

Improving employability skill attainment through a *Theatre of the Board* role play activity

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In this study, we investigate the benefits and barriers to postgraduate students' employability skill attainment through an in-person, boardroom role play activity titled *Theatre of the Board*. We use a case study approach that incorporates mixed methods to analyse 157 pre- and post-survey student responses and twelve reflective logbooks. Over a two year period we measured students' employability skill growth through a *Theatre of the Board* role play. Students play-acted boardroom positions, requiring highly spontaneous and creative solutions to collective problem solving. The results show that students improved their cultural awareness, reflective learning and problem-solving. On the other hand, students' self-confidence with time management, interpersonal and oral communication skills decreased over time. Based on the findings, we present key recommendations to advance role play curriculum design while considering employability skill attainment as a key component to experiential learning outcomes.

Introduction

Universities continue to participate in the teaching and assessing of students' work-ready growth, thus enhancing graduate job destination outcomes by ensuring that learners gain relevant skills and work experience, which is often termed employability (Jackson & Meek, 2021; O'Leary, 2017; Oliver, 2015; Twyford & Dean, 2023). A work-ready individual possesses the foundational technical and non-technical skills needed to be minimally qualified for a specific occupation (Bosco & Ferns, 2014; World Economic Forum, 2020; Jackson, 2016; Petruzzello et al., 2023). Work-ready skills include communication and time management, which industry expects graduates to possess (Schech et al., 2017; Tomlinson, 2007; Tymon, 2013; Twyford & Dean, 2023). To help meet this call, teachers are providing a range of learning approaches, such as experiential learning in the form of interactive role play in diverse subjects (Da Vinha, 2021).

Role play learning is positively associated to work-ready skill attainment because it can mirror and simulate the world of work, fostering students' non-technical skills through ill-defined and flexible learning activities, increasing collaboration amongst team members (Chad, 2020; Cohen, et al., 2006; Duchatelet, et al., 2019; Duchatelet, et al., 2021; Farashahi & Tajeddin, 2018; Joyner & Young, 2006; Niska, 2023; Schech, et al., 2017). Role play activities that mirror industry practice reflect real-world complexities in a creative and authentic way (Aldrich, 2006; Beaubien & Barker, 2011; Prud'homme-Généreux, 2023), enabling teachers and students to embrace failure without fear of life consequences, such as job loss or bankruptcy (Alkaabi, 2023; Cohen, et al., 2006; Duchatelet, et al., 2021; Farashahi & Tajeddin, 2018; Joyner & Young, 2006). When role play aligns to professional practice (e.g., business budget planning or strategic updates) and occurs in the day-to-day

operations of an organisation (Duchatelet, et al., 2021) it can increase students' metacognitive learning outcomes, resulting in deep learning about a topic (Chernikova, et al., 2020).

However, despite role play as a noted success in higher education, research accurately measuring students' work-ready skills through role play is modest (Alkaabi, 2023; Bosco & Ferns, 2014; DeFillippi, 2001; Duchatelet, et al., 2021; Jackson, 2016; Jackson & Meek, 2021; O'Leary, 2021; Marsick & Watkins, 1997; Oliver, 2015; Prud'homme-Généreux, 2023; Reynolds & Vince, 2004; Schech, et al., 2017; Tomlinson, 2007; Tymon, 2013; Twyford & Dean, 2023). Firstly, students' perceived employability confidence, previous learning experiences, changing work environments, geographical and political disruption and diverse labour markets shift and change (World Economic Forum, 2020; Twyford & Dean, 2023). Secondly, new skills are added to industry's most wanted list, such as improvisation, creative thinking, global citizenship, ethics and entrepreneurship skills (Hains-Wesson et al., 2017; Jackson & Meek, 2021; Jackson et al., 2023). Therefore, difficulties arise around ascertaining accurate measurement criteria, creating challenges due to skill variety, negative and positive influence foci, resulting in short and long term impact discrepancies.

Further, upon a closer review of the literature, besides health and medicine (Beaubien & Baker, 2004; Joyner & Young, 2006) skill attainment and measurement in role play curriculum is in its infancy (Chad, 2020; Chernikova, et al., 2020; Cohen, et al., 2006; Duchatelet, et al., 2021; Farashahi & Tajeddin, 2018; Schech, et al., 2017; Tezcan, et al., 2020), especially in the domain of boardroom etiquette (Avramenko, 2012; Bezemer, et al., 2018; Duchatelet, et al., 2019; Groysberg & Bell, 2013; Dacre Pool, et al., 2014; Travis, 2011). To help bridge this gap, we measured students' employability skill attainment through an experiential learning role play titled *Theatre of the Board*. In this study we define our *Theatre of the Board* as "participants represent[ing] a specific actor in a predefined situation, while following a set of rules in interacting with other participants" (Duchatelet, et al., 2021, p.1).

