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Creating experiential learning opportunities in enterprise education: an example of a facilitator-led business simulation game in a taught setting

Experiential
learning
opportunities
in education

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Abstract

Purpose – Simulation in education has been well documented. Business simulation games (BSGs) are often digital and run by a third-party provider. This can create barriers to engagement from educator and student perspectives. This paper explores a facilitator-led BSG, posing the question: can facilitator-led BSGs provide practical experiential learning experiences within a taught setting.

Design/methodology/approach – Exploratory inductive research recruited a sample of 45 student participants, an external examiner and a module leader. Qualitative data were collected using focus group discussion, participant observation and facilitator reflection. Mixed-method feedback forms were also used.

Findings – The facilitator-led BSG offered a flexible approach to challenge or problem-based learning, experiential learning, collaborative learning and critical reflection. Student feedback was positive, and there was an increase in engagement within all elements of the module.

Originality/value – This paper presents a case study example of the implementation of a facilitator-led BSG, providing an alternative solution for teaching practitioners to structured simulations run by third-party hosts. This paper highlights a flexible approach to student-centric experiential and challenging learning through enterprise education within small-group settings. There are opportunities for further evaluation and exploration of the notion, which can be developed from this paper in future works.

Keywords Collaborative learning, Enterprise education, Experiential education, Business simulation game, Challenge learning, Problem learning

Paper type Research paper

Introduction

Simulation games in higher education are not new. Examples of simulation games in business disciplines date back to 1955 when Monopologs was developed to simulate inventory management in the Air Force supply system (Renshaw and Heuston, 1957). More recent examples within academia include SimVenture (simventure.com) and MarkStrat (stratxsimulations.com). Whilst digital business simulation games (BSGs) are reported to contribute positively to entrepreneurial education (Costin *et al.*, 2018; Dharmawan *et al.*, 2022; Ferro *et al.*, 2022), research by Rogmans and Abaza (2019) found that students were more likely to engage in traditional case study exercises than in BSGs due to the complexity of their delivery causing barriers to participation. There are also institutional barriers to adopting BSGs due to the cost incurred through software licencing agreements and the training required for the facilitators.

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This paper details a teaching intervention that was implemented in a final year global marketing strategy module for undergraduate students at a university in the United Kingdom (UK). The facilitator-led BSG was created and led by the module leader, whom we will refer to throughout this paper as the facilitator. By removing third-party involvement, the facilitator sought to provide a BSG experience while retaining control of the simulation and seeking to remove barriers to student engagement in simulation scenarios, as stated by Rogmans and Abaza (2019) previously whilst having flexibility in the simulation's delivery.

Through case study research, this paper explores an alternative to third-party hosted BSGs and addresses the question: can facilitator-led BSGs provide practical experiential learning experiences within a taught setting?

In answering the aforementioned research question, this paper contributes to the existing literature on BSGs by highlighting the value of facilitator-led simulation in reducing barriers to student engagement in simulation experiences whilst providing an example of a facilitator-led BSG which encompasses a holistic approach to enterprise education.

The paper begins with an overview of the existing literature on BSGs, enterprise education, experiential learning and reflective learning. Themes associated with challenge, project, collaborative and blended learning approaches are presented. Then, the methodology is presented, and the facilitator-led BSG is explained. The research findings follow, with key recommendations for practitioners drawing the paper to a close.

Review of the literature

This section provides an overview of the existing literature on the use of BSGs in enterprise education, highlighting the role that BSGs play in experiential, collaborative, project-based and reflective pedagogy.

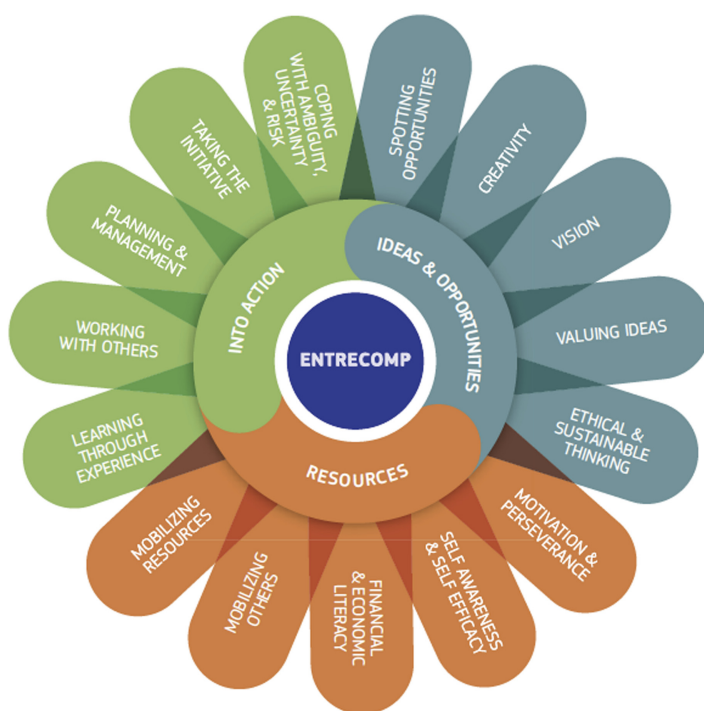
Business simulation games in enterprise education

Enterprise education is designed to aid students in realising and developing their enterprising potential. Originating from the entrepreneurship discipline, enterprise education reflects the significance of entrepreneurial competences across all aspects of business and enterprise, employment (Bridge, 2017), society and everyday life (Bacigalupo *et al.*, 2016).

