ASCILITE 2021
Back to the future

Designing hybrid and online capstone experiences for accounting students

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In this paper, we share insights from our experience of harnessing technologies to innovatively design a capstone experience for large cohorts of accounting students in hybrid and online environments, informed by insights from key stakeholder consultations and relevant research. To support scaffolded development of professional skills and identity in a short span of eleven weeks, we designed a coherent suite of experiential learning and assessment activities based on contemporary events, an Enterprise Resource Planning business simulation, employability skills training and authentic case studies. Consistently high student evaluations of this unit suggest that our students find this experience valuable. Student responses to the Graduate Attribute Scale in the Graduate Outcomes Survey have shown improvement following the introduction of the capstone unit.

Keywords: Online capstone, Hybrid capstone Employability skills, Professional Skills

Introduction

Capstone units are designed to facilitate higher order learning by holistically drawing together the knowledge from individual units into a cohesive whole body of knowledge (Gresch & Rawls, 2017) and to prepare students for the future of work (Holdsworth, Watty, & Davies, 2009). Increasingly, the Australian government and student survey responses emphasise employability or professional skills as a key priority for universities (Senate Select Committee on the Future of Work and Workers, 2018). We developed our undergraduate capstone unit by including authentic and complex real-world problems to provide students with the opportunities to develop professional skills commensurate with employers' requirements (Milligan, 2020) and to prepare for their careers (Lombardi, 2007; Milligan et al., 2020). Our innovative approach allows the scaffolding of employability skills with authentic activities within an eleven-week unit. We balance a range of experiential learning activities and assessments consistently underpinned by the over-arching focus of professional skills. This concise paper can inform the innovative design and conduct of a capstone experience.

Methodology

Key Stakeholder Consultation: Keeping our Curricula Grounded

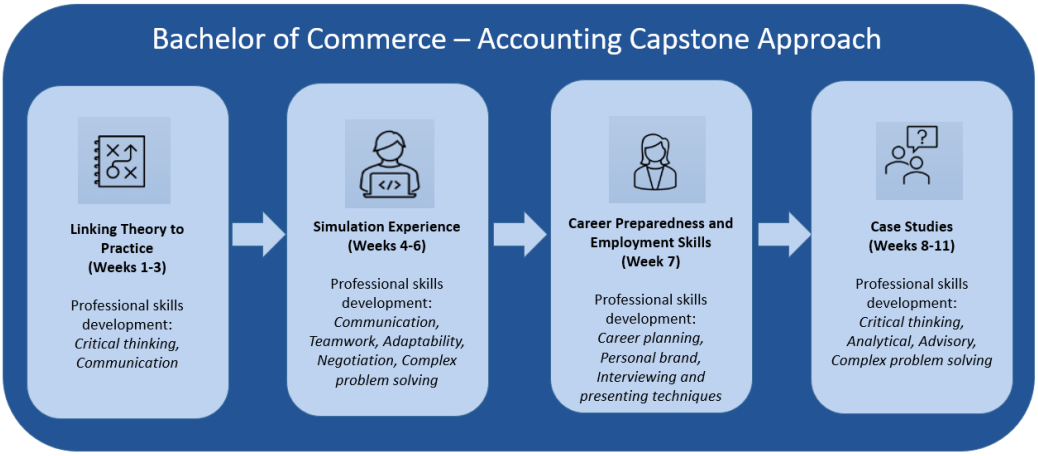
In early 2016, prior to the development of the capstone unit, we interviewed key stakeholders including graduate recruiters, employers, representatives from the professional accounting bodies and alumni to understand the needs and expectations for graduate professional skills in the accounting profession.[1] The feedback received unequivocally resonated with the literature (Pincus, Stout, Sorensen, Stocks, & Lawson, 2017; Jackling & De Lange, 2009) that accounting graduates were expected to demonstrate strong capabilities in communication, teamwork, critical thinking, and problem solving. Accounting graduates were widely and generally perceived by our interviewees to lack the ability to analyse a situation or issue, determine the key factors at play, identify a range of potential alternatives and then propose, justify, and articulate the most suitable action.

[1] As the interviews were for educational purpose, formal ethics approval was not sought. No demographic details were obtained, and the questions focused solely on the skills required by graduates which needed to be developed in the capstone.

Designing the Curriculum

Our capstone design addresses stakeholder concerns in these issues by achieving the following two objectives. Our first objective was to enable students to explore the role of accounting in a contemporary business environment where the accountant provides and analyses information in a multi-faceted context, and where different business operations and decisions intersect. Our second objective was to enable students to gain and refine skills in seeking and obtaining employment. Our curricula and assessment comprise four components as shown in Figure 1 with the overarching theme of providing authentic learning and enhancing students' professional and personal brand to enhance employability over eleven weeks. The specific content covered in each component is regularly refreshed by incorporating inputs from industry experts, including trending industry topics, professional issues that matter to graduates, graduate employability seminars conducted by the professional accounting bodies, and insights from our Accounting Advisory Board.

