mother and Father	Funky Town HS	Football	BS/MS	Musician
Nathan Principal	32	Grandparents	Texas Tradition	Football	BS/M.Ed	Principal
Jacob Money	25	Mother and Father	Texas Speed	Track	BS/MBA	Accountant

The following section gives a brief description of the participants.

Winslow Lawyer is a 30-year-old African American male. Winslow is from a middle-class, urban neighborhood. His neighborhood is the home of the "City of Champions". Winslow indicated he was surrounded by a diverse student population throughout his time in the community. He described the general student population as being very diverse, while many of his student athlete counterparts were African American. Winslow was transparent and relaxed throughout the interview process. In conjunction with transparency, Winslow revealed personal feelings and opinions and his experiences as a child, adolescent, and adult. He was confident in expressions and statements regarding race, education, and motivational experiences.

Norris Jazz is a 29-year-old African American male. Norris was born and raised in a large urban community known for its musical tradition and influence. Norris described his neighborhood as being primarily African American, and his academic experiences involved diverse students. In addition, many of his teammates were African American. He was very honest in his responses, which gave the interview value and depth. His perspective throughout the interview process gave the study insight and added to the context of the study.

Nathan Principal is a 31-year-old African American male. Nathan was born into a military family and raised in an urban community. This urban community is the home of numerous successful and professional athletes and performers. Nathan and his younger brother lived with his grandparents. His community shaped his experiences and perspectives through long-standing academic and athletic success. Nathan was confident and his responses were interesting. In addition, Nathan is currently an assistant principal and a member of a fraternity. His current profession gave him a unique perspective during the interview process. He was assertive in his comments regarding motivation and how ongoing experiences enhanced his development.

Jacob Money is a 25-year-old African American male. He has a military background and his parents lived in numerous cites and homes as a child and adolescent. Because of the background of the participant, he is an introvert and does not engage in extreme social settings. However, his perspective is useful in order to demonstrate the nature of collegiate athletics.

Data Collection

The interview protocol consisted of 27 questions, which covered their family backgrounds, social influences and influencers, childhood and adolescent student athlete experiences prior to college, the factors that lead them to choose the college they attended (i.e. recruiting process), their student athlete experiences while in college, their experiences in graduate school, and their experiences post graduate school. Examples of the questions during the interviews range from "how did your coaches and advisors influence you academically?" to "what was your involvement in campus activities during your collegiate experience?" Each interview was

approximately 45-90 minutes in length. During the interview process, the participants conveyed vivid descriptions of experiences as student athletes, graduate students, and current professionals. Each participant elaborated on motivators, contributions, and contributors to their successes, failures, and achievements after athletics and graduate school. The interview process captured the actions and decisions made by the participants, progression, and classifications of different motivations for specific activities. Although the interview protocol consisted of 27 questions, additional questions were asked based on their responses. After completing the interview process, I transcribed data from the interviews with the assistance of a transcription service. In total, the data produced 64 pages of transcripts and 30 data units.

Data Analysis

The initial stage of data analysis included coding the data in order to construct themes. The coding process used internal and external coding in order to identify terms, experiences, occurrences, descriptions, and responses associated within each specific theme. Internal coding creates a respondent-centered analysis (Spickard, 2017), and external coding helps the researcher answer questions posed in previous research, academic literature, societal phenomena, and various academic disciplines (Spickard, 2017). Of the 30 data units that emerged from the 64 pages of transcripts, 10 codes surfaced in order to categorize intrinsic and extrinsic motivations and then applied within the sub-themes of SDT. The motivations that surfaced within the interview process are addressed in the next section. Nonetheless, within these codes, themes emerged to approach the unit of analysis. When using themes as coding units, expressions of ideas were used in framing the theme. The choice of how the codes emerged was dependent upon context and comparability of outcomes and responses between the participants. Within several codes, many data units overlapped due to the nature of the theoretical framework, experience integration, and the nature of participant responses. Therefore, the coding process can be viewed as a continuum that captures how each code relates to one another. After the coding process was completed, the codes were then rechecked for consistency, reliability, and validity. After the codes were rechecked, conclusions were drawn in order to make sense of the themes. Member checking occurred in order to ensure dependability, credibility, and transferability. This process, both formal and informal, consisted of consisted of the participants verifying the data and interpretations collected through the interviews (Turner, 2004). This process also consisted of a summary at the end of each interview, which allowed the participants to verify interpretations and carry on informal conversations that are relevant to the study. In addition, myself as the researcher, along with the participants reviewed the 64 pages of transcripts. This process ensures validity and triangulates the data to corroborate the evidence. Also, it reduces bias from the investigator and cross-examines the integrity of the participants and their responses.