These competences can be shown in the EntreComp framework (Figure 1), which are divided into three categories: (1) ideas and opportunities, (2) resources and (3) into action.

BSGs are designed to embed the experience within a taught environment. Managed by third-party providers, BSGs are designed to improve the tacit knowledge of learners and increase their motivation to learn (Humpherys *et al.*, 2022). BSGs are used by facilitators to complement enterprise education by enhancing the learning experience (O'Brien and Costin, 2022) and having positive impacts on engagement (both behavioural and cognitive), learning achievement and the development of higher-order thinking skills such as problem-solving, critical thinking and creativity (Huang *et al.*, 2022). These skills are identified in the EntreComp Framework in Figure 1. They are considered reliable predictors of success in education and work settings (O'Brien and Costin, 2022; Huang *et al.*, 2023).

As platforms for experiential learning, BSGs allow students to practice and identify the skills presented in Bacigalupo *et al.*'s (2016) EntreComp framework. However, whilst reported as beneficial to enterprise education (Faisal *et al.*, 2022), third-party-developed BSGs are critiqued for being rigid and going against the ethos of student-centred pedagogy, failing to recognise the different ways that students receive, assimilate and process information, as well as interact with resources and construct knowledge (Burns, 2014; Dewey, 1926, 1933, 1938). However, as part of a blended learning approach, Burns (2014) and Faisal *et al.* (2022) advise that BSGs within enterprise education can facilitate a move away from the traditional taught learning environment,



Source(s): Bacigalupo *et al.*, 2016

Figure 1.
The EntreComp
framework

which can then incorporate a student-centred pedagogy, allowing educators to identify who our students are, recognise their needs, understand their capabilities and create a learning environment tailored to student needs (McKenna, 2013., O'Brian *et al.*, 2009) in contrast to the traditional teacher-centred approach (Rogers and Frieberg, 1994).

Experiential learning in enterprise education

Experiential learning or “learning by doing” (Bradberry and De Maio, 2019) is a well-documented pedagogic approach that enhances student learning by giving opportunities to take learned theoretical knowledge and experience and apply it to a specific context.

Learning by doing can be achieved through problem-, project- (Chan, 2013) and challenge-based learning approaches (Gallagher and Savage, 2020), often adopted within the scope of experiential education. By giving students a challenge, problem or scenario to solve, students are encouraged to find unique, innovative and original solutions, practising the skills of creativity and critical thinking. Combining challenge-, problem- or project-based learning with collaborative learning encourages students to work together to make effective group decisions. This gives students a real-life experience of challenges associated with “meeting a common goal”. Furthermore, adopting a collaborative learning approach within the higher-education system allows adult learners to acquire knowledge and competences in specific areas, such as team working skills, knowledge sharing, developing creativity, self-learning and developing essential skills for the workplace (Huang *et al.*, 2023). Locke (1728) observed that experiential learning techniques assist students in storing information within their long-term memory, where it can easily be recalled.

With students at the centre of experiential learning, experiential learning within enterprise education also allows students to think critically and reflect upon their current views (Castelli and Lawrence, 2011). Castelli and Lawrence (2011) and Locke (1728) observe that students are receptive to experiential learning within a classroom environment as they are in a safe environment where they can take on challenges, test their views and try different solutions. Furthermore, where experiential activities are planned, they provide opportunities for inclusive interaction. Also, by taking students outside of their comfort zone, they are encouraged to think outside of the box. Supporting this, research by Cui *et al.* (2021) and Sánchez (2013) informs that enterprise education facilitates the building of entrepreneurial skills and mindset in students and can increase career aspiration.

Adding to this, Huang *et al.* (2023) assert that experiential learning contributes to cognitive and intellectual development and facilitates knowledge sharing through teamwork. Embedding collaborative, project-based or problem-based learning within the experiential learning environment has been found to increase student motivation (to learn) and develop decision-making capability, creative thinking, self-learning and knowledge acquisition and implementation (Davidson *et al.*, 2014; Huang *et al.*, 2023).

A well-cited academic in the field of teaching and learning is David Kolb. Kolb (1984) developed a “model of experiential learning” (Figure 2). Kolb (1984) defines the experiential learning process into four key stages: (1) concrete evidence; learning by doing, where the learner learns from primary experience; (2) reflective observation, where the learner reflects upon and reviews the experience; (3) abstract conceptualisation, where the learner concludes the learning experience, considering ways in which to generate alternative options and practice, and (4) active experimentation, where the learner will plan and consider the learned experience in future practice.

