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ABSTRACT

Faculty, instructors, and institutional leaders are increasingly interested in integrating experiential learning in higher education. However, the remains a limited understanding of their integration in practice. Through a narrative approach this research explores an instructor's views on the development of an experiential learning course over time and themes in their decision-making. An AI is used to extract themes from the narrative which include: experiential learning and course design, agile methodology, challenges of scaling, client engagement, evaluation and assessment, and learning from experience. Future work and research directions are discussed.

Keywords

Experiential Learning, Business Analytics, Course Design, Narrative Analysis, Agile Learning

INTRODUCTION

Experiential learning is valued in information systems and business analytics for its potential to enhance learner outcomes. It is believed that by providing learners with practical experiences they will be more competitive in the post-graduation job market. The ability to acquire gainful employment is among the criteria learners use in their decisions to pursue and complete their post-secondary education. Post-covid, higher education institutions are increasingly facing challenges with recovering enrollment numbers and competition from non-institutional training and certificate programs (Sutton, 2024). It is therefore important that institutions create novel learning environments that build successful learner outcomes.

Experiential learning can provide several benefits to enhance learner outcomes. By utilizing their skills in practical settings learners can improve their technical skills while gaining a higher understanding of relevant material (Gittings et al., 2020). These experiences can prepare learners for employment by allowing them to integrate a variety of skills that enhance their critical thinking and develop practical insights (Gavillet, R., 2018). These and other benefits of experiential learning can provide advantages to learners and, potentially, as a result, the institutions they attend.

However, integrating experiential learning into higher education course activities can present several challenges. Among these are challenges related to the design and management of courses that integrate experiential learning. In business and information systems courses, experiential learning projects often pair teams of students with client organizations for the completion of specific projects or tasks (Kosnik, Tingle, Blanton, 2013). Designing experiential learning courses in these environments requires balancing curriculum objectives with activity and stakeholder requirements while ensuring learner outcomes.

These challenges can require a significant amount of effort on the part of faculty. However, this can be challenging as faculty may not have the training, expertise, or experience to integrate these types of experiential learning activities in their coursework (Dean, Wright, and Foray, 2020). Adding to this problem is that there are few guidelines or common practices for experiential learning.

Dean, Wright, and Foray (2020) suggest that the lack of guidelines in a business environment that may break from expected norms and engage learner emotions presents a moral challenge. To resolve this and ensure the safe-guarding of learner interests they urge the development of an experiential-teaching community of practice. Among their recommendations for the creation of this practice in business is the development of practical understanding in the field. They discuss Brown and Duguid's (1991) example of sharing practitioner knowledge through storytelling to develop a unified view that could define the practice. As to the insight needed from the community to develop this understanding they write:

"Within practical understanding, we have limited collective knowledge of what is actually happening in experiential teaching and how educators are making sense of their own teaching praxis.."

Based on these recommendations this research seeks to contribute to the understandings by sharing experiences gained through the development of an experiential learning course in business analytics. Specifically, this research will use a narrative approach to describe the development of the course and the teaching praxis in which it is realized.

BACKGROUND

The theoretical foundations for experiential learning were presented by Kolb in 1984. Kolb's model merged understandings from learning models developed by Dewey, Lewin and Piaget (Kolb, 1984). Merging these understandings Kolb presented a cyclic description of experience in the learning process based on concrete experience, reflective observation, abstract conceptualization and active experimentation.

The realization of experiential learning can take different forms. Radović, Hummel, & Vermeulen (2021) discuss various methods used in teaching that are seen in various higher education domains. These include fieldwork, internships, practicums, service learning, serious games, simulations, case studies, apprenticeships, guided participation, and peripheral participation. In management information systems and business domains experiential learning activities often follow a constructivist pedagogy and tend to be project-based (Shahanaz, 2018).

METHODOLOGY

This study is conducted using a narrative research approach (Squire et. al, 2014). Narrative research is used in studies of education practice to examine human experiences in relation to social contexts (Moen, 2006). By using a story telling approach narrative research brings communication elements together that can aid in the understandings sought by Dean, Wright and Foray (2020).

