



Vol.4 No.1 (2021)

Journal of Applied Learning & Teaching

ISSN : 2591-801X

Content Available at : <http://journals.sfu.ca/jalt/index.php/jalt/index>

Why student engagement in the accounting classroom matters

Mark Wheaton^A

A

Academic Director of Accounting, Kaplan Business School, Australia

Keywords

Accounting education;
cognitive skills;
student engagement;
student learning.

Abstract

This study aims to investigate the theory of student engagement and its impact on student learning. A student-centric pedagogy (inter-teaching) was introduced to create better engagement for students studying an accounting course at an offshore campus of an Australian University, in Vietnam. Surveys were conducted to collect data. The quantitative approach was implemented to test the theory of engagement for improving student learning of the respondents, by comparing two treatments, a teacher-centred class (lecture model) and student-centred class (inter-teaching model). The findings of this study propose that student engagement is an encouraging development for student learning in accounting courses. The findings contribute towards the current body of knowledge of accounting education, effectiveness of student learning, and overall greater student engagement in accounting courses.

Article Info

Received 12 October 2020

Received in revised form 30 January 2021

Accepted 18 February 2021

Available online 18 February 2021

DOI: <https://doi.org/10.37074/jalt.2021.4.1.3>

I. Introduction

This study analyses the impact of student engagement in the classroom on students' learning at an offshore campus of an Australian University in Vietnam. What is evident from the literature of student engagement is that there is not a clearly defined theoretical model; rather it is a multi-definitional meta-construct that depends upon the context to which it is applied (Wang & Fredricks, 2013). Eccles (2016) explained that "engagement is an elusive, emergent, and multifaceted concept one that would be difficult to measure and complex to theorize" (p. 2). Boekaerts (2016) stated that researchers used theories from the psychological disciplines to study classroom engagement. However, these theories use different constructs to explain and predict behaviour which may not be relevant to the study of classroom engagement. There is no solid theoretical foundation for understanding how student engagement in the classroom is created, and how it benefits students' learning. Thus, this study intends to unravel the complexity of student engagement and how student learning is enhanced when students work together in small groups in the classroom.

This study adopts and builds on the seminal work of Deutsch (1949a, 1949b). Deutsch (1949b) provided evidence explaining why students in small groups, working together, outperform students working alone or competitively against each other. His model together with the research of Astin (1977, 1984) and Finn (1989) demonstrated how learners engaged through interaction with other learners in a setting involving preparation, discussion and reflection. Peer learning is known to accentuate the capacity for understanding where students assist one another to build their own understanding (Johnson, Johnson & Smith, 2014).

This study is significant for the following reasons. First, it responds to the call from Weiss and Garcia (2015) that most student engagement studies have examined their effects on student learning either in America, or other English-speaking countries. Relatively little research has examined how student engagement contributes to student learning in emerging economies and to our knowledge, none has applied the framework of student engagement in the classroom in Vietnam where the students' first language is not English. Secondly, student engagement in the undergraduate classroom in Vietnam is rare with the emphasis on teacher-centred instruction. Therefore, Vietnam provides an interesting cultural environment to study students' attitude to learning especially where accounting courses are designed and delivered with a student-centred focus. Third, it builds on this gap in the literature by providing evidence sourced directly from two surveys into the factors driving and impeding student engagement in the classroom.

This article is structured as follows. The next section of this article provides a summary of the research on student engagement with emphasis and justification of the theoretical framework. Then, it discusses the research method employed. Findings are next presented that evaluate student engagement including participants' perceptions of both the benefits and issues from the two surveys. The article concludes with a discussion of key findings together with study limitations and avenues for future research.

II. Literature review

Student engagement

Appleton, Christenson and Furlong (2008) observed that student engagement has multiple meanings, depending on its application and setting. The short history of student engagement over the past 30 years may explain why there are multiple definitions of student engagement as researchers apply it to different settings, observe different phenomena and reach different conclusions about students being engaged. Interest in student engagement has grown as school administrators and academics try to unravel why "some students are engaged, and some students are not engaged in the educational context" (Finn 1989, p. 123). Notwithstanding, the complexity of the various research studies, common themes have developed from Fredricks et al. (2004) who described "student engagement theory as a multi-component model with behavioural, emotional and cognitive elements" (p. 60). Behavioural engagement is defined as participation and task involvement in academic activities (Fredricks, Filsecker & Lawson 2016). Emotional engagement is conceptualised as identification with school, which includes belonging, enjoyment of school learning, and valuing/appreciation of success in school-related outcomes (Finn, 1989). Cognitive engagement is defined as strategic or self-regulated learning (Wang & Fredricks, 2013). Of interest in this study is the behavioural engagement model where students in the classroom are participating in learning tasks which demonstrate behaviours such as effort, questioning, and contributing to class discussion resulting in improved student learning (Fredricks et al., 2016). Howard (2016) and Apostolou et al. (2016) suggested that to be a great teacher, they should continually work towards implementing student engagement and student feedback. Wong, Cooper and Dellaportas (2015) also asserted that student engagement has been one of "the most highly valued aspects of student learning" (p. 321), and student engagement can improve "any accounting class" (Kaciuba, 2012, p. 248).

