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Supporting students to engage with case studies: a model of engagement principles

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ABSTRACT

Case studies are an educational tool that can promote active learning, and make learning more accessible, by serving as frameworks for student meaning-making. This action research project focused on the student experience of case studies; aiming to understand how students respond to being taught with case studies, whether they are able to engage with cases and learn from them, and how educators can support this engagement and learning, through the effective use of cases. The findings of this project are of value to any educators working with case studies in the classroom, or considering doing so.

The research included an initial survey, to ascertain student experience and preferences in relation to case studies, and review practical considerations. This informed content and approach for two observed tutorials, which used a case study to support final-year UK undergraduates in their learning about formal and informal workplace communication. The project concluded with a further survey to capture student perspectives on the case study itself, and the tutorial experience. The findings from all stages allowed a model for case study teaching to be developed, as a guide for educators. The key considerations for educators are that applicable, relevant and real-life case studies effectively support engagement and learning. Furthermore, focused case studies are preferred, with greater depth than breadth. Finally, practical considerations supporting accessibility should not be overlooked, the appearance and presentation of the case study were significant, as was the provision of time for preparation or reading.

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Introduction

"Cases are stories with a pedagogical objective" (Herreid et al., 2021, p. 620); for many educators they offer a way to bring a subject to life, and purposeful use of case studies in the classroom creates potential for active learning.

Pedagogic literature throughout the twenty-first century shows the use of case studies across diverse subject areas (Belt, 2001; Bonney, 2015; Healy & McCutcheon, 2010).

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This article has been corrected with minor changes. These changes do not impact the academic content of the article.

Research on their impact and effectiveness tends to focus on the perspective of the educator and the challenges they may encounter, and the resulting student learning outcomes (Herreid et al., 2021; Kantar, 2013; Ulvik et al., 2022). Student experience and engagement has been viewed through this lens (Belt, 2001; Bonney, 2015), rather than as a matter of interest in its own right. Accessibility has been considered largely in relation to ease of access for the educator, as seen in Anderson (2019, p. 26) and Pearson et al. (2015, p. 4), rather than how inclusive or accessible students might find the case, and any related resources. Overlooking inclusivity also led to limited consideration of how case studies support inclusive learner engagement, underpinning active learning (Auster & Wylie, 2006), despite the potential for enhanced outcomes for all, and specific benefits for underrepresented groups (Theobald et al., 2020). In summary, the theoretical basis for the effectiveness of the case method was unconsidered for many years (Mesny, 2013), along with how this might connect to an active, engaging and inclusive experience for learners. However, in more recent years, researchers and educators have sought clarity and evidence on the elements that should be present in a case study for teaching, and what approaches support engagement and learning with case studies (Anderson, 2019; Cox, 2014; Herreid et al., 2021). This is significant, because when learners are engaged, they are "bringing emotions, feelings, values, motivations, and attitudes to the forefront, thereby enabling an explicit move from strictly cognitive toward affective learning". (Mesny, 2013, p. 59).

Action research offers a meaningful way to examine student engagement with cases. Case teaching supports learners to experientially build their own understanding through discussion and reflection to actively construct meaning (Auster & Wylie, 2006; Cox, 2014; Kim et al., 2006). Similarly, the cyclical nature of action research facilitates the iterative construction of ideas and meaning (Coghlan & Brannick, 2014) building a dialogue between researcher and research participants (McNiff, 2017) which further supports reflexiveness (Armstrong & Moore, 2004). The alignment between the action research process and the constructivist theory underpinning case teaching creates a beneficial synergy between research subject and approach.

This action research project seeks to develop the existing evidence base, focusing on the overlooked area of student experience in relation to case studies, by capturing student experiences of case teaching, and clarifying student preferences around cases, through focusing on the experiences of fourth-year undergraduate students at Harper Adams University (HAU), in the United Kingdom. Specific aims are to establish whether students find cases engaging, and if so, to what extent. Further to this, the project also aims to evaluate whether student engagement with cases can be developed, and if so, what resources, approach or support might be needed to facilitate this. The project includes an initial survey, two observed tutorials, and a concluding survey. Limitations in the scale of the study are acknowledged, but are mitigated wherever possible. The findings from all stages support development of a model for case study teaching. This model is intended to be applicable in multiple educational settings, and to be of practical value to any educator working with case studies.

