



Enhancing employability skills through project-based learning in business education: addressing the needs of widening participation students

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Abstract

This case study explores the practical application of project-based learning (PjBL) within a first-year business management module designed to address the unique challenges faced by widening participation students. It examines how embedding employability skills such as problem-solving, communication, teamwork and critical thinking directly into the curriculum can help bridge gaps in academic preparation and career readiness. Through authentic project tasks, and a focus on sustainability and governance, the module aims to create an inclusive and engaging learning environment. Key insights highlight the positive impact of collaboration, iterative reflection, feedback and artifact creation in fostering professional competencies. Practical recommendations are provided to support the integration of PjBL, with a particular focus on designing strategies that enhance accessibility and inclusivity for diverse student populations.

Keywords: project-based learning; authentic assessment; employability; widening participation.

Context

Business and Management studies attract the highest number of students in UK higher education, with 587,165 enrolments in 2022/23 (Statista, 2024). These programmes also see high participation from students from widening participation backgrounds, including those from underrepresented ethnic groups, lower-income households, and first-generation students (HESA, 2022). However, these students often face challenges in securing degree-level employment upon graduation (HESA, 2024). This is partly due to

limited engagement in extracurricular skill-building activities crucial for employability, as many of these students balance full-time study with part-time work, family commitments, and caring responsibilities, making participation in 'optional' activities difficult (OfS, 2020).

Recognising these challenges, in the 2018/19 academic year, our School of Business and Management at Queen Mary University of London identified several critical issues affecting the undergraduate Year 1 experience. In particular, there was a need for a cohesive introduction to business management that aligns with the School's mission of sustainability and good governance. Among the most significant concerns were underachievement, especially among students from widening participation backgrounds, who make up three-quarters of the cohort in our School. These students frequently struggled with academic skills such as critical thinking and quantitative analysis. In addition, we observed insufficient development in teamwork and career preparation skills, compounded by a lack of engagement and sense of belonging within our School. To address the barriers faced by widening participation students, we prioritised embedding employability skills directly within the curriculum rather than relying solely on optional extra-curricular activities. This approach is aimed at ensuring that all students, regardless of their circumstances, can access opportunities to develop critical skills such as communication, teamwork, problem-solving and quantitative analysis within their formal education.

Subsequently, we restructured the Year 1 programme, introducing a core module, 'Current Challenges in Business and Management', in 2020/21 for BSc Business Management students (300-350 students), the cohort with the highest proportion of widening participation students. This module takes a critical and integrated approach to contemporary management problems, replacing the traditional lecture-seminar format with a more extended workshop-based delivery for smaller groups of 50 students. The module is designed to build on students' existing skills, particularly supporting those from widening participation backgrounds, while embedding employability-based skill development.

Assessment is continuous and project-based, with students working in teams of five on real-world projects related to sustainability and governance. The projects are designed to utilise the strengths and diverse perspectives of all students, creating an environment that

values equity and diversity. This approach ensures that every student can contribute meaningfully, fostering a more inclusive and supportive learning environment.

Theoretical principles

The learning and teaching approach is informed by the principles of PjBL, a methodology that combines real-world tasks and authentic assessments with academic objectives to enhance both individual and collective learning. In one of the earliest reviews of PjBL in business and management, DeFillippi (2001) describes PjBL as utilising time-limited projects to achieve performance objectives while facilitating learning. Pitchford, Owen and Stevens (2021) and Connolly, Dickinson and Hellewell (2023) further emphasise the importance of creating engaging learning environments through a project structure and authentic assessments that support learners in developing their academic and professional skills. This approach encourages critical reflection, deep learning and active participation. Similarly, Danford (2006) and Guo et al. (2020) highlight how PjBL mirrors real business situations, varying in student-centeredness and practical significance, and presents a typology of implementations from lecturer-driven to client-driven projects. In our module, students work on projects that are both client-driven and lecturer-driven, allowing for the application of theory to practice and fostering continuous reflection on their experiences.

