EDM8014 - English Literacy and Special Educational Needs

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TITLE: Embedding Student Engagement Technologies

PARTICIPANTS: EDM8014 English Literacy and Special Educational Needs is a core course in the newly accredited *Master of Learning and Teaching* (MoLT) program. Sixty postgraduate students commenced the course, with 88% of the student cohort in their final year of study. Though suggested enrolment patterns would recommend the course be undertaken in the final year/semester, 8% of enrolled students in the course were in their very first semester of study when undertaking the course. Dr Susan Carter [Course Examiner] also taught in the course.

CONTEXT:

Ensuring that online learning experiences enhanced and facilitated learning and engagement and reduced attrition.

- The MoLT is a Master's degree designed for those who have undertaken a bachelor (or similar qualification) in an area other than education. As such, the course cohort has diverse academic and work background experiences. Students enrolled in the Master of Learning and Teaching (MoLT) program tend to be non-traditional students from diverse vocational and industry backgrounds, ranging from accounting to engineering, science, business, and health. Catering to the learning needs and expectations of students from this diversity of academic backgrounds has previously proven to be challenging. Problematic also is that students have three specialisations (early childhood, primary, and secondary) and thus course specifics need to address each in equal depth in order to enhance employability and student engagement. Students within the course cohort also face many competing demands, including juggling the demands of study commitments, family responsibility and work commitments. These competing demands have a significant impact on student engagement and increase the risk of attrition (McCluskey et al, 2019; Willcoxson et al., 2011). In past iterations of the course, this manifested in terms of minimal to no responses/posts in traditional forum activities and non participation in the traditional StudyDesk surveys and quizzes.
- Participation in the 2020 Tech Dem project was motivated by the intent to promote co-constructed learning that embedded opportunities for interactions with course teaching staff, or other students, to support cognitive engagement, social engagement, and connectedness. It was anticipated that feelings of online isolation could also be reduced using a digital approach, which incorporated interactive elements that promoted opportunities to build a class community and a sense of belonging.
- This aligned with the Student Success and Retention Action Plan's focus on knowing your students.

Ensuring that the course content and pedagogy provided was clear, motivating and challenging so that online students received the same level of support as would face-to-face students.

- The emotional, intellectual, and financial investment made by students needs to be respected in online pedagogy.
- Participation in the 2020 Tech Dem project was motivated by the intent to provide quality pedagogy that would maximise engagement of online students and provide positive learning outcomes from their study.
- This aligned with the Academic Plan's focus on innovative learning and teaching.

Ensuring that MoLT students experience and engage in using digital pedagogical approaches and tools that can be utilised in their future classrooms.

- As the course targets preservice teachers, the intent was to provide opportunities to use and engage with digital pedagogical approaches and tools that can later be utilised by students, when they themselves become teachers.
- This aligned with the Academic Plan's focus on employability.

Aim of the initiative

Aim 1: Ensure that online learning experiences enhance and facilitate learning and engagement and reduce attrition.

- Technology Demonstrators mentoring provided the opportunity to embed digital technologies that encouraged both students and lecturers to engage in a more interactive and collegial way with both the content and each other. A suite of asynchronous technologies was embedded in the course to promote co-constructed learning, and opportunities for interactions with course teaching staff, or other students. The intent was to support cognitive engagement, social engagement, and connectedness in an endeavour to build a class community, create a sense of belonging for individual students, and to reduce students' feelings of online isolation.

Aim 2: Ensure that the course content and pedagogy provided is clear, motivating and challenging so that online students receive the same level of support as would face-to-face students.

- As part of the newly accredited *Master of Learning and Teaching* program, the course EDM8014 was redesigned. This provided the opportunity, through Tech Dems mentoring, to move the course from a more passive, to active, learning environment, encouraging both students and lecturers to engage in a more interactive and collegial way with both the content and with each other. The quality of pedagogy presented needed to provide positive learning outcomes by embedding opportunities for students to support engagement and connectedness within the cohort.

Aim 3: Ensure that MoLT students experience and engage in using digital pedagogical approaches and tools that can be utilised in their future classrooms.

- As the course was for preservice educators, there was the opportunity to make the use of online technologies an explicit part of the course design, in addition to providing modelling for students on how to use these technologies in their future teaching practice. Online technologies were not just embedded tools to enhance engagement and understanding of course content. Students were alerted as to why and how each online technology was used. Instructional videos and resources were included on how to set up and interact with each, facilitating their use within the student's own teaching practice.

Educational Technologies

This newly designed course was taught for the first time in Semester 1, 2021 and included the enmeshing of five learning technologies to enhance student engagement based on Redmond et al's (2018) online engagement framework elements and indicators.