Background

Cases were initially associated with business and medical education, but subsequently expanded across other subjects (Belt, 2001; Bonney, 2015). Case studies are widely

understood as "stories that are used as a teaching tool to show the application of a theory or concept to real situations" (Vanderbilt University, 2022), although in different professional settings and fields of study, the conceptual framework for the use of cases in education may vary (Ulvik et al., 2022, p. 658). The case study approach aligns with constructivist theory, and is anchored in the tradition of active and experiential learning, supporting students to develop critical thinking and decision-making skills alongside subject specific content (Auster & Wylie, 2006; Cox, 2014; Kim et al., 2006). Critics note that the theoretical underpinning for the case method was unconsidered for many years (Mesny, 2013). Studies have found evidence of real-world learning, overall effectiveness of approach and enhanced student engagement, from student feedback, but all recognised limitations, with small sample groups or specific settings limiting certainty on wider effectiveness (Anderson, 2019; Bayona & Castañeda, 2017; Burdon & Munro, 2017; Erzurumlu & Rollag, 2013). Evidence of case teaching enhancing students' understanding of key concepts is noted as limited (Bayona & Castañeda, 2017; Yadav et al., 2010).

Anderson (2019, p. 124) summarised earlier work to present five key qualities for a case study:

- pertinent to the class and learning objectives;
- connects theory and practice;
- allows a framework for student meaning-making;
- tells a focused story using a detailed, real-life setting; and
- contains reasonable and realistic ambiguity.

The comprehensive, evidence-based nature of these overarching principles means they provide a valuable framework for this research project. Similarly, valuable to this project as an overview of methods and styles, Herreid created taxonomy of approaches to case teaching, shown in Table 1.

Herreid's framework has been partially superseded by technology; mobile phones and surveying software are modern "clickers". From 2020 onwards, Covid-19 required

Table 1. Case study taxonomy. Derived from Herreid, 2011.

Lecture method	Lecturer as didactic storyteller.	Herreid, 2011
Discussion method	Whole classroom case discussion, lecturer-led.	Herreid, 2011
Small-Group method	Case prompts active and peer learning through discussion.	Herreid, 2011
Individual	Students work on a case individually, potentially with subsequent class discussion.	Herreid, 2011
Computer simulation/ Jigsaw/ Real-World Business or Consultancy	Students work collaboratively on a complex case. Information may be released over multiple weeks, with time for wider research.	Herreid, 2011; Erzurumlu & Rollag, 2013; Burdon & Munro, 2017
Clicker cases	Audience response systems capture responses to cases in large groups.	Herreid, 2011
Live cases	Guest speaker presents their story and prompts students to learn and engage, by offering decision points from real-life.	Cameron et al., 2012
Case study roleplay	Students are assigned roles or perspectives within a case.	Cox, 2014

innovation in case teaching, with challenges of engagement and technology, but potential benefits in self-directed learning and connection (Herreid et al., 2021). Although Herreid considered different delivery formats e.g. via lecturer, in writing or through technology, live cases were overlooked. This hybrid approach maximises benefits and minimises drawbacks of both guest lecturer and case teaching (Cameron et al., 2012). Multimedia cases were also under-represented; these can add interest and diversity to case teaching (Anderson, 2019; Cox, 2014).

Research on case teaching to date has focused on the experience and perspective of the educator rather than that of the students (Bayona & Castañeda, 2017; Belt, 2001; Bonney, 2015; Kantar, 2013; Ulvik et al., 2022). Even post-pandemic reflection frequently focused on the educator (Herreid et al., 2021). Where feedback from students was considered, it largely focused on their content understanding, over their experience, and ability to engage with this method (Kunselman & Johnson, 2004). Furthermore, there is limited research on case teaching outside of Westernised classrooms and students (Bayona & Castañeda, 2017), and little consideration of inclusivity and accessibility in the use of case studies in the classroom.