The curriculum design and implementation are informed by Thomas's (2000) original five criteria for PjBL: projects are central to the module curriculum, focus on driving questions or problems, involve constructive investigation, allow student autonomy, and are realistic. We also draw on Larmer, Mergendoller and Boss's (2015) description of the 'Gold Standard' for PjBL design, emphasising defined student learning goals, real-world applicability, critical thinking, teamwork, and career readiness. Accordingly, the module's key design elements include:

- *Challenging question/problem*: addressing meaningful and future-relevant issues in sustainability and governance.
- *Sustained inquiry*: engaging in investigative processes using diverse sources (e.g., documents, academic and practitioner texts, qualitative and quantitative data analysis).

- *Authenticity*: engaging in real-world tasks and contexts that impact both others, namely live clients, and the students personally.
- *Student voice and choice*: allowing student perspectives and solution pathways.
- *Reflection*: providing formal and informal opportunities for reflection.
- *Critique and revision*: offering feedback from peers, lecturers and employers, along with formative assessments and opportunities for improvement.
- *Artifact creation*: producing tangible outcomes – a presentation about the solution to a problem or the answer to a driving question.

The essence of PjBL lies in the creation of tangible artifacts which serve as representations of students' emergent knowledge and skills, namely problem-solving, critical-thinking, research, decision-making and communication. Artifact creation also provides valuable assessment tools and is crucial for knowledge construction, enabling students to reflect, receive feedback and revise their work (Harmer and Stokes, 2014). Artifacts represent the culmination of sustained inquiry and iterative refinement, motivating students through public presentations.

For PjBL to be effective, projects must involve cooperative groups, encouraging varied perspectives, idea exchange and feedback. In our module, students receive continuous support in developing and practising teamwork skills, with scaffolding provided to ensure successful project completion and meaningful learning experiences (Hmelo-Silver, Duncan and Chinn, 2007). Raelin (2001) and Ryan (2012) emphasise the role of reflection and communities of practice in learning, advocating for public reflection in trusted groups. This process enhances learning through shared experiences and collective sense-making. Thus, our PjBL approach combines theoretical and practical elements to engage students in meaningful, real-world learning experiences. Through artifact creation, sustained inquiry and collaborative work, students start to develop critical skills and knowledge, preparing them for future challenges in their academic and professional lives.

Practical implementation

The module aims to integrate real-world experience into the curriculum through three team projects on the themes of sustainability and good governance with each project lasting three to four weeks and culminating in student presentations to peers, academic staff and

live clients. Students do not self-select their teams; instead, the module leader assigns them to ensure diversity based on factors such as gender, ethnicity and nationality. These diverse teams remain consistent throughout the module, enabling sustained collaboration that not only enhances peer learning and student engagement but also fosters a sense of belonging and strengthens social connections early in their university studies.

In the sustainability theme, students collaborate with live clients, including two external employers (OLIO and CDP) and the university Sustainability Team. Each student team is assigned to one of the two external employers, while all teams engage with the university Sustainability Team. Students present their analysis, findings and recommendations directly to the clients, who actively participate in all presentation assessments:

- In the OLIO (a mobile app aimed at reducing food and household waste) project, students take on the role of OLIO's business development team to turn the app into a self-sustaining business by creating multiple revenue streams with 'environmental sustainability' at their core. For this task students must find, analyse and visualise data on monetisation trends, strategies and tactics of start-ups and mobile apps.
- For the CDP (a global environmental disclosure NGO) project, students assume the role of a sustainability team to develop a business case for an 'environmental sustainability' initiative for a real company. For this task they are required to analyse company sustainability reports and environmental impact data.
- For the university Sustainability Team, students serve as teams of consultants to advise the university on areas for improvement in either recycling and waste management or sustainable catering on campus. For this task students analyse quantitative and qualitative data collected by the Sustainability Team.

Student feedback indicates that they greatly value having the opportunity to receive questions and constructive feedback from employers on the extent and depth of their analysis and recommendations, as well as their communication and presentation style.