Theoretical framework

To better understand the importance, opportunities and limitations to accurately measure employability skills we turn to Jackson's (2016) seminal work, suggesting that a "skills-list approach, [...] is too narrow and does not fully capture the complexity of work readiness" (p. 925). We agree with this perspective and other researchers' views (Bosco & Ferns, 2014; Hains-Wesson & Ji, 2020; Jackson, 2016; Jackson & Meek, 2021; Kaider & Hains-Wesson, 2016; O'Leary, 2021; Oliver, 2015; Dacre Pool, et al., 2014; Schech, et al., 2017; Tomlinson, 2007; Tymon, 2013). With this in mind, we reconsider the term *employability* and view this as a set of industry-desired skills and as a philosophy, mindset, and aspiration, that evolves, shifts, and changes. Accordingly, while it is simple enough to say that these skills are imperative to becoming employable, which for many students is the end game for gaining a degree (Oliver, 2015), teachers arriving at which type of learning framework to use to develop students' employability skills creates additional challenges.

For instance, a curriculum that uses an identity-based understanding of employability would be taught differently from a skills-based approach (Murphy, 2017). On the other hand, when curriculum focuses on both identity and skills, employability begins to refer to a “state of mind, a set of personal qualities and attributes” (p. 117) rather than just a number of skills. No matter a teacher’s curriculum preference, developing and measuring employability skill attainment is fraught with difficulties. We, therefore, took this opportunity to quality assure our *Theatre of the Board* curriculum design, applying the findings to improve practice while exploring which skills were most developed, why and if not, why not. The key research question to help guide the study was:

Which self-assessed employability skills increased and decreased upon completion of the *Theatre of Board* role play activity and why?

Aim

The objective of our study was to explore students’ employability skill attainment through a purposely designed framework that stimulated students’ imaginations, creatively and via improvisation and play acting. Additionally, we desired to pinpoint new ways to improve our role play curriculum as a key element in experiential learning. To achieve this, we employed a corporate boardroom meeting as our predefined role play situation where students acted out structured scenarios via a set of criteria, working towards collective problem solving. Students were invited to undertake business tasks for a pretend boardroom of a fictional company that required budget casting and project approvals, mirroring organisational boardroom activities. We chose role play because it mirrors professional practice without fear of failure while improving self-confidence and time management. Finally, role play can involve many students and simultaneously, requiring less resourcing compared to other types of experiential learning programs (Chad 2020; Dean, et al., 2020; Tezcan, et al., 2020).

Context

The teaching team consisted of a senior professional career’s leader and two mid-career teachers. Over a two year period, we met in-person and via online means at least once per week for up to two months prior to the design and delivery of the *Theatre of Board* program including once per month throughout delivery. The meetings were structured to ensure consistency across the role play set-up, design, assignment tasks, preparation workshops, delivery style and employability skill development mechanisms being taught and assessed. The *Theatre of the Board* consisted of three set assignment tasks: (1) 500 words for a goal setting task which was allocated 25%; (2) a 750 word professional career portfolio entry which was allocated 30% and (3) a 2000 words reflective logbook worth 45%.

Curriculum framework

We designed a role play activity for a whole semester extensive experience (i.e., 12 weeks), which was student-centred, meaningful and authentic, mirroring industry practice. Our

model was aligned to the scholarship of teaching and learning (Figure 1), influenced by Avramenko's (2012) tested "theory to practice" approach, which is an effective role play teaching and learning framework. The model includes reflective learning to support students' transition to employment, "by providing lifelike experiences, ensuring the formation of certain business skills and, by that, boosting the students' self-confidence" (p. 359). The role play model also advocates for students to apply knowledge, linking theory to practice and the use of secondary research, making sense of the problems being solved. It is a tested model that is framed within a constructivist learning approach where the learning outcomes, assessments and activities are linked and constructed together.