Although not considered by the student engagement literature it is argued that Deutsch's (1949a) theory of cooperation and competition contributes significantly to the foundational understanding of student engagement and why students inter-relate in the classroom. Deutsch (1949b) describes how student groups in classroom settings connect to achieve greater outcomes than if they work alone.

Cooperation and competition theory

The theoretical roots of cooperation and competition (Deutsch, 1949a) lie in the theory of social interdependence by Koffka and Lewin (1935). Lewin found that for interdependence within groups, individuals "must impact each other in that a change in the state of one causes a change in the state of the others" (cited in Johnson, Johnson & Smith, 2014, p. 88).

Deutsch (1949a) expanded Lewin's analysis of group behaviour with the theory of cooperation and competition. Deutsch (1949a) described a cooperative relationship where the "individuals who are exposed to the cooperative

social situation will perceive themselves to be promotively¹ interdependent (in relation to other individuals composing their group) with respect to goals” (p. 138). In contrast, Deutsch (2003) viewed competitive behaviour by individuals as not contributing to successful inter-group relationships. In general, cooperation produces effective communication, forthcoming discussions which are productive, and a willingness to strengthen the collaboration of other members (Deutsch, 2003). In contrast, competition impairs group communication, creating a lack of trust or disagreement which can lead to negative or divisive intentions from other individuals (Deutsch, 2003).

The work of Deutsch’s influential and highly validated cooperation and competition theory explains successfully how students working together in groups, engaged with each other, achieved better academic outcomes because they have similar interests in achieving their common objectives. This theory is supported by a clear theoretical foundation and, through rigorous research studies, it has been validated and confirmed in the educational setting (Johnson et al., 2014). Johnson, Johnson and Holubec (1988) findings indicated that cooperation learning strategies in the classroom were more successful in academic achievement, as compared to competitive and individual learning strategies.

Astin (1984) was one of the first researchers to recognise involvement as the heart of the classroom. He asserted that student interactions influenced, more than anything else, cognitive development and enhancement through involvement with each other. The next section explores the theory of involvement.

Involvement theory

Astin’s theory of student involvement is strongly associated with engagement and frequently cited in the higher education sphere (Harper & Quaye, 2009). Astin (1984) stated that “student involvement was the amount of physical and psychological energy that the student devotes to the academic experience” (p. 518). His theory closely resembles the cooperation segment of Deutsch’s theory, in that, student involvement entails the individuals investing their knowledge and emotional energy in other students. Astin (1984) described this aspect of involvement as students who can “cathect” or invest emotional energy on other students (p. 518).

Involvement theory encompasses two fundamental hypotheses which form the key to a more effective program designed for students (Astin, 1985). Firstly, “the amount of student learning is directly proportional to the quality and quantity of student involvement in that program” (Astin, 1985, p. 36). Secondly, the “effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement” (Astin, 1985, p. 36). Astin (1993) identified three forms of student engagement which impacted on student academic

achievement, namely time on task, peer collaboration, and the student’s involvement with the faculty. Astin (1993) found when students are actively engaged their cognitive development is improved in comparison to other methods of teaching. Bentley, Brewer and Eaton (2009) also proposed that interactive learning activities increased student engagement which, in turn, improved students’ academic performance.

Astin’s involvement theory is dependent upon institutional processes that provide opportunities to facilitate student involvement in their learning. A key difference between Astin’s theory and Finn’s participation-identification theory is that one can be involved without participation (Harper & Quaye, 2009). Finn’s theory, which is discussed next, is considered to be a core element of the engagement framework (Appleton et al., 2008).

Participation-identification theory

Finn developed the participation-identification theory from his influential research into student dropout prevention. This heavily influenced recent student engagement research and fostered the idea that active student participation in learning was linked to improved academic performance (Fredricks et al., 2004). Figure 1 described how students initiating classroom activities, participating in the classroom decisions and belonging as valued members are key ingredients to successful academic performance (Finn, 1989). Moreover, Finn’s theories are essential for understanding the difference between students not engaged and being engaged through participation, identifying and being valued in the classroom.

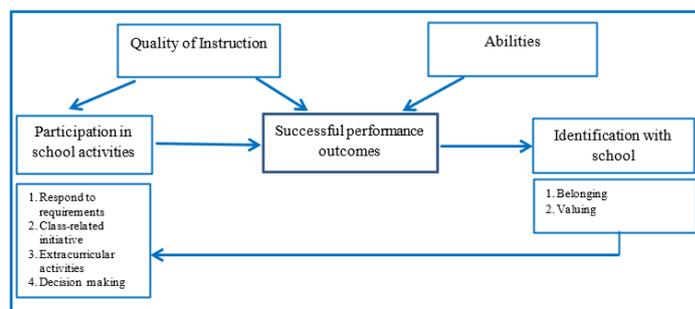


Figure 1: Participation-identification model. Source: Adopted from Finn (1989, p. 130)

Finn’s model has four levels of participation which range from student responses to instruction, through to students using initiative to resolve problems on their own or in peer discussions. Finn (1989) focused on participation, in what he termed the operational component of behaviour known as engagement and observed that engagement in the classroom allowed students to develop their social and cognitive abilities and to have positive academic outcomes.