Intervention 1: Padlet for Social, Cognitive and Collaborative Engagement
There were two Padlets used within the course: the EDM8014 Course Padlet and the EDM8014 Resources Padlet. These were used by the course lecturers to build community and create a sense of belonging for students through the curation of relevant resources to support course content. They were also used to encourage students to: articulate assumptions and beliefs about inclusion, activate metacognition, gain feedback from others on their learning, establish trust, and develop relationships with peers as a community of learners.

Intervention 2: Flip Grid for Cognitive and Behavioural Engagement
Used for students to complete learning tasks that encouraged cognitive engagement through critical thinking, developing deep discipline understandings, and justifying decisions. Supported behavioural engagement related to academic skills and agency, as students can receive feedback from both the course examiner and peers.

Intervention 3: Mentimeter for Behavioural and Emotional Engagement
Used by the Course lecturers to seek student feedback on their learning experience within the first few weeks of the Semester in terms of: developing academic skills; navigating the online learning environment; developing agency as they encounter course content and assessment requirements; as well as helping the course lecturers in supporting student expectations. This feedback was then used as a formative tool by course teaching staff.

Intervention 4: Embedded 360 Video for Cognitive and Emotional Engagement
Used by Course lecturers to expose students to an immersive learning experience where they experience a Neurologically Diverse Person's 'Meltdown'. This is designed to challenge students to think critically and recognise their own motivations and assumptions, and feel more connected to their peers as part of this learning experience.

Intervention 5: H5P for Cognitive and Behavioural Engagement
Used by students to undertake a series of short, self-check quiz activities throughout the course to test their understanding of course content, and develop academic and multidisciplinary skills. Here, immediacy of feedback was key to support student learning.

Online engagement framework

The online engagement framework for higher education was used both to guide the selection of intervention objectives and to measure their effectiveness. A more detailed analysis of the intervention (below) will highlight that many elements of the framework were considered. In the main, however, aligning with the aims expressed above, there were two main engagement elements targeted: social engagement (most especially building community) and cognitive engagement (thinking critically and activating metacognition).

Each of the educational technologies provided limitless possibilities within course design. The engagement framework allowed the use of these technologies to be focussed and targeted to the specific intervention objectives. Take for example the course Padlet, 'Let's build our knowledge together,' which was designed specifically to focus on cognitive engagement through targeted reflection after the completion of each module, and to enhance social engagement through the opportunity to read, post, and respond collaboratively.

Project approach

When redesigning the course, learning activities were initially identified that would allow students to achieve the desired course outcomes and address the contextual challenges that impacted on student engagement. Technologies that have the ideal affordances to deliver those learning activities were then selected and embedded in the course content and directly on the StudyDesk. Learning activities were grounded in Constructivism via student-centred active learning (Marek, & Wu, 2020) and enmeshed in the following ways:

Intervention 1: Padlet

The two Padlets, the EDM8014 Course Padlet and the EDM8014 Resources Padlet, were embedded directly into StudyDesk as tools to: support knowledge development and construction; encourage the aggregation and internalisation of content knowledge; and offer opportunities for

multi-user interface. The Padlets enabled flexible learning, supported autonomy, and supported the active engagement of students in the learning process (Park, 2013).

Intervention 2: Flip Grid
Two Flip Grid activities were used. Both activities were embedded within the course workbooks.

Intervention 3: Mentimeter
Mentimeter activities were enmeshed in a number of ways in the course. A Mentimeter scaling activity, used as a check in to gauge how the students were travelling in regards to understanding Assignments Task requirements, was directly embedded into the StudyDesk. This activity provided 'quick' feedback to teaching staff that further information/explanation needed to be provided to students. A range of different types of Mentimeter activities were also embedded throughout each of the Module workbooks. Word clouds, scaling, questions and answer, and short answer questions were utilised, which provided students with ways to demonstrate their knowledge and understanding. Mentimeter was also used during live Zoom tutorial sessions,with short answer and open ended questions used to promote active engagement opportunities in place of passive listening to tutorial discussions. Mentimeter activities from the live Zoom sessions were also embedded in the Zoom session recordings which provided students who had not attended live sessions, with opportunities to engage in the Mentimeter activity up to 2 weeks after the live session. This would not have been possible without the Mentimeter.

Intervention 4: Embedded 360 Video
One 360 Video was embedded in one of the course workbooks.

Intervention 5: H5P
Three HP5 activities were embedded directly on the StudyDesk where students engaged in a series of short, self-check quiz activities throughout the course to test their understanding of course content.

The approach was designed to promote engagement, build community and create a sense of belonging for students by fostering collaborative learning, where students actively interacted by sharing experiences, clarifying ideas, and evaluating other students' ideas by engaging. This approach encouraged students to establish trust and develop relationships with peers as an active community of learners. This focus on engagement and community was important in the course as it was a Masters course that drew students from diverse academic and professional backgrounds.

