Student Teachers' Experiences with Classroom Engagement in Large Undergraduate Classes in Selected Public Universities in Uganda

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Abstract

The rapid growth in enrolment in undergraduate teacher training programmes calls for a pedagogical innovation geared towards effective participatory classroom instruction. The purpose of this mixed study was to explore classroom engagement experiences with large classes as lived by student teachers at the selected public universities in Uganda. The level of behavioural, cognitive, emotional and agentic engagement among student teachers was investigated, as well as their experiences with these domains. Consequently, data from hermeneutical phenomenological and cross-sectional survey design was triangulated. Proportionate random sampling was used to select 396 student teachers and purposive sampling was used to select nine focus groups from the selected public universities. Manifest content analysis was used to describe and infer meaning from participants' statements. According to the mean and standard deviation ratings, large classes performed unsatisfactorily in terms of overall classroom engagement (M=3.4, SD=0.9) and agentic engagement (M=2.7, SD=1.0). However, they

acknowledged being behaviourally, emotionally and cognitively engaged (M=3.6, SD=0.8; M=3.6, SD=0.9; M=3.8, SD=0.8). Focus group narratives revealed inadequate class support, incivility, social presence and interaction, passivity and discomfort experiences as key themes that influenced the participants' engagement levels. They felt less in control of their learning experiences and had limited opportunities to make decisions that affected their learning outcomes. Social and academic responsibilities like signing attendance sheets, taking notes and meeting with friends significantly maintained class attendance. It was recommended to improve the training of lecturers in effective engagement techniques for large undergraduate classes, and universities to invest resources in providing textbooks, reference materials and digital technologies to facilitate constructive learning and classroom participation.

Keywords: *Undergraduate; Student teacher; Classroom engagement.*

Introduction

A new problem for instructors in higher education is how to appropriately and successfully ensure students' participation during the teaching-learning process in the light of the larger courses that are being taught there (O'Flaherty & Phillips, 2015). According to Holmes (2015) and Groccia (2018), the depth and breadth of students' engagement define the quality of their learning experiences at higher education institutions. By the time they graduate, undergraduate students are expected to have proven their proficiency in the necessary areas. The increased demand for higher education, which has been estimated to have increased by 14% between 2000 and 2018 (NCES, 2020), along with budget cuts brought on by the aftermath of the global financial crisis that were unavoidable in the majority of countries, have led to the large classes (Coughlan, 2015). For instance, Harrison (2011) noted a 12% fall in funding across all sectors in the United Kingdom. According to Trounson (2013), the Australian federal government made AUD 2.8 billion budget cut for their universities. In this regard, the financial pressure prompted public universities to either shelve some programmes and/or embrace private education where numbers are seen as a possible remedy to the financial woes of underfunded public universities.

Across the globe at post-secondary institutions, enrolment was estimated to be 51,160,000 students in the 1980s. This figure climbed to 139,395,000 in the year 2006, and then increased again to 150.6 million in in 2007 (Arvanitakis, 2014; Altbach et al., 2019). In 2012, the Department of Education in the United States of America reported a registration of 20.6 million undergraduate students enrolled in tertiary institutions for a degree (Snyder & Dillow, 2012). Over the last 20 years, student numbers in Australia, including both domestic and international students, have doubled. By 2012, the ratio had reached 25% (Norton, 2013). In sub-Saharan Africa, enrolment at the tertiary level witnessed significant growth, increasing from 200,000

students in 1970 to over 4.5 million in 2008 – a more than 20-fold increase (UNESCO, 2010). In Uganda, the enrolment in higher education experienced an increase from 179,569 students (110,255 male; 86,135 female) in Financial Year 2011/12 to 198,066 students (111,831 male; 86,235 female) in Financial Year 2012/13 (Ssentamu, 2014). By the year 2019/20, the enrolment figure had further risen to 544,080 students, reflecting a growth rate of over 22% (UBOS, 2021). Out of this total, 489,760 were undergraduate students (NCHE, 2021). In terms of public universities, the enrolment number reached 218,780 students in the academic year 2019/2020, indicating a 33% increase over a four-year period (NCHE, 2020). Previous studies conducted by the National Council for Higher Education (2013) revealed that student enrolment grew by 14.2% in 2010/2011, while the number of staff increased by only 10.6%.

The data mentioned above can be explained by the extraordinary demand for higher education and the eventual increase in the number of private universities from 33 to 50 as of 2020 (NCHE, 2021). As a result, as demand goes up amidst financial woes, university managers deliberately admit big numbers of students, and use large lecture halls and technology to be able to break through. The high enrolment rates may therefore have an effect on class sizes and the efficacy of participation by students and lecturers in the classroom. The study acknowledges the conceptualisation of classroom engagement as operating on multiple levels – behavioural, emotional and cognitive (Christenson et al., 2012; Skinner et al., 2009) and agentic engagement (Reeve & Tseng, 2011). Thus, the level and student teacher experiences of classroom engagement in large undergraduate classes at Ugandan universities is explored across these four dimensions.

Behavioural engagement refers to how fully learners are involved or zealous about learning activities in respect to attention, persistence and effort (Skinner, Kindermann, & Furrer, 2008). Emotional engagement is defined as the presence of positive emotions during task involvement, such as interest, enthusiasm (Skinner et al., 2009). Cognitive engagement is described in terms of learners' self-directed, self-regulated and intentional approach to learning (Fredricks, Blumenfeld, & Paris, 2004), while agentic engagement means students' constructive contribution or participation in the flow of instruction they receive in terms of asking questions, and expressing preferences, wants and needs (Reeve, 2013). Therefore, the four sub-constructs of engagement are conceptualised by this study to be interconnected in a constructive teaching-learning process.