Findings

SDT is a metatheory of four intersecting sub-theories. The theories link assumptions and how they influence psychological well-being. After I identified themes, the categorization process began and applied to different sub theories within SDT. Ten themes surfaced from the data. Table 2 classifies intrinsic themes and Table 3 classifies extrinsic themes. Although extrinsic motivation plays a key role in success, this study only seeks to illuminate intrinsic motivators and how they influence perceptions of results and environments. Accordingly, Ryan and Deci (2004, 2014, 2016) note how intrinsic motivation reflects the positive potential of human nature. In addition, intrinsic motivation influences individuals to seek challenging and stimulating environments.

Table 2
Intrinsic Motivation

Intrinsic Motivation				
High Academic Expectations (Know Your Assignment)	High Athletic Expectations (Being the GOAT)	Strong Work Ethic (Hard Work and Dedication)	Discipline (Read Your Keys)	Competitiveness (Win at All Costs)

Table 3
Extrinsic Motivation

Extrinsic Motivation				
Family Influence (Family Over Everything)	Community Influence / Traditions (Expect Greatness)	Social Influence (Be Mindful of the Company You Keep)	Teamwork (There is no "I" in Team)	Code Switching (Knowing How to Play the Game)

"Know Your Assignment" (High Academic Expectations)

This theme identified academic motivation as a contributor to academic outcomes. Organismic Integration Theory, Cognitive Evaluation Theory, and Causality Orientations Theory interact with each other within this theme. The contribution of intrinsic motivation to academic expectations was a result of internalizing inputs from family, coaches, recruiters, social settings, and academic advisors. Positive external factors sustained these experiences. For instance, Norris stated:

> That's what it was there. I'm a product of my environment. There wasn't… a conscience decision to you know… I'm going to do the best I can on this test to be smart… I'm going to go out on the field and do the best I can do… to smack this dude on the next play. You just… the people around you are good… so I wanted to be good.

In addition, Organismic Integration Theory surfaced due to sustained success in athletics based on positive outcomes of academics. For instance, the academic accomplishments achieved by Winslow were influenced by athletic performance. To this extent, Winslow demonstrated autonomous growth. This is significant because the it contradicts deficit-laden social perceptions of AAMSAs, throughout society and existing literature, that describe them as being less motivated academically and needing academic support.

The statements made by the participants demonstrate progression through the SDT Continuum and its association with Organismic Integration Theory. The participants demonstrated integration in regulation and approached components of intrinsic motivation. Because these individuals had healthy and positive sources of external regulators, they integrated experiences they found success in.

In addition, Causality Orientations Theory demonstrates how the participants were autonomous in sustaining ongoing experiences as it relates to athletic and academic experiences. For example, Norris noted:

> So, once that decision was made – ok I'm done with my math degree… do I want to double major or get a graduate degree… it was a no brainer for me… once you get out with a graduate degree, especially in physics… if you're going to a tech related field… that looks way better than a double major… so that's really why I went for a graduate degree. It was better than a double major.

Regulation through identification and integrated regulation identified completion of a bachelor's degree, willingness to achieve accomplishments based upon intrinsic and extrinsic forces, and through deliberation of positive options of well-being. Joey, stated:

> I had some classes, I could do some equations, I could memorize come crap, but I knew nothing about it. Um, if I was stuck in something my whole life and I'm miserable then I'm screwed…I need something that could give me the flexibility to focus on something…focus on civil engineering…or I could do some lobbying or working in the political sector as some public official…I didn't really have a game plan… but graduate school equipped me for that.

This specific statement demonstrates reflection and flexibility, which applies to the autonomy orientation of Causality Orientations Theory. This shows the process of how this participant decided to choose a degree more fitting to his outlook after his eligibility expired.

