

**Exploring Student Engagement and
Disengagement in University Education, Can
Vocational Activities/Practice-Based Learning
Help?**

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1.0 Introduction

Student engagement is a commonly discussed term within education especially within Higher Education where academics regularly engage in research around the topic with the aim of improving engagem

Some studies [2] have considered engagement in greater detail by splitting it into different types: Behavioural Engagement (how students behave in class), Emotional Engagement (emotions/feelings about learning), and Cognitive Engagement (mental preparation and motivation). Some definitions seem to relate to one of these types (for example Schaufeli et al. [12] refers to emotional engagement while Booth [15] refers to behavioural engagement) but perhaps to fully describe engagement a definition should address all three types?

With so many different definitions of engagement various studies [2, 13 & 14] discuss how this makes measuring engagement difficult. Baron and Corbin [2] came to the conclusion that the reason why there is little agreement among definitions of engagement is they only describe parts of student engagement and approaches to measure it and a wider all-encompassing definition and approach to measure it is required:

“...we propose a definition that combines the individual’s state of mind with a sense of community. Thus, the definition by Schaufeli et al. [12], together with definitions that emphasise community and social engagement, capture individual engagement for us. Therefore, we suggest that the engaged student is the student who has a positive, fulfilling and work-related state of mind that is characterised by vigour, dedication and absorption and who views him or herself as belonging to, and an active participant in, his or her learning communities.” [2]

2.2 Disengagement

It is not just a lack of engagement that is an issue, many academics comment on how they have observed an increase in disengagement with issues such as students wishing to spend as little time as possible on campus, doing minimal work (a surface learning approach), minimal participation, poor attendance, reliance on

2.3 Summary

Therefore, in summary academic engagement involves students who are willing to participate fully with the university experience to not only participate within class but to engage with the wider university community and other learning opportunities available via self-study, networking, work-experience, etc. Students will be dedicated to their studies devoting significant amounts of energy into education to gain the maximum benefits from it. This dedication will require students to battle with factors that cause disengagement such as the complexities involved with modern life that may put demands on their time.

Therefore, while engagement is desired and the benefits for academic success and a good student experience are clear, the challenge is to find a way to foster academic engagement (and naturally encouraging increased attendance) in a way that meets the needs of adult learners and is suitable for students with complex lives and limited time to study. The presented case study shows one such approach.

3.0 Learning Theories, Approaches and Styles

A variety of literature has explored the ways students learn and considered whether the current way we teach adults (such as in a university) is the best approach for their learning needs and styles. Massingham and Herrington [3] for example discuss how students' attitudes to learning has shifted away from viewing education as an intellectual challenge and seeing value in the pursuit of knowledge towards being goal-oriented, typically influenced by work pressures and ambitions, and a desire to see a value in what they are learning. This therefore casts doubt on whether the pedagogy/teacher-focused approach to learning typically used in universities, such as use of the lecture format (or similarly instructional based seminars) where students sit passively receiving information, is no longer fit for purpose for teaching modern day students and whether university teaching should be adapted accordingly. The goal-oriented nature of students discussed fits in with the work on andragogy (student-centred learning) by Knowles et al. [4] thus suggesting perhaps an andragogy approach is more suitable.

3.1 Adult Learning: Andragogy versus Pedagogy

Although adult learning has existed for centuries until recently little has been researched about how to teach adults. H4()ni ada(e)-12(v)8(er)-2(,)-1(t)3(eac)-12(h)8(er)-2(s)5()-12(h)8(av)8(teach adults differently to children as they realise they would benefit from a different style of teaching. They recognise teaching adlts should be inquiry based to help stteachereddagogy

responsible for students' learning: how teaching occurs, what, when and why topics are covered, defining assessment etc. It assumes that learners are dependent personalities who attend classes because they are told it is necessary, that they only require specific knowledge to pass the course (a subject-centred orientation to learning) and have no interest in why they are studying it. Students' prior experience and knowledge is of little value and is ignored in favour of the teacher or other scholar's experiences and knowledge.