The constructivist theory of Vygotsky (1978), mentioned by Shabani et al. (2010), on which this study is based, considers social interaction to be a learning principle that underpins classroom participation. In the constructivist process, Vygotsky saw contact between children and adults as being essential to knowledge creation. According to Yasnitsky and Van der Veer (2015), Vygotsky defines the sweet spot in learning as the area between a student's ability to do a task on their own and their ability to complete the task with support and direction. This area is known as the "zone of proximal development" (ZPD).

ZPD claims that an individual is able to execute a certain number of tasks alone, while in collaboration as a first phase. The second phase emphasises the role of an adult/teacher/more competent person during the learning interactions with a child. The basic assumption is that adults and/or more advanced children directly or indirectly have a positive influence on the child (Gillen, 2000). The third phase emphases "properties of the learner", including notions of a learner's potential and/or readiness to learn. The idea is that individuals learn better when working together with others during joint collaboration, and it is through such collaborative endeavours with more skilled persons that learners learn and internalise new concepts, psychological tools and skills. Given that large undergraduate classes are common in Uganda, lecturers ought to utilise differentiated instruction, collaborative learning, scaffolding, feedback, peer tutoring, active learning strategies and technology to help students work within their ZPD and attain their learning objectives. In many universities, undergraduate student teachers attend core professional study (PS) lectures in large groups of more than a hundred students. Despite this noticeable growth, there is a lack of emphasis on the quality of learning experiences, particularly in public universities. Both students and lecturers face challenges in achieving effective classroom engagement, which can negatively impact the quality of learning outcomes. In order to address the challenges in achieving effective classroom engagement in the context of large undergraduate PS classes, the study aims to fill the gap by examining the level and experiences of classroom engagement, as well as possible insights.

Classroom engagement rides on a movement to support modern, progressive constructivist pedagogies and techniques that welcome a transition away from teacher-centred pedagogies and encourage active learning in the classroom. Knowing the levels and experiences of engagement that students have can therefore help instructors keep them interested in their lessons. The data utilised in the current study were gathered between April and May 2015 from students enrolled in three public universities in Uganda for a bachelor's degree in education during the academic years 2012/2013 (then in year three), 2013/2014 (in year two) and 2014/2015 (in year one). The paper is part of a bigger study and was guided by two research questions:

1. What is the level of student teachers' classroom engagement in the large undergraduate university classes?
2. What is the classroom engagement experience of undergraduate student teachers attending large classes?

Literature Review

Conceptual review of classroom engagement

The meaning and use of classroom engagement in the context of this study are derived from the scholarly definitions of the concept.

Trowler (2010) defines "engagement" in terms of its polar opposite. What are students if they are not engaged? Non-engaged students frequently miss class for no good reason, become

bored, turn in their assignments late, and miss class altogether. Classroom involvement was defined by Krause (2005) as "the time, energy, and resources students devote to activities designed to enhance learning at university and within a classroom setting". According to Taylor and Parsons (2011), student engagement is the interplay between the time, effort and other pertinent resources that students and their institutions commit in order to maximise the student learning experience, advancements and outcomes. Harper and Quaye (2009) define classroom engagement as participation or involvement with feelings, sense-making and activities. Feeling engaged but not acting could be considered a sort of dissociation; acting but without feeling involved is just participation or even obedience. Although Harper and Quaye's (2009) conceptualisation is older than some of those mentioned above, it nevertheless captures the notion of classroom engagement that was used in the current study.

Similar to the majority of research studies, classroom involvement is evaluated using four interconnected criteria: behaviour, emotion, cognition and agentic. The importance of behavioural engagement is acknowledged by scholars as active participation in academic work and ardent commitment to learning activities in terms of attention, persistence and effort (Skinner et al., 2009; Wang et al., 2011). According to Fredericks, Blumenfeld and Paris (2004), behavioural engagement is defined literally as good behaviour, effort, persistence, concentration and attention, contributing to class debates, and asking questions.

Emotional engagement has been conceptualised as positive feelings while performing academic tasks, the presence of positive emotions during task involvement, such as interest as evidenced in learners' affective reactions and willingness to identify themselves with school and classroom (Wang, Willet & Eccles, 2011; Skinner et al., 2009). Students who are engaged emotionally experience affective reactions such as interest, enjoyment, happiness or a sense of ownership of the entire learning experience as well as reduced boredom, sadness and anxiety (Fredricks, Blumenfeld & Paris, 2004).

Cognitive engagement has been conceptualised as mental investment in thinking and learning in classroom undertakings, and learners' self-regulated and intentional approach to learning (Wang et al., 2011; Fredrick et al., 2004). Cognitively engaged learners happen to attach value to their learning, would go the extra mile for the sake of their learning and would confront learning challenges with great fervour.

Agentic engagement is a fourth and newly proposed aspect of student engagement that denotes a student's constructive contribution into the flow of instruction they receive in terms of asking questions, and expressing preferences, wants and needs (Reeve, 2013). The aspects of agency capture students' proactive and intentional contributions to the flow of instruction in the classroom. Agentic engagement is exhibited when a student seeks to constructively influence instruction during the teaching-learning process. Similarly, it is evident when students are active rather than being passive in their own learning (Fredricks et al., 2019). Thus, agentic engagement pronounces the student's side in the collaborative model of learning by presenting classroom engagement to a complete entity.

Level of classroom engagement in large classes

Several scholars have explored and reported the opportunities and challenges brought about by the level of classroom engagement in large undergraduate classes. For example, higher levels of engagement were associated with higher academic achievement and lower levels of anxiety (Collie et al., 2017) were positively related with academic achievement, attendance and positive attitudes towards learning (Fredricks et al., 2004), were positively related to academic achievement, satisfaction and perceived learning outcomes (Yoo & Han, 2016), and were positively related to student motivation and interest in learning (Hossain et al., 2019).

