Student Perceptions of the Influence of Choice, Ownership, and Voice in Learning and the Learning Environment

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This study used grounded theory analysis to examine and analyze student perceptions of the influence of choice, ownership, and voice on learning and the learning environment in an online M. Ed. program in the southeastern region of the United States. Choice, ownership, and voice make up three of the four components of the learner-centered approach called the COVA learning approach developed by Harapnuik, Thibodeaux, and Cummings. Literature related to constructivism, metacognition, and reflection confirms through years of research that choice, ownership, and voice through authentic learning opportunities have the potential to positively influence learning. Seventy-three graduate students in the M. Ed. program completed a survey indicating their agreement with statements that gave them choice, ownership, and voice in learning and the learning environment. The study further examined graduate students' candid perceptions for the purpose of identifying themes that related to choice, ownership, and voice in learning and the learning environment. Results showed that all three components positively influenced the learners' experience and that metacognitive practices and opportunities for reflection assisted students as they developed their voice as learners.

To provide the context for this study, we will briefly relay the research results that preceded this investigation. In 2015, our research team explored why students stopped using their ePortfolios beyond the program of study. That study revealed that a perceived lack of choice and control over ePortfolio platform selection and tools, absence of personal interest, and the inability to use their own voice in sharing and restructuring ideas contributed to the decrease of ownership in learning. As a result, 82% of learners stopped using their ePortfolio after the program of study (Thibodeaux, Harapnuik, & Cummings, 2017a). These findings confirmed that students desired choice in the activities in which they engaged, ownership and agency over learning, and an authentic avenue to express their voice. These findings also confirmed that by consistently giving Digital Learning and Leading (DLL) M. Ed. students choice, ownership, and voice through authentic learning opportunities, we were creating a learning environment for our students that they could draw upon and apply to their own organizational settings. Based on our own research and a thorough review of the literature, it was clear that learners were not making the necessary connections with their learning experiences as evidenced by lack of retention and a reocognized disengagement using the information transfer model (Mazur, 2014). Our research led us to understand that learners needed to own the learning to bridge a deeper connection; as educators, we should create learning conditions (Dewey, 1916) that allow our learners these opportunities. We formalized the name "COVA" which stands for choice, ownership, and voice through authentic learning opportunities, and the approach is grounded in constructivism, social learning, and active learning. Giving our learners

choice, ownership, and voice through authentic learning opportunities has also become the core proposition for the DLL program.

To confirm the impact of the COVA approach, we investigated whether learners perceived the COVA learning approach as a positive influence on their learning experience. The initial results of the investigation into the influence of the COVA learning approach revealed that all the components were highly interrelated and had significant influence. The influence of ownership and authenticity were identified as having the most influence on learning in an earlier study; therefore, we decided to focus more closely on the influence of choice, ownership, and voice.

The Digital Learning and Leading (DLL) Program

The DLL program is a 36-hour master's degree program in the College of Education and Human Development at a southeastern regional institution. There are twelve 3-credit hour courses in the DLL program. At the time this study was conducted, there were eighty-five students enrolled full-time in the program. All courses in the DLL program require students to use a personal ePortfolios to display their ideas, interact with their peers, build collaborative learning networks, and share their projects and ideas with a global audience. Stated learning objectives for the DLL program include: a) learners will learn to use technology innovation as a catalyst for change, b) learners will learn to lead organizational change in their own institutional settings, and c) learners will create significant learning environments that set up effective conditions for maximizing learning. The ePortfolio is one of many authentic learning experiences woven into

each of the courses and the entire program in which learners experience choice, ownership of learning, and learner voice while developing metacognitive strategies. Students are required to compile and share a final reflection and analysis of their learning as part of the Capstone course.

The program was designed to equip graduate students to be digital leaders who would be able to create their own significant learning environments that use technology innovations as a catalyst for change within their organizational settings (Thibodeaux, Harapnuik, Cummings, & Wooten, 2017b). In addition to requiring learners to research, plan, and create authentic innovation plans, learners develop implementation strategies, organizational change plans, professional development plans, and measurement strategies, and they create an ePortfolio which is used to help organize, share, and promote their innovation strategies with their organizations.

Review of the Literature

Since the COVA learning approach is a synergy of well-established constructivist principles, the related literature—such as interactive learning and constructivism, the connection between learner choice and ownership in learning, and the link between voice, metacognition, and reflective practice in learning—was explored. The research points to numerous studies that give learners choice, ownership, and voice in learning.