Where students provided experience feedback, it was mixed. Ulvik et al. (2022) noted students identifying that they had benefitted from the reflection that can be provoked by case teaching, and recognising that this created potential for changed perspective and deeper understanding. However, in earlier studies, many students disliked the open-ended process, and the potential lack of a tangible, firm outcome (Rippin et al., 2002). Cullen et al. consider "messy stories" to be vital (2004); a reflection of the messiness of the real world (Harford, 2016). In case teaching, over-simplified cases risk undermining the real-world value of learning, creating a challenging dichotomy (Anderson, 2019; Healy & McCutcheon, 2010; Ulvik et al., 2022). Student feedback has also shown that students do not necessarily engage with simulation-based case studies as educators anticipated e.g. in Burdon and Munro's (2017) work many students only utilised materials required for assessment, and engaged in very limited reflection. The requirement for case preparation is also noted as a potential drawback; if students do not prepare, or know how to prepare effectively, then learning may be undermined (Bayona & Castañeda, 2017; Cox, 2014, Ulvik et al., 2022). The role of the educator in case delivery and successful outcomes may also be a confounding factor (Herreid et al., 2021; Kim et al., 2006).

Research design

An initial review of literature relating to case studies and their use in teaching was completed in advance of the project commencing. This review supported the project by ascertaining existing research around, and approaches to, the use of case studies in education. This allowed the development of a clear theoretical underpinning for this work, and the articulation of relevant and purposeful research objectives. As the work progressed, testing results and findings against existing literature and research, allowed the identification of where this project builds on previous work, and where it makes a distinct and original contribution to the field of case study teaching (McNiff, 2017).

The project was carried out at HAU, an award-winning small, and specialist land-based university in the UK; as the researcher's own institution, access was straightforward and readily available. HAU was established as an agricultural college in 1901, and evolved

alongside the agricultural industry, gaining University status in 2012. HAU is committed to delivering varied and engaging programmes of study, that include work-relevant content and activities, and work-based learning, and works closely with employers and professional bodies to maintain and develop the real-world applicability of courses to benefit learners. Staff are supported and encouraged to develop their pedagogic practice, both individually and collectively, in order to deliver this (HAU, 2022). The planned research focus and activities were discussed with colleagues. These discussions often took place through the researcher's participation in an action learning set within their institution, but also occurred in informal discussion with peers. In common with Ulvik et al. (2022), the researcher found that the learning from these conversations supported practitioner reflection, and refinement, both for this research, and the overall case study approach.

The project was granted ethical approval through delegated powers from the Harper Adams University Research Ethics Committee (approval granted for named project, no approval number applies). All participants provided informed consent, after being given written research project information. Consent was collected ahead of each survey, and before the observed tutorials; participants could withdraw their consent at any point. The surveys were optional, and although all students participated in the tutorials as part of their normal teaching activities, they could choose to be in an unobserved group and therefore not participate in the research. This was clearly stated in the written information, and verbally reiterated by the researcher, to mitigate any concerns around power-distance in the taught setting. All data were stored securely, and anonymised to maintain participant confidentiality.

Those who participated were part of a group of final year students studying a module called "Leadership and People Management". The researcher leads this module; the research was embedded into the range of teaching activities the students would usually experience on this module. This group was selected because the module is compulsory for 56 students on five different degree routes, and is an optional module for one further degree route. Those participating therefore were potentially more likely to be able to bring a range of diverse perspectives, backgrounds and experience, than a group comprising students all studying for the same qualification. This diversity was relevant in the case teaching and class discussion, but also to the participants' wider reflection on their experiences of case teaching. The participant group was evenly mixed in terms of gender, with some variation in social class. However, the majority of students were from a white British background, and there were no mature students in the group. All students had completed a mandatory placement year in industry. This mitigated the heterogeneity of the group to a limited extent, as they had gained wider experiences and perspectives during their year in industry and could contribute real-world experiences from their workplaces. Selecting this group also meant that the potential participant group was relatively large, so that even if some students chose not to participate, a good level of understanding could still be achieved. These considerations were built into the research design to ensure fair and accurate conclusions could be drawn from this work (McNiff, 2017).

A qualitative, inductive approach was appropriate as this project requires sense making of the student experience, and their learning, as related to case studies (Saunders et al., 2019). Research to date has focused on the educator experience. In this work

centring the student experience was appropriate; action research offers research participants a voice that may be missing in other approaches (Armstrong & Moore, 2004), which may empower students and support inclusivity. The dialogic and relational nature of action research (McNiff, 2017, p. 41) also allowed the complex, pluralistic nature of student interaction with case studies, to be examined and captured, in iterative, collaborative stages. Action research was therefore well aligned to the qualitative nature of this project, and supported an iterative, inductive process of sense making of the student learning experience.