¹ A situation in which all members of a team can achieve their goals (Oxford Dictionary of Psychology, 2015).

III. Research questions and hypotheses

The need for research into student engagement in the accounting classroom warrants the investigation of "what is the impact of student engagement on student learning in accounting courses?" which is the research question of this study.

The hypothesis was developed to test the theories of engagement to find out whether student learning improved through student engagement in the classroom. To examine the hypothesis, H1: student engagement in the classroom improves the student learning experience, compared to the teacher-centred learning experience for undergraduate accounting students studying the Management Accounting and Business course, 16 questions adopted from the National Survey of Student Engagement (NSSE) and included in a survey were completed by students studying the MAB course. Each question is considered a sub-indicator of describing student engagement in the classroom. Thus, the 16 hypotheses associated with H1 were tested for statistical significance (Appendix 2). The one-tailed hypothesis test, where L is the teacher-centred lecture model and IT is student-centred inter-teaching model (Characteristics of each teaching model can be viewed in Appendix 1), were tested as follows: H0: $L \geq IT$ against the alternative hypothesis: H1: $L < IT$.

IV. Theoretical framework

Fredricks et al. (2016) explain that by adopting behavioural strategies that include preparation, discussion and regular feedback, students are more engaged in classroom and their learning is improved. The research of Deutsch, Astin, Finn and Johnson and Johnson provide the theoretical foundation to justify why students work more productively and learn smarter by being simply being engaged with each other.

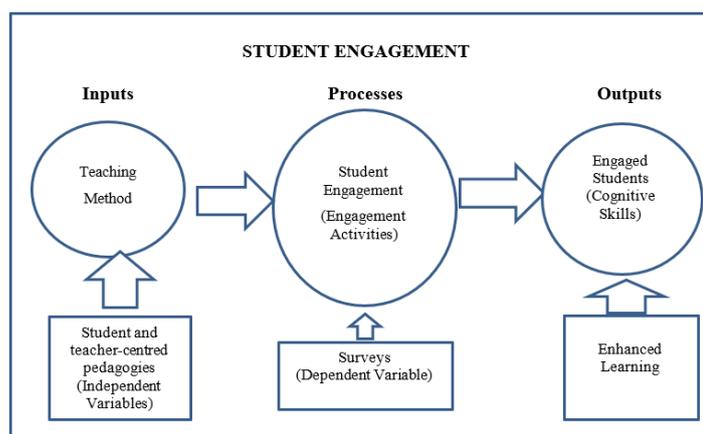


Figure 2: Conceptual model of student engagement learning
Source: By the author

To conceptualise and demonstrate student engagement, the student engagement learning model, Figure 2, was developed by the author. This model may well be considered to consist of three phases, in-puts, processes and outputs

(Biggs, 2012). In the current order of ideas, apply the student or teacher-centred teaching pedagogy (inputs) should impact the way students learn (processes; engaged or not engaged) and academic learning (outputs; same, more or less cognitive improvement) will follow.

V. Research method

Research design

The quantitative approach was employed to test the theory of engagement for improving learning performance of students taking the Management Accounting and Business (MAB) accounting course through the comparison of the teacher (lecture model) and student-centred (inter-teaching) teaching models. The data was collected from two surveys during week 6 and week 12 of semester 2, 2015 of this course. Table 1 summarises the research procedure.

Table1: Research procedures

	Weeks 1 - 6	Weeks 7 - 12
Teaching mode	Lecture model	Inter-teaching model
Survey	Student complete survey in Week 6	Student complete survey in Week 12
	Semester 2, 2015	Semester 2, 2015

Survey instrument

The questionnaire in this study was replicated from the NSSE, adopting two of the six student engagement measures which were designed to understand how well students were engaged, and gather student perceptions of their engagement activities related to the two different teaching models. The NSSE is annually released to students studying at higher education institutions in America (NSSE, 2001). Concerns that the NSSE survey was being taken by non-Western students in a non-Western context were somewhat truncated by the evidence from the Australian Council for Educational Research. They confirmed that the NSSE had been extensively validated for use in Australasian higher education through focus groups, expert reviews and psychometric analysis. Further, while participants of the survey were Vietnamese they were studying an Australian degree in English at an off-shore Australian University.

Variables

The independent variables are the student and teacher-centric teaching models. The characteristics of both models can be found in Appendix 1. The dependent variable is the student engagement survey. Student engagement in this study was captured by variables corresponding to two measures: (i) engagement activities, (ii) and cognitive skills. The survey intention was to capture student perceptions of being engaged or not engaged (Pike, Kuh & McCormick, 2011).