Smith and Johnson (2019) questioned undergraduate students from a range of fields as part of a thorough examination of student involvement in big classrooms across several nations. They discovered that the amount of engagement varied depending on the teaching strategies used. The use of active learning techniques, such as group discussions, problem-solving exercises and hands-on activities, has been found to be particularly helpful in raising student engagement in large classroom settings. The study also highlighted the importance of teacher-student interaction and the incorporation of technologically enhanced learning settings as important elements in fostering better levels of classroom engagement. Similar to this, Brown et al. (2020) looked into how the classroom setting affected students' engagement in large classes. The results of their study showed that physical factors, such as seating arrangements and room layout, had a big impact on student learning. They proposed that the degree of classroom engagement in large courses may be raised by establishing an inclusive and dynamic setting with flexible seating options and collaboration spaces, encouraging increased interaction among peers.

On the other hand, a review by Kerr (2011) showed that tutoring in large-sized classes hampered learners' levels of active involvement in the learning process, regularity and quality of tutor interaction with and feedback to students, and lessened student enthusiasm to learn as well as the development of cognitive skills inside the classroom (Carbone & Greenberg, 1998; Cuseo, 2007; Iaria & Hubball, 2008).

In a study by Busteed (2013), 50 to 70% of elementary graders felt disengaged in their learning in classes described as large. In an earlier study by Anderson, Christenson, Sinclair and Lehr (2004), adequately engaged students manifested proactive behaviours that included attending classes regularly, were attentive in class, respected fellow students and participated actively in the learning process. Mekki, Ismail and Hamdan (2022), in their qualitative study, reported passive engagement across four dimensions of engagement (behavioural, cognitive, affective and social). The rating was done by expert observers who reported poor student interaction between them and instructors as well as between themselves, reduced interest in the course, social withdrawal and emergence of incivility in the class. This was attributed to the limited opportunities available for the learners to ask questions, deliberate and work in partnership during lesson activities. They preferred to work independently since they felt that there was no commitment to group activities.

Kato and Nambi (2021) did a study focusing on the perceptions of undergraduate students in Ugandan universities, despite the fact that there is little research that particularly tackles student participation levels in large classes in Uganda. Despite the obstacles presented by high class sizes, such as limited interaction with instructors and challenges in active participation, the findings showed that students expressed a desire for more engaging teaching approaches. The researchers' precise recommendations for interactive methods or strategies to raise student involvement were not, however, highlighted in the information that was made public. However, the study underscores the significance of addressing student involvement in large courses and the demand for creative methods to enhance learning results at Uganda's higher educational institutions. There is a need for more studies in this area.

Experiences of undergraduate student teachers with engagement in large classes

Engagement experiences can be both good and bad. Numerous researchers assert that engagement, regardless of class size, gave students a sense of belonging to a learning community (Buck, 2016; O'Shea et al., 2015), allowed them to form connections with one another and with teachers through group projects and course materials (Veletsianos & Navarrete, 2012) and gave them the impression that the learning environment had enriched their social networks (Phirangee & Malec, 2017). Because of this, disengagement did not create opportunities for satisfying learning experiences (Kahu, 2013; Kahu et al., 2019; O'Shea et al., 2015).

Focus group interviews conducted as part of a study by Rissanen (2018) found that both students and instructors valued engaging classrooms because these environments encouraged sustained concentration and focus. In a previous study by Dunleavy and Milton (2009), it was found that learning experiences that were "boring, hectic, stressful, and disconnected from the real world" took up most of the space in a qualitative study that looked at student disengagement and its consequences for learning in Canada.

According to Allais (2014), lectures are meant to bring together lecturers and students in a collaborative learning experience to acquire and develop knowledge. A quantitative study by Monk and Schmidt (2011) indicates that large classes did not create opportunities for critical thinking because there were no opportunities for learners to ask questions and to contribute, and also for the instructors to facilitate by means of active participation. Consequently, the courses and instructors were rated as poor. The study by Dogan (2015) concluded that effective student engagement practices created openings for active learning, relevance in class tasks and self-sufficiency through choice, the use of a variety of learning approaches and instructional materials, class activities that integrate both challenges and success, timely and regular assessment feedback as well as a culture of asking during lessons.

According to the study by Davids (2014), one of the negative and harmful effects of high class sizes is that it lowers both student levels of active participation and student levels of depth of thought in the classroom. In large groups, students may feel intense sentiments of alienation, resentment and jealousy, according to Harding and Engelbrecht (2017). To cope,

the students may act in a variety of ways, some of which may be detrimental to their ability to learn well and have a stimulating educational experience.

Actively engaged learners in the class acquire habits of the mind and heart that are beneficial for a lifetime of continuous learning (Chen, Gonyea, & Kuh, 2008). Logically, active involvement helps them internalise and reflect on content under discussion (deeper learning), which consequently impacts on their understanding and personal outlook on things, and possibly touches their attitude towards life. In Australia, the *Annual Report of the Australian Council for Educational Research* (ACER) published in June 2011 notes that, as students are perceived to be in control of constructing their knowledge, institutions and staff have a duty to cause settings that stimulate and perpetuate active involvement of learners. Whereas the current study agrees with the conceptualisation of student engagement as captured by the literature herein and the methodological engagements with the subject matter, the experience of Ugandan public universities in the context of large classes needs to be explored.

Methodology

Philosophical orientation and design

Pragmatism served as the study's philosophical foundation and it employed a concurrent mixed-methods methodology. According to Creswell (2014), pragmatism is premised on the notion that the universe is not an absolute unity and that there is no single system of philosophy or reality. Mixed approaches, which blend qualitative and quantitative procedures for data collection and analysis, unquestionably fall under this category (Morgan, 2007). In order to fully understand each incident and its context, the study set out to ask "what and how" questions using a variety of techniques. Therefore, by using pragmatism, it was possible to establish the classroom involvement levels as well as the concerns/worries of undergraduate student teachers in Uganda's public universities with regard to large PS courses.