The ability and decision to choose a degree option demonstrated orientation towards a perceived choice and a benefit to well-being. Thus, autonomy orientation of Causality Orientations Theory applies to this theme.

"Being the GOAT" (High Athletic Expectations)

According to Edwards (1973, 2000), the importance of athletics is in the mind of numerous young African American males. This specific theme concentrates on the importance of athletic expectations, the purpose of their involvement in athletics, and how their experiences played a role in to their perspectives. Thus, this theme is titled "Being the GOAT" refers to "Being the Greatest of All Time" and encompassed the importance of athletic experiences as they progressed throughout their lives. The participants within this study are African American and former intercollegiate student athletes. Consequently, their expectations and experiences as they apply to athletics and student athletes gives the reader understanding in how they integrated their ongoing experiences. This theme entails athletic commitment and how it contributed to their well-being.

Cognitive Evaluation Theory, Organismic Integration Theory, and Basic Needs Theory represent this theme. Each theory identifies how the participants internalized the experiences leading them towards athletic success. For example, Cognitive Evaluation Theory and Organismic Integration Theory both account for the external prompts and surrounding influences individuals use to carry out tasks and once again, we see multiple external prompts, external environments, and significant others who have played a major role within this theme and in their successes throughout their lifetime. Specifically, the information in this theme from accounts of the participants describing exposure to sports and types of feedback they received. For instance, Nathan noted:

> We were held to a higher expectation than most… they expected more from us. We were put on a pedestal… so anytime we did anything – positive or negative – there was an awareness to it… they expected a lot from us because of the tradition of the district and the school… we were supposed to do right… we were supposed to be successful… on the field and in the class.

On the other hand, if we look at the data more closely, Basic Needs Theory within the context of this theme, suggests all motivations must derive from a need satisfaction or must have a direct relationship with well-being. As the participants expressed their narratives, the participants moved through the continuum found in Organismic Integration Theory (Germer et al., 2016) and integrated the regulations into their own. The integration process created concrete actions as they moved forward; thus, becoming an effective form of motivation and influence on their well-being.

For example, Jacob noted:

> This was back when I ran the 100 meters. I found in retrospect that I wanted to be the fastest 100-meter runner and also in the 200 meters. I wanted to break all these records. Like have gold medals. I was totally immersed in the potential that I was perceived to have.

Winslow also noted:

> You can trust me. I wanted it more than anybody that you could imagine. I would have played in the NFL for $60 thousand… $50 thousand a year. I would've still wanted to play. I love the game of football.

These examples demonstrate how their initial athletic experiences began out of interest, enjoyment, and the outlook of their potential.

"Hard Work and Dedication" (Strong Work Ethic)

Motivation is associated with the amount of effort individuals put forth in activities (Deci, 1972; Ryan et al., 1983; Riley, 2016). This theme in turn highlights the process of how the participants integrated ongoing experiences. In addition, this theme is related to intrinsic motivators analyzed within this study. The work ethic exhibited by the participants, as told in in their narratives, propelled them to exceed levels of expectation by family, peers, and athletic and academic stakeholders who contributed to their experiences and success.

As the sub-theories of SDT relate to this theme, Organismic Integration Theory, and Basic Needs Theory represent this theme. This is due to the determined and persistent behavior they exhibited in the activities they found interest in. Determination and persistence to do well in certain activities is a performance contingency within the aspect of Cognitive Evaluation Theory; however, the reward effects of participation do not exist due to enjoyment of the activity, interest in the activity, and impact the activity has on well-being. The data revealed how the participants worked to actively transform external regulators into self-regulation. Thus, the determination and persistence found within the data has a direct association with Organismic Integration Theory. The participants also exhibited autonomy in order to obtain results of personal value and personal interest. This gives the data a direct association with Basic Needs Theory. Norris gave a great example of this:

> No matter if you're on the football team or…if you're working at McDonald's – the person that you're working for…you want trust and if you've got a good work ethic and character… they can always depend on you to do the right thing, when they are looking or not looking…that trust… is going to always keep you employed…it's going to keep you on the field…those things apply to whatever profession you have…and for work ethic in school…that's a no brainer…do your homework, study, make sure you're fully prepared…that's determined by work ethic.