Liu *et al.* (2022) report a link between the four dimensions’ and Kolb’s (1984) four styles of learning: diverger, assimilator, converger and accommodator. The *diverger* learns best between points 1 and 2 and considers various ways of solving a problem before comparing the possible outcomes. The *assimilator* learns best between points 2 and 3 and will combine reflective learning and abstract conceptualisation whilst systematically gathering information, preferring to work through an assignment. Whilst *convergers*, best suited between points 3 and 4, will combine abstract conceptualisation and active experimentation, testing theory in practice and seeking practical uses for taught concepts. Finally, between points 4 and 2, the *accommodators* prefer to learn from hands-on experience, combining

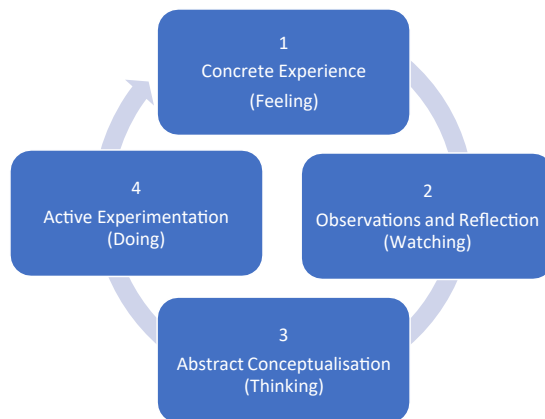


Figure 2.
Kolb's learning cycle

Source(s): Adapted from Kolb, 1984

concrete experience and active experimentation. Notably, Kolb (1984) observes that convergers prefer to work independently, whilst accommodators are typically more people oriented than convergers, divergers and assimilators and are more accepting of new challenges and experiences.

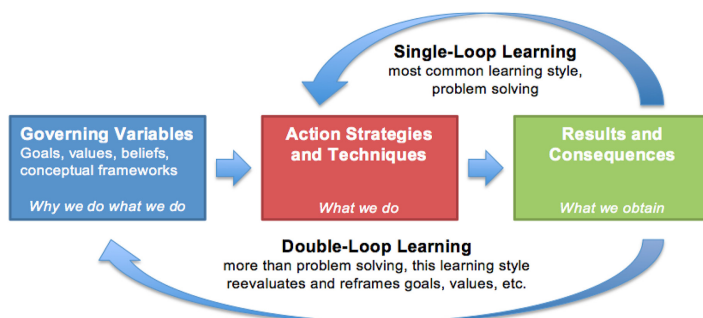
Kreber (2007) suggests that adopting a subject-led pedagogic design allows students to be informed of various academic disciplines' epistemologies and encouraged to access, construct and critique knowledge as part of their learning process (O'Brien *et al.*, 2009). Supporting this, Bell and Kozlowski (2008) consider that the learning process consists of shared meaning, discussion, collaboration and negotiation. By delivering information to engage students in forming a shared meaning of the phenomenon and discussing its meaning and context, educators then work with the students to decipher the meaning of the information.

Using active learning approaches and inductive teaching techniques shifts the role of "teacher" to "facilitator" of learning (Smart *et al.*, 2012), with experiential learning lending itself well to a transformative approach to enterprise education (Alam, 2022). Constructivist in nature (Davis, 1993), enterprise education actively encourages students to ask questions and construct their knowledge rather than being passive recipients of information (Alam, 2022; Bain, 2004; Nada and Legutko, 2022; Syharuddin *et al.*, 2022), with students actively involved rather than passively listening. This leads students to develop analytical and evaluative skills as they are actively engaged in the module and therefore encouraged to explore their attitudes and values within that learning environment (Bonwell and Eison, 1991). This resonates with the work of Davidson *et al.* (2014), who notes that students have always been active in the learning process and that collaborative and cooperative learning pedagogies, team learning and problem-based learning have positively influenced the student learning experience.

Reflection in experiential learning

Reflective learning is current in the literature, though it is not new (Castelli and Lawrence, 2011). Dewey (1933) introduced reflective practice to higher education, which facilitates learning from experience to seek improvement (Bassot, 2023). The skill of critical reflection on experience is valued in the workplace and seen as a way of embarking on continual self-development (Heymann *et al.*, 2022). Castelli and Lawrence (2011) consider the values and attitudes of the student learner as key to the reflective learning process. The reflective process can also help to conceptualise a learned experience (Castelli and Lawrence, 2011). However, Castelli and Lawrence (2011) warn that to be effective, the facilitated experience must be deemed valuable by the student in order for them to participate fully and engage in reflective critical thinking.

The learning process is described as a circular loop (Argyris, 1976; Greenwood, 1998; Castelli and Lawrence, 2011; Pereda, 2013), as presented in Figure 3.



Source(s): Extracted from: Pereda, 2013

Figure 3.
The single- and double-
loop learning process

Considering the reflective element of the learning process, [Castelli and Lawrence \(2011\)](#) present a model ([Figure 4](#)) which illustrates how reflective learning can be facilitated in adult education.

[Castelli and Lawrence \(2011\)](#) describe the notion of single- and double-loop learners. Single-loop learners rarely reflect or gain feedback on their actions and repeat ineffective patterns. Alternatively, double-loop learners are reflective, encouraging others to be reflective within a team. Therefore, double-loop learners demonstrate an ability to reflect on their experiences to learn and grow. [Viebig \(2022\)](#) states that reflection is a critical part of learning in enterprise education.