Interactive Learning and Constructivism

Innovative technologies and teaching practices are causing a shift in teaching and learning in higher education (Ashford-Rowe, Herrington, and Brown, 2014; Batson, 2012). Buchem, Tur, and Hölterhof (2014) suggest that a driving force behind this change is a recognized shift in ownership and control over learning that is being given to the learner. According to Buchem et al. (2014), research shows that socio-constructivist paradigms are rooted in learner control and agency (autonomous learning). Learners gain a sense of control and agency in social constructivist environments because these social environments promote purposeful and meaningful social interactions which can promote learner values, goals, and beliefs (Vygotsky, 1978). Vygotsky's ideas provide a solid foundation for Rhodes' (2011) proposition that it is necessary for learners to build social competency skills through interactive learning experiences. Interactive learning requires students to engage with one another to solve problems or discuss issues and solutions and to

share with one another (Mazur, 2014). The COVA approach, in part, as a socially pragmatic pedagogy, lends itself naturally to interactive learning. Additionally, the term integrative learning experiences encompasses innovative pedagogies and co-curricular learning experiences to enhance the learning environment (Association of American Colleges & Universities, 2018) and is embedded in the COVA learning approach. While both approaches are used, interactive learning is important to examine as part of the review of the literature as it pertains to this study.

Interactive learning experiences are integral to the constructivist perspective which emphasizes making meaningful connections, constructing new knowledge, and learning how to learn (Hattie, 2009; Jonassen, 1999; Labaree, 2005). Similarly, McWilliams (2016) suggested that constructivists create knowledge that is subject to multiple iterations and revisions based on interpretive experience and that constructivism supports choices, meaning-making, and consideration of multiple viewpoints, and therefore, learning is not fixed. Combining social learning and constructivism does not come without challenges though. Labaree (2005) acknowledged that social constructivist methods of instruction tend to be "short-lived," in part, because traditional practices are content-driven and less difficult to conduct (p. 278). However, researchers found that through the instructional design of the learning experience, learner choice and control can be organic to the learning process (Buchem et al., 2014) as it is in most constructivist learning approaches.

Social competence and interactive learning through ePortfolios have become the "most pervasive framework" in higher education today (Watson, Kuh, Rhodes, Light, and Chen, 2016). ePortfolio learning allows learners to provide interpretive meaning and reflection to their own work while sharing with a global community (Thibodeaux et al., 2017a). O'Keeffe and Donnelly (2013) acknowledged that ePortfolios promote student learning, demonstrate connected learning opportunities, and a provide a means to connect the learner with a broader audience. Bandura (1977) warned that "people can gain competence through authentic means but, because of faulty appraisals of the circumstances in which they improve, will credit their achievements to external factors rather than to their own capabilities" (p. 201). This idea suggests that learners could attribute success to something external to their own abilities. However, when learners have choice, ownership, and voice through authentic learning opportunities, they can benefit from Batson's (2016) proposition that ePortfolio learning aligns with how people actually learn, thus providing authentic and real-world opportunities for learners and giving them opportunities to make

decisions regarding the learning environment. Giving learners opportunities to choose what and how they will learn takes significant effort, time, preparation, and organization, but this is necessary if learners are to assume the role of responsibility for their learning (Aiken, Heinze, Meuter, & Chapman, 2016; Thibodeaux et al., 2017b).

The Connection Between Learner Choice and Ownership in Learning

Research confirms that choice empowers the learner, fosters engagement, and promotes a vested interest in the learning experience (Aiken et al., 2016). Giving learners choice and ownership requires that control must be shared with the learner (Thibodeaux et al., 2017a). Choice increases learner motivation and autonomy, which can positively impact a learners' self-efficacy and motivation (Bandura, 1997). Critical reflection allows learners the opportunity to reflect on their own choices and become readily aware of the reasons behind why those choices were made (Mezirow, 1998). Further, Garrett (2011) found that social learning opportunities, control, and ownership contributed to, and were an integral part of, learning with ePortfolios. Shroff, Deneen, and Lim (2014) confirm these ideas but stress that further research should explore freedom and choice in the learning environment.