In conducting narrative research, it is important to consider the epistemological approach, selection of analytical model, construction of data, narratives to analyze, the narrative analysis and how the narrative will be communicated (Squire et. Al, 2014). This research will use a naturalist approach in which the narrative is viewed as the resource. A content-based approach is used for descriptions of practice which are obtained from observations made by the study's primary author and course designer. The narratives focus will be on the development and evolution of a graduate senior experiential learning capstone course. The analysis focus will be on derived themes. To limit bias in the selection of themes, the themes were derived using ChatGPT v3.5. and examined for AI bias and error. The narrative will be reflective and communicated as a first-person account.

STUDY CONTEXT

The study narrative takes place at an association to advance collegiate schools of business (AACSB) certified college of business in the midwestern USA. The latest released enrollment numbers for the fall of 2022 showed approximately 4,427 students enrolled. Out of this approximately 2,593 were full time and 1,834 were part time. 35% of the student population identifies as African American, 29% identify as White, 15% as Hispanic and 2% Asian. 64% are women and 12% are US non-residents. Between 2021 and 2022, 54% of degree seeking undergraduate students received US Pell grant financial assistance.

In 2020 the college began offering a graduate program in business analytics. Courses are offered on-campus, online and in hybrid formats. In their final year, learners are expected to complete a business analytics capstone course where they demonstrate their accumulated knowledge. The studies narrative focuses on descriptions between the fall of 2021 and the fall of 2022.

STUDY NARRATIVE

During the fall of 2021 I began teaching the senior capstone course. One of the preliminary challenges I faced was coming up with a structure for the course. Having had a variety of work experiences in development and management I understood the value of experience. As a learner I took courses that used project-based learning which gave me some familiarity with them. Understanding their value, I sought to replicate the experiences I received from the project-based approach I was familiar with.

During my experiences I was introduced to the concept of Agile as a philosophy and not just a method of practice. The ideas presented in the Agile manifesto resonated with me and my ideas of the way to help learners progress. Based on these values I would eventually re-imagine the course and organize it using methods and techniques I learned in my experiences.

To begin, I had to find a project for my course and ensure learners would meet their ELO objectives. I decided to simulate a business by playing the role of client. The learners would form a team that would perform analytics to help me investigate a research problem tied to COVID-19 misinformation. The project was selected based on the opportunity for research and availability of data. During the course we had regular weekly meetings where we discussed the project direction and shared updates. Learners were evaluated on the results of their project work and deliverables, with a final presentation at the end. But we faced challenges and uncertainties that made me cautious about future directions.

Among them was whether the design could scale. The hybrid course worked with two students but how would that scale with more? Meeting with two students outside of class-time was not a challenge but what happens with more? The project was also a new experience for me. So, in addition to guiding the learners I would have to learn myself.

By Spring 2022 we doubled our size. As I still had uncertainty about the approach, I decided we would continue to work on the COVID-19 project. Our client goal would be for more complex state of the art models.

With the increase in learners, I integrated new practices to keep the team on track. This was based on concerns I developed about learner engagement. I introduced a hybrid approach that used sprint cycles with weekly demos to monitor progress. I also setup a group instant messenger for communication. Management was up to the team. But I frequently intervened to assist. Assistance varied between instruction on advanced algorithms, providing direction, to assisting with interpersonal issues. Meetings were organized based on needs and were long and inconsistent.

I evaluated learners using more traditional methods but faced challenges in evaluating both team and individual performance. As there were different members that contributed at varying levels with more autonomy, I needed a new evaluation approach. I integrated a self-reporting mechanism by having learners keep a weekly log of their activities. This would help me see their contributions and evaluate their analysis of the work.

This worked but I had concerns for the Fall 2022 semester. Our enrollment doubled again, and I now worked with ten learners. I also found a project with a local community group. Although the project did not begin with a concrete direction, the group had an interest in recommendations for businesses in a city's commercial corridor. I was able to get the project through outreach with personal associates. Although I spoke with other potential clients, the group was willing to commit because of our previous relationship.