This project was action-oriented research (Niemi et al., 2015), focusing on the assumptions that underpin personal practice with findings informing recommendations for further exploration or action, and raising questions to challenge assumptions (Arnold & Norton, 2018). In the author's experience, cases appear to engage students, but do students agree; could engagement be improved, and if so how? This initial question was formalised into two research objectives:

- Establish whether students find cases engaging, and if so, to what extent.
- Evaluate whether student engagement with cases can be developed, and if so, what resources, approach or support might be needed to facilitate this.

The project was embedded in a specific context, stemming from individual experiences. The risk of an overly linear and simplified outcome (Mooney Simmie, 2023), not fully representing the nuanced experiences of case teaching in varied, and complex settings, was therefore noted. However, the opportunities for reflexiveness and inclusivity created by the action research approach (Arnold & Norton, 2018; Armstrong & Moore, 2004) helped to mitigate this risk, and maintain the wider value of this work in an under-explored field. In action research, the researcher must maintain open-mindedness, focusing on the journey, not the destination (Chevalier & Buckles, 2013). McNiff (2013) noted the importance of collaboration; thanks to an action learning set, module tutors, students themselves, and the wider academic community, there was collaborative support for both action and reflection throughout this project. An action research cycle requires iterative construction of ideas and meaning, informing plans and subsequent action, before evaluation allows further construction of meaning (Coghlan & Brannick, 2014). This approach can be seen throughout the subsequent iterative design process, with insights from each stage informing the subsequent project; the pre-tutorial survey informed case study selection for the tutorial stages, and tutorial activity observation and collaborative reflection informed the post-tutorial survey.

Stage 1: pre-tutorial survey

Following a student review of the draft survey, a pre-activity survey was circulated, with open questions to elicit students' understanding of, and thoughts on, case studies in the classroom. Students were also asked whether they consented to be observed in the upcoming tutorial. The survey itself was guided by research objectives, wider reading, and reviewed by peers and students to check understanding. This stage stressed that involvement was voluntary, and that all students would receive the same teaching

whether they chose to participate or not, in order to mitigate any concerns around influence (Arnold & Norton, 2018). Findings from this stage were used to inform the design and approach for the classroom tutorials.

Stage 2: taught tutorials

Two classroom tutorials were run, for two groups of students studying one final-year module. A colleague was asked to act as a "Complete observer" (Saunders et al., 2019, p. 383) at the tutorials; they focused solely on observation, whilst the author both observed and led the tutorial. Results from the survey and the plans for the tutorial were discussed beforehand with the observer. However, the comments given to the observer were not overly prescriptive, nor guided by a specific protocol, to avoid prejudicing observations. The observer was particularly asked to capture any examples of students linking the case study to their own experiences. Verbatim comments were also requested wherever possible, to allow consideration of the language used, and student exchanges (Saunders et al., 2019). Observation was chosen due to its potential to capture otherwise hidden student comments and interactions (Saunders et al., 2019), and also the opportunity for triangulation of feedback from the observer, the students, and the lecturer (Mertler, 2019) after the class. It would be difficult to meaningfully and objectively observe the students at the same time as teaching, so having additional input and support from the observer was extremely valuable.

It was recognised that in both tutorials and surveys, convenience sampling and self-selection biases may affect findings (Saunders et al., 2019). Students who chose to participate may be more engaged with their learning, or more interested in the topic of case studies. Limited mitigation could be made for this, given the importance of not using the position of power as lecturer to inappropriately push engagement or participation (Arnold & Norton, 2018). Also, overt observation may have changed student behaviour (Saunders et al., 2019), but it would not have been ethical to covertly observe students.

There was an initial intention to make changes between tutorials, based on student interaction and the observer's comments. However, as tutorial one (T1) went well with no obvious change required, after discussion and reflection with the observer, tutorial 2 (T2) was run in the same way. In each tutorial there was one observed group (T1 = 5 students, T2 = 6 students), within a larger group of around twenty students (T1 = 21, T2 = 19). All students were invited to take part in the observed group during stage 1; eleven students put themselves forward at this stage, so no further selection was required. Those in each observed group specifically consented to be observed, and are the only students from whom anonymous quotes are shared.

