

Title: Finding Your North Star in Active Learning Environments: A Framework to Support Experience Co-creation with Students and Stakeholders

Abstract: This paper aims to explore if quadruple helix inspired active learning experiences within module design can be directed toward better student learning outcomes. In education, teaching and learning, active learning (AL) provides a suitable framing to allow for a range of influences to be managed and supported toward the co-creation of more inspiring experiences. A case is made for taking time to clarify the approach and its benefits, as well as the purpose, objectives, landscape, activities and resources applied supporting student engagement. Based on early insights from the data supplied through email interviews with students having participated in a module designed and inspired through a QHM AL approach, this paper proposes a conceptual framework as a guiding 'north star' toward facilitating co-creation and better engagement at this student and stakeholder nexus. Examples of data from the student experience are provided as signposts to assist in visualising the strength of using such a framework.

Keywords: Quadruple Helix Model, QHM, Co-creation, Active learning, Module Design.

Introduction:

The importance of creating stimulating and effective learning environments has become an imperative for management educators aiming to engage learners in an increasingly competitive educational market (Gosling and Mintzberg, 2006). In seeking to develop greater student engagement at this educational interface (Kahu, 2018), much experimentation has been applied to activating better learning outcomes through various pedagogical approaches (Børte et al., 2020). One such area which has gained significant focus is that of the application of active learning (AL) in lectures, classrooms and through online mediums of education (Khan et al., 2017). Adopting a constructivist perspective and regardless of learning platform, the aim of AL is to stimulate student engagement, develop deeper knowledge of topic content and to do so through processes that challenge students to immerse and experience, in varying degrees, a given topic (Zepke and Leach, 2010).

Theoretical clarity on what AL is has been challenging to specify given that terms are sometime used interchangeably and thus can often lack clear definition (Savery 2006). For the purposes of this study, AL will be considered in five distinct pedagogical frames as "Problem-based; Discovery-based; Inquiry-based; Project-based; and Case-based learning" (Cattaneo, 2017, p.145). The subject of this study leveraged AL as approach and was further developed by embedding aspects of the successful innovation approach of the quadruple helix model (QHM) as a further lens of analysis (Carayannis and Campbell, 2009).

QHM has been applied to successfully engage stakeholders in research processes at the nexus of policy, industry, society and academia toward developing relationships through open innovation (Miller et al., 2018). Adapting these key stimuli and perspectives and embedding these stakeholders and/or aspects of their perspectives as experience

components within a post graduate module experience, a unique module design was applied. Applying QHM as a framing in this instance is argued to bring opportunity for further co-creation of knowledge at the educational interface (Kahu et al., 2019). The experience of students and stakeholders at this interface can be considered important in terms of the cognitive, conative and affective realms of engagement and as such an important area to be addressed in this study (Kahu, 2013).

Aim/Research Question: It is the aim of this paper to explore if QHM inspired AL experiences facilitated within module design can be directed toward better student learning outcomes at the educational interface. This is understood through the enablers and barriers toward engaging in AL as a student and to develop a conceptual framework for better facilitating such engagement.

Design/methodology/approach:

An email interview technique was applied (Bowden et al., 2015) to gather data from participants of an MSc module in Digital Marketing in relation to their active learning experiences in a quadruple helix model inspired module design (Clarke et al, 2015). The data presented is in support of an emerging framework to support AL experience delivery that is inspired by the QHM module design.

Findings:

Early insights highlight the importance of signposting students toward the benefits of the AL approach in the context of a QHM inspired module design. As such 'purpose' is a critical building block toward engagement and learning as presented by 'Mark':

"...I felt that it was a very worthwhile experience and it was excellent to use real data, and objectively try to solve real life problems, rather than hypothetical ones.

Beyond the importance of framing the overall purpose of adopting this approach, it is clear that the 'objectives' of each particular AL approach is also presented as a clarifying step in the practice of engaging students toward better outcomes as illustrated in the comment of Fangfang:

"Yes, I think it is very important that academic practice is part of what constitutes active learning. Because these ideas help us find the direction of our research, help us find faster ways to do it."

The learning landscape constitutes the critical theory to be related and is important to outline in AL experiences as highlighted by Mark who suggests

"as a novice to the subject, I found the general delivery of the module itself ideal and of great benefit. I learn best in a classroom situation and when I can relate the theory to real life use or practice."

The landscape can then be explored more granularly in terms of 'activities'. As Elzebieta highlights these can help where:

“...applying more practice and personal experiences to learn alongside theory would help the students...”

