Developing Learning Spaces and Andragogues' Roles: The C-Star Framework of Large Class Engagement

Rouxelle de Villiers

Auckland University of Technology, New Zealand

Jo-Anna Scott-Kennel

University of Waikato, New Zealand

Marina Kirstein

University of Pretoria, South Africa

Abstract. As class sizes grow, a shift in mind-set from teacher to enabler through development of learning spaces is essential to large class engagement at tertiary level. Expanding upon on previous work in the areas of engagement and management education, the paper develops the C-Star Framework based on five learning spaces – clusters, communication, challenge, co-creation and collaboration – that enable learning through engagement in large class contexts, in particular for diverse, international cohorts. Drawing on extant research, andragogical experience, and shared insight from business educators and scholars, particularly those involved in international business, the paper explains how the role of the large class facilitator (LCF) - as co-ordinator, commentator, coach, catalyst and co-creator – is critical to development of learning spaces. Key attributes and actions, and detailed examples of activities and innovative assessment used by the authors to effectuate these learning spaces are discussed. Key insights from the paper are that modern andragogy needs to shift teaching and learning paradigms toward principles of self- and peer-management, shared responsibility to co-create content and higher order learning through interactive experiential learning, allowing learners to embrace cognitive apprenticeship at their own pace and in their own preferred style. The paper offers an agenda for future andragogy research.

Keywords: andragogy, collaboration, co-creation, enablers, engagement, higher order learning, large classes, online learning, teaching methods.

1. Introduction

Roser and Ortiz-Ospina (2018) predict a rise in global education from 615.18 million people with post-secondary education in 2010 to 841.77 million people by 2020, and more than one billion by 2030. This global massification of education, the term used to describe the rapid increase in student enrolment recorded towards

the end of the twentieth century (Scott 1995), is clearly a trend already affecting tertiary education institutions (TEI) and the andragogues[1] that teach within them (Mulryan-Kyne 2010, p. 175). A direct result of such massification is an increase in class sizes (Mohamedbhai 2008). Class sizes continue to grow without "proportionate increase in human, financial, and physical support from public sources in the higher education sector globally" (Hornsby & Osman 2014, p. 712). Simultaneously, the tertiary sector is facing changes in how and where students learn and funding policies linked to completion rates; as well growing internationalization of education, which in turns brings greater diversity and demands new approaches to ensure quality learning in larger classes (Ching & Da Silva 2017). Further, recent changes in teaching resulting from the COVID-19 pandemic (C-19) and campus lock-downs (Pokhrel & Chhetri 2021; Siew Chein, Jie & Koo 2021), highlight the radical shift in demand towards anywhere-anytime teaching-learning strategies. These changes herald even higher levels of complexity, alongside the need to ensure motivational levels and engagement in both synchronized and unsynchronized learning environments (Balasundran, Nallaluthan, Yankteshery, Harun, Lim, & Gopal 2021).

A growing number of publications (e.g. Akalu 2016; Ching & Da Silva 2017; Knight 2008; Lipinge 2018; Mohamedbhai 2014) and the authors' own experiences at three International Business Schools over three continents, suggest that as in-personal classes and online cohorts at tertiary level increase in size the phenomenon of large classes has implications for educators of business students worldwide. Large is a relative concept, and this paper defines large classes not by the number of students *per se*, but rather by the impact of the number of participants on the additional complexity involved to (i) personalize; (ii) interact and communicate; and (iii) engage to ensure a quality learning experience for each individual student (Hornsby, Osman, & De Matos Ala 2013, p. 8). Underlying this complexity is the environmental context of large tertiary-level classes, namely demographic, psychographic, cultural and digital changes that are not only rapidly transforming the nature of cohorts (Korkofingas & Macri 2019), but also the balance between enjoyment and anxiety faced by individual learners themselves. Complexity and context impact engagement, whether behaviourally through involvement (Büchele 2021; Cheruvalath 2017; Stevens-Smith 2016) in academic activities (online, in-person in class or tutorials); conatively through attitudes, interest and values, cognitively through forms of intellectual engagement or emotionally through forms of emotional processing (Appleton *et al.* 2006; Lester 2013; Moon 2013). Andragogues – as facilitators/teachers of adult classes – require a framework to address these changes effectively, and even

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1.   This paper refers to andragogy (the art and science of teaching adults) and andragogues (facilitators in the learning process when adults are the learners) in order to remove the connotation of conventional approaches to teaching and the concomitant negative perceptions around teacher-centred large classes and traditional transmission based ("talk at", or worse, "talk down" to learners) approaches.

use them to advantage. We propose that andragogues will need to adapt "learning spaces" to engage larger and more internationally diverse cohorts over multiple channels (including in-class and online forums).