Moreover, the data demonstrated the internalization process and transition into integrated regulation. The data also reflects the increase in work ethic and the differing effects it had on the reward effects of their outcomes did not matter. In addition, as the participants shared their experiences, the data depicted evidence demonstrating how participation in certain activities effects well-being. For example, Jacob entails how the two sub-theories coincide with this specific theme.

> I was so committed to getting ice baths after a workout… getting the right amounts of sleep, getting the right amount of food, talking to my nutritionist. I would do two-a-days without the consent of my coaches… I'd go in the gym in the mornings… I would do cardio… weights… all on my own because it was a part of me… I needed to do this… it became the focal point of my college career from when I was about 21… my junior and senior year.

In addition, Jacob noted:

> I'd go and have my own private sessions. Do my jump rope, do my power cleans… the coaches coached me in the afternoon but not in the mornings… I had a lot of freedom and flexibility to do what I wanted to do. As soon as I started doing this… at two points in my career… I was number one in the world… and I directly attribute that to those two-a-day sessions.

These statements demonstrate how the individuals were autonomous and independent during their development process. These statements also demonstrate competence due to understanding of necessary commitments needed in order to sustain enjoyment, interest, and results in specific activities.

"Read Your Keys" (Discipline)

Discipline is correlated with the process of control and how it effects individual decision making

throughout different social environments (Deci & Ryan, 1985, 2016). Hence, a theme capturing how these individuals interact in social environments and how they internalized external prompts emerged from the data. The combination of Cognitive Evaluation Theory, Organismic Integration Theory, and Causality Orientations Theory highlight this theme. This theme captures how the participants were autonomous in orientation while interacting in different contexts. In addition, this theme identifies how they have internalized external prompts into actions of value. For example, Norris, stated:

> When I was in military school, I had the schedule every day from 6 AM to 7 AM… that was study time. And then from 6 PM to 10 PM was study time. So that's five hours every day. So, I kind of just told myself… I can study half that time and still be above the rest… so after football… I went and studied from 7 to 10 everyday… No matter if it was a test… if it was homework… I just found something to do from 7 to 10… I just wanted to keep that trend going while it was already instilled in me.

This specific statement represents the overall theme of discipline, while also representing the intersection of Cognitive Evaluation Theory, Organismic Integration Theory, and Causality Orientations Theory. Within Cognitive Evaluation Theory, perceived locus of causality, perceived competence, controlling mechanisms, and functional significance highlight this statement. While perceived locus of causality identifies autonomy and how social environments impact the internal motivation of individuals, perceived competence is concerned with competence and the effects social environments and contexts have on the perceived competence of individuals. Causality Orientations Theory surfaced due to autonomous behavior and control orientations toward tasks and activities. On the other hand, Organismic Integration Theory highlights motivation influences through identified regulation and integrated regulation.

Norris was previously in a controlling environment. He utilized the concept of functional significance in order to apply those previously learned skills in a more autonomous role. Thus, according to Cognitive Evaluation Theory, individuals must not only experience competence or efficacy, they must also experience their behavior as self-determined for intrinsic motivation to be evident (Ryan & Deci, 2014, 2016). This requires contextual support for autonomy and competence or abiding inner resources (Reeve, 1996, 2014) as the result of development for perceived locus of causality and perceived competence (Reeve, 2014; Ryan & Deci, 2014).

In addition, Nathan noted:

> Be disciplined enough to reach that goal…hard work – life is not easy at all and sports definitely prepares you for that…because you're out there every day, when everybody is in the dorms or at home in the A/C and we're out there – its three o'clock…in the middle of the day and we're working…with full pads on…sweating and hitting each other…that's hard…not a lot of people can do that…that's why everybody can't go to college and play football… because it's tough.