Beyond the purpose, objectives, landscape and activities, identifying the key resources needed to deliver the experience are critical as shared by Paul who suggests:

“...the most important part of the module (in my opinion) was applying the frameworks within the Tourism NI case study. Application facilitated further learning and discussion between the group as to what strategies and tools would be best suited to utilise within the digital strategy. “

Differentiating this approach from others in AL is the inter-relation with QHM. Mark highlighted the key benefit of this approach:

“I found the development of an app for a local real-world application helped to bring the subject into reality, demonstrating that the subject has an influence over society, as well as being influenced by society, rather than the subject remaining academic theory.”

Finally, student engagement is critical to consider in terms of approaches to embed dialogue and interchange as Elzbieta highlighted in her interview:

“Having a wider insight from your peers could help other students to understand things that they have not yet experience, such as, issues that certain professionals in certain industry or job role had to face (because of policies), or opportunities that there are in a specific industry because of the certain policies that other students might have not thought about before.”

[The POLARIS Acronym: Active Learning's North Star](#)

POLARIS (the North Star) provides a suitable acronym to frame the process of aligning the critical steps in the delivery of QHM inspired AL experiences. Assuring the design and delivery of a module experience is aligned through POLARIS ensures that the central experience (at the cognitive, conative and affective level) is given the best basis for delivery and ongoing iteration.

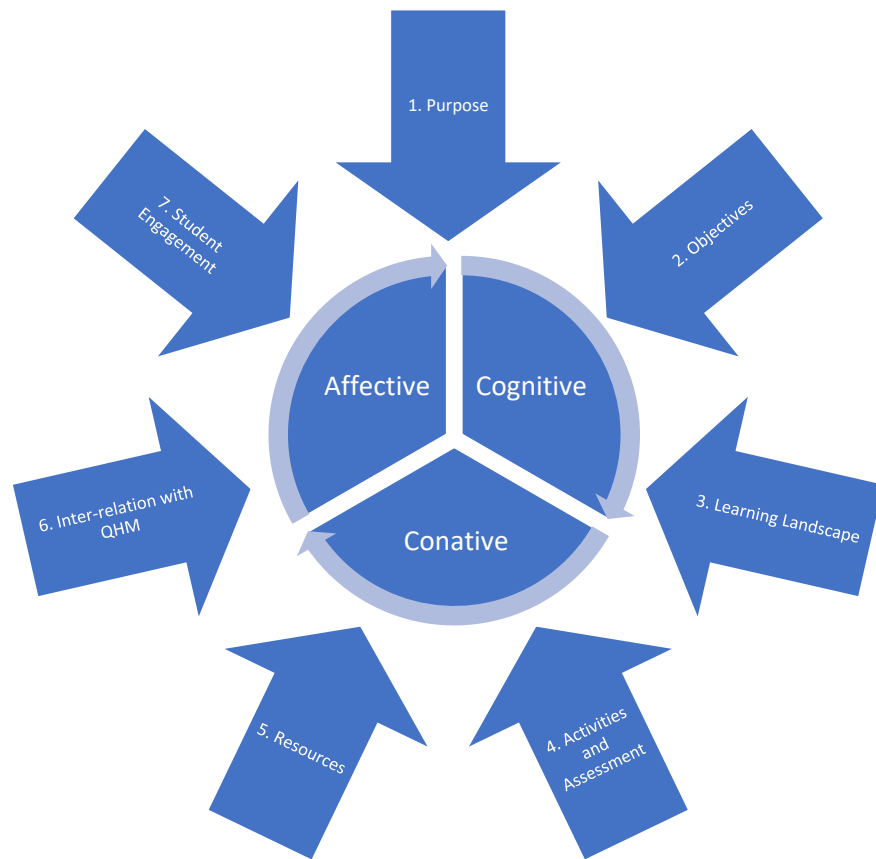


Figure 1. The POLARIS Acronym: QHM Inspired Active Learning Experience Framework

Research limitations/implications: The most notable limitations of the study include the small sample size (8) and the focus on a single module in a single business school setting. Yet, the POLARIS model provides a useful framework for management educators to develop and deploy more impactful AL experiences. Practically POLARIS provides an important framing through which more consideration can be given to the key components of the experience at the heart of a QHM inspired AL module design. Through integration of QHM in AL, the approach also ensures that the benefits of a multi-stakeholder approach to open innovation in class-room experiences can develop deeper engagement and deliver better aligned experiences supporting societal challenges.

Originality/Value: The POLARIS framework contributes an innovative approach to module design and delivery and provides an important steppingstone for educators wishing to explore the benefits of QHM inspired AL experiences at course or module level.

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