According to Pierce (2001), ownership of learning makes up five dimensions: sense of responsibility, self-identity, accountability, self-efficacy, and belonging. Each dimension brings with it a learners' perceived degree of control of tangible and intangible elements, expectations of self and others, perceived ability to reach goals, and feelings of belonging. Piaget's research confirms that learners are "more apt to modify their cognitive structures in a constructive way when they control their own learning than when methods of social transmission (in this case, teaching) are employed" (Ginsburg & Opper, 1968, p. 224). Brookhart, Moss, and Long (2009) found that learners who felt they had control over their learning resulted in having "deeper motivation" (p. 65) and increased perception of autonomy (Ozogul, Johnson, Atkinson, & Reisslein, 2013). Buchem et al. (2014) argued that a shift in ownership and control in the learning environment is similar to modifying objects without instructor consent and stated that this shift is necessary for learner control to occur. Likewise, Garrett (2011) noted that social presence is linked to ownership where the learner has control of the space in which communication exists. As cited in Buchem et al. (2014), learners that truly engage with the learning process and use their own ideas regain power over their learning (Aiken et al., 2016). Bruner (1991) argued that "growth of knowledge…..is neither unilinear or strictly

derivational in a logical sense" (p. 2). Therefore, students need guidance and support regarding the learning expectations (Janosik & Frank, 2013). Based on the literature, choice and ownership have potential to empower learners to take control of their learning, develop cognitive structures, and benefit from the opportunity to reflect on those choices and decisions.

Exploring the Link Between Learner Voice, Metacognition, and Reflective Practice in Learning

The literature confirms that learner voice, metacognition, and reflection positively influence learning. For example, findings by Landis, Scott, and Kahn (2015) reveal that value through reflection helped learners establish a habit of mind that ultimately deepened learning, helped learners take ownership of learning, and established their identity as learners. Mezirow (1991) argued that people need to understand who they are before connecting with the world. From these ideas, it could be assumed that learner voice is developed through the manifestation of choices the learner has made along his or her learning journey; ultimately this can benefit the learner if carefully situated in a significant learning environment (Harapnuik, 2017). Further, Bass and Elmendorf (n. d.) declared that learners construct knowledge by means of connecting their work with an authentic and global audience, and it is recognized that learners must be an "autonomous agent in a collaborative context" (Mezirow, 1997, p. 8). Similarly, Rodgers (2006) suggests that giving students a voice in their learning has the potential to improve or change teaching and learning.

Researchers agree that metacognitive processing occurs when learners regulate their own mental processes; this process also impacts motivation, memory, and learning (MacIntyre, Igou, Campbell, Moran, & Matthews, 2014). Ericsson (2008, 2014) suggests that mental processing plays a key role in opportunities for deliberate practice, which is a method to increase target performance. Deliberate practice is much more powerful than traditional practice because it focuses first on the cognitive domain to control the psychomotor and affective domain participation. Ericsson (2008, 2014) argues that deliberate practice is the key variable that can positively impact student performance when (a) learners have a clearly defined learning goal, (b) learners are motivated to increase and improve, (c) learners are provided feedback to help them improve their learning, and (d) learners are given opportunities to revisit their work. Over time everyday skills can be transformed into expert performance through reflecting on feedback and revising iterations of one's own work. Ericsson cautions that expert performance alone is not going to reach the target learning goal; acquisition of many interrelated skills

will impact learners' overall skills, thus affecting learning goals. If learners make a "deliberate effort targeted to improve performance" (van Gog, Ericsson, Rikers, & Paas, 2005, p. 75), they have the potential to inherently own their learning. By conducting regular self-assessment of one's own skills and reflective practices through choice, ownership, and voice, learners can take advantage of the benefits of reflective practice and metacognitive learning. One such example is through the use of ePortfolios. Garrett (2011) suggested that ePortfolios were originally designed to promote metacognitive practices.

Our Research Focus and Question

The purpose of this study was to examine the perceptions of the influence of learner choice, ownership, and voice as they currently exist in learning and the learning environment within the DLL program. Since we have created a significant learning environment in the DLL program that gives our learners choice, ownership, and voice through authentic learning opportunities, it is important to analyze how DLL students believe they are influenced by these factors. It is also important to validate how our learners perceive opportunities to experience choice, ownership, and voice in their learning and in the learning environment. This investigation aligns with other research that examines the connection between choice and ownership, and it explores the link and significance between voice, reflection, and metacognitive practices. The research question below guided this study:

What are student perceptions of choice, ownership, and voice on learning and the learning environment?

Methodology

For this study, the team chose to specifically analyze perceptions of learner choice, ownership in learning, and learner voice with the purpose of understanding the learners' perspectives of the influence of each factor in their learning and the learning environment. Quantitative research allows the researcher to determine "trends or a need for an explanation of the relationship among variables (Creswell, 2012, p. 13). Qualitative research allows the researcher to analyze data using text analysis to determine themes that help interpret the findings on a large scale. The study used both quantitative and qualitative research methods because one set of data might have been insufficient to address the research question fully. Both sets of data provided a more detailed and complete picture of the students' perceptions of choice, ownership, and voice on learning and the learning environment (Creswell, 2012).