"Win at All Costs" (Competitiveness)

Competitiveness is associated to aspirations, achievement, and well-being (Flunger, Mayer, & Umbach, 1219; Deci & Ryan, 2014, 2016; Ryan & Deci, 2019). The vivid responses the participants gave during the interview process shaped this theme. Cognitive Evaluation Theory and Basic Needs Theory highlight this theme. Within the context of competition, individuals usually partake in tasks and events challenging enough to test their will and potentials against other individuals in exchange for a reward. The winning individual usually receives the reward. In addition, competition levels raise when capabilities and potentials are equally matched. Therefore, this specific theme can be associated with the reward effects of intrinsic motivation and the outcome of certain motivations based upon their well-being which are direct components of Cognitive Evaluation Theory and Basic Needs Theory. The data uncovered numerous competitions between themselves, students, and athletes. For example, Winslow noted:

> I'm a competitor… That's just how I live life… I don't care what it is, I'm going to always strive to be number one… I say… you can judge a competitor by what they do before and after a game. Everybody competes during a game, but… if you really want to know how much of a competitor he is, go… watch him at practice… no… watch him during summer workouts… then you know who really is a competitor… so for me, I did not want to sit on the bench… so I made sure I worked my butt off… I made sure I was not going to be outworked… I also made sure, I knew my assignments… all of the defense… so I had confidence that I was going to be better than you.

This specific statement takes on the assumes motivation must have a direct relationship to well-being. In addition, aspirations are an important part of Basic Needs Theory. Aspirations can be intrinsic or extrinsic. In this specific instance, the competitiveness of Winslow initiates out of interest in the specific activity and the enjoyment of attaining success over others in competitive tasks.

In addition, Nathan exemplified competitiveness in both athletics and academics. Regarding his athletic experiences, he stated:

> I looked at everything… I looked at where you lined up… I looked at tendencies… what plays they run out of certain formations… so once you learn the game… it makes you a like a step quicker than everybody because you know what's going to happen 90% of the time… the other 10% you might get burnt but…I was usually right.

Regarding his academic experiences, he noted:

> I looked at how they did things… I focused more in the classroom… so I can set myself up to go to grad school if I want to go to grad school or go to law school if I want to go to law school. So, I think after Kappa… my GPA went up because I focused more.

Familial influence also highlighted the competitive nature of the participants in areas they may have not noticed early on in their lives, as told through their narratives. As an example, Jacob competed in every phases of his life, which his family members recognized early in his life. Jacob noted:

> When I was seven months old, his brother would taunt him… I was crawling… I didn't have a great sense of awareness at the time or anything like that… but I forced myself to stand up… I pulled the gate open and started walking on my own… from that moment on my mom always said she knew what type of personality I would have.

Also, because the participants were former athletes, and well as former graduate students, their perception of achievement, results, and satisfaction of life were direct results from their willingness to compete with others. Winslow noted:

> I didn't want to become a veterinarian… so that's when I got involved in Teen Court… when somebody gets in trouble… you could be their attorney... and represent them… you could try to get their punishment dismissed or reduced… it was exciting… a competitive program… and I liked the idea of winning… and beating my classmates.

This section has addressed the significant factors that have influenced the participants of this study within the context of SDT. The sub-theories of SDT encompassed the experiences of high academic expectations, high athletic expectations, strong work ethic, discipline, and competitiveness. All of the experiences were integrative factors that the AAMSA's utilized to maximize their potential in their dual pursuits of excellence in athletics and academics. The concept of endogenous tendencies toward psychological growth and unity in development has shaped their everyday behaviors and the evidence from the findings demonstrate that individuals although controlled, fragmented, and even stagnated in some phases of their lives and pursuits, can progress towards positive growth through intervening, shaping, and directive behavior that has purpose and value (Ryan, 2000).

Conclusion

The guiding research questions of this study captured the experiences of former AAMSAs as they matriculated through college, competed at a high level athletically, transitioned into graduate school, and graduated with their graduate degree. Intrinsic motivation was investigated study because it highlighted the influential factors utilized by the participants as they progressed toward success in the aspects of degree completion and the impact it had on their well-being. Social theories explain the effect of external forces and environments, such as the hindrance of potential for AAMSAs (Donnor, 2005; Donnor & Ladson-Billings, 2015). Although SDT, on one hand, focuses on individualization and interaction in social settings, it does not deny the existence of societal forces, social settings, and environment contexts. When comparing the participants to the specified population (i.e. AAMSAs), the possibility of getting graduate degrees, according to current NCAA graduation rates (NCAA, 2018), APR metrics (NCAA, 2018), and societal images (Harper, 2013) is not likely. And although well intentioned peers, media, and community members inform AAMSAs of the possibilities to compete as a professional, the percentage and likelihood of student athletes making it to the professional ranks is only 1.6% (NCAA, 2018).