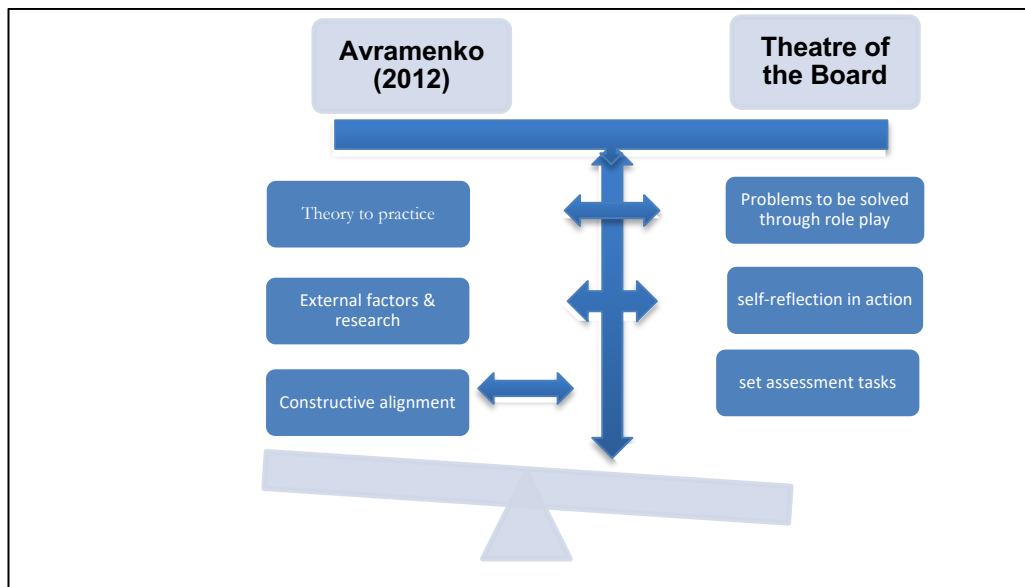


Figure 1: *Theatre of the Board* framework: Ideation

Further, when students role play in a predefined situation, while following a "set of rules in interacting with other participants" (Duchatelet, et al., 2021, p.1) there will be a variety of skills that students grow. Therefore, it was imperative that our *Theatre of the Board* model mirrored organisational boardrooms to include agendas being set, terms of reference, and appropriate communication processes while ensuring students were appropriately supported to develop skills, such as agility, grit, and a can-do attitude (Hains-Wesson & Ji, 2020; Jackson & Meek, 2021; Cooper, et al., 2010). Thereby, a key learning ingredient was to include reflection in and on action through constructive alignment. This inclusion ensured that students compared their skills against those they were sharing the role play with, received and utilised teacher feedback, and activated emotional and intellectual responses to solving problems at set times throughout the activity (Tymon, 2013; Masika & Jones, 2016; Oliver, 2015; Tomlinson, 2007).

Teaching framework

We prepared students for the role play by providing a one off, two-hour introductory session and weekly debriefs to review the learning expectations, while ensuring that students obtained continual teacher-support throughout the role play encounters. Students were provided with a set of rules of engagement and how each role play would be structured, such as topics, disagreeing respectfully when in opposition to a peer's point of view, appropriate dress code, behaving professionally and allowing ample time for discussion and communication processes. The introductory session acquainted students to the role play process with an example provided by the teacher (in real time and in-person) with a student volunteer. This is where the teacher acted out with a student on how best to undertake collective decision making about a particular agenda item, such as disapproving a high-risk project request from a boardroom member due to its financial cost to the company. The preparation process and the weekly role play activities were supported with regular online readings, discussion forums, and learning activities as well as students undertaking regular, reflective debrief sessions that aligned to the assignments.

Our teaching framework included behaviour guidelines and a code of conduct (Avramenko, 2012; Bezemer, et al., 2018; Groysberg & Bell, 2013; Travis, 2011) to support students operating within an authentic boardroom space. For example, we built in distractions that intentionally increased students' stress levels to mirror industry practice. Thus, students needed to complete agenda items, terms of reference and communication processes in the form of minute taking and within set times. Students also took turns for assuming the Chair, Secretary, Treasurer, and general board member roles each week. Even though the role play focused on an imaginary, not-for-profit organisation with fictional charters and a fake annual turnover of two million dollars (AUD) per year, students pretended that they were undertaking research and reviewing the fictional organisation's strategic goals and budget to inform their decisions in real time. Thereby, the weekly role play allowed each student to undertake distinct roles, observe others and to reflect in and on practice.

Towards the end of the program, we invited students to source and secure an observational opportunity on a not-for-profit board that operated in industry to compare the *Theatre of the Board* experience. Students reflected on the learning gained in their logbooks. An alternative assignment (i.e., observing a university board room meeting organised by the teacher) was offered to students who were unable to source and secure an industry approved boardroom observation, ensuring no student was disadvantaged. International students can struggle to find work experience without teacher support due to language barriers, cultural and educational differences (Ross, et al., 2020). However, only a few students (<3) required the additional support.