More than a method of enhancing engagement, the approach undertaken by this initiative is also linked to employability. The enmeshing of the technologies was designed to model, and explicitly teach their use as part of an online learning environment. In this way, the students could engage with the technology as learners, but also learn how to use them as future teachers.

Evaluation method

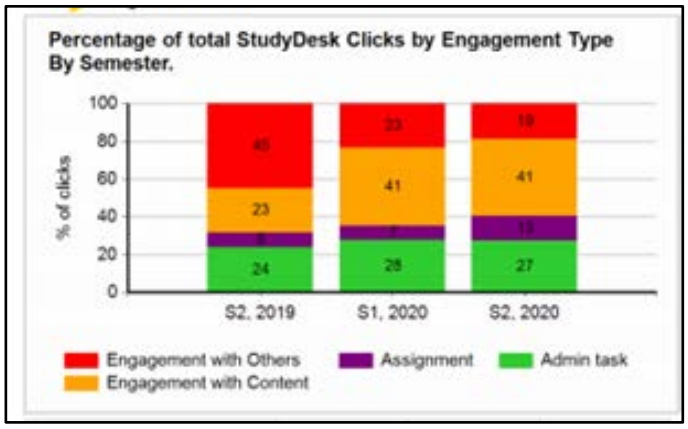
Evaluation of the success of the implementation of the project utilised Redman et al.'s (2018) online engagement framework for higher education, the University of Southern Queensland's Student Feedback Survey Semester 1 results, EDM8014 and EDM8002 StudyDesk Learning analytics, and each Educational Technology's participation analytics to determine the type of engagement, student opinion, engagement patterns, and numbers of engagements.

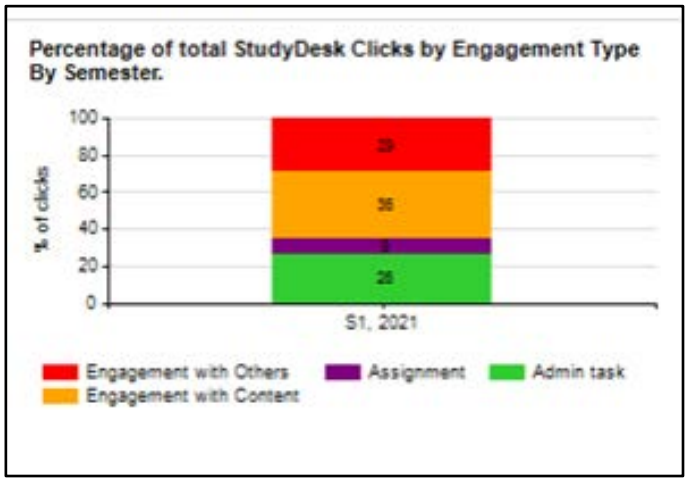
Project impact

Curriculum Design

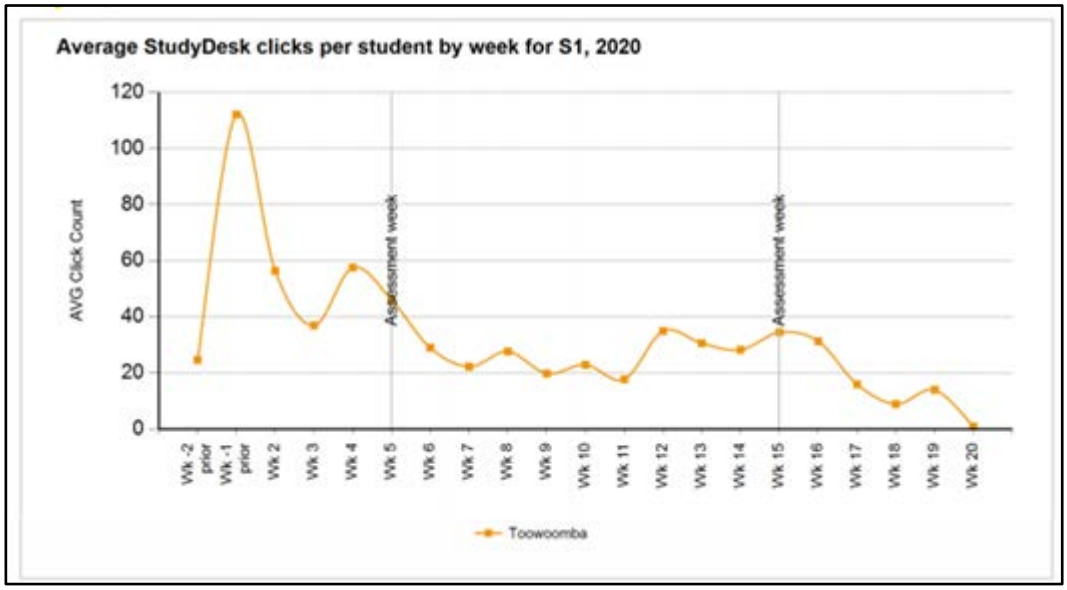
- While student engagement in the educational technologies was less than expected, engagement in the Padlet activities [47% and 31% of students] was greater than engagement in Traditional Forum activities [at an average of 30 % of students] in previous course iterations.