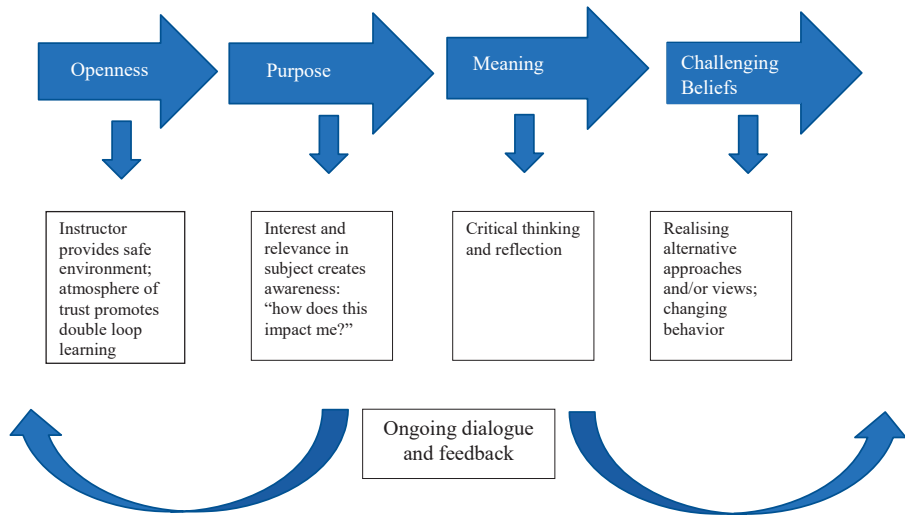


Figure 4. An integrated model for incorporating reflective learning into adult instruction

Source(s): Extracted from: Casteli 2011, p. 21

Methods

A qualitative, exploratory case study approach to research which was inductive in nature saw the facilitator-led BSG implemented to a sample of student participants studying a final-year global marketing strategy undergraduate degree at a UK university. By adopting a case study approach, the study provides an example of the phenomena (a facilitator-led BSG) within a particular context (the taught environment) ([Yin, 2021](#)).

The sample

Purposive sampling ([Clark et al., 2021](#)) saw the selection of student participants from a business management programme. The recruitment was purposive as the author sought a sample from enterprise education, yet convenience sampling was utilised as the sample was easily accessible to the author ([Clark et al., 2021](#)).

The cohort was of mixed gender (male [23] and female [22]) and consisted of 39 student participants from the UK and six from France (t = 45). The student participants from France studied at the university for their final year as part of the Erasmus programme and their degree programme in their home country.

Data collection methods

Primary data were collected through predominantly qualitative methodology, enabling inductive exploration into students' subjective perceptions as study participants

(Clark *et al.*, 2021) via focus group discussions and participant observation, whilst mixed-method questionnaires sought student participant perspectives and allowed comparison of perception across the sample, triangulation and data checking (McGivern, 2005).

Data collection took place in several phases.

Phase 1: A preliminary focus group session, consisting of nine focus groups (with five students in each), identified the priority areas for the students, which would be embedded into the facilitator-led BSG. This transformative research approach gives ownership to the student participants, encouraging participant engagement.

Phase 2: Longitudinal observation took place with a two-hour weekly workshop over 12 weeks. By observing the participants, the facilitator could adapt the simulation to suit their skill level and make notes on the effectiveness of the intervention.

Phase 3: A closing focus group session with the nine focus groups at the end of the module allowed for participant reflection on the learning intervention.

Phase 4: Module evaluation in the form of participant (student) evaluation forms using a mixed-methods format and review of the works submitted gave insights into the effectiveness of the facilitator-led BSG. External examiner feedback was also used to evaluate its effectiveness in enterprise education.

Data analysis

Raw data were collected and managed following General Data Protection Regulation (GDPR) requirements and the universities privacy policy. Data were stored within secure and password-protected files and analysed using thematic analysis. As the research was exploratory, inductive coding was employed, allowing for identifying themes emerging from the literature.

Ethical considerations

This study was granted permission through the university's ethics committee. The students were informed about the study at the start of the module and consented to participate. Individual student details are omitted from the presentation of the study, along with any identifying factors. Students were advised that their participation was voluntary, they could opt to withdraw from data collection at any time and that their participation would not impact their assessment grade. To avoid bias, data collection from the final focus group and student feedback took place after the grades were released to ensure data reliability.

Development of the facilitator-led business simulation game

Using the existing knowledge base to inform the study, the facilitator-led BSG was informed by desk research into enterprise education, BSGs and the subject discipline. Adopting a student-centred approach to delivery which evoked blended learning, as recommended by Faisal *et al.* (2022) previously, the facilitator-led BSG utilised experiential learning, collaborative (group) learning, peer-to-peer knowledge sharing, problem-based learning and reflective learning to address the priority areas as identified by the participants in the preliminary focus group discussions (phase one).

- (1) Employability (specifically evidencing organisation, timekeeping, showing initiative and teamworking)
- (2) Transferrable and critical skills (specifically evaluation, analysis and critique)

-
- (3) Being able to put theory into practice (and being able to show this on a curriculum vitae or in a job interview)

In teams of 5, the student participants were tasked with creating a product to be launched in the confectionery sector. The confectionery sector was chosen as the sector needed to be familiar to all to ensure limited barriers to participation and engagement. This also allowed flexibility in the products the students could design. Each group was given a budget of £100,000. The teams were given a costings sheet to outline basic operational costs and costs of services such as advertising expenses. To encourage the students to problem-solve independently within the team, a consultancy fee would be incurred for each question asked to the facilitator, who acted as a business consultant during the simulation.

The outline

Week 1 focused on team creation and the establishment of group roles. The students were familiar with Belbin's team roles (Belbin, 1981). The student participants reflected on past group experiences to identify their roles. The teams then conducted market research, decided their business location and shared initial ideas. Week 2 saw teams further define their target market and product development, with week 3 being the product's launch to market.