The cross-sectional survey design for the quantitative strand and the hermeneutical phenomenological for the qualitative strand were both employed to investigate engagement levels and lived experiences. According to Creswell and Plano-Clark (2014), methodological pluralism offers direction on data gathering and the blending of qualitative and quantitative findings. Owing to this, a practical approach to data collection and analysis on the level of classroom engagement in the student teachers' PS large classes gave priority to the use of a cross-sectional survey design to gather objective data while using the hermeneutical phenomenological design to interpret and make sense of the participants' subjective experiences. In the end, narratives describing student teachers' classroom engagement experiences during the semester were combined with findings about the amount of behavioural, cognitive, emotional and agentic involvement.

Population, samples and sampling strategy

The study target population was the university undergraduate student teachers recruited from three public universities in Uganda designated as A, B and C. The final sample of 396 participants was drawn from among the 7,696 students based on guidance by the Krejcie and Morgan (1970) table of sample determination. These were admitted for a bachelor's degree in education in the academic years 2012/2013, 2013/2014 and 2014/2015 in the three universities that constituted the geographical scope. The admissions were distributed as follows: In the academic year 2012/ 13, university C admitted 201 students, B 940 and A 1,199; in academic year 2013/15, C admitted 255, B 1360 and A 1,185; and in academic year 2014/ 2015, C admitted 245, B 1,094 and A 1,218. However, admission records provided by the study were based on the Advanced level entry scheme. The record did not consider government-sponsored students, supplementary private admissions and mature age entry admissions. The three had noticeably big classes arising from big admissions perhaps due to the fact that they are centrally located, earliest by establishment and admit students for both science and humanities programmes, making them vulnerable to mass enrolments.

The three public universities were chosen as a smaller portion of the overall population to represent the larger population for the study using purposive sampling (Etikan et al., 2016). Choice of the two centrally located universities was based on the noticeably big classes arising from large intakes of applicants perhaps because they are earliest by establishment and enrol students for both the Bachelor of Arts and Bachelor of Science with Education degrees. The third institution, which is one of the oldest in the area and is situated in northern Uganda, has long attracted students from a wide geographical area and has maintained big class sizes. As a result, the chosen institutions had big undergraduate PS classes with at least 100 students.

The teaching arrangements in the three sampled universities required student teachers to congregate from the many subject areas of specialisation to study core professional study course units in Curriculum Studies, Educational Psychology and Foundations of Education. This meant that they had experience with both small and big classes and could suitably discuss the classroom involvement opportunities provided by both learning contexts.

Data collection

The participants were informed of the study's objectives prior to data collection, and their informed consent was obtained for both the questionnaire and the focus groups. After that, with the assistance of the course lecturers, the participants filled out the questionnaire during the core professional lecture hours. The goal of the questionnaire was to gather quantitative information that would give insight into the degree of behavioural, emotional, cognitive and agentic engagement. As a result, 20 items on a 5-point Likert scale with the values 1 = strongly disagree (SD) to 5 = strongly agree (SA) were used to measure the level of participation in the classroom.

Four sub-constructs make up the classroom engagement scale. Behavioural engagement (5 items), with an internal consistency value of.86, was adopted from Skinner, Kindermann and Furrer (2009). Cognitive engagement (5 items) with an internal consistency value of .84, was adopted from the meta-cognitive strategies scale by Wolters (2004). The five items on the emotional engagement scale were adopted from Skinner and Belmont (1993) and Skinner, Kindermann and Furrer (2009), with an acceptable internal consistency level of .90, and the five items on the agentic engagement scale were adopted from Reeve and Tseng (2011), with an internal consistency level of .86. The sub-scales were dependable and suitable for usage, given the very high Cronbach's alpha coefficient values. Therefore, scores below the mean of 3.5 indicated disagreement with being engaged satisfactorily, while scores over 3.5 showed agreement.

Nine focus group discussions (FGDs) of a similar nature were also conducted. There were three FGDs, each one representing a year of study, and from each participating university. Each group had eight (8) participants, who provided responses regarding the lived classroom engagement experiences of student teachers in the context of large PS classrooms. Membership / recruitment into the focus groups were based on individual willingness to participate, and having participated in filling the questionnaire. However, the researchers were gender-sensitive through admitting into the groups equal numbers of females and males. Groups were engaged using both lead and follow-up questions. Data was eventually triangulated during interpretation. The core motive was to gain in-depth insights into classroom engagement levels and experiences as lived by student teachers in the PS large university classes.

Data analysis

This section of the study looked at the data, addressed research questions, identified trends and came up with plausible explanations. To assess the level of classroom engagement, mean and standard deviation scores for each of the dimension were established and interpreted. These were considered together to gain a more complete understanding of the undergraduate student teachers' classroom engagement levels in the large classes of PS. Scores below the mean of 3.5 implied that they disagreed with being satisfactorily engaged and mean above 3.5 implied that they agreed with being satisfactorily engaged.

Therefore, a high mean and low standard deviation would suggest that most undergraduate student teachers were highly satisfied with classroom engagement during PS lectures and that the satisfaction levels were comparatively consistent across the learners. In contrast, a low mean and high standard deviation suggested a wide range of engagement levels among undergraduate student teachers, with some highly satisfied and others highly dissatisfied. Similarly, manifest content analysis was used to describe participants' narratives and infer latent meaning through logical reasoning. Henceforth, facts and meanings were organised out of large amounts of descriptive information into themes.

Results and Implications

Under this sub-heading, the study presents the findings and inferences reached based on survey responses from student teachers regarding their level of engagement in large undergraduate PS classes and their real experiences. The outcomes shed light on the generally low level of participation in the classroom, which was deemed to be unacceptable.

Demographic composition of the participants

There were 396 participants from the three participating universities (N=3) and 54.9% of them were men. Similar to this, 92 (23.3%) of the participants were in year one, 153 (38.4%) were in year two and 151 (38.2%) were in year three. The differences in the number of students enrolled in the corresponding academic years reflected the variation in the representative sample from each stratum. The highest enrolment for the target group of Bachelor of Education students was in year three, followed by year two. This is due to the fact that colleges must admit fewer students in the years that follow in order to balance the number of students with the facilities that are available.