- In Semester 1, 2021, student engagement was spread across engagement technologies, content workbooks, videos, and online pre-recorded lectures with associated activities.
- Engagement technologies promoted student engagement with each other more often than in previous iterations of the course. In EDM8014 Semester 1, 2021, students engaged more with each other than in Semester 1 and 2, 2020 where students tended to engage more with content than with each other. (Please see tables below.)





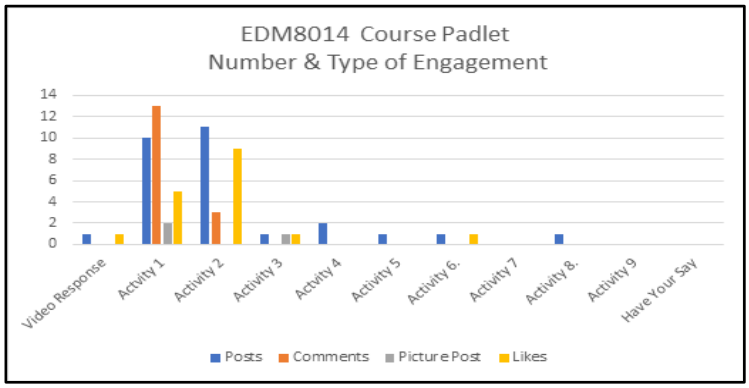
Engagement in educational technologies declined over the course of the semester. However, this was mirrored in overall engagement with the StudyDesk which also declined over the course of the semester. This decline is a typical profile for StudyDesks.



Use of educational technologies and how they were enmeshed into the course

Padlets - EDM8014 Course Padlet

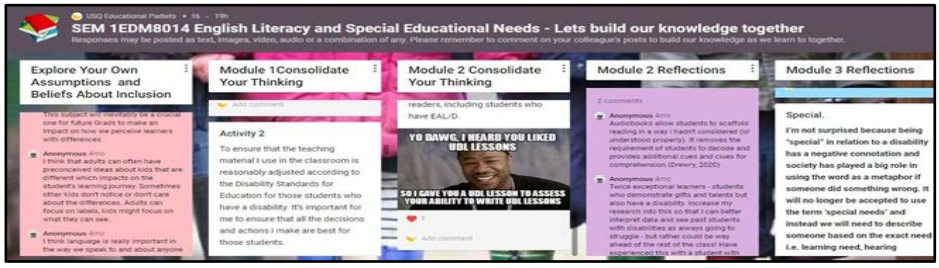
- 47% [28] of students engaged in the EDM8014 Course Padlet. There were 64 [in total] engagements [posts, comments and likes] in the EDM8014 Course Padlet. There were 28 student posts in total, 16 student comments in response to students' posts, 3 student picture posts, and 18 likes. This indicates the development of a class community and online promotion of belonging within the group.



- Activity 1 *Do you think people's perceptions of others play a role in the success of learners with disabilities?* and Activity 2: *What is one key concept from Module 1 that you will include in your professional practice and why*? had the most engagements. Both activities were emotive 'challenge' activities which seemed to connect and resonate with students and thus promoted responses [posts, picture posts or like] to the activities. engagements .
- While there were some posts and likes in Activities 3, 4, 5, 6, and 8, overall engagement in the resource declined as the semester progressed and students undertook professional practice.
- Engagement overall, however, was noteworthy, with the course Padlet receiving 1369 views from 58 visitors, and the Resources Padlet receiving 208 views from 48 visitors.
- Whilst the number of engagements with Padlet was far greater than previous engagements in Traditional Forums, there still appears to be a number of students who are either not confident using Padlet, are not conformable with engaging in collaboration or sharing learning, or would prefer traditional methods of engagement.

