

Embedding Social Constructivism in a First-year Online Economics Module.

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Abstract.

Social constructivism is a prominent educational theory that emphasises the collaborative nature of learning, positing that knowledge is constructed through social interactions and active learning. Closely associated with social constructivism is the concept of scaffolding which enables lecturers to gradually withdraw support as learners become more competent and perform tasks independently. This theoretical framework is particularly relevant in the context of online learning environments, such as Moodle, which is grounded in the principles of social constructivism. While the literature highlights how social constructivism can be applied using digital tools via Moodle, limited research exists on students' perceptions of how useful these digital tools are to their learning. This paper investigates student perceptions of their learning experiences following the integration of digital tools, including MS Teams, Padlet, Weebly, and H5P, within Moodle to support social constructivist principles. First year students are surveyed on a Microeconomics module comprising five credits out of sixty credits in the first-year programme of a Bachelor of Business offered at level 7 on the National Framework of Qualifications. Survey findings demonstrate that learners valued tools like forums for communication purposes and interactive quizzes for active learning, indicating the effectiveness of these tools in fostering social interaction and engagement. Feedback also demonstrates that effective organisation of the Moodle page supports scaffolding. Further research could explore which tools best promote social constructivist principles among learners.

Keywords: Active learning; Case-study; Online learning; Scaffolding; Social constructivism; social interaction.

1. Introduction.

Social constructivism has emerged as a significant theoretical pedagogical framework in online learning environments. This approach emphasises the active role of learners in constructing knowledge through social interactions, which is particularly relevant in online education where traditional face-to-face interactions are limited (Huang, 2002). Similarly, Ngah, Junainah and Osman (2019) and Choi (2023) highlight how the integration of social constructivist principles in an online context can enhance learner engagement. The implementation of social constructivist strategies in online learning is not without its challenges. Youde (2019) highlights that while social constructivism promotes peer interaction, many online learning platforms struggle to foster meaningful interactions between learners. Similarly, Mbatl (2012) and Kizkapan, Karaca and Eroglu (2023) observe that educators often lack the skills to effectively adapt constructivist approaches to online settings, resulting in a continued reliance on traditional teaching methods. Peerapolchaikul et al. (2019) argue that Moodle's effectiveness depends on educators' ability to use its features proficiently, while Deliwe (2020) states that despite its potential, Moodle is often underutilised, limited to basic functions like uploading notes. Gambo (2023) notes that there is a scarcity of a well-defined methodology for deriving social constructivist learning principles to inform the design of an online learning environment and enhance learning experiences. This gap highlights the need to equip educators with the tools necessary to successfully implement social constructivist strategies in online learning environments.

This study identifies digital tools for promoting a social constructivist approach in online learning in an undergraduate class at Atlantic Technological University (ATU) in Ireland. The Virtual Learning Environment (VLE) examined in this study is Moodle, a platform originally developed by Martin Dougiamas in 2002. Moodle was designed to support educators in creating online learning environments grounded in a social constructivist pedagogical framework, emphasising collaborative and interactive learning experiences (Finnegan & Ginty, 2019; Flores-Piñas et al., 2022; Sibgatullina et al., 2022; Yeravdekar, 2022). (Finnegan & Ginty, 2019; Flores-Piñas, Flores-Piñas, Chiri-Saravia, & Laura-de la Cruz, 2022; Sibgatullina, Ivanova, & Yushchik, 2022; Yeravdekar, 2022). Moodle was publicly launched in August 2002 and ATU began using the platform in 2006. A study by Finnegan and Ginty (2019) found that students did not perceive social constructivism as being effectively facilitated via Moodle in the final year of an undergraduate business programme across all disciplines at ATU.

The onset of the COVID-19 pandemic in March 2020 prompted a full transition to online learning in Irish higher education, encouraging ATU lecturers to better utilise digital tools and Moodle's capacity to replicate face-to-face teaching (Ginty et al., 2021). Despite this, there is limited understanding of the perceptions of ATU students regarding the effectiveness of these new