Methodology

We implemented a case study with a mixed methods approach to the investigation. Case studies and mixed methods have been proven to be effective evaluation research processes when exploring curriculum design and improvements (Eisenhardt, 1989; Flyvbjerg, 2004;

Vishwanath & Mummery, 2019). By combining a case study methodology with mixed methods, we were able to highlight differing participants' self-assessed employability skill opinions, perceptions and at various times. Case study methodology is often used to undertake an inquiry that analyses a contemporary phenomenon within a real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2017). Integrating mixed methods within a case study design, therefore, helped us to minimise generalisations because it allowed for statistical analysis to contribute to answering the research question alongside qualitative data supports (Bell & Warren, 2023). The research project received ethics clearance with all data being rendered anonymous (SHR Project 2016 & 2017/521).

Methods

To ensure that the mechanisms of the role play activity were evaluated in terms of employability skill enhancement over a two-year period, *Theatre of the Board* participants were recruited from a Masters of Professional Practice degree at an Australian university. Participants were invited to answer a pre- and post-questionnaire with the option to provide us with access to their reflective practice logbooks. Participation was voluntary with recruitment occurring through the course's learning management system via an online communication plan, word-of-mouth and alerting prospective participants at the preparation workshop before the first role play activity took place. Prospective participants were then invited to self-measure their employability skills: (1) prior to the first activity beginning; and (2) post-activity, using a widely adapted and tested employability development profile survey (Hains-Wesson & Ji, 2020, 2021; Dacre Pool et al, 2014; see Appendix A for detailed survey questions). In addition to the survey instrument, we also invited students to approve the sharing of their individual reflective logbooks, which was optional. Due to the modest number of logbook approvals, we only utilised this data set as an additional and insightful mechanism to finalise the overall results of the study. The reflective logbooks consisted of approximately 2000 words each and focused on students' overall role play learning journey, highlighting the skills that they believed that they had increased and/or decreased over time and why.

We organised all invitations and collection of data through a research assistant who was not part of the teaching team, to adhere to the university's ethics requirements. We also ensured that the survey instrument was administered before or after a role play boardroom activity occurred, minimising any potential for disrupting students' learning experiences. To adhere to the university's approved ethics clearance, we analysed all data forms post-program delivery and after students' results had been finalised. Once we had analysed the responses to the pre- and post-survey instrument, we then delved into the reflective logbook qualitative data, which complemented the quantitative survey results, which were limited (N=12). We collectively agreed to the use of *Excel* and R for the quantitative data analysis and results, which was led by the second named author. Using *NVivo* in the qualitative thematic analysis for the emergence of themes, we investigated the data collectively.

Participants

The university, where this study took place, instigated a marketing and recruitment campaign, strategically inviting international postgraduate students to undertake a practice-based masters by course work in business and engineering communications. The majority of participants were under the age of 25 years, male and from an Indian background. The literature suggests that in Indian families it is the father who plays a “prominent role in deciding the subject choice, and gender mediated the entire decision-making process” (Gautam, 2015, p.31). A lack of gender diversity was also due to “low representation at matriculation” in engineering degrees (Lord, 2009, p.167). Despite most of participants being male and of Indian background, the cohort is reflective of bespoke masters by course work in business and engineering for international postgraduate students in Australia at the time of this study.

Prior to inviting students to undertake the research activities, we ensured that an explanatory statement was available to help define what was meant by employability skill development:

...that students and graduates can discern, acquire, adapt and continually enhance the skills, understandings and personal attributes that make them more likely to find and create meaningful paid and unpaid work that benefits themselves, the workforce, the community and the economy (Oliver, 2015, p.63).

There was a total of 202 students enrolled in the postgraduate course work during the two-year research period with sixty-eight participants opting-in to complete the pre-survey, and 89 completing the post-survey (Table 1). It is important to note that we chose not to undertake a comparison of individual students who completed both surveys due to confounding factors, and as speculated in the research (Yin, 2009). Our decision was also influenced by the number of variables that could impact the results of the pre- and post-survey, for example, different levels of motivation or engagement between the two time points.

Table 1: Participant demographics

Demographics		Pre-survey		Post-survey	
		No.	%	No.	%
No. participants		68	100%	89	100%
Age	Mean (SD)	24.29 (2.80)		24.39 (2.76)	
Gender	Male	55	81%	70	79%
	Female	13	19%	19	21%
Nationality	India	64	94%	83	93%
	Other	4	6%	6	7%
Field of study	Business	14	21%	9	10%
	Engineering	53	78%	79	89%
	Other*	1	1%	1	1%

* Other: Communication, literature, history, sociology, psychology, health, medical.

Twelve participants accepted the invitation to provide consent for the research team to undertake a line-by-line review of their reflective logbooks, which was a graded assessment task worth 45% of the total mark (Table 2).