In the good governance theme, teams take part in a computer-based simulation and are tasked with setting up, running and managing a coffee shop in a busy shopping mall. They are responsible for the overall business performance, including setting and executing the business strategy, managing key functions like sales, marketing, finance and staffing, and

striving to provide great service while ensuring profitability and ethical governance and management practices. To complete this task successfully, students must integrate their learning from other first-year modules such as Fundamentals of Management, Accounting, Marketing, and Human Resource Management. Within the simulation, teams must choose the coffee shop location, analyse market data, and adjust their strategies based on feedback. The ultimate goal is to achieve a strong market share, customer satisfaction, efficient stock management and healthy financial performance, while also considering the interests of various stakeholders, including customers, staff, suppliers and the community. The teams are assessed based on a balanced scorecard, which measures customer satisfaction, company profit margin and staff satisfaction, with the highest score determining the winner. In the presentation that follows the simulation, students reflect on their strategy, business performance, sustainability approach and key lessons learned from governing and managing the business.

As part of continuous authentic assessments students must demonstrate a mastery of relevant employability skills, namely critical thinking (evidence of research and ability to identify, analyse and prioritise relevant information and justify their decisions and recommendations), quantitative data analysis (ability to interpret and visualise numerical datasets), qualitative data analysis (ability to analyse textual data), and presentation and communication skills (ability to present information in a meaningful and structured way and engage in constructive dialogue). At the end of the module, students complete an individual self-reflection assignment, analysing their experience of working in a team, identifying their strengths and highlighting areas for development.

The impact

In the 23/24 academic year, institutional metrics reported a combined 90% student engagement score based on class attendance and interaction with the module VLE, marking it as the highest among all first-year modules, and consistently earning high scores in module evaluations. In the same year, 83.4% of students responded positively to the statement, 'The module challenges me to achieve my best work', with an average score of 3.20 out of 4. This is among the highest for all first-year modules, underscoring the effectiveness of the PjBL approach in creating a challenging and stimulating learning environment. The PjBL approach has also significantly improved student satisfaction with

assessment and feedback. In 2023/24, the module achieved a 93.8% positive response rate (average score of 3.44 out of 4) for timely feedback, and a 91.5% positive response rate (average score of 3.40 out of 4) for the usefulness of feedback in improving work. This feedback highlights the quality and effectiveness of the continuous assessment process, enabling students to use feedback constructively to enhance their academic performance.

Reflections submitted by students at the end of the module suggest that the PjBL approach is effective in fostering the development of key employability skills. Most students perceive communication, presentation, leadership, teamwork and collaboration as critical skills they have developed, with critical thinking skills and confidence also frequently mentioned. While these reflections represent students' perceptions, they highlight the module's success in creating opportunities for skill development in collaborative team projects. This approach aligns with the demands of effective communication, leadership and organisational abilities that are essential in professional environments.

However, the very skills students perceive as having developed often emerge as the areas where they face the greatest challenges. Time management, teamwork and communication were frequently mentioned as difficulties. Managing time effectively while balancing responsibilities such as planning, decision-making and execution within both the live-client and simulation projects was a recurring challenge. In addition, teamwork posed challenges in coordinating group efforts, delegating tasks and ensuring equitable participation. Despite these difficulties, students perceived these challenges as valuable learning opportunities. They recognised that navigating real-world business dynamics not only honed the skills they found challenging but also equipped them with strategies to overcome similar obstacles in future professional contexts.

Implications for theory

Traditionally, live-client and simulation projects have predominantly been utilised in final-year and postgraduate programmes (Bell, 2010). However, a recent review of PjBL research suggests that these approaches are increasingly being adopted across various stages of higher education (see, for example, Guo et al., 2020). By engaging first-year

students in real-world projects, we aim to immerse them in authentic learning experiences from the outset of their academic journey. This approach not only helps accelerate the development of critical thinking, problem-solving and teamwork skills but also enhances student motivation and engagement by demonstrating the practical relevance of their studies early on. Moreover, exposing first-year students to PjBL methodologies can foster a deeper understanding of the interdisciplinary nature of real-world challenges, encouraging them to make connections between different subject areas.

Our PjBL approach has not only validated the theoretical principles of PjBL but also highlighted areas for further refinement and adaptation to better meet the needs of a diverse student body, including widening participation students. These students often face unique challenges in navigating higher education (OfS, 2020), making it essential to tailor PjBL methods to support their learning, engagement and skill development. Based on reflections on our experience, the original PjBL theory can be extended and finessed in several ways, as follows, to more effectively address the needs of students from widening participation backgrounds.