Figure 1. The four components and structure of our capstone unit



Linking Theory to Practice (Weeks 1-3)

The first component of the unit bridges the gap between theory and practice where students apply theories and prior knowledge of accounting/business to make informed, responsible and ethical business decisions. To achieve this, we developed several innovative learning activities, including a substantial forensic accounting activity that manifests problem-based learning where students assume the role of forensic accountants and work in teams to meaningfully construct their own knowledge per the 'FIRDE' framework proposed by Stanley and Marsden (2012). Specifically, teams synthesise facts from the forensic case, share ideas and identify questionable accounting treatments, research applicable accounting standards and principles, make a collaborative evaluation and decision, and execute by communicating or actioning the appropriate accounting treatments for the detected accounting irregularity, controversy, or fraud. Next, students engage with contemporary accounting and business issues presented in industry reports and the media, where they apply theories to evaluate practices and balance financial, non-financial and ethical considerations. These activities prepare students for the first assessment task in the form of a business report where they critically address a contemporary accounting/business issue to specified stakeholders undertaking several theoretical lens/perspectives and independent research. This simultaneously develops students' professional skills relating to communication and critical thinking. This assessment task is weighted at 20% of total marks.

Simulation Experience (Weeks 4-6)

In the second component of the unit a cloud-based Enterprise Resource Planning simulation, MonsoonSIM, is used. Students working in a simulated environment develop important professional skills, such as communication, problem solving and teamwork, while receiving continuous feedback and opportunities to practise (Lateef, 2010). MonsoonSIM requires students to work in teams to apply their accounting and commerce knowledge to run a business. The activities we designed within the simulation engage students in critical thinking and decision-making across 14 interdependent business divisions (e.g., finance, marketing, warehouse, procurement, etc). To scaffold learning, we configure the number of business decisions, the

complexity of the decisions, and the business environment, resulting in students being continually challenged under different scenarios, constraints, and modules in each learning week. Students progressively develop their skills in managing a range of accounting related decisions based on financial, operational and market information. This experiential simulation allows students to learn 'by doing' and fosters strategising in situations fraught with "volatility, uncertainty, complexity and ambiguity" (Leong & Ma, 2019, p. 15). The simulation experience fosters experiential learning (Kolb,1984); both success and failure in the simulated environment (concrete experiences) trigger understanding of how accounting information and integrated thinking inform sound business decision making (reflective observation), which formulate students' business and advisory approach (abstract concepts) that will be applied in their future roles (active experimentation).

One great advantage of this simulation is that the student businesses sell the same products and therefore compete against each other in the class for customers and employees. This provides an interesting intersection between collaboration and competition. Students learn to collaborate and negotiate in a team for internal allocations of resources and cross-functional spending whilst setting a congruent goal for team success. Periodically in classes, the simulation is paused, and the lecturer provides comparisons (in numbers and in graph form) of the various team businesses which allows students to reflect and proactively review team decisions and manage business challenges. Students also discover that their business decisions do not always achieve the results they expected, requiring them to consider cause and effect and contrast their actions with their competitors (Milohnić & Licul, 2018). We encourage teams to run the 'best' business by setting different key performance targets each week, including a range of financial and non-financial performance measures, which motivates students to make comprehensive, balanced, and adaptive decisions.

This simultaneously develops students' professional skills in communication, teamwork, adaptability, and complex problem solving. As these stimulating activities simulate real life, they are conducive in shaping students' expectations about the organisational dynamics that they are likely to encounter in their professional lives (Schwering, 2015). We designed summative assessment tasks to ensure students could demonstrate how their strategy, decisions and team interactions based on accounting information impacted business performance and evidenced the professional skills required in the workplace. Our tasks assess students' professionalism in managing their business, oral presentation skills in evaluating their strategies and decisions, and a business report analysing the effects of their strategy and the prevailing economic conditions on their business' financial reports. As each team adopts different strategies and generates distinct business outcomes, the assessment maximises authenticity. This assessment task is weighted at 30% of total marks.

Career Preparedness and Employment Skills (Week 7)

The third component of the capstone directly focuses on employment application and interview skills. Thirunavukarasu et al. (2020) observe significant gaps in student career preparedness. By embedding employability skills in the curriculum in a scaffolded approach across all years of the degree and formally assessing career skills, we encourage students to engage in their career planning (Jackson & Tomlinson, 2020). We collaborated with learning designers from our university's Graduate Employment Division in designing interactive seminar activities that guide students on interviewing and presenting techniques. This includes researching organisations, deconstructing, and understanding the requirements in a position description, handling interview questions, and how to effectively articulate their personal brand and evidence of their professional skills and achievements using the STAR (Situation, Task, Action, Result) framework. These equip students with necessary skills for the assessment task in which they undertake an online interview captured by the Montage software, or design a self-recorded pitch tailored to their application for a graduate position in the accounting profession. Montage is a cloud-based asynchronous video interview product. The learning and assessment are directly related to the professional skills of self-management (e.g., career readiness) and communication. This assessment task is weighted at 20% of total marks.