Nature of undergraduate PS classes

Table 1 below describes the class size, duration of teaching-learning sessions and class size preferences in the context of undergraduate PS classes.

Table 1: Description of professional study (PS) classes for student teachers at public universities

		Frequency	Percent (%)
Class size	1 – 99	55	14.6
	100 +	340	85.4
Duration of teaching-learning session	One hour	163	41.2
	Two hours	218	54.8
	Three hours	15	3.8
Class size preferences	Small	153	38.7
	Large	88	22.3
	Both small and large	154	39

As Table 1 shows, 340 (85.4%) of the participants stated that their undergraduate student teacher PS classes had more than 100 pupils. The classes listed here were extremely large when compared to what is meant conceptually by a large class. Knowing the current class size confirmed past research that large classes were common in higher education institutions and offered valuable insights into involvement levels as well as experiences. Based on focus

group narratives on class size, the excerpts below demonstrate how big professional courses (PS) were:

> Over 400 (FGD A1); About 1,000 (FGD A2); Around 700 (FGD A3); Initially the group was too big but recently it was split into smaller groups of about 300 per class (FGD A3); Arts is around 700 students (FGD B1); then here at the university, in departmental we are like 16, and in professional classes we are 300 plus (FGD C 2); For Professional classes we are approximately 380 (FGD C2)...

The classes under consideration had a significant number of learners, with hundreds of students being taught in the same cohort. The enrolment size was substantial, leading to large class sizes and potentially affecting the level of individualised attention and engagement. Regarding the duration of teaching-learning sessions, 54.8% (218) of the participants reported having two hours, while 45.2% (177) reported having one-hour sessions. The findings suggested that an hour might not be enough to encourage interactive and collaborative learning. This is contrary to the recommendations made by the National Council for Higher Education (NCHE), which calls for lengthier interactive teaching sessions to ensure a comprehensive learning experience.

Level of classroom engagement

Research question one sought to establish the level of student teachers' classroom engagement in the large undergraduate university classes.

Item mean and standard deviation across the four dimensions of engagement were calculated basing on classroom survey of student engagement (CLASSE). A low standard deviation indicated that the data points were clustered around the mean and, therefore, not very spread out. Conversely, a high standard deviation indicated that the data points were more spread out and not clustered tightly around the mean.

The metrics based on item rating gave an indication of the level of engagement in general and on each dimension. The findings are set out in Table 2 below.

Table 2: Arithmetic mean and SD for the dimensions of engagement

Aspect	Mean	SD	Rating
Behavioural Engagement	**3.6**	**0.8**	**Agreed**
When I'm in this class, I listen very carefully.	2.9	1.4	Disagreed
I pay attention in this class.	3.8	1.0	Agreed
I try hard to do well in this class.	4.0	1.0	Agreed
In this class, I work as hard as I can.	3.9	1.1	Agreed
When I'm in this class, I participate in class discussions.	3.4	1.2	

Agentic Engagement	**2.7**	**1.0**	**Disagreed**
During class, I ask questions to help me learn.	3.1	1.3	Disagreed
I tell the teacher what I like and what I don't like.	2.3	1.2	Disagreed
I let my teacher know what I'm interested in.	2.3	1.3	Disagreed
I offer suggestions about how to make the class better.	2.6	1.2	Disagreed
During this class, I express my preferences and opinions.	2.8	1.3	Disagreed
Cognitive Engagement	**3.8**	**0.8**	**Agreed**
I try to make whatever we are learning as interesting as possible.	3.3	1.2	Disagreed
When I study for this class, I try to connect what I am learning with my own experiences.	3.9	1.0	Agreed
I try to make all the different ideas fit together and make sense when I study for this class.	3.6	1.1	Agreed
When doing work for this class, I try to relate what I'm learning to what I already know.	3.9	1.0	Agreed
I make up my own examples to help me understand the important concept I study for this class.	3.9	1.0	Agreed
Emotional Engagement	**3.6**	**0.86**	**Agreed**
When we work on something in this class, I feel interested.	3.7	1.1	Agreed
This class is fun.	3.2	1.3	Disagreed
I enjoy learning new things in this class.	3.8	1.1	Agreed
When I'm in this class, I feel good.	3.4	1.2	Disagreed
When we work on something in this class, I get involved.	3.4	1.2	Disagreed
Overall Score	**3.4**	**0.9**	**Disagreed**

Key: 1=strongly disagree, 2=disagree, 3= not sure, 4= agree, 5=strongly agree
Mean response =<3.4 implies participants disagreed, mean response =>3.5 they agreed

The level of class engagement for each parameter is shown in Table 2 above. The majority of individuals (M=3.4, SD=0.9) disagreed with being involved. However, they largely disagreed with agentic engagement (M= 2.7, SD = 1.04) but only slightly agreed with cognitive engagement (M = 3.8, SD = 0.83), behavioural engagement (M = 3.6, SD = 0.84) and emotional involvement (M = 3.6, SD = 0.86). This suggests that while they might not have actively participated or taken the initiative, they still exhibited some level of interest, attention and emotional connection in class. Similarly, this pattern appears to suggest that students felt dissatisfied with their level of active participation during class instruction despite their participation, effort and

commitment on a cognitive and affective level because there were few or no opportunities for them to contribute positively to the teaching-learning process.