Table 2: Response rates for each data collection tool

Time	Pre-survey	Post-survey	Logbook
Total enrolment	202	202	202
No. of participants	68	89	12
Response rate	33.7%	44.1%	5.9%

Quantitative analysis

To start with, we calculated the percentage of participants' self-assessed level of 'existing skills' via the online survey that students completed prior to and post-role play. We then applied an independent samples t-test to see if students' self-assessed existing skills had significantly changed prior to and post-role play. As shown in Table 1, we discovered that the demographic characteristics were similar for the pre- and post-survey participants, which ensured the comparability of the pre- and post-survey responses. Additionally, for each newly developed employability skill we used an independent samples t-test to evaluate whether the demographic characteristics, i.e., age, gender, and area of study, were significantly different for the participants who indicated that they developed, or not developed that skill. We chose not to include cultural background differences in our data analysis because most participants self-identified as coming from one country, India. We, therefore, note that this is a limitation to this study. We recommend that future studies explore diverse disciplines, cultural backgrounds, gender and different year levels of study.

Qualitative analysis

We met regularly in-person and online to discuss and design our framework to code the textual data collected from the surveys and reflective logbooks. This included re-coding multiple times as individuals in the research team viewed meanings, words, sentences and paragraphs differently. We, therefore, collectively and continually reminded ourselves about the purpose of the study, which was to answer the research question. Our coding framework included individually reviewing the data set in its entirety, searching and locating key words that we had agreed to. The agreed key words came from the research question, which was to explore work-ready skills growth over time, such as limitations, enablers and barriers when undertaking a role play activity. The key words were: "work-ready"; "skills"; "role play"; "employability"; and "employability skills". We used these key words to assist us to highlight key sentences and paragraphs pertinent to the study. We met regularly to share our notes, ideas, thoughts and the sections of the data that aligned most to the research question. We, therefore, purposely panned through each data source, using an eyeballing technique suggested by Ryan and Bernard (2003) to elicit codes, to create clusters of meaning, eventually leading us to an agreed set of themes. Our coding process included the use of different coloured pens to highlight sections of the textual data. We continued to meet, discuss, share notes, reflect and while answering the following

questions: (1) what is the textual topic about; and (2) how does this text diverge/link to the next?

Mixed data analysis

We used a two-prong mixed methods approach. We first evaluated the changes and development in self-assessed work-ready skills over time by analysing the quantitative data sets in the pre- and post-surveys. Second, we analysed students' reflective logbooks by undertaking qualitative coding to elicit themes, using *NVivo*. Finally, we mixed the quantitative and qualitative data sets to pinpoint which skills students developed, and if not, why not.

Results

The literature on the use of student self-assessed data, perceptions and points of views have received some negative debate. However, we also know that students' self-perceptions are key to understanding how to better improve curriculum design to meet diverse learning needs. There is a positive relationship between students' achievement and their self-perception (Avramenko, 2012; DeFillippi, 2001; Hains-Wesson & Ji, 2020, 2021). Therefore, we hypothesised that most skills would increase and decrease over time during a role play activity due to diverse learning differences and needs.

Increased skill attainment

Table 3 shows participants' existing skills that were self-assessed prior to and after the role play, as well as the skills that were developed over time and during the role play activity. The survey instrument (Appendix A) invited participants to select the employability skills they believed were most applicable to their pre-existing skills. This was achieved prior to and after the role play. We then calculated the percentage of participants who selected each pre-existing skill. We then compared participants' skill development changes post-role play, using an independent samples t-test. For example, problem solving appeared to be the most popular perceived pre-existing developed employability skill (ranked No. 1 at 62%) with 66% of students noting similar in the post-survey. Participants also identified other skills they believed were developed during the role play activity as well as in the reflective logbooks. For example, 69% of participants post-role play indicated they believed oral communication skills were developed (ranked No. 1), coinciding with four additional sources discovered in the reflective logbooks. Overall, the results suggest that students consistently assessed their existing skills in both the pre- and post-survey, while a significant change in perception was observed in cultural awareness. For instance, students perceived their pre-acquired skill attainment (i.e., prior to the role play activity) for cultural awareness at an increase of 15%, which is significant at the 10% level (Table 3).

When combining the quantitative results with the thematic analysis, including participants' reflective logbooks, the findings indicate that the boardroom activity enabled students to build self-confidence in those skills as well. Students reflected on their problem-solving skills, acknowledging that the role play activity allowed them to practise organising board