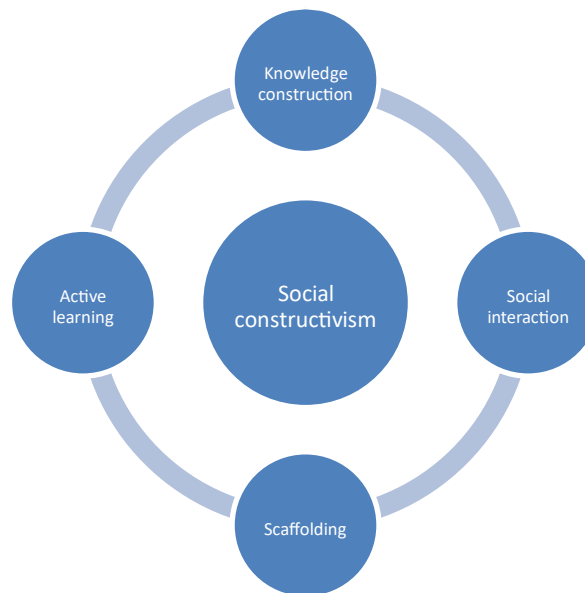
digital tools in supporting social constructivism and enhancing their learning experiences. This is important because students only engage with learning tools if they find them useful (Bedregal, Cornejo, Tupacyupanqui, & Flores, 2019). Furthermore, student engagement in learning activities significantly influences the likelihood of achieving desired learning outcomes (Laeq, Memon, Abbasi, Awan, & Khan, 2024). This study aims to answer the primary research question: How do students perceive the usefulness of digital tools within the Moodle environment in supporting social constructivist principles at ATU?

2. Literature Review.

Social constructivism is a theory of education that emphasises the role of social interaction, active learning and cultural context in the development of skills and knowledge (Dewey, 1938; Piaget, 1954; Vygotsky, 1978). The concept of scaffolding, which is closely linked to social constructivism, enables lecturers to gradually withdraw their support as learners gain competence, ultimately allowing them to complete tasks independently (Bruner, 1978). Constructivism is a learning theory, which draws on both behaviourist and cognitive ideals and believes that learning is a process of constructing meaning from our own experiences (Amineh & Asl, 2015). The main theorists associated with constructivism are Bruner and Piaget (Alanazi, 2016). Social constructivism builds on constructivism by emphasising the importance of culture and context in understanding what occurs in society and constructing knowledge based on this perspective (Adams, 2006). Vygotsky, the principal theorist among social constructivists states that '*all higher functions originate as actual relations between human individuals*' (Vygotsky, 1978, p.57).

This literature review explores social constructivism by distilling it into four key principles. While this may appear overly simplistic, abstracting these themes from the broader theoretical framework provides a practical foundation for developing a digital teaching and assessment strategy grounded in social constructivism (Finnegan & Ginty, 2019). The principles are shown in Figure 1 and are as follows: learners construct new knowledge using their current knowledge; learning is an active process; knowledge is constructed through interaction with others and scaffolding is central to learning.

Figure 1: Principles of Social Constructivism.



Alt Text: A circular diagram illustrating the key components of social constructivism. The central circle is labelled "Social constructivism," and it is surrounded by four interconnected circles labelled "Knowledge construction," "Social interaction," "Scaffolding," and "Active learning." The surrounding circles are connected in a loop, emphasizing the relationship between these elements.

In terms of knowledge construction, social constructivism considers that learners construct new understandings using their current knowledge. Bruner (1978) emphasised this notion that knowledge is constructed given our pre-existing knowledge and experiences and argued that to learn something about 'a domain requires that you already know something about the domain and that, perhaps, there is no such thing as *ab initio* learning pure and simple' (Bruner, 1978, p.243). Knowledge is constructed by the learners themselves as they actively share their experiences and knowledge with their peers rather than passively receiving instructions from their lecturers (Al-Qaysi, Mohamad-Nordin, & Al-Emran, 2018). Drawing upon related cognitive theory, social constructivism posits that existing knowledge structures and beliefs support new learning and readily incorporate social and cultural factors as essential to the formulation of understanding (Adams, 2006). In an online environment, knowledge can be constructed among communities of learners with tools such as forums, online chats, e-mail, online whiteboards and synchronous and asynchronous tutorials and lectures (Battistoni, Pasqualino, & Moschetta, 2011; Hamat & Amin Embi, 2010). Moodle facilitates all of these tools. Buckley and Kukhareva (2021) further note that Moodle encourages the creation of learning communities where students can collaborate on projects, share knowledge and engage in meaningful discussions.

Another key tenet of the constructivist model of learning is that people learn best by actively constructing their own learning (Cole, 2009). Piaget argued that learning requires active

engagement, as problem-solving skills cannot be taught but must be discovered (McLeud, 2015; Piaget, 1955). Piaget's paradigm also argued that active learning was the best way to facilitate learning (Kivunja, 2014). Bruner (1978, p.243) rejected the notion that students are passive rote learners of knowledge and display success by '*by repeating what has been learned.*' Instead, she argued that learners should be active participants in the learning process. Truong (2021) notes that Moodle's interactive features enable learners to engage actively in their education.

Social constructivism is a learning and development theory that also confirms the importance of collaboration among learners (Woo & Reeves, 2007). This approach is rooted in the work of theorists such as Dewey (1938) and Vygotsky (1978) who argued that learning is inherently a social process. Meaningful learning often occurs when individuals are engaged in social activities such as interaction and collaboration (Vygotsky, 1978). Related to social interaction is the concept of creating social presence which is the establishment of a supportive learning community, providing a venue for communication within a trusted environment where learners can express individual identities and establish social relationships (Garrison, Anderson, & Archer, 1999).