Participants

After obtaining approval from the Institutional Review Board to collect data for this study, the research team, composed of two principal investigators and a co-principal investigator, used the theory sampling method (Creswell, 2012). The theory sampling method enabled us to consider student perceptions of choice, ownership, and voice as part of the larger COVA learning approach. Eighty-five graduate students enrolled in the online DLL M. Ed. program were invited to be part of this study. Seventy-three students responded anonymously to the online survey and student interactions in the course discussion boards were analyzed anonymously. All students were employed in educational institutions (such as a K-12 school), corporate training settings, or non-profit organizations. Participants' occupations included classroom teachers, learning coordinators, instructional coaches, school administrators, corporate trainers, and non-profit volunteers/leaders and were located throughout the United States. Fifty females represented 68.49%, and 23 males represented 31.51% of the responding population, making a total of 73 participants. Twenty-seven respondents, or 37%, indicated they were currently in their first course block (first, second, third, or fourth course). Twenty-eight respondents, or 38.4%, indicated they were in their second course block (fifth, sixth, seventh, or eighth course). Eighteen respondents, or 24.7%, indicated they were in their third course block (ninth, tenth, eleventh, or twelfth course).

Instrument

The first questions on the online survey asked basic demographic information such as gender and course block. For this study, actual age, race, and ethnicity were not relevant in looking for larger group themes. Students were then asked to indicate on a Likert scale ranging from *strongly disagree* to *strongly agree* to *not applicable* the extent of choice, ownership, voice, and authentic learning (COVA) that they had experienced in the DLL program. The final group of items asked students to rank the extent of choice, ownership, voice, and authentic learning (COVA) on the learning environment in the program:

(a) I feel that the COVA learning approach deepened my learning;
(b) The COVA learning approach helped me to personalize my learning experience;
(c) The COVA learning approach improved my learning experience;
(d) The COVA learning approach helped me to self-regulate my own learning in the DLL learning environment;

(e) The COVA learning approach improved my ability to openly collaborate with my peers;

(f) The COVA learning approach increased my desire to engage in authentic learning

opportunities;

(g) The COVA learning approach increased my desire to use the ePortfolio;

(h) The COVA learning approach helped shift my attitude from a teacher-centered to a

learner-centered focus; and

(i) The COVA learning approach enabled me to make a difference in my own learning

environment.

The survey included an open comments section for students to share any additional comments.

Quantitative Data Collection

In this study, quantitative data was obtained using a web-based Likert scale survey. The survey was sent through email to all current students in the Digital Learning and Leading program. The survey was sent a total of three times to collect as many responses as possible that would represent the population of students surveyed. Participation was voluntary and did not seek specific identifying information.

Qualitative Data Collection

Several qualitative data collection methods were employed in this study. First, data was obtained by sifting through hundreds of candid discussion board comments in several DLL courses. Second, the open-ended comments available at the end of the web-based survey were reviewed and collected. Third, search queries were used to identify instances where the words "choice," "ownership," and "voice" occurred in discussion threads. Student identification was removed from the narratives and open-ended commenting and organized by current courses in which they were enrolled.

Quantitative and Qualitative Data Analysis

The quantitative survey data were coded using weighted averages (means) indicating students' agreement or strong agreement with the given indicator. Data were also coded using overall percentages of students' agreement or strong agreement with the given indicator. Both sets of data were included to provide a snapshot of responses as they relate to the larger population of respondents. Data was checked for accuracy by the research team and compared and analyzed with the qualitative research to recognize emerging themes.

Grounded theory analysis was used to collect and analyze qualitative data to explore student perceptions of the influence of learner choice, ownership of learning, and learner voice in learning and in the learning environment. Grounded theory (Glaser & Straus, 1967) allows a theory to organically develop about the influence of such variables based on student perceptions about their learning experiences. The constructivist design approach was used to analyze learner narratives to explore the views, beliefs, and assumptions that learners within a similar group have experienced (Charmaz, 2006). These methods allowed us to identify themes that naturally emerged from the learner's perspective (Mann, 1993). Student narrative discussions were analyzed in over 300 discussion boards pulled from six courses in the program, spanning several sections of students. Conventional content analysis was used to develop categories specifically from the narratives. Emerging categories were coded into themes developed to understand student perceptions of the learning environment. Themes were clustered (Charmaz, 1994) and interpreted using the constructivist design approach to explain learner experience with choice, ownership, and voice to analyze their experience with these elements of the COVA learning approach.