Enhanced engagement and realism

The integration of real-world problems, particularly collaboration with live clients, can significantly enhance student engagement. By working on actual issues faced by employers, students perceive their tasks as more relevant and impactful, which aligns with Danford's (2006) and Pitchford, Owen and Stevens' (2021) emphasis on mirroring real-business situations. This practical significance is particularly beneficial for widening participation students, who often bring diverse perspectives and experiences but may lack prior exposure to professional environments. Engaging with live-client projects not only motivates these students to invest more effort and creativity into their work but also helps them build confidence and develop a clearer understanding of workplace expectations.

Increased autonomy and responsibility

Allowing students to choose their solution pathways and perspectives can foster a sense of ownership and responsibility. This autonomy has been evident in both live-client and simulation-based projects in which students navigate the complexities of real-world

constraints and stakeholder expectations. Such experiences have extended Thomas's (2000) and Larmer, Mergendoller and Boss's (2015) criteria by highlighting the importance of student-led decision-making in authentic and PjBL contexts. From our observations, these opportunities to take the initiative and make independent decisions can be particularly empowering for widening participation students, helping them build self-efficacy and gain practical experience that can help them transition more seamlessly into internships, placements or graduate roles.

Iterative reflection and feedback

Incorporating formal and informal reflection opportunities throughout the module, as well as iterative feedback from peers, lecturers and employers, can deepen students' learning experiences. Raelin's (2001) original concept of public reflection within trusted groups has been integral in enhancing collective sense-making and knowledge construction. This iterative process has moderated the original theory by emphasising the continuous nature of reflection and its role in iterative learning. Reflective practices, involving scaffolding and clear expectations (Ryan, 2012), can be particularly impactful for widening participation students, as they provide a structured space to articulate their experiences, identify areas for growth, and build confidence in their abilities. In addition, receiving feedback from diverse stakeholders can help these students better navigate unfamiliar academic and workplace norms, and develop a stronger sense of belonging in academic and professional communities.

Skill development and career readiness

The focus on artifact creation as a representation of emergent knowledge has been crucial in developing students' problem-solving, decision-making, research, critical thinking and communication skills. These artifacts not only serve as assessment tools but also as tangible demonstrations of students' capabilities to potential employers. This alignment with Larmer, Mergendoller and Boss's (2015) 'Gold Standard' has reinforced the importance of producing realistic, high-quality work that prepares students for professional challenges. For widening participation students, artifact creation provides an opportunity to showcase their abilities in a concrete, professional format that may compensate for limited prior experience and professional networks.

Conclusion: recommendations for practice

Based on our experience over the past four years, we recommend incorporating the specific strategies to enhance the authenticity, engagement and educational value of PjBL activities. While many practical recommendations for implementing PjBL tasks and assessments have been put forward by other authors referenced in this article, here we focus specifically on how educators can help address the unique barriers faced by widening participation students when designing and implementing PjBL activities.

Authentic task design and mentoring. Tasks become significantly more authentic when designed in collaboration with employers (Gulikers, Bastiaens and Kirschner, 2006). In addition to establishing partnerships with organisations aligned with the module's themes and engaging them early in co-creating project briefs, consider incorporating mentoring opportunities within these collaborations, through which students can receive guidance from industry professionals, bridging gaps in professional networks and career preparedness.

Accessible and flexible learning opportunities. As noted above, widening participation students often balance multiple responsibilities (OfS, 2020). To address this, provide asynchronous resources, such as online project briefs and recorded workshops, to allow students to engage effectively. Flexibility can make projects more inclusive. Consider starting with smaller, low-stakes components to allow widening participation students to adapt to the expectations of authentic tasks. Use this iterative process to gather student feedback and refine assessments as needed, ensuring they are inclusive and supportive of diverse student needs.

Targeted scaffolding, continuous support and reflection. Embed structured scaffolding into PjBL activities (Ryan, 2012), with a focus on breaking down complex tasks into manageable steps. For widening participation students, this can reduce the cognitive load and build confidence in tackling unfamiliar challenges. Incorporate ongoing support into the curriculum through regular in-class and online check-ins, complemented by structured reflection opportunities. For widening participation students, reflective exercises can help contextualise their progress and build self-awareness.

By adopting these practical recommendations, educators can enhance the implementation of PjBL to create more inclusive and supportive learning environments.

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