Social interaction in online learning programmes is paramount as isolation is often experienced by students taking fully online modules (Adnan & Anwar, 2020; Elmer, Mephram, & Stadtfeld, 2020; Marelli et al., 2021). Within a social constructivist learning environment, it is possible to create an online space where learners can work together and support each other as they use a variety of tools and information resources in their pursuit of learning goals and problem-solving activities (Hamat & Amin Embi, 2010; Miller-First & Ballard, 2017). Fostering social interaction in the online learning environment is challenging but lecturers can promote active, meaningful discussions by posing open-ended questions, encouraging peer interaction and ensuring that students engage with each other's online contributions (Swan, 2019). Buckley and Kukhareva (2021) and Rajanen et al. (2021) note that Moodle's features are designed to enhance interaction and collaboration, fostering a sense of community, which are essential components of a social constructivist learning environment.

Scaffolding is a concept that closely aligns with social interaction in the theory of social constructivism. The concept is most often associated with Bruner (1978) who stressed the '*inherently social nature*' of learning and considered the role of scaffolding in the context of a mother teaching a child language. Bruner (1978, p.244) states that '*Scaffolding...reduces the degrees of freedom with which the child has to cope, concentrates his attention into a manageable domain, and provides models of the expected dialogue from which he can extract*

selectively what he needs for fulfilling his role in discourse.' In terms of pedagogy, lecturers provide temporary support to learners as they develop new skills or knowledge. This support is gradually removed as learners become more competent, allowing them to perform tasks independently (Mehri & Amerian, 2014). The challenge of scaffolding in an online learning environment lies in the absence of face-to-face social interaction. This necessitates the need for educators to actively engage and support learners throughout the various stages of their online learning journey (Bryceson, 2007).

While the literature explores how online platforms like Moodle can support social constructivism, less is known about students' perceptions of the usefulness of these tools for their learning. This study contributes to the literature by evaluating student perceptions about the usefulness of these tools, helping to identify effective resources for promoting social constructivism in online learning.

3. Embedding Social Constructivism Principles in a First-year Online Economics Module.

3.1 Knowledge construction.

Knowledge construction is embedded in the digital teaching and learning strategy employed in the delivery of the online Microeconomics module at ATU in several ways. Table 1 demonstrates knowledge construction mapped against the digital tools used in conjunction with Moodle to facilitate this principle.

Other methods to facilitate knowledge construction included the use of breakout rooms in MS Teams to solve problems. Students shared their solutions with the class by taking pictures using MS Lens and posting them on Padlet, where the solutions were then discussed collectively. Padlet exemplars were then posted to Moodle to aid further comprehension. Figure 2 shows an example of a Padlet output from one of these breakout sessions.

Table 1: Knowledge Construction Principle Evidenced in Digital Teaching and Assessment Strategy for Microeconomics Module

<p>Social constructivism principle</p>	<p>Digital Teaching and Learning Strategy Application of principle in the digital teaching and learning strategy for the Microeconomics module</p>
<p>Learners construct new knowledge using their current knowledge.</p>	<p>Knowledge construction Facilitate and guide actively managed forums. Students post and comment on other students' posts. Use breakout rooms in MS Teams to solve problems – students access link for MS Teams in Moodle. Students share solutions with the class using MS Lens and Padlet, posted to Moodle. Students work in groups on graded projects in week 4 – instructions, screencast and marking rubric embedded in Moodle. Use of MS Forms to consider students' prior knowledge and to form a basis for discussion in live classes</p> <p>Digital Artefacts – embedded in Moodle Interactive screencasts Interactive HP5 quizzes in YouTube videos Worksheets MCQ quizzes- practice and graded</p> <p>External Resource – embedded in Moodle Weebly page with links to other course material and publications.</p>

Figure 2: Output Posted to Padlet Using MS Lens

The image shows a screenshot of a Padlet board with three posts. The first post, from Group 5, asks a question: "Question 5: Makes it easier to supply the good". The second post, from Group 1, explains that a supply curve shifts left due to an increase in production costs, leading to a new equilibrium (E1), a lower price (Q to Q1), and a lower quantity (S to S1). The third post, from Group 2, features a handwritten note and a supply and demand graph. The note describes how technological advances shift the supply curve right, resulting in lower prices and higher quantities. The graph shows a downward-sloping demand curve and two upward-sloping supply curves, with the equilibrium moving from E1 to E2, showing a decrease in price and an increase in quantity.

Alt Text: Screenshot of a Padlet board displaying three posts. Group 5's post says, "Makes it easier to supply the goods." Group 1's post explains that higher production costs shift the supply curve left, affecting equilibrium price and quantity. Group 2's post features a handwritten note with a supply and demand graph, describing how technological advances shift the supply curve right, resulting in lower prices and higher quantities.