From week 4, the teams had all launched their products. They had entered the same sector, and their products were seen as potential competitors, along with real-life brands in the market space, in real time. Each week a new scenario occurred, and the student participants responded. The scenarios were based on the competitor (student) teams' decisions and real market conditions. There were some situations added by the facilitator too.

Feedback and assessment

At the start of each week, the students would receive an update on the market from the facilitator. This would include a response from the market, such as the level of interest and number of sales. The facilitator decided these based on how appropriate the product was for the target market and how appropriate its placement was for the market. This encouraged student participants to rework the product offer and market research to increase sales. These figures also considered the marketing strategy and how they utilised the marketing budget. This intervention created a way of giving formative feedback to students as they worked through the simulation. Feedback was given clearly to ensure they knew how to improve their return on investment or increase sales. The facilitator created opportunities to "go global", enabling students to consider market entry and exit strategies.

Formative assessment was given each week via a Market Review. This was given by the facilitator, detailing the previous week's decisions and outcomes. A performance summary was given to each team, giving more detail, including that which would not usually be shared with competitors, such as profit margins. Then, the students would reflect as a team and consider ways forward. There would also be a market review given to the whole cohort.

The summative assessment consisted of an individual reflective report based on the simulation task. This enabled the student participants to reflect on the simulation and their decisions and consider things they may have done differently. The assessment encouraged reflection and the unpacking of action at key moments in time, encouraging evaluation, critique and analysis, identified as critical skills in the literature (Huang *et al.*, 2022, 2023).

As the reflective report was individual, this took the strain off those high achievers who engage actively in sessions as those students who are laggards either became encouraged to attend or are engaged as the final assessment was an individual piece. For those in groups with students who did not attend sessions, there was no impact on the quality of the

assessment grade or strain of trying to compensate for the missing team member. This also meant that those students who engaged were not taking on the laggards' work to submit a complete project with a high mark.

The simulation game was aimed at allowing the student participants to put theory into practice. Applying theory into practice can often be a duo of trial and error, balancing the taught knowledge with lived experience. Therefore, a reflective assessment also allowed the student participants to reflect on the right decisions and learn from the choices that did not provide the best outcome.

Supporting the BSG initiative was the lecture content, case studies, recommended readings and vlogs appropriate to the theme each week.

Findings and discussion

This section presents the findings of the study. The research findings focus on the qualitative data collection over the duration of implementing the facilitator-led simulation game.

Throughout the 12 weeks, the student participants competed in the confectionery sector. They used problem-based, experiential, reflective and collaborative learning to create a product, take it to market and seek market share.

Whilst each student participant performed well on the module, demonstrated by a 100% pass rate, the paper focuses on the student experience rather than academic aptitude as the grades are subjective and detract from the purpose of the research question.

Student engagement was high, and the student participants displayed that they enjoyed the game and the level of challenge set by the facilitator. By the end of the simulation, all nine teams had implemented tactics and strategies from idea generation to maintaining market share. Two teams had explored exit strategies, and six had looked at product redesign to suit the changing market or sought-after product improvements. Two groups entered collaborative agreements and merged to maintain market share against another team.

Entrepreneurial mindset, competence and skill development

The facilitator-led simulation allowed the student participants to apply the 15 competences of the EntreComp framework, presented in [Figure 1](#). Throughout the simulation, each of the student participants (100%) demonstrated the competences and exhibited an entrepreneurial mindset. The student participants could also identify the competences through the reflective elements of the simulation and assessment. This gave added value as the student participants informed through their feedback that they would feel confident in giving examples of when they had demonstrated entrepreneurial mindset and competence when applying for work, with one student summarising, *"I can see the point in us [the student participants] doing this [partaking in the simulation] because it is clear that it is useful for our employment after graduation."* Others stated, *"this will give us really useful examples to talk about in interviews"*, and *"not all of us have work experience, which is a disadvantage when applying for jobs after University, so this gives us experience to include in our applications and to talk about at interview"*.

The simulation experience also allowed the student participants to practice professional skills, core skills such as collaborative working, independent learning skills (through researching solutions to problems), critical thinking and communication (both written and verbal). Whilst this supported their learning, this also contributed to building self-esteem and confidence which was beneficial to a positive student experience and self-actualisation when exploring career paths. Furthermore, 92% (n41) of the cohort stated they felt more confident to challenge the theory, with one student participant stating, *"I couldn't just sit there. I had to make decisions, and that actually made me think about what I have been learning and how it might look in an actual business scenario."* With another adding, *"yes, but that makes it (the*

taught material) *all make a bit more sense, plus I took it in better because I knew we would be having to make decisions using the information.*"

The external examiner reflected that the assessment was innovative and encouraged the student participants to engage in the module and think outside of the box. They said it was good to get them to think practically. *"Through this assessment, students are exposed to a variety of mini-tasks, which provide opportunities for both the development of academic skills and transferable skills that prepare them for the world of work. In addition, there is evidence of the tasks being written to challenge students sufficiently."*

A reflective learning environment

Formative feedback allowed opportunities for continuous reflection, which helped the student participants rationalise the outcomes of their decisions each week. The reflective element of the assessment enabled the student participants to consider how their group may have done better, looking at further options and further enhancing the student participants learning. In addition, this also took the pressure off the student participants to "get it right" the first time. Furthermore, marking them on their reflective report gave the student participants a safety net to make risky decisions if they felt appropriate. To ensure the student participants were thinking about their decisions critically, the assessment required them to justify the rationale for each decision within the reflective report, ensuring that there was full engagement in the task at hand and no selection of the first "easy option".