Case Studies (Weeks 8-11)

Finally, the fourth component requires students to analyse three case studies, individually, in teams and then class wide. We developed the cases in-house to specifically connect with recent corporate issues relating to accounting, ethics, governance, society, and the environment. Case studies encourage higher order thinking and often require students to undertake further research to evaluate the issues from different perspectives (Bonoma, 1989). Deep engagement, discussion and diverse perspectives exchanged with their peers enhance students' ability to formulate rigorous and comprehensive evidence-based analysis and reflect on the impacts of their

suggested solutions on the organisation and its broader community (Cullen, Richardson & O'Brien, 2004). In these activities students hone their advisory and professional skills, particularly critical thinking and problem solving. This assessment task is weighted at 30% of total marks.

Our capstone unit was first offered in Trimester 1 2017 and continues to be offered every trimester. We deliver the seminars to on-campus students in a computer room equipped with facilities designed for collaboration and active learning. Seminars for online students are offered through BlackBoard Collaborate Ultra/Zoom using break out rooms to enable group discussions. Our online delivery experience for off-campus students enabled us to move smoothly to online learning for all students during the pandemic.

Results and Discussions

Challenges

Our student cohort consists of a mix of on-campus and online students, school leavers and mature aged learners. We were able to foster authentic experiences for both on campus and online students. However, the interactive nature of the unit required online students to attend classes at specific times. This was challenging for some online students who have other commitments and can be located in different time zones to our university.

Mature aged students often had considerable work experience. While some reported that the employability task was of less value to them, others found new insights and raised self-awareness to constantly improve their employability and reposition their personal/professional brand to become more competitive and respond to the constantly changing professional environment.[2]

Impact

Over 2,500 students have completed this capstone. The capstone replicated authentic real-world experiences where online students worked together collaborating and experiencing the dynamics of working in distributed teams to understand the importance of teamwork and collaboration. Using an off-the-shelf industry-relevant cloud-based simulation software, enabled us to focus our attention on the learning activities and avoid other externalities of setup, support and delivery of the simulation tool.

Lecturers in the unit observed students quickly learn to approach problems from different angles, communicate effectively in their teams, and engage in meaningful class discussions without much teacher intervention. The end of trimester student evaluations conducted by the university indicate continued satisfaction with the unit with outcomes significantly above our Faculty averages. Student evaluations on the statement 'Overall, I am satisfied with this unit' consistently receive agreement of over 90%.

By engaging students in solving authentic complex problems through a coherent suite of technology enhanced learning and assessment activities, this unit significantly contributed to developing professional identity and skills among our large cohorts. By paying careful attention to avoiding extraneous cognitive load, the unit promotes deep approaches to learning (Prosser & Trigwell, 1999). Despite the complexity and multiplicity of learning and assessment activities in this unit, on an average more than 90% students have consistently agreed with the following statement across all the offerings thus far: The workload in this unit is appropriate to the achievement of the learning outcomes. Student feedback in the standard University evaluations supported these observations.

An example of alumni feedback we have received is[3]:

> …This unit provided me with the essential tools to become the best accounting professional to date and has allowed myself to flourish in an array of roles since it's completion. The unit taught me the core components of teamwork, communication and critical thinking and their application into real world accounting situations a professional may undertake. Overall, the unit, brilliantly incorporates all the core principals an accountant will use in their professional career and it's teaching is world class! I'm grateful to have been a graduate of such a uplifting program …

[2] A survey and focus group were conducted related specifically to the employability aspect of the unit to obtain student feedback on this task. University ethics approval was obtained for these activities which are reported in full in another working paper.
[3] Used with permission.

Table 1. Graduate Attribute Scale in the Graduate Outcomes Survey (2017 versus 2020)4

Year	2017	2020
Number of responses **from accounting graduates**	81	50
Graduate Attribute Scale		
Development of foundation skills	84%	85.4%
Ability to work collaboratively	71%	79.6%
Ability to solve problems	82%	85.4%
Ability to integrate knowledge	84%	83.3%

Table 1 shows a significant improvement in our graduates' perceptions of their capabilities to work in teams and solve problems, skills highly valued by potential employers. We believe our capstone unit, which has an underlying focus on employability, professional and technical skills, has contributed to accounting graduates' job-readiness.

Conclusion

Accounting education is underpinned by strong regulatory requirements and a need to prepare graduates who can communicate effectively and respond proactively to the needs of stakeholders, apply theoretical knowledge to authentic situations, and address complex, challenging, diverse and uncertain problems. Informed by insights from key stakeholder consultations and relevant research, we redesigned our capstone unit to leverage the power of digital technologies in providing authentic learning and assessment experiences, requiring students to integrate and apply their learning from individual units (Holdsworth, Watty, & Davies, 2009). Through this paper, we have shared key transferable insights from our experience as encapsulated in Figure 1. We invite more conversations within the ASCILITE community about sharing innovative approaches to technology enhanced capstone design for enhancing professional identity and skills development of large cohorts of students. We also call for adapting and refining our framework within the same or different disciplines based on their specific contexts.
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[4] Data used with university permission.

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