Stage 3: post-tutorial survey

Noting the concerns about educator-led perspectives in existing research (Bayona & Castañeda, 2017; Belt, 2001; Bonney, 2015; Herreid et al., 2021) and a focus on content over experience and engagement (Kunselman & Johnson, 2004), the follow-up survey was designed to centre the students' experiences of, and engagement with, the case study. The survey was constructed after a reflective discussion with the observer, and a

review of all materials and records from the tutorial. It was sent to all students who attended the week 8 tutorial; 18 students completed it (T1 = 12, T2 = 6). This unbalanced follow-up response may link to the researcher's perception of slightly lower engagement in T2.

Design limitations

This project focused on fourth-year students, who had all completed an industrial placement, and had real life experience to bring to bear on the case study. It may be that groups with other experiences, or at other ages, might respond differently. This would be a fruitful area for further research. Similarly, the tutorial activity involved a written case, and therefore the findings may or may not be transferable to multimedia cases. It would be interesting to select a case with more complexity and potentially multimedia elements, that could be built on over multiple weeks, to explore whether this created greater depth of student engagement and understanding. In future work it would also be important to capture the unheard part of the class. Although anonymous, it is likely that the group filling out surveys and volunteering to be observed were one and the same, which means a little under half the students on the module were not represented in this work, beyond any general observations made about the class. A more sustained project over multiple weeks might support greater involvement by showing that the observation element was not onerous for students.

Results and discussion

Stage 1: pre-tutorial survey

Eighteen final year students responded to the first survey. Students were initially asked whether they had experienced the use of case studies in teaching at HAU. Four students responded that they had, in the majority of their modules, 10 students responded yes, in some of their modules and four students responded yes, in one or two of their modules. No one said they did not know what case studies were, or that they had never had a module tutor who used case studies. A definition and overview of case studies was then provided, to ensure consistency of understanding amongst the respondent group, and to check for any disparity, before the same question was asked again. A minority of students subsequently changed their answer, seven students now responded that the majority of their modules used case studies, and seven students responded that some modules used case studies, while the number responding that one or two modules involved case studies remained the same at four students. This demonstrated that some students might not have realised that certain teaching materials were case studies. Nevertheless, overall the group's awareness and use of case study teaching was relatively strong, which aligns with their widespread use in education (Bonney, 2015).

Case studies were also welcomed, contradicting Rippin et al. (2002): all respondents either always (12 respondents) or sometimes (six respondents) liked module tutors using case studies. When asked what they liked, 9 out of 16 respondents mentioned either "real-life", or "real-world", three mentioned contextualising or applying learning, and two noted that it can help them remember content. On reflection, the definition

provided might have influenced responses to this question, but even if that were the case, the overwhelming majority chose to highlight that they valued real-life and real-world learning.

Students were asked what they disliked about case studies. Six comments referred to them being "off topic", "very broad" or not relevant to them. Two students noted that they can find them boring or unengaging, and two said they can be hard or difficult. There were also individual comments of "More to remember!" and hard to "tie them into assignments", showing the focus that Burdon and Munro (2017) noted on the assessment-linked elements over wider understanding. When asked whether there was anything that would make it easier to engage with case studies, four comments focused on relevance or relatedness. Four practical considerations were raised; making them "more of a show", provision of an "A4 print out", "less reading" and "quiz to check learning".

The survey feedback, and the information from the literature review, was then used to review the case study and tutorial content/slides:

- The case study selected for this research focused on a HAU graduate working in agriculture in Australia (Toogood, 2023, pp. 17–18). As a real individual and story, this should meet both the students' criteria of real-life relevance, and Anderson's (2019) case study principles.
- This was a written case, to be taught using the "small group method" (Herreid, 2011). A live, or multimedia, case was not selected due to the limited availability of such cases in the agricultural sector.
- The case study and the planned activities included examples of communication that were pertinent to the tutorial and module i.e. not "off topic"; aligning with both Anderson (2019) and student feedback. Originally, there was an intention to also cover diverse teams in the tutorial, but following student feedback on "very broad" topics, the tutorial teaching was refined to focus solely on communication, in more detail. This included making a link back to the topic of communication barriers, as covered in that week's lecture.
- A reminder teaching note was added, to connect the topic explicitly to the assignment at the end of the tutorial, to address student concerns.