Reflection in experiential learning allowed the student participants to unpick key moments in the learning process and evaluate how the key moment led to an outcome. Critique and evaluation of key moments encouraged the student participants to think deeper and engage further in their learning. If something worked well, they are encouraged to evaluate "why?" If not, they are encouraged to evaluate "why not?" and consider other routes to achieving the targeted outcome (Bassot, 2023).

Interestingly, no team asked for consultancy. They did not want to spend their budget on advice, so they utilised the resources around them to problem-solve. This meant that the student participants were independently working in groups and having the confidence to take on the challenges. They were learning to self-learn.

Student engagement

Taking the role of a participant observer, the facilitator observed strong engagement in the taught sessions relevant to the simulation task; there was an increase in questions around module content and collaborative discussion as the student participants became more active seekers of information than passive listeners. During the focus group session at the end of the module, one student participant stated, *"peer-pressure is real. I couldn't be lazy. I didn't want to let me team down"*.

During the first week, the facilitator noted little integration between the Erasmus student participants and those at the host institution. As the module titled "Global Marketing Strategy" included themes surrounding culture, internationalisation and "doing business globally", there was an opportunity to implement a pedagogic approach allowing the student participants to reflect on their knowledge and experiences of international markets. All of the student participants also saw value in the exchange of discussions between Erasmus and domestic student participants, with an Erasmus student participant stating, "it is actually quite cool hearing how business operations, culture, and the job market is similar in some ways, but different in others".

Eighty-four percent (n38) of the student participants, whilst seeing the value in group work, expressed anxiety regarding marks being awarded due to concerns of fairness and contribution within groups. They stated that group performance evaluations alongside

group assessment did not relieve anxiety as those student participants who felt they performed better than their peers felt that they would be doing more work, with one student participant stating, “*I have worked with others before, and I end up re-doing their work because I don't want the overall assignment grade to suffer*”, and argued that whilst they saw value in group work for gaining employability skills, it is rarely graded in the business world. By having an individual assessment which allowed for reflection if things did not go as planned, anxiety and barriers to participation were reduced, resulting in improved engagement.

As time progressed, the student participants fully engaged in the simulation. Being facilitator-led, the student participants had the safety net that someone they knew was running the simulation. The facilitator discussed lecture content with explicit relevance to the simulation game, which helped the student participants feel emersed in the simulation activity. By having a facilitator-led blended learning mechanism, the facilitator could allow for impromptu brainstorming and discussion during the taught session.

Student satisfaction

The findings from the preliminary focus group are presented in the Development of the facilitator-led business simulation game section. The focus group discussions at the end of the simulation reflected on the 12-week duration of the simulation and informed that 100% of the student participants had found the facilitator-led simulation to support their learning and saw value in the experience they gained through the simulation.

Feedback from the module was positive. Each student participant reported enjoying doing something participative in lectures. “*I really enjoyed working as a team and having control over what direction you took your business. I would like more exercises like this in other modules*”. It encouraged them to think outside of the box and allowed them to put taught theory into practice. “*The session encouraged both class participation and individual learning*”. The student participants also commented that the individual assessment took the pressure off the group work element of the module as they did not have to do any additional work to compensate for those group members who did not attend the lectures or participate in the group task.

Conclusions

This study offers links between simulation and experiential learning and evidences the use of simulation to support student learning in a small-group taught setting. In doing so, the study examples how enterprise education can utilise reflective learning within business school modules through holistic yet blended pedagogy formed by reflective practice and experiential, collaborative, challenged-based and project-based approaches to teaching and learning. Contributing to the existing literature on BSGs in enterprise education, the paper shows how a facilitator-led BSG can reduce barriers to participation and improve student engagement in the module and broaden the learning experience. The student participants were motivated to participate in the simulation as it allowed them to put taught theory into practice. They gave them an experience to talk about to potential employers. However, a key consideration is that by implementing the simulation within a taught setting, the student participants could take risks and challenge theory in the safety of the classroom. This provided the opportunity to test theories and thoughts formed by the student participants themselves.

The rationale for incorporating the facilitator-led BSG was to provide final year BA (Hons) Business Management student participants with an opportunity to practice real-time decision-making whilst drawing upon taught knowledge from their previous years of study. It also allowed those student participants with work experience to draw upon that knowledge.

By leading the BSG, the facilitator utilised a student-centred approach to challenge learning, highlighting the value of learning through doing for the cohort. Combining this approach with experiential learning, facilitator-led BSGs were developed, encouraging student engagement whilst offering collaborative (group) learning, peer-to-peer knowledge sharing, problem-based learning and reflective learning, whilst being centric to a student-focused challenge learning pedagogy. This type of learning contributes to the development of critical skills which student participants recognise as sought after by potential employers and is supported by a blended learning approach (Faisal *et al.*, 2022), focusing on core skills, entrepreneurial mindset and specialist knowledge.

The simulation game can be adapted for a range of contexts and encompasses the student-centred approach as well as a variety of proven approaches, meeting the diversity of student need. Furthermore, it allows engagement from student participants with a variety of preferred learning styles due to the task's teaching, experiential and reflective elements, in addition to collaborative group learning and individual learning contexts.