Table 3: Summary of pre- and post-survey results

Skill	Self-assessment of existing employability skills						Skills developed			
	Pre-survey (N=68)		Post-survey (N=89)		Changes in perception		Post-survey (N=89)		<i>NVivo</i> nodes (N=12)	
	%	Rank	%	Rank	Δ in %	Sig. 2-tail	%	Rank	No. of sources	
Communication skills (oral)	56%	3	51%	4	-5%	0.511	69%	1	4	
Communication skills (textual)	38%	7	42%	7	3%	0.675	42%	7	1	
Communication skills (visual)	32%	9	34%	8	1%	0.859	33%	9	0	
Comm. skills (interpersonal)	44%	5	33%	9	-12%	0.141	47%	6	6	
Problem solving	62%	1	66%	1	5%	0.560	61%	2	5	
Time management	57%	2	45%	5	-12%	0.125	55%	4	6	
Reflective practice	25%	10	31%	10	6%	0.378	48%	5	4	
Critical thinking	54%	4	56%	2	2%	0.827	58%	3	2	
Cultural awareness	38%	7	53%	3	15%	0.070*	39%	8	6	
Discipline knowledge	43%	6	44%	6	1%	0.884	27%	10	0	

* Significant at 10% level.

room meetings for team-based problem solving. Participants also expressed their ability to enhance their interpersonal skills to manage conflict and differences of opinions, maintain civility, and open mindedness (reflective logbook comments, 1e and 2e). We also noticed in the reflective logbooks that participants were suggesting that key skill attainment mostly occurred when teachers offered opportunities to students to self-reflect during the role play activity. For example, participants acknowledged that they learnt through practice, observation, and reflection to embrace the diversity in the role play boardroom exercises. They found that a board that consisted of diverse groups of people with varying skills, expertise, and mindsets often encouraged creativity and innovation, which are valuable skills in the workplace. Informants also discussed in their logbooks that they were able to observe, exercise and nurture organisational and boardroom cultures to improve trust, inquiry, disclosure, and teamwork thinking through the linking of theory to practice. As students mentioned the opportunity to “reflect after each session, evaluate personal strengths and weaknesses, and provide and receive feedback for improvements” (reflective logbook comments, 1a, 1b and 1c) was beneficial for employability skill development.

Practising skills

On the other hand, the pre- and post-learning survey comparison proposes that participants’ perception of their pre-acquired time management (by 12%) and communication skills (interpersonal by 12% and oral by 5%) reduced over time. In the untabulated results, when students were invited to indicate the skills for which they required further assistance with, they chose interpersonal (59%) and oral communication skills (71%) as well as time management skills (38%). These skills also turned out to be the most frequently selected skills that were developed during the role play activities, according to

the post-survey and the reflective logbooks. Considering time management skills for example, participants reflected on a variety of occasions of being stressed in managing deadlines (reflective logbook comments, 1b and 1c) and in achieving agenda objectives (reflective logbook comments, 2d and 2e). They also made recommendations about how to better manage their time in a professional context, such as eliminating distractions, creating schedules, and prioritising tasks (reflective logbook comment, 2b). These results are interesting because students and teachers interact together in role plays. Thereby, it shows students gained a heightened awareness of their lack of skills and became keenly aware of the importance of the teacher's role to improve these skills during the role play activity. Second, students realised that more can be learnt, especially when they compare role play to industry boardroom practice:

Some students had high confidence in sharing ideas, and they often dominated the discussions and interrupted other people's participation. However, the real board meeting that I observed displays communication at a completely different level. The meetings were well structured, and everyone respected each other's opinions. It was very much civilised and there were hardly any interruptions. This is the communication skill that I need to improve on (a student logbook quote, 2d).

Demographics and skills

We explored the quantitative data sets to determine if characteristics of age, gender and area of study influenced skill development during the role play activities. For each skill, participants were classified into two groups – one claimed they have developed the skill (labelled as “Yes”), with the other group stating they have not developed the skill (labelled as “No”). For example, the average age of those participants who developed oral communication skills was 24.51 and those students who believed they did not develop the skill was 24.14. For gender, we defined female as one, and on average, 23% of those participants who stated they had developed oral communication skills were females, with 18% suggesting they had not developed the skill. Similarly, we defined discipline, such as engineering as one. Despite the demographic related results being limited, the data suggests that 89% of those who developed oral communication skills were engineering students with 86% expressing that they did not develop this skill. We then used an independent samples t-test to examine if age, gender and/or discipline were significantly different for the two groups (Yes vs. No) and according to each skill (Table 4).

The findings imply that younger participants were significantly more likely to benefit from the role play activity when developing their time management and critical thinking skills as well as improving disciplinary knowledge. Male participants (compared to female students) were also more likely to develop time management skills. Therefore, age and gender diversity can be viewed as potential enabling factors when attempting to measure variations in skill development in role play activities. However, as mentioned previously this study is limited in providing concrete findings around significant factors that impact skill development based on age, gender and discipline area. Nevertheless, the literature does expand on this notion, proposing that male students develop skills and beliefs based on accomplishments, while females rely more on peer feedback (O'Leary, 2021).