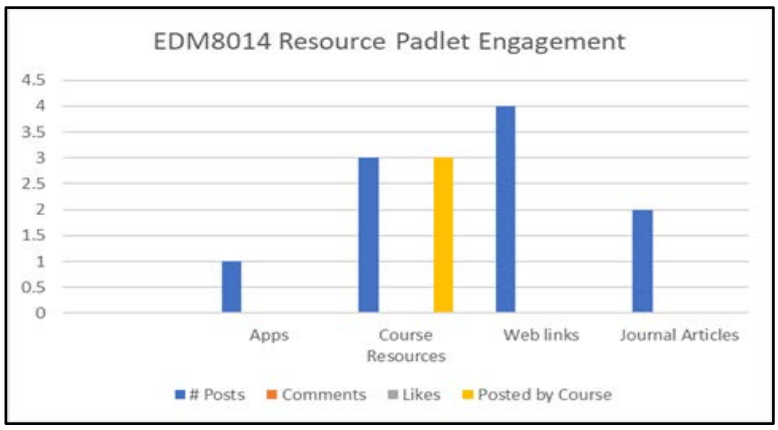
EDM8014 Course Padlet – Course Commencement No Responses 17.2.2021

EDM8014 Course Padlet – Course Completion 1.7.2021



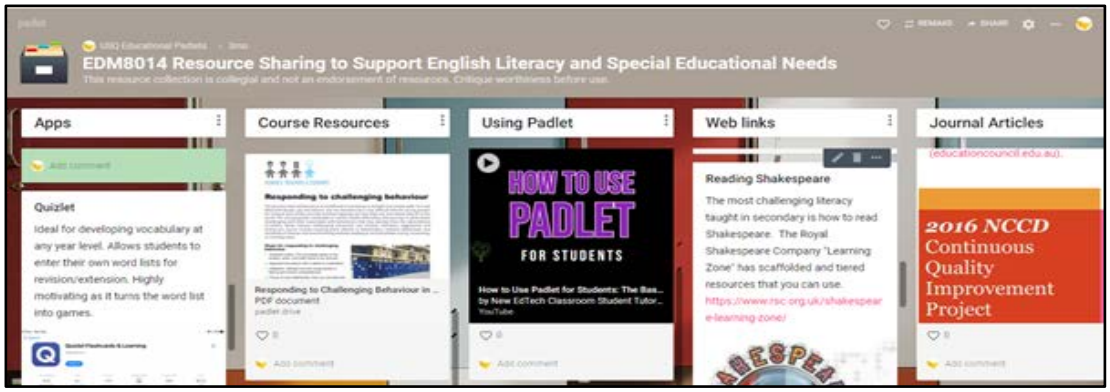
Padlets - Resources Padlet

- 22% [13] of students engaged in the EDM8014 Resources Padlet. Of the 13 students who engaged in the Resources Padlet, there were 21 views in total, with 9 students viewing once only, 2 students who viewed twice, and 2 students who viewed 3 times over the semester.

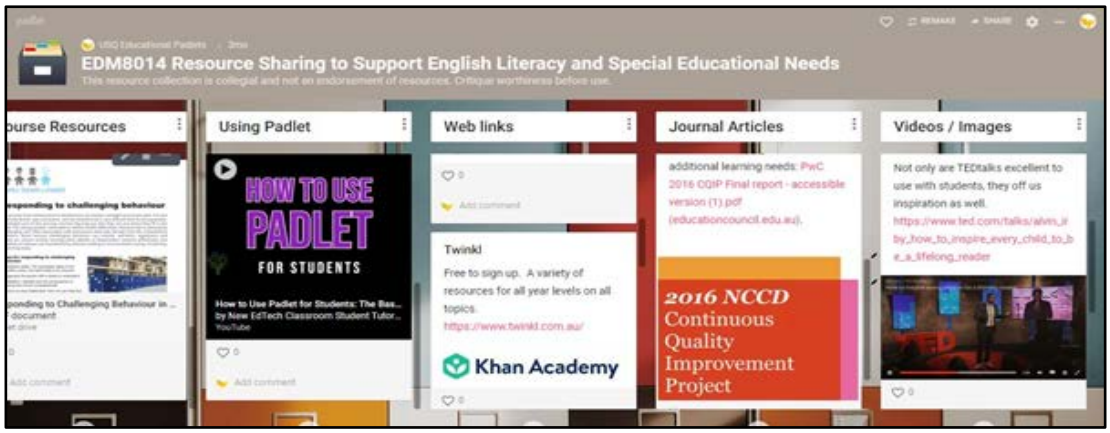


- Of the 13 students who engaged in the Resources Padlet, only four of those students posted in the Padlet, with each only posting once. Of the post types, there were 15 posts, 0 likes and no comments in the EDM8014 Course Padlet.
- This suggests that students were interested in the idea of accessing a resource base, but were not yet far enough into their professional practice to be able to contribute.