In terms of practicalities, the following steps were taken:

- Printed paper copies were made available to any student who wanted one.
- During the lecture, it was explained that there would be reading in the tutorial, and that this was available in the usual Virtual Learning Environment in advance, so anyone who wanted to read ahead of time could, to support accessibility. Time was also allocated specifically for reading during the tutorial. As well as responding to students, this also reduced the risk of compromised learning due to lack of preparation (Bayona & Castañeda, 2017; Cox, 2014).
- An illustrated case study was selected for the tutorial, to deliver more of a "show".

No quiz was added, with the intention that classroom discussion would provide more detailed and considered feedback to the group.

Stage 2: taught tutorials

During the teaching activities there was evidence of active learning in both tutorials (Auster & Wylie, 2006; Cox, 2014). Students engaged with the topic and discussed the questions posed effectively, and with insight e.g. both tutorial groups picked up the potentially more complex issue of a psychological barrier to communication created by the fear of asking "silly" questions. This arose in whole group discussion in both tutorials; discussion in the T1 observed group saw one student note that "she might not want to ask something that sounds obvious", while in T2 it was commented that "she might have felt stupid asking questions".

Students related to the real-life nature of the case study, and engaged with the subject's experiences and motivations (Mesny, 2013), with comments such as "what she's done is why I chose to come to Harper" (T1), and "end of day chat, I had that". (T2). As the lecturer moved around each tutorial, numerous students related elements of the case study to their own experiences of workplace communication, and these experiences fed into the whole group discussions too. Observer notes show multiple statements beginning "I" or "We"; sharing their own experience. In each group there was a question about the background and real-life nature of the case study: in T1 the lecturer was asked if this was a real-life example, and in T2 the lecturer was asked where the example and the case study came from.

When discussing barriers to communication, there was also evidence that the case study was supporting students to develop critical thinking skills alongside subject specific content (Cox, 2014; Kim et al., 2006). For example, in T1, the group corrected itself; some students initially said no there were no language barriers, but then others said they felt both terminology (agriculture) and colloquialisms (Australia) could be barriers, allowing the lecturer to build upon this peer-led challenge. There were also examples of engaged self-reflection on feelings and emotions (Mesny, 2013) within the observed groups, with a student in T1 noting they took communication from their manager "too personally", and in T2 an observed group discussion around needing to "know boundaries".

In both observed groups interaction was strong, although the observer noted that T1's group seemed more at ease than T2's. From the lecturer's perspective it felt as though the whole group in T1 was more engaged than T2, but the factors affecting that are unclear. The observer noted conversation and interaction in both groups, with students working together and building on each other's ideas, or having a sustained conversation on one element of the topic. This interaction is important, as it allows the multiple perspectives and discussion that students find beneficial (Yadav et al., 2010), and encourages active participation to support learning (Bayona & Castañeda, 2017; Cox, 2014).

Stage 3: post-tutorial survey

In the follow-up survey, students were asked to rate whether the following were "just right" or "could be improved" and comment on any improvement. All respondents were happy that the first five elements were "just right". For the latter two, 17 out of 18 of respondents were happy that they were just right.

- Length of case study
- Appearance, design and layout of case study

- Discussion activities linked to the case study
- Relevance to the subject/module being taught
- Relevance to you as an individual
- Content of case study
- Real-life nature of case study

In relation to "content" one individual commented that at the start they were unsure "if they were all forms of communications or examples of using communication"; as this was prefaced with "at the start" it evidently did become clear later. For real-life nature of case study, one individual responded that they would have "preferred something even more similar to us. For instance U.K. But it was all relevant". There was therefore nothing in the case study that students felt did not meet the criteria they highlighted in the first survey of real-life relevance.

Students were then asked for further comments. Three students simply commented "No" or "None", but the other eight responses are below.