As a response to the 1.6% possibility of competing professionally, athletically and academically successful AAMSAs provide an alternate perspective in assessing the relationship between athletic participation, academic achievement, and attainment of educational and occupational goals (Dawkins, Braddock, & Celaya, 2008; Meekins, 2018; Sacco, 2012; Williams, 2018). This study utilized former AAMSAs who competed in football and track; the two sports with the highest AAMSA populations, the lowest graduation rates among student athletes and the general student population, and the lowest APR scores of all NCAA sports (Harper, 2013). Thus, findings from this study support existing literature in how AAMSAs have the positive growth-tendencies and psychological needs necessary to generate intrinsic motivation, personality integration, and fostering growth conditions (Gill et al., 2018).

Participants did not characterize the societal perception of AAMSAs. However, SDT can be applied to explain individual behaviors and attitudes and how the individual internalizes ongoing experiences (Ryan & Deci, 2000a, 2019). The analysis revealed how the participants encountered the same barriers presented in existing research when comparing the same student population, but this study provides an alternative to combating those barriers through SDT and its the sub-theory Organismic Integration Theory. This sub-theory of SDT characterizes external motivation as being antithetical to SDT and although research highlights extrinsic motivation as being a supplement to attaining tangible rewards, it does, however, undermine intrinsic motivation (Deci & Ryan, 2002). Additionally, Organismic Integration Theory is based upon a continuum rather than being dichotomous (Deci & Ryan, 2002). Because Organismic Integration Theory is the most commonly used sub-theme of SDT within this study, it suggests that although the student athletes exhibited intrinsic motivation or internalization, the student athletes had positive nutriments to sustain ongoing experiences. The participants also exuded all three of the components within SDT – autonomy, relatedness, and competence – in order to take full advantage of opportunities. These components surface in all five themes related to intrinsic motivation, while Organismic Integration Theory was found in four of the themes associated with intrinsic motivation and five of the themes associated with extrinsic motivation respectively. Additionally, the theme of "Know Your Assignment" utilized Organismic Integration Theory the most. This theme captured the process of integration as they received athletic honors, navigated their recruiting experiences, developed their academic abilities, sought out various support systems, understood and created career plans, and executed positive decision-making skills.

This study revealed how intrinsic motivators guided the participants in developing motivation inputs used to receive outcomes. In addition, integrated regulation is the basis of the most autonomous form of extrinsic motivation. This means the participants had external factors increasing their intrinsic motivations. For example,

Jacob references his strong work ethic was the focal point of his career while Norris describes his military experiences as an aid to his success in academics and athletics. These descriptions by the participants demonstrate autonomy and how they integrated them into their ongoing experiences. In addition, because of the variability of the participants' background, GPA, and other social factors, this study has limitations. Accordingly, if each student athlete utilized support systems, then maybe the statistics regarding the plight of AAMSAs will increase. Administrators, faculty, educators, psychologists, advisors, learning specialists, counselors, and success coaches should identify support systems and mechanisms necessary to aid student athletes in individual growth and development needed to sustain their success post eligibility.

This study helps scholars and educators maintain a success-oriented perception of the specified population. While many student athletes believe the path to economic mobility lies solely through professional sports, graduate and professional degrees are fundamental indicators of well-being (Harris, 2012). The information within this study also coincides with motivational literature in how maintenance and enhancement of growth requires supportive conditions (Deci, 1980; Deci & Ryan, 2002, 2012; Ryan & Deci, 2014, 2016).

Topics for Further Discussion

This study analyzed four African American males, all former athletes who attended PWI's during their athletic careers. It would be beneficial to research African American females to analyze the differences between the two populations. While this study analyzed with former African American student athletes who attended PWI's during their athletic careers, it would also be beneficial to replicate this type of study with student athletes who attended HBCUs. In addition, although the participants in this study were athletically gifted and accomplished, they did not make it to the professional ranks or embarked on other professional endeavors. This type of study would be interesting for athletes who have played professionally in their respective sport. This study exemplified the experiences of African American males. Lastly, it would be thought-provoking to create more research on African American student athletes who become graduate students. This information would indeed shift the paradigm of the African American student athlete context regarding academics.

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