EDM8014 Resources Padlet – Course Commencement No Responses 17.2.2021



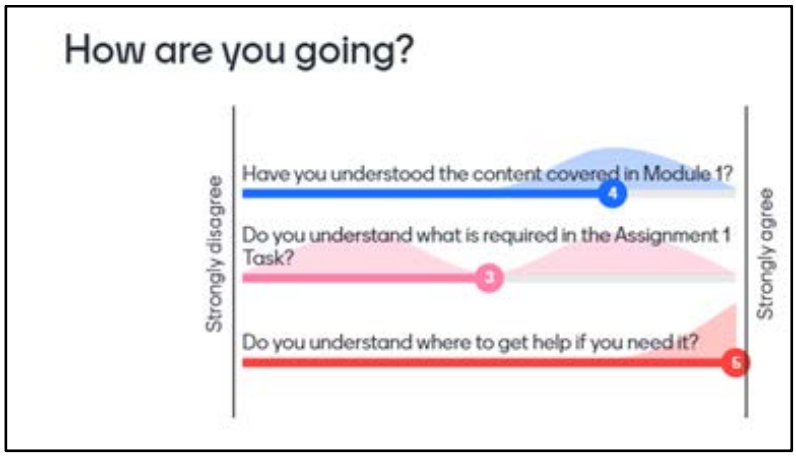
EDM8014 Resources Padlet – Course Completion 1.7.2021



Mentimeter

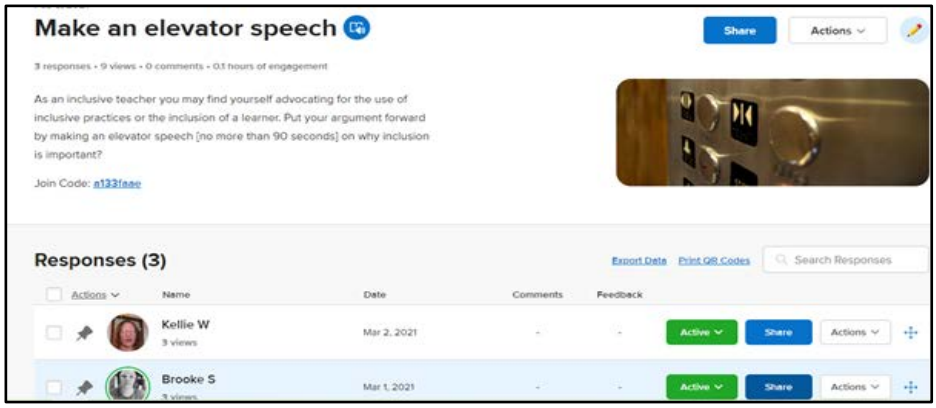
- 25 % [15] students accessed/viewed the Mentimeter Activity '*How are you going'* embedded on the StudyDesk, with 12 students posting a response. Of the 76.2% [32] students who accessed the Module 4 workbook, no students completed the Module 4 Mentimeter activity.
- Of the 54% [27] of students who accessed the Module 5 workbook, no students completed the Module 5 activity. Mentimeter activities embedded in workbooks are not accessed by students.
- In the Zoom Tutorial Activity, all 8 students who engaged in the live Zoom session engaged synchronously with each of the 3 Mentimeter questions that were presented in the Zoom session. The links to the Activity were embedded in the Zoom Tutorial recording and the 3 Mentimeter Activities remained open for 3 weeks after the live Zoom session. An additional 7 students of the 13% [8] students who engaged with the Zoom tutorial recording, also engaged in the 4 Mentimeter Activities.
- Easily accessed technologies embedded directly in the StudyDesk or into a Zoom session were accessed more by students than technologies embedded within course Moodle workbooks. Students appear to prefer engaging in technologies that are highly visible and easily and directly accessible on the StudyDesk. In the main, Mentimeter activities only engaged the industrious students willing to try something new.

Mentimeter Example



Flip Grid

- While only **4 students posted** in the Module 1 Flip Grid activity *Make an elevator speech,* the posts were viewed **21 times in total**. One student provided an email indicating that Flip Grid was a very good activity that she would use with her future students.