I adjusted the structure of the course based on the new development and lessons learned previously. The project's uncertainty and potential for changing direction would fit well in an Agile environment. With more learners in the course and the need to monitor their progress, I introduced the use of Scrum to organize the teams. I would serve as the Scrum master and the client would serve as the product owner. We would integrate Scrum rituals, run on a weekly sprint cycle and use an online kanban board for sprint and product backlogs.

For the project's success I would have to build the teams with flexibility in mind. Although, our learners had similar training through the program, real world projects often rely on other skills. Therefore, I would use learner bios for team assignment with the goals of creating diverse cross-functional teams to ensure team flexibility and adaptability.

I would also revise the evaluation criteria to integrate client and team feedback. The client would meet every two weeks with the learners for their product demo but would only provide verbal feedback. I decided I would use a survey at the end of the course to allow the client, myself, and learners to evaluate the project at the end during presentations. I would also supply learners a survey to evaluate their teammates.

DISCUSSON

The study narrative discusses the structure of an experiential course and decisions made about the course design. Based on the narrative several themes have been identified. These include experiential learning and course design, agile methodology, challenges of scaling, client engagement, evaluation and assessment, and learning from experience.

The literature discusses challenges with the lack of standard approaches and instructor experience in designing experiential learning courses (Dean, Wright, and Foray, 2020). The narrative discusses a similar challenge. The course's design was based on experiences taking courses, not instruction or previous expertise on their delivery. The course design also evolved based on new experiences. Each semester, new lessons would be learned, and new challenges faced would inform how the course evolved. Among the chief challenges faced were scaling issues.

As the program grew both in the number of learners but also with the addition of clients and the need to ensure objectives were met additional changes had to be integrated. This provided different requirements for the instructor. In the first semester the client served more as an advisor, then a coach, but then ended up taking on more of a manager role as the team size grew. One of the approaches the instructor took towards addressing the challenges faced was the adoption of Agile methodologies to manage learner teams and client projects. While the use of Agile in courses is not new. The novelty discussed in the narrative is on how the use of Agile methods evolved over semesters to address specific challenges as opposed to being part of an experimental design.

CONCLUSION

This study provides insight into experiential learning practice and educator views of their praxis. Among the lessons from the narrative are how experiences are not only being used to teach experiential courses but aiding in their design. Since 2022 the course has grown to thirty-four learners who are working on four stakeholder projects including three provided by area companies. Future papers will describe the course evolution and build upon the narrative to include considerations of educator goals and outcomes, assessment processes, and the links between activities, experiences and outcomes.

REFERENCES

1. Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization science*, 2(1), 40-57.
2. Dean, K. L., Wright, S., & Forray, J. M. (2020). Experiential learning and the moral duty of business schools. *Academy of Management Learning & Education*, 19(4), 569-583.
3. Gavillet, R. (2018). Experiential Learning and Its Impact on College Students. *Texas Education Review*, *7*(1), 140-149.
4. Gittings, L., Taplin, R., & Kerr, R. (2020). Experiential learning activities in university accounting education: A systematic literature review. *Journal of accounting education*, 52, 10068.
5. Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development. New Jersey: Prentice-Hall.
6. Kosnik, R. D., Tingle, J. K., & Blanton III, E. L. (2013). Transformational learning in business education: The pivotal role of experiential learning projects. *American Journal of Business Education (AJBE*), 6(6), 613-630.
7. Moen, T. (2006). Reflections on the narrative research approach. *International Journal of Qualitative Methods*, *5*(4), 56-69.
8. Radović, S., Hummel, H. G., & Vermeulen, M. (2021). The challenge of designing 'more' experiential learning in higher education programs in the field of teacher education: A systematic review study. *International Journal of Lifelong Education*, *40*(5-6), 545-560.
9. Shahanaz, D. (2018). Meta-Analysis on experiential learning in management education. *Management Today*, *8*(1), 95-102.
10. Squire, C., Andrews, M., Davis, M., Esin, C., Harrison, B., Hydén, L. C., & Hydén, M. (2014). *What is narrative research?* (p. 144). Bloomsbury Academic.
11. Sutton, H. (2024). Student enrollment up for the first time since pandemic—but results are mixed. *Enrollment Management Report*, *27*(10), 1-9.