Graded group work was also used to facilitate knowledge construction. A screencast was created to inform students about the group work approach and a rubric in Moodle was used to mark this work (see Figure 3). Marks were awarded on both an individual and group basis.

Figure 3: Group Work Instructions and Rubric to Encourage Knowledge Construction.

Individual mark: Labelling	X and Y axis incorrectly labelled <i>0 points</i>		X and Y axis correctly labelled <i>1 points</i>
Individual mark: Demand and Supply curves	Demand curve and supply curve not correctly drawn <i>0 points</i>	Demand curve correctly drawn <i>1 points</i>	Demand curve and supply curve correctly drawn <i>2 points</i>
Individual mark: Shift or movement	Incorrect curve shifts <i>0 points</i>		Correct curve shifts <i>2 points</i>
Individual mark: New equilibrium	New equilibrium incorrectly shown <i>0 points</i>		New equilibrium correctly shown <i>2 points</i>
Individual mark: Description of change	Unclear description of change <i>0 points</i>	Clear description of change <i>1 points</i>	Clear description of the change and new equilibrium <i>3 points</i>
Group mark: Overall consistency of document in terms of diagrams and descriptions	No consistency <i>0 points</i>	Some consistency <i>2 points</i>	Good consistency <i>3 points</i>

Table 1 demonstrates that knowledge construction was facilitated by the inclusion of several digital artefacts including interactive screencasts, interactive HP5 quizzes in YouTube videos, worksheets, use of IPPEVO Visualiser and MCQ quizzes, both formative and summative. An external resource in the form of Weebly incorporating links to learning resources and research was included to build on students' pre-existing knowledge. In addition, MS forms was used at the beginning of the module to assess prior learning, exploiting real time results as a basis for discussion. All of these tools were embedded in Moodle in a structured manner that made it easy for the student to navigate the Moodle page including links to online MS Teams lectures. This pedagogical approach instilled confidence in students that they were learning the material effectively. It also supported the lecturer to verify that the live online sessions were working in terms of student learning.

3.2 Active learning.

Active learning is embedded in the digital teaching and learning strategy by enabling learners to engage in hands-on activities, problem-solving and critical thinking, which in turn help them to construct their own understanding. Table 2 demonstrates active learning mapped against the digital tools used in conjunction with Moodle to facilitate this principle.

Table 2: Active Learning Evidenced in Digital Teaching and Assessment Strategy for Microeconomics Module.

<p>Social constructivism principle in the digital teaching and learning strategy for the Microeconomics module. Learning is an active process. Facilitate and guide actively managed forums in Moodle.</p>	<p>Digital Teaching and Learning Strategy principle Application of Assessment activity process.</p> <p>Practice and graded MCQ in Moodle. Group work in Week 4 uploaded to Moodle. Provide feedback on uploaded assignments on Moodle using rubric.</p> <p>Engagement tools & activities Use breakout rooms in MS Teams for students to solve problems together – link in Moodle. Students capture images of their graphs or mathematical solutions using Microsoft Lens, then upload these images to Padlet for collaborative discussion. Afterward, they save their work as a PDF file and submit it on Moodle for review. Videos/Screencasts (including interactive quizzes). H5P Quiz-Activity with quizzes embedded in YouTube videos. MCQ practice and graded quizzes. Use of MS forms quizzes in the chat in live sessions to check understanding.</p>
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Table 2 demonstrates the assessment strategy and engagement tools used to promote active learning. The assessment strategy was made available to students at the beginning of the module and includes students contributing to forums (where students get 1% for posting and 1% for responding to another student’s post), a group project and the completion of MCQ quizzes. Engagement tools used to promote active learning included the use of breakout rooms in MS Teams for students to solve problems together. Students post solutions taking a picture with MS Lens of a graph or mathematical solution and upload it to

Padlet. Students are brought back to the main room to discuss the Padlet creation collectively. The Padlet is then saved as a pdf and posted to Moodle (see Figure 2). Group work is conducted in Week 4 and uploaded to Moodle (See Figure 3). Additional activities and resources include videos/screencasts (including interactive quizzes), H5P quiz-activity with quizzes embedded in YouTube videos, MCQ practice and graded quizzes and the use of MS Forms quizzes.

3.3 Social interaction.

Social interaction is embedded in the digital teaching and learning strategy employed in the delivery of the fully online module – Microeconomics – in three ways: Creating a learning community, establishing a social presence and employing feedback tools and activities. Table 3 shows social interaction mapped against the digital tools used in conjunction with Moodle to facilitate this principle.