Bligh (2019, p. 5) suggests that our understanding of learning spaces to accommodate learner styles, multiple cultures and stakeholders' expectations remains "incomplete, uncertain [and] …deeply contextualised" (p. 5), and Temple (2008) stresses further research to illuminate adult learning spaces, and the connection between space design and institutional effectiveness. To this end, this paper seeks to explore the link between engagement and different learning spaces in large, diverse classes at tertiary level. Prior models in andragogoy conceptualize engagement in three to six components (e.g., Appleton *et al.* 2006; Büchele 2021; Kahu & Nelson 2018; Lester 2013; Zhoc *et al.* 2019): namely academic; social; physical; cognitive; conative and; affective engagement. Scholars's definitions do not all correlate, however. Thus, this study adopts four dimensions of *engagment,* i.e. behavioral (attendence, active class/online participation, extracurricular participation); cognitive (various forms of informational processing), affective (forms of emotional and inter-personal engagement, including a sense of belonging to the TEI) and conative (forms of interest, dedication and self-drive).

Learning spaces are defined as the physical and virtual spaces within which the learning facilitator (lecturer; teacher; educator; trainer) enables learners to develop and grow, using a variety of tools (traditional tools such as readings, cases, textbooks and presentations/lectures and new tools such as online multi-media, mobile phone applications; social media; simulations, gamification, web-searches) and a variety of formats (in-class lectures; studio-based tutorials; online group discussions; journals) within a variety of mediums (traditional, blended and online learning) and including both hard (technical) and soft (social, EQ and pervasive) competence development. Here the notion of space also encompasses social space (individual, group or class interaction within certain cultural contexts), physical place i.e., (classroom, fieldtrips) and virtual space (online and distance learning).

Previous research links quality in-class learning experiences and engagement to several positive outcomes, like improved performance, satisfaction, and higher completion rates and student retention beyond undergraduate studies (Billionniere & Rahman 2020; Kirstein & Kunz 2015; Schertzer & Schertzer 2004; Sneyers & De Witte 2017). Yet, valuable insights into development spaces for learning and engagement have focussed on course design, learning objectives and learning outcomes (LOs) whilst rather neglecting *learning spaces*. This paper proposes that learning spaces form the third leg of an effective learning tripartite[2] which facilitates learning experience efficacy. Drawing on the extant literature

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2. Tripartite of learning consists of learner, large class facilitator (LCF) and learning space components (e.g. peers, guest speakers, industry members or other learning support specialists).

and our own and peers' extensive experience with learning approaches, our paper makes two assertions. First, to achieve large class engagement and the requisite tertiary education evolution, requires a shift in andragogue mind-set to enhance the student experience over all channels – and the entire student journey is the departure point. Second, andragogues need to consider learning space design and delivery into lesson planning and preparation to achieve effective student experience and learning outcome(s) design. This paper addresses calls for tools (Billionniere & Rahman 2020; Mulryan-Kyne 2010) to activate effective learning spaces of andragogues wishing to enhance large class engagement.

Our paper deconstructs the largely cognitive development space concepts that dominate the current literature into more practical guidance for LCFs, using an auto-ethnographic approach based on andragogues' insights on student experience, feedback from students, and the authors' experiences in design and delivery of courses specifically oriented toward engagement in learning spaces in international contexts. The resulting "C-Star" framework presents five interdependent *learning spaces* namely; clusters, communication, challenge, co-creation and collaboration, and proposes the role of the large class facilitator (LCF) shifts from teacher to enabler – as coach, catalyst, commentator, co-ordinator and co-creator – within and between these spaces. Moving between theory and practice in andragogy, learning environments of large classes and real-life experiences and examples, cultural context and learner archetypes, the paper highlights the attributes, activities and actions associated with each learning space and how this affects engagement, with specific emphasis on LCF roles.

The paper contributes to theoretical discussions by suggesting that principles of self- and peer-management, shared responsibility through co-creation and collaboration and attaining higher order learning through interactive experiential engagement, fosters cognitive apprenticeship at the tertiary level. Cognitive apprenticeship refers to effective learning environments built on the four fundamental components of content, method, sequence and sociology (Berryman 1991; Dennen 2004; Oktaviyanthi & Dahlan 2018). Added to this is the cultural context of the class, and individual learner archetypes, both of which need not only be addressed but truly celebrated as part of the interdependent learning spaces in the framework. Thus, our contribution is to expand on theory relating to design of large class learning environments, specifically learning objectives and learning styles, by proposing a tri-foci model encompassing learning spaces. From a practice-oriented perspective, the framework and examples of tools and activities used to effectuate learning space activities and reinforce LCF roles, contribute to andragogues' ability to integrate engagement into pre-planning course design and in-class activities or virtual delivery, and provide proactive response to a rapidly changing environmental context.

The remainder of the paper focuses first on engagement as andragogue mind-set in an evolving environmental context characterised by larger classes combined with digital delivery, and shaped by learner archetypes and cultural context in