Implications

The study has implications for enterprise education by showing how facilitator-led BSGs can provide a flexible, self-managed challenge-learning scenario encompassing the ethos of experiential, project and collaborative pedagogy, with opportunities to embed reflective practice, further building upon the learning experience. By adopting a facilitator-led approach, facilitators gain control of the BSG, allowing them to focus on delivering a student-centric education through subject-led design. Furthermore, this study provides insights for enterprise educators to explore facilitator-led BSGs within their learning environments.

Limitations

This paper reports a facilitator-led BSG. The study is of one cohort in one UK institution. However, as this is case study research, the author is not claiming generalisability (Yin, 2021). Further exploration of facilitator-led BSGs in enterprise education will explore the phenomena further.

Recommendations for future teaching practice

This paper demonstrates the value in innovative approaches to enterprise education. In a sector where student experience and student learning is at the core of everything, it is crucial to incorporate student-centred learning and provide engaging activities such as the intervention exemplified in this paper. The paper provides an example of how a simulation game activity can positively encourage student engagement and learning through a facilitator-led approach.

Key recommendations for practitioners exploring ways of including similar scenario-based pedagogy into the taught setting include (1) allowing flexibility for the learners in terms of the way they learn and the way the simulation/scenarios are run, (2) having a regular reflection strategy to ensure effective formative assessment and (III) ensuring there is appropriate access to additional resources to encourage independent learning.

References

- Alam, A. (2022), "Investigating sustainable education and positive psychology interventions in schools towards achievement of sustainable happiness and wellbeing for 21st century pedagogy and curriculum", *ECS Transactions*, Vol. 107 No. 1, 19481.

- Argyris, C. (1976), "Single-loop and double-loop models in research on decision making", *Administrative Science Quarterly*, Vol. 21 No. 3, pp. 363-375.
- Bacigalupo, M., Kamylyis, P., Punie, Y. and Van den Brande, G. (2016), *EntreComp: The Entrepreneurship Competence Framework*, Publication Office of the European Union, Luxembourg.
- Bain, K. (2004), *What the Best College Teachers Do*, Harvard University Press, Cambridge, MA.
- Bassot, B. (2023), *The Reflective Practice Guide: an Interdisciplinary Approach to Critical Reflection*, Taylor & Francis, London.
- Belbin, R. (1981), *Management Teams*, Heinemann, London.
- Bell, B.S. and Kozlowski, S.W.J. (2008), "Active learning: effects of core training design elements on self-regulatory processes, learning, and adaptability", *Journal of Applied Psychology*, Vol. 93 No. 2, p. 296.
- Bonwell, C.C. and Eison, J.A. (1991), *Active Learning: Creating Excitement in the Classroom*, (ASHE-ERIC Higher Education Report No. 1), George Washington University, Washington, DC.
- Bradberry, L.A. and De Maio, J. (2019), "Learning by doing: the long-term impact of experiential learning programs on student success", *Journal of Political Science Education*, Vol. 15 No. 1, pp. 94-111.
- Bridge, S. (2017), "Is Entrepreneurship the problem in entrepreneurship education?", *Training and Education*, Vol. 59 Nos 7-8, pp. 740-750.
- Burns, M. (2014), "Working together: how teachers teach and students learn", *International Journal of Instruction*, Vol. 17 No. 1, pp. 17-28.
- Castelli, P. and Lawrence, A. (2011), "An integrated model for practicing reflective learning", *Academy of Educational Leadership Journal*, Vol. 15, pp. 15-30.
- Chan, Z.C.Y. (2013), "Exploring creativity and critical thinking in traditional and innovative problem-based learning groups", *Journal of Clinical Nursing*, Vol. 22 Nos 15-16, pp. 2298-2307.
- Clark, T., Foster, L., Sloan, L. and Bryman, A. (2021), *Bryman's Research Methods*, 6th ed., Oxford University Press, Oxford.
- Costin, Y., O'Brien, M.P. and Slattery, D.M. (2018), "Using simulation to develop entrepreneurial skills and mind-set: an exploratory case study", *International Journal of Teaching and Learning in Higher Education*, Vol. 30 No. 1, pp. 136-145.
- Cui, J., Sun, J. and Bell, R. (2021), "The impact of entrepreneurship education on the entrepreneurial mindset of college students in China: the mediating role of inspiration and the role of educational attributes", *The International Journal of Management Education*, Vol. 19 No. 1, 100296.
- Davidson, N., Major, C.H. and Michaelsen, L.K. (2014), "Small-group learning in higher education—cooperative, collaborative, problem-based, and team-based learning: an introduction by the guest editors", *Journal on Excellence in College Teaching*, Vol. 25 Nos 3-4, pp. 1-6.
- Davis, B. (1993), *Tools for Teaching*, Jossey-Bas, San Francisco.
- Dewey, J. (1926), *Democracy and Education*, MacMillan, New York.
- Dewey, J. (1933), *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process*, D.C. Health., Lexington, MA.
- Dewey, J. (1938), *Experience and Education*, MacMillan, New York.
- Dharmawan, B., Rosyad, A., Silitonga, L.M., Mandamdari, A.N., Zulkifli, L. and Wu, T.T. (2022), "BSG-A serious game tool to improve student's self-efficacy, motivation, and engagement in entrepreneurship", *Innovative Technologies and Learning: 5th International Conference, ICITL 2022, Virtual Event*, August 29-31, 2022, Proceedings, Springer International Publishing, Cham, pp. 405-414.