Group work, discussions and collaborative projects are integral to the learning process and the creation of a learning community. Through collaboration, learners can share perspectives, challenge each other's thinking and build deeper understanding. Table 3 highlights the use of actively managed forums, where students post and comment on each other's contributions; utilise breakout rooms in MS Teams to solve problems; share solutions with the class using MS Lens and Padlet (see Figure 2); and participate in graded group work during week 4 (see Figure 3).

The fostering of social presence by the lecturer was instrumental in promoting social interaction. Digital tools used to create a social presence included quizzes from MS forms circulated in the chat during live sessions in MS Teams to create ice breakers, a screencast incorporating an introduction to the lecturer and module, weekly live online workshops, using the IPEVO Visualiser to get students to draw graphs along with the lecturer, frequent messaging to students and responding within 24 hours to the Q&A forum and emails. The provision of feedback is also central to social interaction. Feedback was facilitated through the rubric on the group assignment, feedback on Moodle questions in terms of why the answer was correct and live feedback after breakout room sessions for each group.

Table 3: Social Interaction Evidenced in Digital Teaching and Assessment Strategy for Microeconomics Module

<p>Social constructivism principle</p>	<p>Digital Teaching and Learning Strategy Application of principle in the digital teaching and learning strategy for the Microeconomics module.</p>
<p>Social interaction: Knowledge is constructed through interaction with others.</p>	<p>Creating a Learning Community Facilitate and guide actively managed forums. Students post and comment on other students' posts. Use breakout rooms in MS Teams to solve problems. Students share solutions with the class using MS lens and Padlet. Students work in groups on graded projects in week 4.</p> <p>Social presence: Use of MS Forms quizzes in live session chats in MS Teams to create ice breakers Screencast on introduction to Lecturer and Module. Weekly live online workshops. Use IPEVO Visualiser to get students to draw graphs alongside you. Respond within 24 hours to Q&A forum and emails. Message students.</p> <p>Feedback tools and activities Rubric on group assignment. Feedback on Moodle questions in terms of why the answer was correct. Live feedback after breakout room sessions for each group.</p>

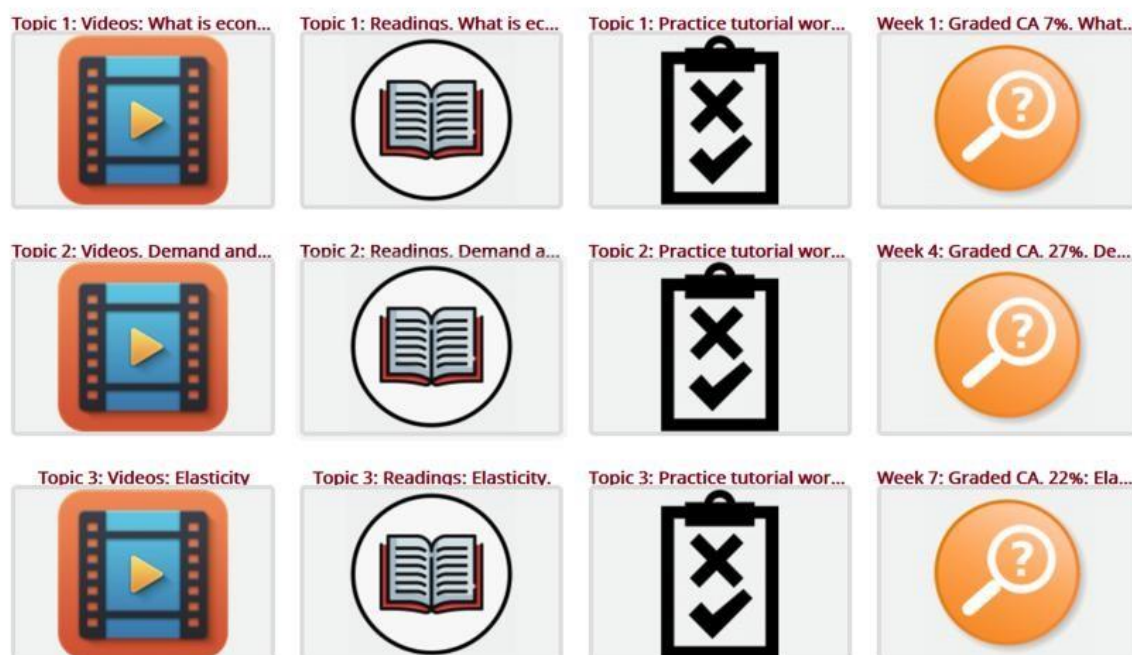
3.4 Scaffolding.

Scaffolding is embedded in the digital teaching and learning strategy employed in the delivery of the fully online module – Microeconomics – in several ways. Table 4 shows scaffolding mapped against the digital tools used in conjunction with Moodle to facilitate this principle.