The search mining was used to analyze as many narratives from the target population as possible to determine significant and recurring emerging themes. Narrative discussions and blog posts from the Capstone course were also used to aggregate student responses concerning learner voice, metacognition, and reflection. All discussions that explicitly mentioned the use of choice, ownership, and voice and their influence on learning were charted and analyzed to generate themes that helped the team to determine the perceived influence of learner choice, ownership of learning, and learner voice had on learning and the learning environment.

Finally, the constant comparison technique was used to compare the data sets (Creswell, 2012). The constant comparison technique uses both sets of data to determine if the data converges or diverges (Creswell, 2012). Both data sets helped the researchers identify emerging themes.

Validity, Reliability, and Trustworthiness

First, the survey instrument was reviewed by experts in the field to confirm that the questions were appropriate and that the answers would solicit the information the researchers hoped to collect. Next, the survey instrument was piloted to a group of individuals to test that the survey questions were clear and articulate. All of these steps established validity of the survey instrument questions. Individuals that represented the target population were asked to confirm the consistency of the survey instrument. The data from the pilot survey was reviewed for issues and

Table 1

Rankings of the Influence of Choice, Ownership, and Voice on Learning and the Learning Environment

Element	M	
	Weighted Average	Agree/Strongly Agree %
CHOICE		
The COVA learning approach helped me to personalize my learning experience.	4.54	91.67
The COVA learning approach increased my desire to engage in authentic learning opportunities [of my choosing].	4.17	77.78
OWNERSHIP		
The COVA learning approach enabled me to make a difference in my own learning environment.	4.53	88.89
The COVA learning approach helped shift my attitude from a teacher-centered to a learner-centered focus.	4.44	88.89
VOICE		
The COVA learning approach improved my ability to openly collaborate with my peers.	4.17	79.16
The COVA learning approach increased my desire to use my ePortfolio.	4.17	77.78
METACOGNITION/REFLECTION		
I feel that the COVA approach deepened my learning.	4.54	94.45
The COVA learning approach improved my learning experience.	4.49	94.45
The COVA learning approach helped me to self-regulate my own learning in the DLL environment.	4.35	88.89

Note. n = 72. Likert scale items ranged from 1 (*strongly disagree*) to 5 (*strongly agree*), with 0 (*not applicable*). All numbers are rounded to the nearest hundredth.

discrepancies. Any additions or changes that were suggested by the pilot study participants were taken into consideration by the research team and adjustments made as necessary. These steps established the reliability of the instrument.

Provisions of trustworthiness were established through measures that involved each researcher independently conducting conventional content analysis to identify emerging themes (Creswell, 2012). The team discussed divergent and convergent themes and agreed upon three broad themes that are shared and discussed in the findings and discussion sections of the study. The discussion section also provides interpretive meaning to the learners' shared experiences.

Results

Seventy-three graduate students in the online M. Ed. program completed the survey (85% response rate), indicating their agreement with statements that gave learners freedom of choice, ownership, and voice in the learning process. First, it was essential to determine whether students believed they had choice, ownership, and voice in the program prior to investigating their perceptions whether those elements positively influenced their learning experience. In total, 88.89% of students indicated that they were given choice in their learning; 98.57% indicated they were given ownership, and 95.77% of students indicated they had a voice in their learning. From these results, it was apparent that students felt they experienced choice, ownership, and voice in the program. Second, students were asked to rank their agreement with statements in Table 1 that alluded to the broader categories of choice, ownership, and voice. As such, each element in Table 1 was classified according to the literature around Choice, Ownership, and Voice. Personalized learning and authentic learning opportunities were grouped to form the Choice category. Learning that makes a difference and shift of power to a learner-centered focus were grouped to form the Ownership category. Collaboration and desire to use the ePortfolio were grouped to from the Voice category. Perceptions of self-directed learning, the deepened experience, and improved learning were grouped to form the Reflective/Metacognitive category. Table 1 shows that each category was ranked above a 4.0 on a 5.0 scale and made up a range of scores between 77.78% to 91.67%. The range of scores grouped together, agree and

strongly agree, showed that learners perceived they had experienced learner choice, ownership in learning, and learner voice on learning and the learning environment. The results in Table 1 confirmed that students experienced all three elements within the larger COVA learning approach framework.

While the quantitative data confirms that students fully experienced all three elements of the COVA approach, the influence and perceptions of choice, ownership, and voice in learning and the learning environment must be explicated from the candid student comments in the discussion boards and from the Capstone posts. Student quotes included in the subsequent sections represent our cumulative understanding of how emerging themes related to perceptions of the influence of choice, ownership, and voice in the DLL program.