Table 4: Student characteristics for each developed employability skill

Skill	Age			Gender			Discipline		
	Average		p value	Average		p value	Average		p value
	Yes	No	Sig.	Yes	No	Sig.	Yes	No	Sig.
Comm. skills (oral)	24.51	24.14	0.5472	0.23	0.18	0.5801	0.89	0.86	0.7233
Comm. skills (textual)	24.62	24.23	0.5577	0.16	0.25	0.3118	0.89	0.87	0.7077
Comm. skills (visual)	24.69	24.25	0.5529	0.28	0.18	0.3514	0.86	0.88	0.7847
Comm. skills (interpersonal)	24.50	24.30	0.7374	0.19	0.23	0.6196	0.83	0.91	0.2561
Problem solving	24.50	24.23	0.6482	0.22	0.20	0.8041	0.87	0.88	0.8305
Time management	23.86	25.05	0.0582*	0.14	0.30	0.0820*	0.96	0.76	0.0143**
Reflective practice	24.37	24.41	0.9447	0.12	0.30	0.0290**	0.91	0.85	0.3993
Critical thinking	23.96	25.00	0.0986*	0.17	0.27	0.2893	0.92	0.81	0.1407
Cultural awareness	24.34	24.43	0.8872	0.17	0.24	0.4298	0.94	0.83	0.0948*
Discipline knowledge	23.54	24.71	0.0248**	0.21	0.22	0.9436	0.92	0.86	0.4475

Discipline = Engineering equals to one, and others equal to zero.

* Significant at 10% level; ** Significant at 5% level. Gender: Female = 1; Male = 0.

Female students have also been known to generate slower paced communication processes compared to males (Thorson et al., 2011), tending to be less advocated by leaders than their male counterparts. We can attest to this observation and recommend that supportive inclusion and equity mechanisms are implemented into role play curriculum (Hill et al., 2016).

Limitations

This study has a number of limitations. It is context bound to the Australian higher education landscape with a gender and diverse age imbalance finding. We were only able to collect data from a minority of the students (5.9%) for the logbook reflections. Therefore, the logbook data set alone does not provide a good indication of overall cohort experience. We also relied on the pre-conceived and/or attained employability skills as perceived by students. There is also the potential of a selection bias in our sampling as students who volunteered to participate in our study may be more competent and/or self-confident in their employability skills to begin with. Whilst this might be the case, our results should thus serve as a starting point only, and to better enable role play curriculum re-design using an evidence-based approach. Additionally, the participants' demographic characteristics were mainly under twenty-five years of age, male and from an Indian background who were studying a masters in business or engineering. This study was unable to investigate diversity in learners' background demographics and other differences like degree year level and disciplinary knowledge. Nonetheless, the change in student responses regarding their self-efficacy and employability skills attainment, following an immersion in the boardroom role play was clear. Therefore, our study makes crucial steps towards showing that there are diverse learning gains as well as support mechanisms to be made to effectively design boardroom role play activities.

Discussion

We discovered that the opportunity for students to reflect on self-assessed, pre-conceived attainment of skills and to practice employability skills development through a corporate boardroom role play activity was new to many. The results also suggest that students will change their pre-conceived employability skills and areas of focus for future improvement when this is included in the learning framework. Another area of discovery was obtained through assurance of quality and when research-led teaching transforms practice for both students and teachers (Johnson & Golombek, 2011; Pinter, 2021). For instance, we found that the role play activity improved students' confidence in the pre-acquired cultural awareness, reflective practice, and problem-solving skills. On the other hand, participants' self-confidence with time management, interpersonal and oral communication skills reduced over time. We believe that the re-alignment of students' pre-conceived skills development and the decrease in certain skills occurred due to participants becoming overwhelmed with professional practice expectations. Additionally, students realised that their employability skills required further improvement, especially when they compared (i.e., through observation) the role play to an industry boardroom committee meeting. We, therefore, hypothesise that students self-assess their employability skills as being further developed than is necessarily the case. Teachers' abilities to ensure that students authentically self-reflect about their skill levels is the first step towards realistic employability awareness in role play pedagogy. Subsequently, this finding is an important future curriculum design input and aspiration.

Conclusion

This study expanded upon our understanding of the benefits, challenges and barriers in role play learning and teaching. This was achieved by extensively studying students' employability skills development over time through their involvement in the *Theatre of the Board* program. Second, it helped us to explain variations in students' employability awareness and attainment, based on demographics, different learning experiences at an individual and group level. Third, taken together, our quantitative and qualitative data sets indicate that participants effectively foster, balance, and deeply understand the need to critically review their employability skills through observing peers during role play as well as professionals at work. Notwithstanding, by students engaging in role play they experience first-hand the professional capabilities that they lack and need to improve upon to succeed in business. Finally, we used the results to undertake a quality assurance process, building upon our initial role play ideation to enhance our role play pedagogy for future iterations (Figure 3).