Table 4: Scaffolding Evidenced in Digital Teaching and Assessment Strategy for**Microeconomics Module**

Social constructivism principle	Digital Teaching and Learning Strategy Application of principle in the digital teaching and learning strategy for the Microeconomics module.
Scaffolding	Weekly schedule published every Monday morning. See Appendix. Learning broken down into small steps. Material released in a piecemeal fashion with a new topic every week. Clear signposting in Moodle page: Course structure- 4 quadrants per topic. Use conditionality: Combining activities into sequences,
	where results feed later activities. Rubrics to show what is required and to give feedback. Feedback after breakout room sessions for each group. Facilitate and guide active managed forums. Video created on how to navigate Moodle and the group assignment.

Table 4 highlights digital tools used to scaffold the learning experience. Figure 4 shows the Moodle design home page which shows clear signposting for students on where to find material for each topic, divided into four quadrants: Videos. Readings. Practice. Graded Activity. Other tools to scaffold learners included pre-recorded lectures and a schedule for each week released each Monday morning at 9am (See Appendix).

Figure 4: Moodle Design Home Page.

Alt Text: Screenshot of a Moodle course home page showing a grid layout with three rows and four columns. Each row represents a topic and includes icons for videos (filmstrip with play button), readings (open book), practice tutorial work (clipboard with checkmarks), and graded assessments (magnifying glass with question mark). The topics shown are: Topic 1 (What is economics?), Topic 2 (Demand and supply), and Topic 3 (Elasticity).

4. Methodology.

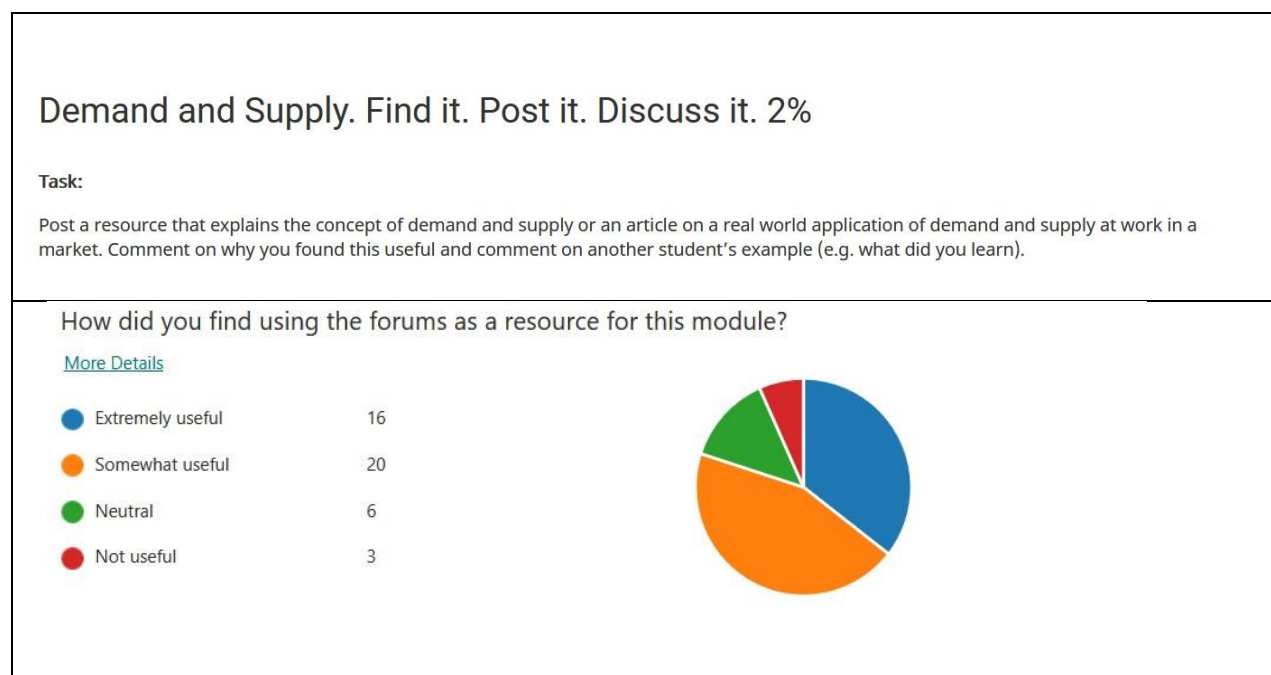
This study addresses a primary research question which is: How do students perceive the usefulness of Moodle's digital tools in promoting social constructivist principles at ATU? The digital tools piloted within a Moodle framework were MS Teams, MS forms, screencasting software, Padlet, Weebly, HP5, external links, IPEVO Visualiser, MS forms and MS Lens. A survey was distributed to first year students on the mandatory online Microeconomics module comprising five credits out of sixty credits in the first-year programme of a Bachelor of Business offered at level 7 on the National Framework of Qualifications. There were ninety students enrolled on the module. The survey tool employed was a standard student feedback mechanism with ethical approval that is administered at the end of each module as part of the university's

quality assurance process. This survey was modified to include some closed questions on the digital tools employed in the online module to promote the tenets of social constructivism and embedded in Moodle in the final week of the module prior to students sitting their examinations. Students were assured that their responses were anonymised and would only be reported as part of an anonymised whole. 51% (n=46) of first year students volunteered to participate in the survey.