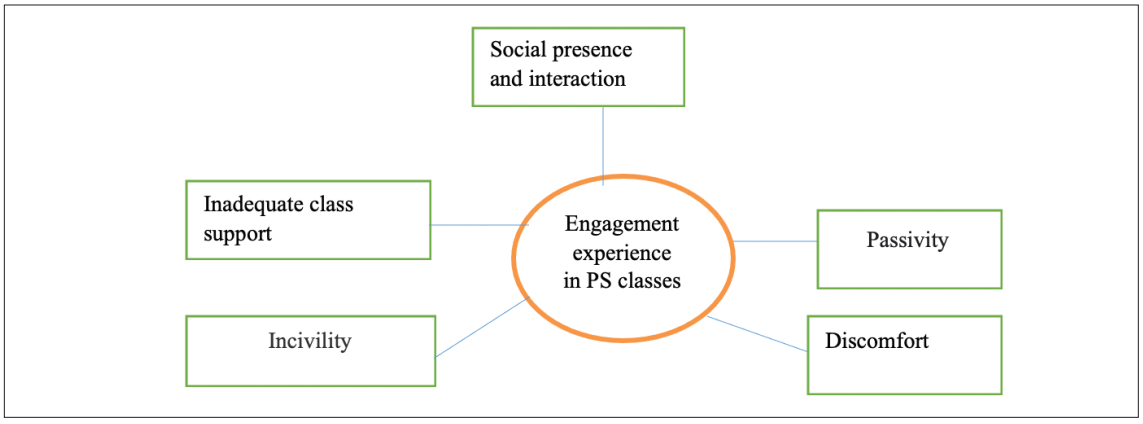
Overall, the results indicate that the study participants showed limited levels of engagement and, more specifically, regarding the sense of agency towards their learning. They disputed claims about agentic activity, including those about asking inquiries, expressing preferences, coming up with ideas and exchanging opinions. In addition, many did not think the class was enjoyable. However, they did show cognitive engagement by making the learning process interesting, relating new information to their own personal experiences, and fusing fresh concepts with what they already knew. By actively listening, paying attention, participating in class discussions and pursuing academic achievement, they also demonstrated behavioural involvement. To further engage the participants and enhance the overall learning experience, it may be advantageous to foster the possibilities for agentic involvement.

The low levels of participation in the big undergraduate student teacher classes of PS offer insights into how students view their classroom experiences and how this perspective affects the dynamics of the classroom, students' behaviour and learning results. In the light of this, the qualitative narratives discussed how student involvement levels invariably influenced peer relationships, classroom engagement, teaching techniques, student motivation and classroom culture.

The experiences of undergraduate student teachers with classroom engagement in large classes

The second research question examined undergraduate student teachers' experiences with classroom participation in big classes. Low levels of classroom participation in large college PS classes can result in a variety of unfavourable consequences, including rudeness, inactivity, discomfort and insufficient class support, as revealed by hermeneutic phenomenology and manifest content analysis. As seen in Figure 1 below, these are condensed and presented using a thematic map.

Figure 1: Thematic map illustrating themes generated during the analytic process



Inadequate class support: There were fewer possibilities to get crucial assistance from instructors and peers during lectures, according to the participants' accounts. The instructors in the professional study sessions did not give students the opportunity to participate in group or individual class activities or to ask questions or seek clarification.

> I find difficulties in large classes. A teacher may not be able to reach everyone and it's a challenge to some of us. I understand so well when someone is near me guiding me here and there. So you find even challenges because the lecturer after teaching the very class he will go away and you get problems of meeting him one on one but if they are these departments, you find that the lecturer is near to you because the class is somehow small not like the PS. (FGD B2)

> Big numbers, no asking. Small numbers, quiet and you can ask for clarity. (FGD B1)

> In a large class, it's very rare for the lecturer to pick on one to answer a question. (FGD C3)

> During lectures in large classes, it's difficult to ask questions. If am to ask, I wait until the time for tutorials or follow the lecturer immediately after the lecture. (FGD A2)

> Some of us the students we need individual attention. In a large class it's not easy for a lecturer to give individual attention to each and every individual student. Some of us who learn easily when we are attended to individually we are left out and we can't learn altogether or we get just a little because the individual attention we need can't be achieved because we are very many. (FGD B3)

Participants in the study described the obstacles and problems brought on by big class numbers. They emphasised problems such as a dearth of individualised attention, little opportunity for asking questions, and decreased involvement. The participants preferred more intimate learning environments where they could receive individualised instruction, ask questions with ease, and were more likely to actively participate. The participants in large classes thought that owing to the overwhelming number of students, individual attention and interaction with the instructor were reduced, making for a less ideal learning environment for those who benefited from individualised instruction.

For participant A3, teaching and learning had been reduced to simply dictating notes from a handout sometimes shared with the students prior to the lecture.

> Sometimes, we have the handouts, we go to the lecture, and discover that the man is simply reading the handout. It's more of bandwagon to attend those classes. (FGD A3)

By implication, some undergraduate student teachers may feel disengaged during lectures in large classes because they perceive the lecturer as not adding any value beyond what is already available in the handouts. This may contribute to a lack of motivation to attend such classes and a perception that the lectures are not essential to their learning.

Social presence and interaction: Other non-academic intriguing aspects of large classes were found to include social contact, presence and belonging. They gave first-year students the

chance to re-connect with peers from both primary and high school who were enrolled in the same study programme. Because of this, participants in their stories saw PS lectures as opportunities to have fun, meet new people and take a break from the demanding academic errands that come with small classes. Additionally, because active participation in learning is a key component of effective learning, students in big classes were compelled to take an initiative by forming study groups outside of class. The groups helped them, among other things, to conceptualise the course material and handle homework.