However as teaching evolved scholars began to realise adults learn differently to

mature they become less dependent and teaching that allows independence/self-directed study becomes more useful [4]. Therefore, as study increases and dependence decreases a pedagogy approach becomes increasingly inappropriate and an andragogy approach becomes more suitable.

Therefore, an andragogy student-centred approach to teaching should appeal to modern day students goal-oriented attitudes to learning and their need to see value in what they are studying. It can also help with their work-related ambitions, allows for flexibility to fit study around students' complex lifestyles and is well supported with the availability of modern technology and teaching resources.

3.2 Learning Theories

Similarly, there are many learning theories and approaches to teaching which will now be considered in relation to adult learning. Constructivist and humanist theories influenced Knowles' andragogical assumptions and clearly match the ideals of andragogy. They are suitable for teaching adults as they allow learners to influence the learning process and their knowledge and experiences are valued which is desired by adult learners. They can also be considered for teaching children just adults will have a larger quantity of experiences and knowledge to draw on. Similarly, as cognitivism helps learners develop their own understanding of a concept rather than being told the teachers interpretation of the concept it aligns with andragogy and adults' desires for self-learning. Behaviourism does not naturally fit with andragogy or the desires of adult learners as it treats learners as dependents with no free will and dictates how they will learn. Finally, social learning theory is not specifically aimed at children or adults or the ideals of pedagogy or andragogy. It draws on behaviourism which aligns with pedagogy, and cognitivism which mainly aligns with andragogy. However, it is a student-centred approach so links well with andragogy and the desires of adult learners.

4.0 Case Study

In response to observed engagement problems discussed above a case study was created to investigate if knowledge about engagement, disengagement and adult learning can be used to improve engagement in a lab session. It involved creating a lab session which is vocationally relevant with examples that are more realistic to a work environment than a traditional lab session. This approach should help improve engagement as research [2 & 14] has found increasingly students are looking for how university can help them with employment and how content covered is relevant to employment; consequently, universities are focusing on work-based/work-related learning and promoting courses' vocational value.

The lab session was designed to accompany the security lecture of the Web Technology Integration (WTI) unit for second year undergraduates to help them understand the topics the lecture covered. The lecture looks at vulnerabilities within web pages and approaches to solve them and the current/existing lab session involves students using code to test some of the vulnerabilities covered. The case

The students were given 20 minutes to complete the tasks. This was followed by a discussion on what the students learned and how to resolve identified vulnerabilities. Next the students were asked to fill in a feedback questionnaire/survey followed by a discussion on if the session was useful and how they could use their new knowledge to enhance their assignment website to achieve higher marks.

learning to aid understanding and memory recall. These approaches meet the desires of adult learners and principles of andragogy, and aids motivation. Behaviourism was purposely avoided because it focuses on the teacher taking full responsibility for the learning process and does not respect student's free will or allow self-directed learning so is inappropriate for adult education [4].

6.0 Results

The results from the student feedback survey were overall positive with the majority of responses (92%) being agree or strongly agree.

the week of the lab. This was due to the lab being a trial, a need to quickly create the server, and for it to be a stand-alone server due to the vulnerabilities in the website. A future improvement would be to investigate a more permanent solution to allow students to use the website anytime for task completion, revision and to practice hacking. Due to purposely making the website vulnerable to attack security will need to be considered and monitored carefully to avoid making the server itself vulnerable to attack. Also the server should be stand-alone/isolated in case its security is compromised.

8.0 Conclusion

As discussed teaching adults is complex with many different approaches that can be used with numerous advantages and disadvantages. Keeping students engaged and avoiding disengagement can be difficult with students' complex lives [2] and many distractions making the problem worse. However, choosing the right teaching approach for the current situation and content you are teaching can help significantly. This paper presented one such way to improve a teaching session by making the session vocationally relevant with examples that are more realistic to a work environment. This makes use of a variety of learning theories, primarily social learning theory, and an andragogical approach to appeal to adult learners; adults like to see the relevance of content they are learning and tend to be vocationally focused so the session appealed to their desires and learning styles.