In summary, a future call to action is twofold. First, we will instigate the following changes to the *Theatre of the Board* program, which are: (1) ensure role play activities include boardroom equity and inclusive strategic intents; and (2) support, instigate and evaluate group and peer reflective learning to explore students' realistic employability skill attainment.

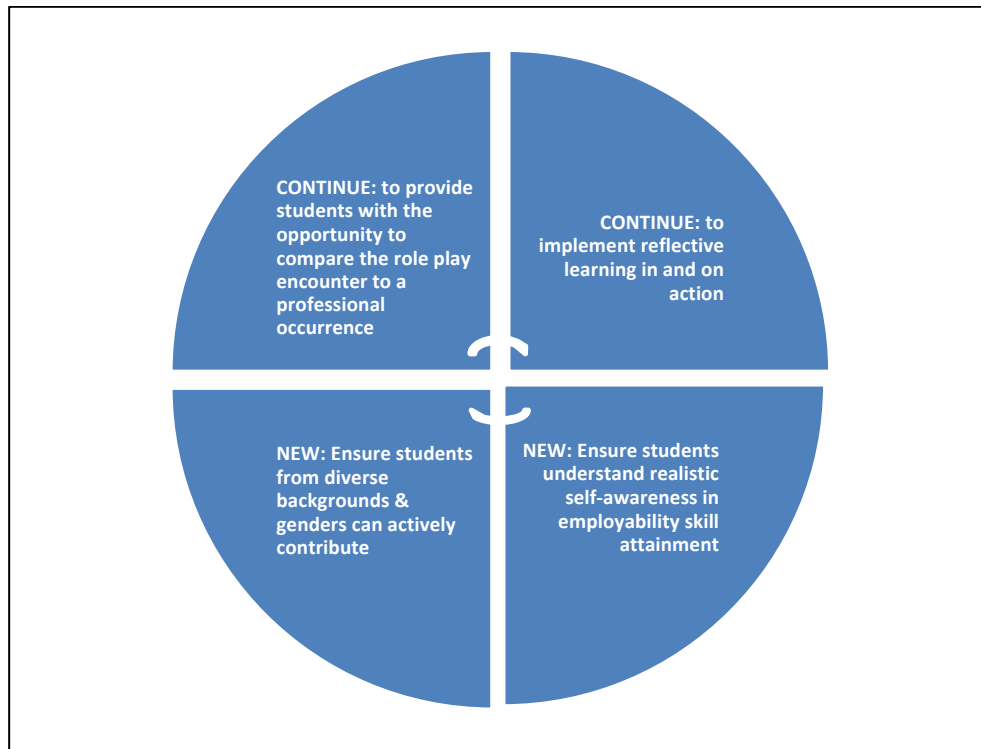


Figure 3: *Theatre of the Board* framework: Continued and new ideations.

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Statements and declarations

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Appendix A: Pre- and post-survey instrument

Adapted from Dacre et al. (2014); Hains-Wesson and Ji (2020); Hains-Wesson and Ji (2021).

Item	Question	Options
1-7	Demographics	
8	Select in order of most important: What do you hope to get 'personally' out of participating in the 'Theatre of the Board' learning activity?	Communication skills (oral) Interpersonal skills Written skills Time management skills Discipline knowledge Boardroom etiquette skills Taking minutes Being the chair Being a member of the Board Understanding not-for-profit organisations Understanding for-profit organisations Meeting new students Making friends Getting to know the convenor of the unit
9	Select in order of most important: What are some of the specific employability skills that you hope to achieve by being a part of the 'Theatre of the Board'?	Communication skills (oral) Communication skills (textual) Communication skills (visual) Communication skills (interpersonal)
10	Select in order of most important: Which skills do you believe you are able to bring to the 'Theatre of the Board'?	Problem solving Time management Reflective practice
11	Select in order of most important: Which employability skills do you think you might need assistance with?	Critical thinking Cultural awareness Discipline Knowledge
12	Select 1-7 on a Likert scale from very unimportant=1 to very important=7: How important do you believe taking part in the 'Theatre of the Board' is to your current studies?	Very unimportant Unimportant Mostly unimportant Neither important nor unimportant Mostly important
13	Select 1-7 on a Likert scale from very unimportant=1 to very important=7: How important do you believe being a part of the 'Theatre of the Board' will be for you after you have completed your studies?	Important Very important
14	Select 1-7 on a Likert scale from very unimportant=1 to very important=7: How important do you believe taking part in the 'Theatre of the Board' is to your career?	
15	Any other comments, questions, feedback?	Open-ended question

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