> With big classes, it's always fun … During tutorials (small class) we interact a lot academically. (FGD B1)
>
> I like large classes as it allow me to make more friends from other department. (FGD C2)
>
> I enjoy large classes for the fact I sit between ladies and it feels cool. (FGD C3)
>
> I go to professional classes to meet my OGs and we chat all through. (FGD C1)
>
> Normally with those classes, I basically go there to meet my OGs whom I have taken long to see. You spot them before the lecture, enter, sit together, chat all through. For sure you pick nothing. It's meeting time. (FGD A2)

The opinions of the participants regarding their experiences in large classes are reflected in these remarks. Despite enjoying large class numbers, FGD B1 emphasises the value of academic conversation in tutorials, which are frequently held in more intimate settings. FGD C2 offers a favourable opinion of large classes, pointing out the chance to make friends with students from many departments. Because they can sit close to intriguing people, FGD C3 prefers large classes. FGD C1 goes to professional classes largely to catch up with old friends and converse with other students. In order to reestablish contact with their "OGs" (original group members), FGD A2 also enrols in large classes. The two of them spend time together before, on the way to, during and after a lecture. These stories suggest that although some students appreciate the social components of large classes, academic engagement and learning results might be less prioritised or degraded as a result of intense social interactions.

Incivility: The tales of the participants emphasised the occurrence of disrespectful and disruptive actions in large classes, demonstrating a lack of social grace. There have been reports of conversations that disrespect the learning environment and involve creating noise, slandering and talking back to others. These actions had a detrimental effect on the dynamics of the classroom and interfered with others' ability to learn. The inclusion of disrespectful actions highlighted a lack of respect for social standards in the classroom context even more. Large class environments can be made more productive and peaceful by addressing these disruptive behaviours and encouraging a culture of respect and constructive social interaction.

There is noise making in large classes, especially those who sit behind… Quite often, behind is full of fun. Students can talk, gossip. (FGD C2)

Teacher-pupil ratio in a large class in unbearable. You are in a group where some learners are attentive while others are not. (FGD A 1)

These classes are disorganised and the lecturers tend to give less. (FGD A3)

The narratives provided by FGD C2, A1 and A3 suggest that some undergraduate student teachers may struggle with maintaining focus and staying engaged in large classes due to noise and distractions, as well as a perceived lack of individual attention and organisation. FGD C2 notes that noise and gossiping by other students can make it difficult to concentrate during class, while FGD A1 emphasises the negative impact of a high teacher-pupil ratio, with some learners being attentive and others not. Additionally, FGD A3 suggests that large classes may be disorganised and that lecturers may not give enough attention to individual students. Therefore, teachers may need to work harder to maintain a sense of order and focus in the classroom, and may need to develop strategies for engaging all students, even those who may not be as attentive or motivated.

Passivity: The participants in their narratives acknowledged being passive recipients of content without any input or constructive action/contribution during the delivery of the lecture. Lecturers simply talked all through, and some simply dictated notes. This means that they missed out on the learning outcomes that come with interactive learning techniques such as guided self-reflections, group discussions and plenary presentation as well as problem-solving.

> Sometimes the lecturer is just talking to himself. You can't understand what he is teaching. You are getting nothing. As the lecture is going on, you are looking at the time. When it's 15 minutes to the end of the lecture, students begin to shout it's time, it's time. (FGD A2).

> I have confidence but I feel the too many faces scare me. So, I tend to shy away and I don't feel very free because of my background of going through small classes. Large classes turn me off. (FGD B2)

> Small classes have good teacher-student ratio and there is easy interaction and sharing of ideas. (FGD B3)

Passivity was reported to have been extended to group take-home activities:

> I will talk about the experience we have just had here. In our last lecture, the course facilitator assigned us to discuss some topics of the course unit but some of us didn't even bother to discuss. We thought other students will be able to do so and present. (FGD B3)

> With these professional classes, there [were] people who have never spoken. (FGD C3)

> Many times, in a large class sometimes space may not be enough, and now those students seated far away or those without a favourable seat may be there for the sake of attending. (FGD B1)

> In a large class, when we are assigned group work, I can tell my group members to do the research and I do the typing/printing. OR I can even request them to simply include my name. These things usually happen. (FGD B3)

Discomfort: Narratives from the participants articulated the challenge of inadequate seats, heat and contaminated air because of too many perfumes, visibility and hearing difficulty, especially by those who sit at the back, and all these made PS classes uncomfortable.

> Personally, when the timetable is reading Professional Studies, I feel like it's a punishment. Going for something your heart does not wish is disheartening… Anyway, you have got to go because failure to sign in the attendance list is like digging a grave for yourself as it may earn you a retake. (FGD A1)

> I am sorry to say this. If PS was optional I would have been among the first people to drop it. (FGD B1)

> You understand by chance, you need to come to class early to be able to find a seat and sit in front for you to be able to pick one or two things. We have lecturers who are naturally created with a small voice. (FGD A1)

> The classes are too big, the lecturers need a microphone or else you may miss most parts of the lesson. That is why when some people at the back are asked about something being studied, they explain a completely different thing. (FGD B2)

> I always have challenges when I stay in too crowded classes. I am just allergic to the environment of fumes which contaminates the air. It affects me. University is an institution where it's difficult to control whatever someone is going to put/use. Somebody uses a strong perfume, lotion and it affects me. I sneeze throughout the lecture. It's hazardous to my health. (FGD C3)

> In my class, we are about 600 but usually we are about 100 or less who attend classes. My fellow students do not like PS. The rate of absenteeism is too much for those classes. (FGD B3)

The opinions of the students on PS classes rotates around recurring themes and difficulties. Since PS is a required subject that does not match their choices, several participants indicate a lack of passion for the subject. Students find it difficult to hear and follow the lessons because of large class sizes and soft-spoken instructors. Classes that are too packed raise concerns about health, such as allergies brought on by the potent perfumes and lotions worn by other pupils. High absence rates reveal a general lack of interest in PS among students. The necessity of addressing factors like student involvement, teaching strategies, class size and health risks is highlighted by these revelations in order to improve learning and participation in PS classes.