The first 11 questions in the questionnaire include active and collaborative learning questions designed to illicit responses on class participation, involvement, group work and feedback. All of which are aligned to the theories

developed by Astin (1984) (Involvement theory), Finn (1989) (Participation theory), Deutsch (1949a, 1949b) (Cooperation and Competition theory) and Johnson et al. (1988) (Cooperative learning theories).

The second measurement of student engagement includes 5 questions relating to cognitive skills engagement and is aimed at capturing student responses regarding their integrated and higher-order thinking skills. They are aligned with the theories of small group interrelationships developed by Deutsch, Astin and Johnson and Johnson.

Validity and reliability

Instrument Validity and Reliability

Validation of the central measurement (the survey) is about establishing its authenticity and robustness (Kane, 2006). A self-report survey, such as the NSSE, is one of the meaningful ways of collecting data on a large scale (Kuh, 2002). Student self-reports are thought valid where the questions are clearly and unambiguously designed (Pike et al., 2011). The NSSE has been intentionally designed to meet all the criteria with the design team placing emphasis on clear expression and well-structured questions, and thus it "appears to be reliably measuring the constructs it was designed to measure" (Kuh, 2002, p. 17) and "the face and construct validity of the survey are strong" (p. 23). This is consistent with the findings of Kuh et al. (1991, 2006) who examined the validity and reliability of the NSSE survey for students from different racial and ethnic groups and institutions. They observed that the "NSSE can be confidently used across all institutional settings with different types of students" with no significant variation (Kuh et al., 2006, p. 64). As the survey questions in this study were replicated from NSSE it is also expected that (i) they had high face and construct validity, and (ii) they could measure what was intended.

Reliability statistics

Cronbach's alpha, a measure of reliability, was used to verify inter-item consistency and reliability of the survey instrument. A reliable score will add strength to the statistical analysis used to test the hypotheses. In this study, the Cronbach's alpha (0.832) indicated a strong level of internal consistency for the scale in the Likert survey, and it is marginally higher than the Cronbach's alpha value for the NSSE survey in 2014 (0.820) (NSSE, 2015).

Data collection

All 154 students enrolled in MBA in semester 2, 2015 were invited to participate in the surveys. They were taught by the same instructors who taught the course during semester 1, 2015. The survey was conducted at the end of the first half of Semester 2 (Week 6; Teacher-centric teaching), and 78 of the 154 students (51% response rate) completed the survey. The survey was distributed again to the same students at the end of the second half of semester 2, 2015 (Week 12; Student-centric teaching), 73 of the 154 students (47%

response rate) completed the survey with all the responses being valid.

Data analysis

SPSS version 22 was used to analyse the survey data. The required precision for the study was a statistically significant level of < 0.05 . Following a review of non-parametric statistical tests, in consultation with a critical content expert and statistician, Wilcoxon Mann Whitney U test was used (Merola, 2015). The following test assumptions were met: the measurement scale was ordinal, the independent variable has only two levels, and the data was suitable for an unpaired test for differences of medians; the independence of the two groups was partially satisfied (Black et al., 2007; Sekaran, 2013). A one-tailed test was used to verify whether student-centred (inter-teaching sessions) survey responses would have a higher median score than the corresponding values for the teacher-centred (lecture model sessions).

VI. Data analysis and findings

Respondents' profiles

A total of 78 and 73 valid responses were collected in Weeks 6 and 12, respectively (Table 2). The majority of students in both surveys were 18 years or older (94%). The proportion of female (58%) and male (42%) was nearly the same for both surveys.

Table 2: Respondents' profiles

Semester 2, 2015	Frequency		Percentage (%)	
	First half	Second half	First half	Second half
No. of participants	78	73		
Response rate			52%	48%
Gender				
Male	33	31	42%	42%
Female	45	42	58%	58%
Age Profile				
18-25	73	69	94%	95%
>25	5	4	6%	5%

Result of hypothesis tests

The results for the Wilcoxon Mann Whitney U test found 14 of the 16 questions were statistically significant (Table 3). The 14 questions' p-values ranged from 0.000 to 0.040 $< 0.05 = \alpha$; therefore, the null hypothesis H0 was rejected for these questions. The statistically significant difference between the two medians of student-centred and the teacher-centred classes implies that student engagement improved in the student-centred classes (inter-teaching) compared to the teacher-centred classes (lecture model) in relation to 14 of the 16 questions associated with student engagement. However, questions 7 and 11 were not statistically significant (p-value = 0.101 and 0.213 $> 0.05 = \alpha$); therefore, the null hypothesis H0 was not rejected for these two questions.