5. Results.

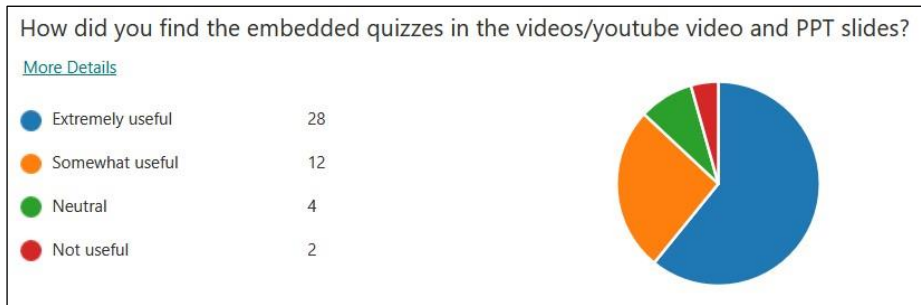
Forums were employed on the Microeconomics module to promote knowledge construction and social interaction. Figure 5 indicates that 78% of respondents found the forums to be useful or somewhat useful. In terms of encouraging social interaction. MS Forms were inserted into the chat during online sessions in MS teams to create ice breakers and to gauge student understanding. 84% of respondents strongly agreed or agreed that the lecturer encouraged contributions via the conversations window and 67% of respondents indicated that they strongly agreed or agreed that they could easily communicate with the lecturer when online.

Figure 5: Forum Evaluation.



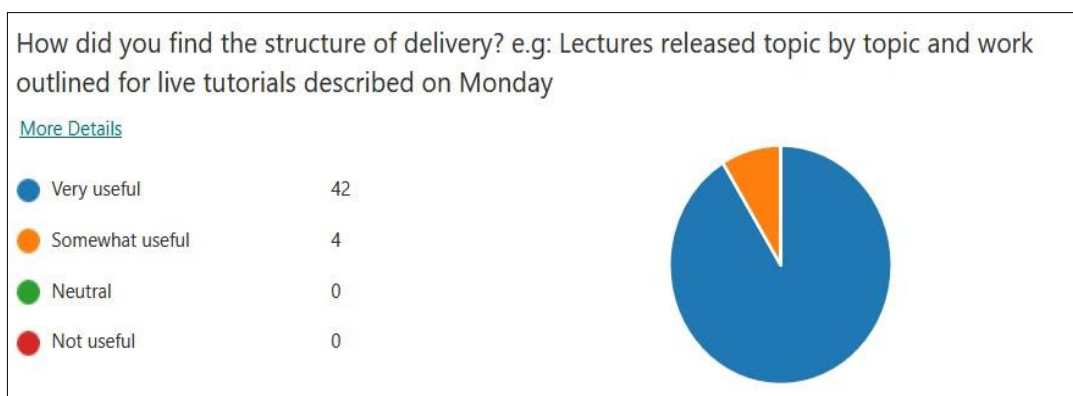
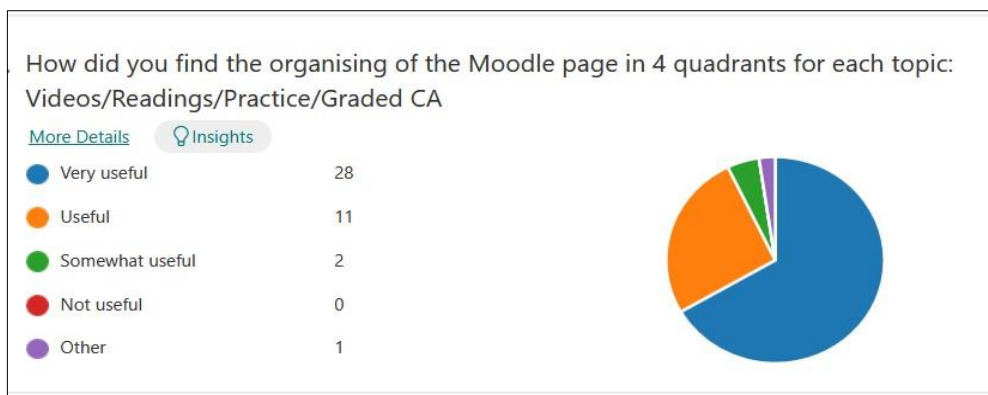
In evaluating the active learning tools used, Figure 6 indicates that 40 out of 46 respondents (87%) found the interactive quizzes embedded in videos and YouTube to be either very useful or somewhat useful.