Learner Choice and Ownership of Learning

In the DLL program, personalized learning experiences and authentic learning opportunities encompass student choice in a variety of ways. For example, students in the DLL program personalize their learning experience by developing authentic innovation plans, such as blended learning, online learning, or ePortfolio initiatives, that they implement in their organizational settings. Students make revisions when they revisit their plans in every course of the program. Students conduct literature reviews, design implementation outlines, and create media pitches to support their ideas, and they are able to choose any digital tool to develop these areas. The discussion boards are used in the DLL program as the place where students collaborate and help each other out with their authentic projects, so their discussions often deal with how they perceive their learning experience. Comments related to learner choice include:

- "When we have a choice in what we do, we feel more empowered and in control."
- "Once I choose what I want to do, then I really feel that having my voice is important."
- "When given a choice, most people don't know and if pressed, struggle to come up with something."
- "As an educator, my job is not to tell my learners what to think or believe, I can only inspire, educate, and foster. Then, [my learner] can consciously and consistently make choices according to her own values."
- "The CHOICE aspect is what jumped out at me considering if the learner chooses it, it gives VOICE a sense of AUTHENTIC OWNERSHIP!"

These comments corroborate the quantitative findings that choice in learning is important to learners.

Learning that makes a difference and learner-centered instruction requires a shift in ownership to occur. As part of their innovation plans, learners have to own all aspects of their plan, from challenges and obstacles to influencing others to follow through with their ideas. Learners design every aspect of their innovation plans which take on new meaning as they learn to implement their plans in their organizational settings. They build significant learning environments and use Fink's (2003) Taxonomy to develop outcomes, activities, and assessment to guide their students learning. Comments related to ownership in learning include:

- "The COVA learning approach will be impactful for me because it will be MY learning made by MY choices and with MY full ownership."
- "Personally, the 'ownership' phase is my biggest concern since normally students assume that it is the teachers' responsibility for your education rather than your own."
- "I had to adjust myself not to worry so much about what everyone else was doing and focus on myself.....one of the greatest challenges in the process was organizing myself and my thoughts into something that made sense to someone besides myself."
- "I wasn't comfortable with the assignments being so open to interpretation. However, looking back, I was able to make those necessary connections between concepts because the projects were authentic and unique to me."
- "Teaching students to face challenges with the mindset that they are in control of their own learning and can make choices that either promote that learning or hinder it, gives students the choice and ownership of their personal educational outcome."

The importance of choice and ownership in learning is confirmed by these comments, but the comments also indicate that ownership of learning did not come without challenges.

Learner Voice, Metacognition, and Reflection

In the DLL program, students are not given explicit prescriptions on how to build, innovate, and execute their authentic plans. Instead, they are given a voice and freedom to be creative to meet the needs of their organization and are also guided to meet the specific learning objectives within each course. Integral to the design of the DLL program is the

collaborative component where students turn to the class discussion boards, help each other out in developing and implementing their plans, and seek and provide feedback on key decisions in the progress of their innovation strategies. Since students are required to implement their innovation plans in their own organization, it is imperative that they find their own voice and learn how to influence others on importance of the plan and the impact it will make. Comments related to learner voice and finding that voice include:

- "I felt my voice as I thought deeply about my thinking and the thinking of others."
- "People are naturally social, so in my mind, it makes sense that student voices would be part of a significant learning environment."
- "Focusing on my organization was easy, but taking control of and finding my voice was not. I had to decide which voice I wanted to portray and that was depending on which hat I was going to wear throughout this process."
- "…..Focusing on my voice as a change-agent for my organization rather than a voice for my own self-reflection."

These comments confirmed the important of voice but also indicated that some students struggled with finding their voice or that their self-reflective voice was difficult to identify.

The DLL Capstone course asked students to reflect on their entire experience in the M. Ed. Program. It was necessary for us to gauge the learners' experience through the lens of choice, ownership, and voice, but also to allow learners to capture their experience and synthesize their learning in a reflective blog post that includes opportunities to share the work the students have developed along their journey. We have found when learners become vested in their innovation plan, self-regulated learning and metacognitive processes naturally occur as students develop ownership of their own learning. It was important to have learners reflect in the Capstone so we could give learners the opportunity to engage meta-cognitively through this reflection on their learning experience. Comments from students Capstone posts include:

- "Self-directed learning: It was up to me to determine what information applied to my own situation in order to synthesize authentic products."
- "Innovation plan: I have to strategically develop digital significant learning environments that breed and model innovation to bring a culture shift among educators and learners in my educational corner of the world."
- "Because of the ownership that ePortfolios provide, every piece of work was filtered through the lens of my current experiences in the educational world, and gave me the chance to publish a variety of works that I expect to drive innovation and change."
- "I've learned that part of planning entails researching and learning from others, locally and globally. We should look at their implementation process to find out what worked, what could have been done better and how to apply the lessons learned."
- "Just as our professors were giving us freedom to show our understanding, I had to give myself freedom to think outside the box of my own creativity to grow….but through these courses, I have come to develop a deeper understanding of my constructivist philosophy."