Table 3: Wilcoxon Mann Whitney U test scores for the student engagement survey

Survey Questions	Wilcoxon Mann Whitney U test	Significance Level 0.05 Sig. (1-tailed)
Engagement activities		
1. Asked questions during your course	.001	Reject H0
2. Contributed to a class discussion that occurred during your course	.003	Reject H0
3. Came to your course without having completed readings	.011	Reject H0
4. Worked with other students on projects during your course	.026	Reject H0
5. Worked with classmates outside of your course to prepare assignments	.034	Reject H0
6. Put together ideas or concepts from different courses when completing assignments	.010	Reject H0
7. Tutored or taught other students in your course	.101	Do not Reject H0
8. Discussed ideas from your course with others outside of class (students, family members, co-workers, etc.)	.040	Reject H0
9. Made a class presentation in your course	.000	Reject H0
10. Received prompt feedback on your academic performance from your course instructor	.000	Reject H0
11. Please rate how prepared you were before coming to your tutorial	.213	Do not Reject H0
Cognitive skills engagement		
12. Memorizing facts, ideas, or methods from your courses and readings so you can repeat them in pretty much the same form	.009	Reject H0
13. Analysing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components	.001	Reject H0
14. Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships	.011	Reject H0
15. Making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions	.001	Reject H0
16. Applying theories or concepts to practical problems or in new situations" (Source directly from NSSE survey Appendix 1)	.001	Reject H0

VII. Discussion and implications

Student engagement activities

The interest in this study was to correlate the survey outcomes with the findings espoused by Deutsch (1949b), Johnson et al. (1988), Astin (1984) and Finn (1989). The direction was positive and encouraging. The findings are promising for equipping MAB accounting students with engagement when student-centred pedagogies are adopted.

The results of questions 1 and 2 related to asking questions and being involved in class discussion showed that student-centred classes improved the engagement of students. This was consistent with the findings of Astin (1984) and Finn (1989), that student involvement, participation and discussion groups engaged students in the classroom more than the teacher-centred teaching model. Working with other students on projects during their course (Q.4) or with classmates outside of their course (Q.5) improved their student engagement experience. Similarly, Kienhuis' (2013) study of student-centred teaching reported that students were more engaged when working with other students. The respondents gathered different ideas or concepts when completing assignments (Q.6), and students discussed ideas from their MAB course outside class with other students, family and friends more often in student-centred teaching sessions compared to the teacher-centred lecture model (Q.8) which is similar to the findings by Chmielewski-Raimondo, McKeown and Brooks (2016) regarding student-centred approach. This corresponds with the findings of Astin (1984) in which student peer interaction in and outside the classroom enabled student reasoning and behavioural development. Class presentations by students in inter-teaching classes are a common occurrence (Q.9). Question

10 asks students whether they received prompt feedback on their academic performance and was found to be statistically significant. This resonates with the research by Watty et al. (2013) that reported students in Australian accounting courses, predominately taught by the lecture model did not receive adequate feedback. They found damning evidence from a national survey of Australian university graduates with the quality and quantity of feedback received. They stated that "approximately one-third of accounting students in Australia are not satisfied with the feedback they receive" (Watty et al., 2013, p. 474). As previously argued this may be because the lecture model is not structured to allow feedback. It is a one-way teaching model, communicating information from the lecturer to the student, i.e., teacher-centred.

Question 7 about tutoring or teaching other students was not statistically significant. Even though both peer class discussion and tutoring between students (reciprocal peer tutoring) in a student-centred class are one and the same role. The result indicated that students in both lecture and inter-teaching classes were not prepared for their courses during the semester (Q.11). In contrast, Slagter and Scribner (2014) reported that students in their political economy course "were more likely to complete the pre-reading for class, with students reading more carefully" when they had an inter-teaching class (p. 88).

Cognitive skills

Memorising facts was found not to improve with either method of teaching. However, the student-centred classes did improve a student's ability to analyse theories in depth and reach new conclusions, compared to the teacher-centred classes. The findings for questions 15 and 16 support the theories of Deutsch and Astin. They both argued that discussion groups improved student's ability to observe and listen to another student's dialogue. This comprehensively improved a student's ability to interpret data in reaching their conclusions. The results imply that students engaged in the classroom analyse, synthesise and apply theories to practical problems better than a lecture styled class (Pike et al., 2011; Gallagher, 2015). Further, students who are engaged apply a deeper approach to learning which enables them to have a stronger and lasting understanding, according to Biggs (2012).

Overall, the on-going intention has been to find better and more comprehensive methods of engaging first year accounting students. Accounting graduates are entering a profession that is increasingly challenging, and employers are demanding that their prospective employees are equipped with a multi-faceted range of skills and critical thinking attributes. The primary reason for the effectiveness of student-centred learning is that students are engaged in the learning process. Students are involved, participating, discussing, presenting, listening and thinking about accounting problems on a much deeper level than in the lecture model scenario. The underlying strength of classroom engagement is the cognitive improvement of each student. This is produced in highly interactive classes undertaken throughout the semester rather than one final

exam which have encouraged students to cram facts that are quickly forgotten after the event.

Contributions to the current literature

De Lange and Watty (2011) reported that the chronic concerns with accounting education several years ago were still relevant now. Yet, there appears little impetus on the part of academia to adopt and implement research findings concerning pedagogical improvements. Wygal, Watty and Stout (2014) noted that the Australian accounting fraternity has actively promoted teaching and curriculum reform; however, they found little evidence of implementing teaching effectiveness in the student learning space. They recommended further research of student-centred pedagogies to inform teaching approaches in the classroom.