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- Faisal, N., Chadhar, M., Goriss-Hunter, A. and Stranieri, A. (2022), "Business simulation games in higher education: a systematic review of empirical research", *Human Behavior and Emerging Technologies*, Vol. 1, pp. 1-28.
- Ferro, A., Buzady, Z. and Almeida, F. (2022), "Developing entrepreneurial competencies among tourism students using FLIGBY", *Journal of Hospitality and Tourism Education*, pp. 1-15.
- Gallagher, S.E. and Savage, T. (2020), "Challenge-based learning in higher education: an exploratory literature review", *Teaching in Higher Education*, pp. 1-23.
- Greenwood, J. (1998), "The role of reflection in single and double loop learning", *Journal of Advanced Nursing*, Vol. 27 No. 5, pp. 1048-1053.
- Heymann, P., Bastiaens, E., Jansen, A., van Rosmalen, P. and Beusaert, S. (2022), "A conceptual model of students' reflective practice for the development of employability competences, supported by an online learning platform", *Education + Training*, Vol. 64 No. 3, pp. 380-397.
- Huang, Y.M., Silitonga, L.M. and Wu, T.T. (2022), "Applying a business simulation game in a flipped classroom to enhance engagement, learning achievement, and higher-order thinking skills", *Computers and Education*, Vol. 183, 104494.
- Huang, Y.M., Silitonga, L.M., Murti, A.T. and Wu, T.T. (2023), "Learner engagement in a business simulation game: impact on higher-order thinking skills", *Journal of Educational Computing Research*, Vol. 61 No. 1, pp. 96-126.
- Humpherys, S.L., Bakir, N. and Babb, J. (2022), "Experiential learning to foster tacit knowledge through a role play, business simulation", *Journal of Education for Business*, Vol. 97 No. 2, pp. 119-125.
- Kolb, D. (1984), *Experiential Learning: Experience as the Source of Learning and Development*, Prentice Hall, London.
- Kreber, C. (2007), "What's it really all about? The scholarship of teaching and learning as an authentic practice", *International Journal for the Scholarship of Teaching and Learning*, Vol. 1 No. 1.
- Liu, H.C., Chen, H.R., Yu, S.C. and Shih, Y.T. (2022), "Effect of learning computational thinking using board games in different learning styles on programming learning", *Innovative Technologies and Learning: 5th International Conference, ICITL 2022, Virtual Event*, August 29-31, 2022, Springer International Publishing, Cambridge, pp. 514-521.
- Locke, J. (1728), "Some thoughts concerning education", in Wainright, A.W. and Yolton, J.S. (Eds) (2000), *Clarendon Edition of the Works of John Locke*, Oxford University Press, New York, (Original work published 1693).
- McGovern, Y. (2005), *The Practice of Social Research: an Introduction*, Prentice Hall, New Jersey.
- McKenna, S. (2013), "The dangers of student-centred learning – a caution about blind spots in the scholarship of teaching and learning", *International Journal for the Scholarship of Teaching and Learning*, Vol. 7 No. 2, 6.
- Nada, C.I. and Legutko, J. (2022), "Maybe we did not learn that much academically, but we learn more from experience"–Erasmus mobility and its potential for transformative learning", *International Journal of Intercultural Relations*, Vol. 87, pp. 183-192.
- O'Brien, M. and Costin, Y. (2022), "Social interaction in virtual teams—an exploratory study of students undertaking business simulation", *European Conference on e-Learning*, Vol. 21 No. 1, pp. 323-330.
- O'Brien, J.G., Millis, B.J. and Cohen, M.W. (2009), *The Course Syllabus: A Learning-Centered Approach*, 2nd ed., John Wiley & Sons, New York.
- Pereda, R. (2013), "AFS intercultural programmes", available at: <http://www.afs.org/blog/icl/?p=2653> (accessed December 2014).
- Renshaw, J.R. and Heuston, A. (1957), *The Game Monopologs*, RAND Corporation, California.
- Rogers, C. and Frieberg, H. (1994), *Freedom to Learn*, 3rd ed., Merrill, Columbus.
- Rogmans, T. and Abaza, W. (2019), "The impact of international business strategy simulation games on student engagement", *Simulation Gaming*, Vol. 50 No. 3, pp. 393-407.

- Sánchez, J.C. (2013), "The impact of an entrepreneurship education program on entrepreneurial competencies and intention", *Journal of Small Business Management*, Vol. 51 No. 3, pp. 447-465.
- Smart, K.L., Witt, C. and Scott, J.P. (2012), "Toward learner-centered teaching: an inductive approach", *Business Communication Quarterly*, pp. 392-403.
- Syahrudin, S., Mutiani, M., Handy, M.R.N., Abbas, E.W. and Jumriani, J. (2022), "Putting transformative learning in higher education based on linking capital", *Journal of Education and Learning (EduLearn)*, Vol. 16 No. 1, pp. 58-64.
- Viebig, C. (2022), "Blended learning in entrepreneurship education: a systematic literature review", *Education & Training*, Vol. 64 No. 4, pp. 533-558.
- Yin, R.K. (2021), *Case Study Research: Design and Methods*, Sage, London.

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