Most of the comments for voice, metacognition, and reflection came from the Capstone course post because this assignment was designed to encourage learners to reflect and think back to their learning journey in the program. Finally, it was important for students to have professors model what they were expected to do, so the students could learn to do this within their own organizational settings.

Discussion

The survey and narrative discussion data results confirm that learner choice, ownership in learning, and learner voice positively influenced learning and the learning environment. The findings suggest that when learners are given choice and the ability to develop their voice as a manifestation of these choices, learners become vested in the experience and take ownership of the learning. Further, learners acknowledged that metacognitive practices built into the program helped them realize their learning was deepened, improved their learning experience, and helped them take ownership of their learning at different stages in the programs. The reasons are variable and may hinge upon the point at which students make genuine choices and recognize they have a voice in the learning. Whether learners recognize and embrace one or more elements at a time which consequently might lead to embracing another, has yet to be determined.

This study also revealed that a constructivist-designed, learner-centered pedagogy does not come without its challenges. Learners in all course blocks, ranging from the beginning of the program to the Capstone, identified challenges with making choices that would impact their learning experience. Learners reported feeling discomfort with taking ownership of their learning

and uneasiness making choices that would affect their organization. However, students noted that making choices and developing ownership of their learning allowed them to be in control of their learning and empowered them as learners. It could be argued that until learners embrace their own choices and take ownership of their learning, they will continue to struggle with decisions that may impact their lives in a genuine way. However, if the COVA learning approach is modeled carefully within a significant learning environment in any course of study, students could benefit greatly from learner choice, ownership in learning, and learner voice. Doing so allows learners to experiment, learn, grow, and making meaningful connections with the learning and their own ideas (constructivism).

Some learners acknowledged that control and ownership promoted self-directed learning. When given choice, ownership, and voice through authentic learning opportunities, learners had to figure out how to effectively implement their authentic innovation plans in their organizations, which posed authentic challenges. Through metacognitive thinking, reflection, and peer confirmation of those choices, learners acquired the ability to lead organizational change. Many students found that the constructivist learning environment was vital for them to grow and learn their voice as they connected with others and shared the progress of their plans. Opportunities for students to consistently synthesize their experiences and truly reflect on their decisions and action plans further allowed them to take ownership of the learning. Learners indicated that while having freedom to learn and be inquisitive was initially difficult to embrace, once they were accustomed to their feelings about their learning experiences, they met challenges with an attitude of inspiration.

Many students reflected on their familiarity and comfort with the traditional factory models of learning, where learning occurs through recipe and regurgitation. Learners discussed how this traditional focus may hinder the learners' ability to make choices that directly affect their learning experience; this includes taking ownership of learning, and developing their own voice in the learning environment. Finally, we suggest that there is little room for metacognitive skills to grow if learners are expected to replicate content exactly as they are taught because there are no authentic opportunities for students to apply their learning. Therefore, based on the literature review and the findings of this study, we share the following themes that are important considerations for new courses and programs:

- Choice and ownership of learning positively influenced the learner's experience.
- Voice is a manifestation of choice in learning and positively influenced the learning experience.

- Metacognitive practices and opportunities for reflection assisted learners' as they developed their voice.

Choice, ownership, and voice cannot exist within a program that is not consistently interconnected. Courses must complement each other on a programmatic level and should include authentic experiences of our learners. From our research, we can confirm that learner choice is important and necessary for learners to take ownership of their learning. Through choice and ownership, voice is manifested. Perhaps one of the most important findings is that these elements should not exist without one another, nor can they exist in an ill-structured environment that is too open-ended; they must be embedded carefully within a significant learning environment that embraces authentic learning opportunities.

Limitations

One limitation of this study was that all the participants came from one M. Ed. degree program. Obtaining data from one program may not fully represent the viewpoints of the influence of the COVA learning approach as it applies to other M. Ed. level students. In reference to course blocks, respondents spanned six courses across the program, so the level of experience of those respondents varied. Some were in the first couple of courses in the program, others were in the middle of the program, and some were towards the end of the program or in their final Capstone course. To gain a comprehensive viewpoint, the team surveyed participants throughout the program rather than in one course block only. A separate study addressed perceptions of learner choice, ownership, and voice through authentic learning and categorized responses by course block.