This study challenges the status quo, advocating student learning practises in accounting education that engage students in their own learning, through student-centred pedagogies. The application of the appropriate teaching method is a critical condition of student engagement. The student engagement learning model (Figure. 2) explains that student engagement and subsequent enhanced cognitive skills will not occur where the teaching model does not employ interactive and collaborating behaviours. This study found that engaged students are those that are prepared, involved in class discussion groups and receiving feedback from every lesson. These are the components, considered essential to being engaged in the classroom, and are the mechanisms that drive the effectiveness of student-centred pedagogies.

A further substantial finding of this study was that student engagement in the classroom may have its roots in the group theories espoused by Deutsch (1949a). This study also revealed that students might be more productive in student-centred classes than working alone. The major contribution of this study to the literature found that it was probable that student-centred classes improved student engagement for MAB accounting students in Vietnam.

Managerial implications

Implementing student-centred settings in accounting education is not without significant challenges. Accounting schools are faced with growing student/staff ratios and an increased use of sessional staff (Evans et al., 2010). The issue is further exacerbated by rising international student enrolments to supplement accounting schools' revenue base due to changes in public funding (Freeman & Hancock, 2011). Class sizes have reached unyielding proportions, and the need to generate revenues is leading to a reduction in the quality of the student experience in accounting programs (Evans et al., 2010). Further, Parker states "can accounting survive such a high-volume, low-cost, lean, casualised higher education delivery model?" (cited in Evans et al., 2010, p. 20). Although beyond this study it is believed that student-centred pedagogies can be efficiently delivered to large cohorts of students through the implementation of the Large Student model developed

by Jarvis et al. (2014) or variations thereof. Importantly, accounting school academics need to actively promote the advantages of better cognitive performance that comes from the implementation of student-centred classes.

Practical implications

Introducing more effective educational practices requires time and preparation which can inhibit already time-limited academic research output (Watty et al., 2013). Introducing student aligned practices involves increased workload for students, incorporating, for example, pre-class preparation. This makes it all the more difficult for lecturers to take on a more demanding teaching practice and, therefore, the teacher-centred lecture model becomes the easiest option (Sturmey, Dalfen & Fienup, 2015). Considerably more preparation is required of the academic for the student-centred sessions, for example, constructing preparation guides, involves time in the conversion of lecture materials into preparation guides. Kienhus (2013) reported that lecturers found it a challenge to adapt new learning materials and provide clarification, based on student feedback, in such a short-time frame.

VIII. Conclusion

This article is the only known study testing student engagement on a non-western cohort in a course of study with a history of poor performance. This study challenges the status quo, advocating student learning practises in accounting education that engage students in their own self-directed learning. A major contribution to the literature is that it is probable that improved student engagement comes from student-centred classes and is a formidable alternative to the teacher-centred lecture model for teaching accounting courses. This study also revealed that (i) students might be more productive in small group work than working alone, and (ii) student-centred learning through the inter-teaching pedagogy likely improved student engagement and cognitive performance for MAB accounting students in Vietnam.

Limitations of this study found the research method may have restricted conclusions about fundamental relationships to this study. It is suggested that comparisons of teaching models should be conducted with randomly chosen students dispersed between independent groups to allow more meaningful conclusions for the wider population of accounting students.

Student-centred models like inter-teaching, which led to better student engagement, may be applicable to large classes (Kienhuis, 2013). Thus, future research is anticipated to investigate the large class approach for improved student learning. Further research should be conducted in the same study using statistical techniques that are more immune to sample size effects while considering additional variables, such as demographic factors and teaching skills. Research at the student cognitive level involved in group work is warranted since Deutsch, Astin and Biggs, in their investigations of student learning, all cite better retention

and faster conception of problem solving when students work together in groups.