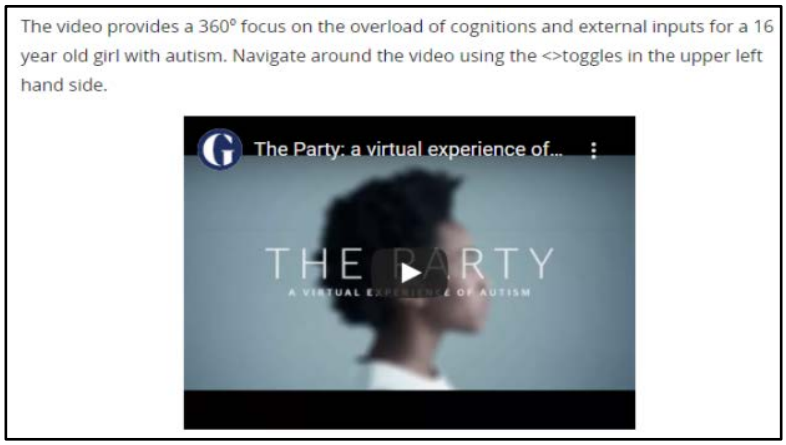
- No students engaged in the Flip Grid Activities *Module 4 Reactions to the video Meltdown* and *Module 5 What is your reaction on Removed?*
- While a number of students were happy to view the few Flip Grid responses that were posted, very few students posted a video response within the activity. Such behaviour indicates the presence of lurking behaviour in some students in the cohort.
- The non-engagement in later Module technologies, mirrors overall course patterns of student disengagement with course material as the students shift their focus towards assessment, rather than a di*sengagement with the technologies themselves.*
- The Flip Grid activity engaged industrious students willing to try something new and students who were comfortable 'lurking' in the activity.

HP5 Activities

- The self-paced nature of the HP5 activities supported students in that they could engage in the activities in their own time with 50% to 95% of students engaging with the activities [95% in the *Getting Started* activity, 60% in the *People First Language activity*, and 50 % in the *Test Your Knowledge of Legislation* activity]. The activities enabled students to test what they had learnt which promoted active learning engagement.
- The interactive content was embedded directly into the StudyDesk. The activities provided non threatening instant feedback which promoted students to actively participate in their learning by answering a variety of question types related to the content.
- HP5 activities promoted high levels of engagement from a range of students.

Embedded 360 Video

- 26 [43 %] students viewed the embedded 360 Video in Module 4.
- A large number of students engaged with the 360 Video technology that illustrated a personal experience of a person with ASD from a 360 perspective. This is particularly noteworthy as the video was embedded in a Course Module Workbook later in the course. Typically, there has been a decline in engagement at this time.



Project impacts

Your skill development (e.g. technology use, learning design)

The project increased my knowledge and skills in how to establish and maintain a classroom that incorporates the use of engagement technologies. I commenced the project without having any prior experience, knowledge or skill in how to use or set up Padlet, Mentimeter, Flip Grid or build HP5 activities. As a result of the project, I am now able to effectively use these educational technologies across a number of courses. I have also increased my knowledge and skill in course design, and am now able to plan learning outcomes and identify appropriate engagement technologies to support the achievement of the identified learning outcomes.

Application of your chosen elements from the online engagement framework

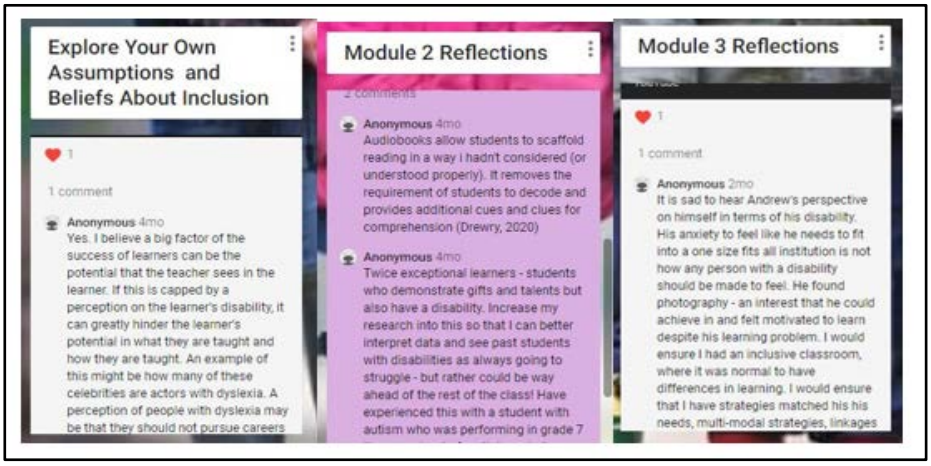
The element of **social engagement** was achieved in terms of building community and cohort connectedness. It was strongly evident in students' engagement in Padlet activities. **Emotional engagement** was also evident in the way that 'likes' were used in Padlet posts which mimicked existing ways of working and online social networking behaviour (Marengo et al., 2021). This type of emotional engagement and behaviour provided a non-threatening way in which to share support for discussion and presentation of ideas. While evidence suggests that only a small number of students in the cohort posted or actively engaged with Padlet, Flip Grid and Mentimeter technologies, a larger number of students viewed the posts that were made, which demonstrated an element of **behavioural engagement** by mirroring the lurking behaviour evident in social media networking behaviour (Mazuro & Rao, 2011). **Cognitive engagement** was evident in the promotion of critical thinking, activation of metacognition, and integration of ideas in students' Padlet posts. **Collaborative engagement** was evident to a lesser degree, with only a small number of participants engaging in collaborative sharing of resources and ideas in the Resources Padlet.