- Very interesting, and engaging. I've learned so much more from this module as opposed to others due to how interesting [the lecturer] makes the tutorials
- Really good case study – not long winded like some in uni can be!
- It was nice having a stand-alone example i.e. this only really showed examples of informal communication, which made it easier to differentiate from a raw example of formal
- I thought it was an insightful way to analyse informal processes.
- Case study was very relevant to the industry and useful in class learning
- Very interactive, kept me engaged.
- Very good tutorial as per usual.
- Having it printed out for me to read in the class was very helpful, as i don't read well of a computer due to my dyslexia.

A specific question on learning was not posed, to see if the students mentioned learning or related principles without prompting, and what other factors they chose to mention. Three students mentioned engagement or learning, and one further student made a related comment on analysis. Two of the comments featured scope or size; "not long-winded" and "stand-alone example" demonstrate that the students preferred case study focus and detail over breadth, as highlighted in the first survey. Relevance also came up once more, despite being assessed in the first question, asserting the importance of a relevant case study to that particular student. It was also positive to see a dyslexic student confirming that the approaches selected supported accessibility. Multiple students took a printed copy of the case study during the tutorial, but there may have been various reasons for this preference.

All stages

The findings from all stages have been used to construct a model of engagement principles, shown in Table 2. This has been designed as a mnemonic model to assist recall and use of these engagement principles.

Table 2. Mnemonic model of engagement principles.

REAL-LIFE	Students value case studies from recognisable real-life settings and situations, and are interested in their provenance.
APPLICABLE	Students want cases to be applicable and relevant to the module, subject learning and assessment, but also to them as individuals.
DEPTH	Students engage well with a focused case study, preferring depth to breadth.
APPEARANCE	Consider case study design, length and layout to maximise appeal to students.
READING TIME	For written case studies, offer in class reading time and multiple formats to support student engagement, and overall accessibility of the case study activity.

The engagement principles are broadly aligned with Anderson (2019). The first two principles of Real-life, and Applicable also connect to learner engagement, through feelings, emotion and connection, which support deeper engagement, active learning, and inclusivity (Auster & Wylie, 2006; Mesny, 2013; Theobald et al., 2020). However, this project also found an additional focus on the practicalities of case delivery and teaching is crucial to support engagement, underpinning the student experience, and their learning. This is recognised in the latter two points of the model, Appearance and Reading Time.

Although not a stated objective of this work, the comments also suggest that students may have benefitted from their participation in this research, beyond the learning in the tutorial. By highlighting that case studies are a tool for learning, a more considered evaluation of how to engage with, and learn from, cases can be established. The student who chose to reflect on the case study as "an insightful way to analyse informal processes" appears to have considered not just how they felt about the case study, but also why it might have been selected and used in class, to support analytical consideration of a subject. Similarly, the observer commented on how they might develop their use of case studies in the future, following their involvement in this project; observing the in-class discussion had given them an opportunity for deeper reflection on how the students were engaging, and how they could build this in their own teaching. Discussion of case studies with other colleagues, including those in the researcher's action learning set, also increased throughout this project, promoting wider peer learning and the exchange of views and experiences around the use of case studies in the classroom.

Conclusion

This research has confirmed that students find case studies engaging, and demonstrated students' understanding of the purpose of case studies in teaching. It has also shown that students have clear preferences relating to how case studies are used in the classroom; these preferences were articulated in both project surveys, and further demonstrated through the way the group engaged with case study teaching in tutorials. Awareness of these preferences may help staff to select appropriate case studies for teaching, and also to make practical choices to support student engagement and learning. The model of engagement principles (Table 2), which emerged from this project, will support staff in appropriate case study selection and classroom approaches, and offers a contribution to the field of case study teaching.

It can be challenging to deliver the student preference for "Depth" and focus, without over-simplification (Anderson, 2019; Healy & McCutcheon, 2010). Students did not say or

indicate that they wanted simple stories though; they were willing to engage with complex topics, but did not like overly broad case studies. Getting this balance right will require input from students when educators are writing and designing cases, and feedback after classes. The findings from this work will inform the researcher's own teaching activities going forward, but also have applicability and value to others. Centring the engagement of students is a relevant and important consideration in multiple learning environments, and has the potential to enhance learning in a range of settings. Readers are encouraged to consider how they can use the findings from this research in their own pedagogic practice, in the context of their own approach, experiences, learners and environment (Mooney Simmie, 2023). Researchers are specifically encouraged to consider how this model can be expanded and further evaluated, in a range of teaching environments.

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