Figure 6: Evaluating Interactive Quizzes.



In terms of scaffolding, Figure 7 suggests that 39 students out of 46 (85%) found the Moodle design page to be very useful or useful. Figure 7 also shows that 100% of learners found the structure of the delivery, with lectures released topic by topic and work for outline tutorials described on Monday, very useful or useful (example in appendix).

Figure 7: Feedback on Scaffolding Tools.



6. Discussion.

The literature suggests that social constructivism offers a robust framework for enhancing online learning in VLEs such as Moodle (Buckley et al., 2021; Finnegan & Ginty, 2019; Flores-Piñas et al., 2022; Rajanen et al., 2021; Sibgatullina et al., 2022; Truong, 2021; Yeravdekar, 2022). However, the literature also demonstrates that implementing social constructivist strategies in online learning presents several challenges (Gambo, 2023; Kizkapan et al., 2023; Mbatl, 2012; Youde, 2019). Gambo (2023) highlights the absence of a clear methodology for applying social constructivist principles in online settings.

Finnegan and Ginty (2019) found that students at ATU did not feel social constructivism was effectively supported by Moodle in the final year of an undergraduate business programme. The authors advocate for cultural change and technical training to empower lecturers to fully

leverage Moodle in this context. By contrast this study indicates that the digital tools used to promote social constructivism in a first-year Microeconomics module at ATU were perceived as useful by students.

There are a number of limitations with this study. This research comprises a relatively small sample with 46 responses from 90 students enrolled in one module. Future research could be conducted at a larger scale and across other disciplines in an academic year to understand student perceptions more broadly. The manner in which digital tools promoted knowledge creation, active learning, social interaction and scaffolding could also be investigated. The inclusion of open-ended questions in future surveys would also provide valuable qualitative data.

7. Conclusion.

This paper adds to the literature by identifying a number of beneficial digital tools as perceived by students that can be used within the Moodle platform to promote the principles of social constructivism. Tools and pedagogical approaches outlined in the paper could also be piloted in other disciplines. Further research could consider to what extent social constructivism frameworks in an online setting promote student retention. Consideration of how social constructivist principles in an online setting address diverse cultural backgrounds and promote equality, diversity and inclusion could also be investigated.

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Appendix: Example of Weekly Learning Schedule

Week 6	Topic 3. Week 6
Session title	Pre-recorded Material: Elasticity
Aims and learning outcomes	<p>LO 4. Explain and apply price elasticity of demand, cross price elasticity of demand, income elasticity and price elasticity of supply and their determinants</p> <p>Review Theory: Video 1: Elasticity of Demand Review Theory: Video 2: Ped and TR Watch Theory: Video 3: Other Elasticities Watch Theory: Video 4: Elasticity of Supply Watch Practical: Video 5: Tutorial YouTube videos on Elasticity with embedded quizzes</p>
Session title	Live Tutorial: Elasticity
Aims and learning outcomes	<p>Access here: weblink</p> <p>You only need to come to one tutorial, but you are welcome to come to more.</p> <p>Make sure you have downloaded MS Lens on to your phone to link with your OneDrive.</p> <p>The file to open in advance of the tutorial for week 6 is here: Weblink (It is also on Moodle page under practice icon). Weblink</p> <p>We will be using the collaborative platform Padlet in class, familiarise yourself with it. https://padlet.com/mariefinnegan/ytbylbnqittd3nxj</p>
	Prepare
Let's get started	Do embedded exercises in quizzes
Theory Resource	<p>Chapter 3. Mankiw, N. Gregory and Taylor, Mark P (2020) <i>Economics</i>, Cengage, 5th edition.</p> <p>Interactive slides Revision Sheet</p>
Practice Quiz	weblink

Graded Tasks	Theory eDoing (Required Graded Task): 22%
	Find it. Post it. Discuss it: 2%. Closing date: Friday 20 th November at 23.59.
Practical eTivity	<p>Find it. Post it. Discuss it</p> <p>Weblink</p> <p>Task: Post a resource that explains the concept of elasticity or an article on a real-world application of elasticity helping to inform price decisions. Comment on why you found this useful and comment on another student's example (e.g. what did you learn).</p>
	Weblink
Practical eTivity	<p>weblink</p> <p>8.1 CA3: MCQ on Elasticity worth 20%. Friday 20th November Once you start the quiz, you will have 30 minutes to complete it.</p> <p>Questions will be shuffled and answers within questions will also be shuffled.</p> <p>You can do your assessment online from a location of your choice. It is your responsibility to ensure you have reliable broadband.</p> <p>It will remain open all day on Friday of Week 7 from 9.00 to 23.59.</p> <p>Each student gets different questions, in different order and answers shuffled within questions. Attempts allowed: 1</p>