Additional limitations lie in the findings because some of the students may have spoken favorably about choice, ownership, and voice because they are currently in a program that utilizes the COVA learning approach; however, there is no reason to believe this occurred because there were also many examples of students lamenting the challenges of this approach. More studies that involve sampling of students in other courses or programs might strengthen the findings of this study. Follow up questions and interviews would further allow the team to analyze choice, ownership, and voice to gain a more in-depth view of the learners' perceptions.

Future Research Opportunities

Since learners are given freedom to control many aspects of their learning opportunities, the team might investigate how self-efficacy is affected by the

attributes of choice, ownership, and voice in learning and the learning environment. Bandura's (1977) notion that perceived self-efficacy leads to greater changes in behavior is a potential research avenue that is worth exploring. Similarly, the link between self-efficacy and ownership of learning should be explored.

Further research should consider some of the perceived cultural differences in choice, ownership, and voice and how this approach could benefit students from cultures other than North American. Buchem et al. (2014) raised the point that the type of control and ownership given to the learner should be further researched. Degrees of choice, ownership, and voice within cultural contexts could further support or challenge the findings of this study that could reveal additional avenues of thinking.

Rodgers (2006) described that student feedback would help make decisions with our students about learning and what is important to them rather than making decisions for them. Feedback from students would be helpful in determining the impact or effects of choice, ownership, and voice with students that come from a more rigid and disciplined academic approach, as opposed to the DLL program.

Additional research could survey faculty members to identify models of academic motivation that can be used to design instruction for meaningful learning and engaging students. Findings from this research could help us improve our learning approach, as specific models may highlight or address areas faculty members and students identify as important to learning.

Finally, after further analysis of the findings, varying viewpoints and experiences with learner choice, ownership of learning, and learning voice in the program emerging from participants in different course blocks would be a logical next step for this study and will be addressed in a future study.

Conclusion

The purpose of this study was to examine student perceptions of the influence of learner choice, ownership in learning, and learner voice on learning and the learning environment. We have found that there is a trajectory of personal value associated with choice, ownership, and voice, but we propose that these elements must be nested within an authentic and significant learning environment. While this method of learning might seem unconventional to some, personal and meaningful learning experiences can be effective and lead to deeper learning because they challenge existing ideas (Dirkx, Mezirow, & Cranton, 2006). With the ebb and flow of teaching and learning, it is important that we consider our students' learning needs first and fixate those needs at the core of our instruction. In

fact, we argue that for choice, ownership, and voice to effectively work, each element must be embedded programmatically with integrity and fidelity through authentic learning opportunities.

Our investigation has also confirmed Buchem, Tur, and Hölterhof's (2014) notion that perceived ownership and control is an indicator of whether learners engage in learning and the learning environment. When students are engaged in learning, they are making choices, developing ownership and agency, and using metacognitive strategies to build their identity as learners. Learner voice and reflection through iterative processes that give them opportunities to make mistakes and fail forward gives learners the sense of control and supports the shift in learning that is needed. Therefore, a carefully crafted learning environment will heed Bandura's (1977) claim that learners' belief systems about their own abilities will likely affect whether they will be able to adapt and learn in any given situation; thus, a learner's perceived success can contribute to self-efficacious beliefs about progress and achievement. If learners measure their progress and achievement by how accurately they can regurgitate information, they will continue to memorize content only. If learners are given choices in learning, opportunities to engage through ownership of those choices, and a voice that is powerful in supporting their choices, they will not only learn the content, but they will cultivate intellectual, social, and affective skills that are fundamental to human development. Our core proposition that emphasizes learner choice, ownership of learning, and learner voice through authentic learning opportunities has a positive influence on learning and the learning environment.

Given the findings of this study, those wishing to investigate elements of the COVA learning approach might consider the following questions. Considering these questions could initiate the process of developing a new culture of learning that gives learners an opportunity to experience learner choice, ownership in learning, and learner voice that has the potential to be a driving force for change in teaching and learning pedagogy.

1. Are there opportunities in my course and program for students to make personalized and authentic choices that influence their learning experience?
2. To what degree do students take ownership of the learning if they are given choices in their learning and the learning environment? Do students actually take ownership of learning if they are referred to a prescriptive rubric or checklist every time they must complete an assignment?

3. Is student voice in learning important for students to develop metacognitive skills?
4. Can one or all elements of choice, ownership, and voice truly exist if one or more element is missing?

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