References

- Apostolou, B, Dorminey, J. W., Hassell, J. M., & Rebele, J. E. (2016). Accounting education literature review. *Journal of Accounting Education, 35*, 20-55.
- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools, 45*(5), 369-386.
- Astin, A. W. (1977). *Four critical years*. San Francisco: Jossey-Bass.
- Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*(4), 297-308.
- Astin, A. W. (1985). Involvement: The Cornerstone of Excellence Source. *Change, 17*(4), 34-39.
- Astin, A. W. (1993). *What matters in college? Four critical years revisited*. San Francisco: Jossey-Bass.
- Australian Council for Educational Research. (2021). *Australasian survey of student engagement*. Victoria, Australia.
- Bentley, K. A., Brewer, P. C., & Eaton, T. V. (2009). Motivating students to prepare for class and engage in discussion using the hot seat. *Journal of Accounting Education, 27*(3), 155-167.
- Biggs, J. B. (2012). What the student does: Teaching for enhanced learning. *Higher Education Research and Development, 31*(1), 39-55.
- Black, K., Asafu-Adjaye, J., Khan, N., Perera, N., Edwards, P., & Harris, M. (2007). *Business statistics*. Australian, John Wiley and Sons, Australia.
- Boekaerts, M. (2016). Engagement as an inherent aspect of the learning process. *Learning and Instruction, 43*(June), 76-83. <http://dx.doi.org/10.1016/j.learninstruc.2016.02.001>.
- Chmielewski-Raimondo, D. A., McKeown, W., & Brooks, A. (2016). The field as our classroom: Applications in a business-related setting. *Journal of Accounting Education, 34*, 41-58.
- De Lange, P. & Watty, K. (2011). Accounting Education at a Crossroad in 2010 and Challenges Facing Accounting Education in Australia. *Accounting Education: An international journal, 20*(6), 625-630.
- Deutsch, M. (1949a). A theory of co-operation and competition. *Human Relations, 2*(2), 129-152.
- Deutsch, M. (1949b). An experimental study of the effects of co-operation and competition upon group processes. *Human Relations, 2*(3), 199-231.
- Deutsch, M. (2003). Cooperation and conflict: A personal perspective on the history of the social psychological study of conflict resolution. In M. A. West, D. J. Tjosvold, & K. G. Smith (Eds.), *International handbook of organizational teamwork and cooperative working*. San Francisco: Wiley.
- Eccles, J. S. (2016). Why engagement matters. *Learning and Instruction, 43*, 1-5.
- Evans, E., Burritt, R., & Guthrie, J. (Eds.). (2010). *Accounting education at a crossroad in 2010*. Institute of Chartered Accountants in Australia.
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research, 59*, 117-142. <http://search.proquest.com/docview/214117047?accountid=10499>
- Finn, J. D. (1993). *School engagement and students at risk*. Washington, DC: National Centre for Education Statistics.
- Fredricks, J. A., Wang, M., Schall, J., Hokfkens, T., Parr, A., & Snug, H. (2016). Using qualitative methods to develop a measure of math and science engagement. *Learning and Instruction, 43*(43), 5-15.
- Fredricks, J. A., Filsecker, M., & Lawson, M. A. (2016). Student engagement, context, and adjustment: Addressing definitional, measurement, and methodological issues. *Learning and Instruction, 43*, 1-4.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109. <http://search.proquest.com/docview/214138084?accountid=10499>
- Freeman, M., & Hancock, P. (2011). A Brave New World: Australian Learning Outcomes in Accounting Education. *Accounting Education, 20*(3), 265-273.
- Gallagher, S. M. (2015). Improving Student Engagement through Consultation. *Accounting Education, 24*(6), 564-568.
- Harper, S. R. & Quaye, S. J. (2009). *Beyond sameness, with engagement and outcomes for all*. In: *Student engagement in higher education*. New York and London: Routledge, pp. 1-15.
- Howard, C. (2016). Engaging Minds in the Common Core: Integrating Standards for Student Engagement. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 89*(2), 47-53.
- Jarvis, W., Halvorson, W., Sadeque, S., & Johnston, S. (2014). A large class engagement (LCE) model based on service-dominant logic (SDL) and flipped classrooms. *Education Research and Perspectives (Online), 41*, 1-24.
- Johnson, D. W. (2003). Social interdependence: Interrelationships among theory, research, and practice. *American Psychologist, 58*(11), 934.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1988). *Cooperation in the classroom*. Edina, MN: Interaction Book.

- Johnson, D. W., Johnson, R. T., & Smith, K. A. (2014). Cooperative Learning: Improving University Instruction by Basing Practice on Validated Theory. *Journal on Excellence in College Teaching*, 25(3/4), 85-118.
- Kaciuba, G (2012). An instructional assignment for student engagement in auditing class: Student movies and the AICPA Core Competency Framework. *Journal of Accounting Education*, 30, 248-266.
- Kane, M. T. (2006). *Validation*. In R. Brennan (Ed.), *Educational measurement* (4th ed., pp.17-64). New York: American Council on Education and Praeger.
- Kienhuis, M. (2013). *Interteaching: Dissemination and Evaluation across three RMIT Colleges*. Health Sciences, SHE, Final Report.
- Kuh G. D. (2002). *The national survey of student engagement: Conceptual framework and overview of psychometric properties*. Center for Postsecondary Research, Indiana University, Bloomington. http://nsse.iub.edu/pdf/psychometric_framework_2002.pdf
- Kuh, G. D., Kinzie, J. Cruce, T. Shoup, R. & Gonyea, R.M. (2006). *Connecting the dots: Multi-faceted analyses of the relationships between student engagement results from the nsse, and the institutional practices and conditions that foster student success*. Centre for Postsecondary Research Indiana University Bloomington sourced from http://www.inpathways.net/connecting_the_dots_report.pdf
- Kuh, G. D., Schuh, J. S., Whitt, E. J., & Associates. (1991). *Involving colleges: Successful approaches to fostering student learning and personal development outside the classroom*. San Francisco: Jossey-Bass.
- Merola, G. (2015). *Critical content expert and statistician*. RMIT University Vietnam.
- NSSE (2015). *National benchmarks of effective educational practice*. Bloomington, IN: Indiana University Centre for Postsecondary Research and Planning.
- NSSE (2001). *National benchmarks of effective educational practice*. Bloomington, IN: Indiana University Centre for Postsecondary Research and Planning.
- Oxford Dictionary of Psychology (2015). *Promotively independent goal*. California: Stanford University.
- Pike, G. R., Kuh, G. D., & McCormick, A. C. (2011). An investigation of the contingent relationships between learning community participation and student engagement. *Research in Higher Education*, 52(3), 300-322.
- Sekaran, U., & Bougie, R. (2013) *Research methods for business: A skill building approach*, (6th ed), John Wiley and Sons, West Sussex.
- Slagter, Tracy H., & Scribner, Druscilla L. (2014). Interteach and Student Engagement in Political Science. *Journal of Political Science Education*, 10(1), 81-92.
- Sturmey, P., Dalfen, S., & Fienup, D.M. (2015). Inter-teaching: a systematic review. *European Journal of Behaviour Analysis*, 16(1), 121-130.
- Wang, M., & Fredricks, J. A. (2013). The reciprocal links between school engagement, youth problem behaviours, and school dropout during adolescence. *Child Development*, 85(2), 722-737.
- Watty, K. de Lange, P. Carr, R. O'Connell, B. Howieson, B & Jacobsen, B. (2013). Accounting students' feedback on feedback in australian universities: They're less than impressed. *Accounting Education*, 22(5), 467-488.
- Weiss, C., & García, E. (2015). Student engagement and academic performance in méxico: Evidence and puzzles from Pisa. *The Comparative Education Review*, 59(2), 305-331.
- Wong, G., Cooper, B. J., & Dellaportas, S. (2015). Chinese students' perceptions of the teaching in an Australian accounting programme – an exploratory Study. *Accounting Education*, 24(4), 318-340.
- Wygol, D. E., Watty, K., & Stout, D. E. (2014). Drivers of teaching effectiveness: Views from accounting educator exemplars in Australia. *Accounting Education*, 23(4), 322-342.