Discussion, Conclusions and Recommendations

The study findings show that even though student teachers' overall levels of engagement were below average, they frequently voiced dissatisfaction with not being fully immersed in their learning experiences. In particular, agentic engagement scores were significantly below average, whereas engagement levels in the behavioural, cognitive and emotional domains were at the edge. The negative effects of this lack of engagement are highlighted by participant accounts, which detail incidents of rudeness, insufficient class support, inactivity and discomfort. These findings are consistent with a more comprehensive understanding of student participation in big courses when seen in the context of the studies by Smith and Johnson (2019) and Brown et al. (2020). The study emphasised the variation in engagement levels according to the teaching methods used, highlighting the efficacy of active learning strategies such as group discussions, problem-solving activities and hands-on activities. The low levels of engagement observed by student teachers may be related to the underuse of such techniques in their instructional settings.

The findings of the current study showed that student teachers expressed dissatisfaction with their degree of involvement and the limited opportunities for active engagement in their learning experiences. Anderson et al.'s (2004) study, which placed heavy emphasis on the significance of proactive acts in boosting engagement, is consistent with these findings. The proactive behaviours of students who were appropriately engaged in the learning process were seen, including regular attendance, attention, respect for other students and active engagement in the instructional process. According to these studies, participation requires more than just showing up; it also demands active involvement and a positive attitude towards the learning situation.

Further, the results of the study show that a lack of participation in the classroom led to negative effects, as seen by participant accounts of rudeness, a lack of class support, inactivity and discomfort. These results are consistent with those of earlier research by Davids (2014), who found that having a lot of students in a class can have negative effects on learning, such as lowering levels of active participation and lowering levels of concentration. Additionally, according to Harding and Engelbrecht (2017), learners in large groups may feel severe sentiments of alienation, resentment and jealousy. As a result, these students may act in a variety of compensatory ways that obstruct learning and the development of an engaging educational experience.

Similarly, the results of the current study show that while levels of involvement in the behavioural, cognitive and emotional domains were at the edge, agentic engagement scores were significantly below average. This shows that students can have trouble taking control of their learning process, taking initiative and making decisions. The general inert involvement seen among student teachers may be attributed to the lack of agentic engagement. The results of the current study and those of Mekki et al.'s (2022) study emphasise the high degree of passive involvement among students in big classes. This passive engagement is a result of the

limited possibilities for active participation, the poor interactions with instructors and peers, the decline in interest in the course, and the growth of rudeness.

Although social engagement can have both beneficial and negative aspects, converting lecture time into a social event is equivalent to losing focus. A lack of affective and emotional reactions towards teachers, instruction, programmes and institutions, as well as decreased student enthusiasm for learning and the development of cognitive skills inside the classroom are all consistent with the findings of studies by Trowler (2010), Quaye (2 009) and Chen, Gonyea and Kuh (2008).

Similarly, the study findings did not reflect the much-desired classroom engagement practices for the 21st century learner. The findings manifested loose ties with Vygotsky's (1978) constructivist theory, which is seen as a progressive constructivist pedagogical approach in education tailored towards learner-centred teaching strategies that place a student at the centre of his or her own learning. The findings are supported by the theory on the grounds that failure by instructors to adequately engage students interferes with optimal benefits of ZPD tenets and therefore compromises learning outcomes (Yasnitsky & Van der Veer, 2015). Ongoing pedagogical practices in the large undergraduate classes seem to grossly contravene educational pedagogies/philosophies (constructivist, collaborative, integrative and reflective and inquiry-based learning) that are highly regarded for the 21st century learner.

Conclusions

The results from Table 2 provide valuable insights into the participants' levels of class engagement. Although there were some encouraging signs of cognitive, behavioural and emotional engagement, the absence of agentic engagement raises questions about the degree to which students actively participate in directing their own educational experiences. Large class sizes, lectures that run for less than an hour and potential instructor competence gaps can all be blamed for this. Instructors should use methods that encourage interactive and participatory learning to overcome these constraints. Students' sense of agency and involvement can be increased through encouraging collaboration, discussion and problem-solving. For the classroom to be inclusive and empowering there must be opportunities for students to participate, ask questions and offer feedback.

Regarding students' lived experiences in the large PS classrooms, the results of this study, which combined manifest content analysis with hermeneutic phenomenology, show that big undergraduate PS classes can suffer from poor levels of participation. Low levels of participation have negative effects on the classroom environment, including rudeness, inactivity, discomfort and insufficient support. These findings demonstrate the need to urgently explore interventions and techniques required to create a friendly and encouraging learning atmosphere that promotes engagement, interaction and collaboration. Educators and institutions should address these problems in order to enhance the overall learning experience for student teachers and decrease the detrimental impacts of inadequate classroom participation.

From the findings it was recommended that there was need to use student-centred learning methods in big class settings to increase student involvement and enhance the learning environment. This can be achieved through reducing class sizes, providing professional development for instructors, supporting technology integration, promoting collaborative learning opportunities, and assessing and rewarding student engagement. By adopting these strategies, policymakers can create an inclusive and empowering learning environment that prioritises active student participation, agency and personalised learning experiences. By addressing the issues raised by large class sizes and encouraging meaningful participation, this policy prescription hopes to improve learning outcomes and student success.

Similarly, there is also a need by the university administrators to enforce particular procedures like regularly asking students for comments on their experiences in huge classes and the quality of instruction. This can be done by using surveys and other techniques of feedback collection. Second, increasing student participation in the classroom can be accomplished by increasing the budgets for teaching-learning resources such as technological equipment and reference books/textbooks. If used, these recommendations can improve learning results for student teachers in large class situations while increasing their engagement.

Limitations and Future Direction

Besides the study being limited to student teachers in selected public universities in Uganda, it was also restricted to self-reported measures of engagement and, therefore, future research should incorporate other objective measures of engagement such as observation. Similarly, the study did not explore the influence of other teaching-learning elements such as teaching quality as well as course content on engagement levels among student teachers.

Future research need pay attention to examining the relationship between engagement levels among student teachers and their academic performance, as well as their future teaching practices; the role of technology in fostering engagement among student teachers in large undergraduate classes; and a comparison between the engagement levels of student teachers across different subject areas.

Declaration

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