The effectiveness of the educational technologies used to achieve your project aims

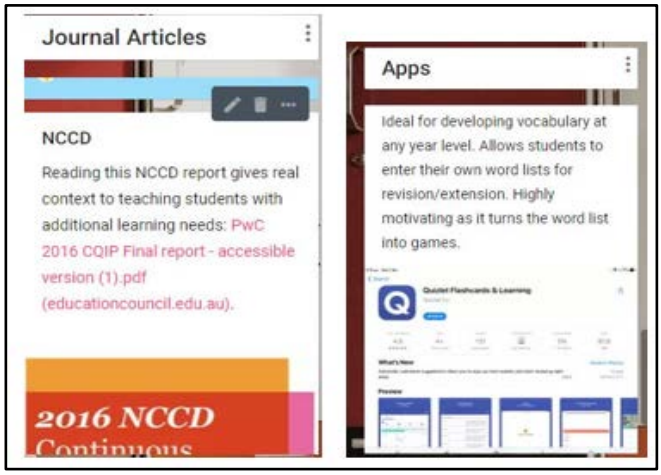
Aim 1: Ensuring that online learning experiences enhance and facilitate learning and engagement and reduce attrition.

- While the level of engagement in the educational technologies from the 2021 Semester 1 cohort was not as high as anticipated, there was evidence of engagement in Padlet, Mentimeter and the first Flip Grid activities.
- The HP5 activities were the educational technology that students most engaged with, closely followed by engagement in Padlet activities.
- Despite the use of engagement technologies, 30% [18] students from the Semester 1 2021 cohort withdrew from the course by the time the second assignment was due. (The use of engagement technologies is only one method in a repertoire of strategies targeted at decreasing the risk of disengagement from learning.)
- Student posts in the Course Padlet provided evidence of co-constructed learning which supported cognitive engagement, social engagement, and connectedness between students.
  Student posts in the Course Resources Padlet provided evidence of building a community and a sense of belonging where students shared curated resources and information.

EDM8014 Course Padlet Examples of Posts



EDM8014 Resources Padlet Examples of Posts



Aim 2: Ensure that the course content and pedagogy provided is clear, motivating and challenging so that online students receive the same level of support as would face-to-face students.

- The engagement technologies Padlet and Mentimeter attracted the most engagement when embedded directly onto the StudyDesk and not embedded into course workbooks or PDF documents. Embedding links to the engagement technologies Flip Grid, Mentimeter, and 360 Video within course workbooks was not a successful strategy as students did not use any of the links within the workbooks to engage with the technologies. An exception to this were HP5 activities with students engaging in activities when embedded within course workbooks and directly onto the StudyDesk. This is likely more reflective with students' engagement with workbooks than the introduced technology.
- Use of Mentimeter in live Zoom tutorial sessions increased active [rather than passive] participation.

Aim 3: Ensure that MOLT students experience and engage in using digital pedagogical approaches and tools that can be utilised in their future classrooms.

- Students were alerted as to why and how each online technology was used. Only one student provided feedback that the educational technologies would be useful in future practice. "*Hi. I've uploaded my FLIP GRID elevator speech now (what a great classroom tool!). Regards K.*"

Recommendations

- Padlets would be retained with use expanded to embedding in both live and recorded Zoom sessions/lectures. Padlets provide a means for all students to contribute to discussions even those who may not have attended a synchronous session, whereby they can include their responses at a later time and read the responses provided by others.
- Mentimeter activities would be retained. However, their use would be decreased and only used during live and recorded Zoom sessions/lectures as they can be quite labour intensive to maintain/roll over when embedded on the Study Desk. Mentimeter has great value in recorded Zoom sessions/lectures, as the activities can remain open for a number of weeks after a live session/recorded lecture, thus enabling students who view a recording to also engage in the activities that were presented in synchronous sessions/lectures.
- The use of HP5 activities would be expanded more widely across course content. HP5 activities are easily maintained and offer a wide variety of interactive elements and engagement activities.
- While the Flip Grid activity was valued by the few students who engaged with the technology, it would be discarded as too few students engaged with the technology.
- Padlet is recommended as it is free and is a device agnostic technology which can be used on a range of device types. It can be used both synchronously and asynchronously, and is simple to 'roll over' from semester to semester. A link to a Padlet can be easily embedded on the StudyDesk.
- The use of HP5 activities would be recommended as HP5s can be set up quite easily after learning the techniques for doing so. HP5s offer a wide variety of interactive elements and engagement activity types and are also easy to maintain and ' roll over' from semester to semester once set up.

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