Appendix

Appendix 1

Inter-teaching
<ul style="list-style-type: none">• guided independent learning• student-paced small group tutorial discussion• lectures are developed in response to student feedback• a distinctive feature of the model is that tutorials precede lectures• before attending each tutorial class, students are provided with a preparation guide• the preparation guide directs students through the week's learning outcomes, with questions that test comprehension and ability to apply and synthesise the material• students are expected to have completed the preparation guide before their tutorials• students come to class and immediately form small groups to discuss the topic material• students start off their discussion by working through the questions that they answered during their self-directed learning from the preparation guide• students are expected to know the answers before they come to tutorials and be able to explain their answers to their peers• peer discussions should make up 80% of the class period• peer discussion is facilitated by the teacher, who also provide reinforcement (including marks towards class discussion grades) for engaging in effective discussion• following each peer discussion session, students are requested to report on the most challenging aspects of the course content• Feedback is used by the teacher to develop content for subsequent clarification which occurs immediately after the discussion (Adapted from Kienhuis, 2013, pp. 1-31).

Lecture Model
<ul style="list-style-type: none">• 1.5-hour lecture which precedes the tutorial• the lecture is once per week where all students receive power point slides• the lecture is posted into Blackboard each week• the lecture begins with a summary of the learning outcomes for the week which are taken from the published course guide• the next session of the week is a 1.5 hour tutorial where students solve questions prepared by the same lecturer• the students usually work alone solving the questions and seeking assistance from the lecturer when required (Adapted from RMIT Vietnam, Accounting Organisations and Society, 2015).

Appendix 2

Hypothesis 1A: Asking questions in class improved the student engagement experience compared to the lecture model for undergraduate accounting students.

Hypothesis 1B: Contributing to a class discussion that occurred during the course which improved the student engagement experience compared to the lecture model for undergraduate accounting students.

Hypothesis 1C: Coming to class without having completed readings did not improve the student engagement experience compared to the lecture model for undergraduate accounting students.

Hypothesis 1D: Working with other students on projects during the course improved the student engagement experience compared to the lecture model for undergraduate accounting students.

Hypothesis 1E: Working with classmates outside of the course to prepare class assignments improved the student engagement experience compared to the lecture model for undergraduate accounting students.

Hypothesis 1F: Putting together ideas or concepts from different courses, when completing assignments or during class discussions in the course, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1G: Tutoring or taught other students in the course, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1H: Discussing ideas from the course with others students, family members and co-workers, outside of class, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1I: Making a class presentation in the course, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1J: Receiving prompt written or oral feedback on academic performance from the course, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1K: Being prepared before coming to the tutorial, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1L: Memorising facts, ideas, or methods from the courses and readings so that they can be repeated in pretty much the same form, does not improve the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1M: Analysing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1N: Synthesising and organising ideas, information, or experiences into new, more complex interpretations and relationships, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1O: Making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions, improved the student engagement experience, compared to the lecture model for undergraduate accounting students.

Hypothesis 1P: Applying theories or concepts to practical problems or in new situations, improved the student engagement experience, compared to the lecture model for undergraduate accounting students." (All hypotheses sub-questions are replicated from the NSSE survey questions [NSSE, 2001]).

Copyright: © 2021 Mark Wheaton. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.