PERCEPTIONS OF SIMULATION GAMES AND THE ROLE THEY PLAY IN CREATING AN ENTERPRISING AND EMPLOYABLE GRADUATE

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Abstract*: Purpose -The aims of this paper are to examine the type of employability skills students develop through participating on a Business Strategy Game (BSG) and how these business simulation games can address the graduate skills gap. Methodology - The research used a mixed methodology, in the first instance employing a face-to-face survey with 105 participants of a business simulation game, the BSG, and using semi-structured interviews with 10 past participants (graduated students) and 4 academic facilitators of the BSG to explore themes to emerge from the quantitative component of the research. Findings - The research found that participants were positive about engaging with the BSG, they enjoyed playing the BSG and generally felt it helped improve their understanding of business. In terms of their employability skills, the majority thought the BSG improved their hard skills, specifically team working, problem solving, and project management skills but were less convinced that the BSG improved their softer skills, namely confidence and communication skills. In other words, the BSG partially addresses the graduate skills gap. Significance - The findings consolidate existing literature on the effectiveness of simulation games to enhance learning and the employability skills set of participants. The findings also take research forward in terms of identifying the potential barriers to learning, the employability skills participants develop while participating on the BSG and the role the BSG plays in the preparation of graduates for employment.*

Keywords: Business Simulation Game; Business Strategy Game (BSG), Employability Skills, Graduate Skills Gap
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Introduction

How educational establishments prepare learners for employment, sometimes referred to as the 'graduate skills gap' has been a greatly debated topic in the academic literature but with a lack of firm conclusions as to the best approach to equip learners with the necessary required skills (Avramenko, 2012; Bennis & O'Toole, 2005; Turner & Mulholland, 2017). The body of literature in which the debate is usually contextualised is experiential learning (Beard & Wilson, 2006; Edwards & Muir, 2012; Strauss, 2014; Svitak, 2015) where learners are encouraged to apply their learning to real-world scenarios and practical situations, so they can develop their employability skills. The use of simulations and games are examples of this applied learning which, although not the sole solution to making a learner more employable, can certainly be part of the solution. Business simulation games in particular are capable of deepening a learner's subject knowledge and elicit the skills deemed necessary for life and employment (Faria & Dickson, 1994; Gatti, Ulrich & Seele, 2019; Goi, 2018; Gonen, Brill & Frank, 2009; Pongpanich, Krabuanrat & Tan, 2009; Reese & Wells, 2007). However, whilst business simulation games can provide a holistic view of a business situation, this does not guarantee real life decision making in an actual business environment and therefore there is a potential learning gap between academia and industry. The reality of actual business is difficult to replicate in the classroom and as a result the potential of business simulation games is perhaps diluted. Using quantitative research with participants of a Business Strategy Game (BSG) and supported by qualitative research with past participants (graduated students) and academic facilitators of the game, the research examines the capacity of the BSG to engender employability skills (Cross, 2009; Fripp, 1997; Herro & Clark, 2016; Lu, Hallinger & Showanasai, 2014) contributing to existing research in the area of graduate employability and the graduate skills gap.

Literature Review

The theoretical framework of this research is founded on experiential learning, the practice of learning by doing where the learner engages directly with the phenomena to validate a concept rather than doing so in a purely theoretical and abstract context (Beard & Wilson, 2006; Thompson, 2014). Kolb (1984) argues that there should be linkage between what is taught in the classroom and the learning of students which is arguably the role played by simulation games. The business simulation game has the potential to convert classroom learning to practical application where students can improve their understanding of theory through taking collective and justified decisions which have measured consequences. The approach creates a diverging style of learning capable of producing a range of favourable outcomes to enhance the employability prospects of participating students.

Preparing students for the employment market is a challenge and requires not only engagement with business and careful consideration of the relevance of this business engagement to student employability, but also institutional reflection on what students learn in the classroom, the teaching pedagogy involved in this learning, how student learning is assessed and the levels of student enjoyment with their learning (Parinduri, 2014; Roberts, 2014; Svitak, 2015; Tait, 2016; Thompson, 2016; Thompson, 2014; Umali-Hernandez, Garing & Apita-Chavez, 2017; Wright, 2013). In today's business world, businesses are forced to adapt and change, so too must educational establishments to ensure there is an appropriate 'match' between business needs and graduate capabilities (Cross, 2009; Ruben, 1999; Tunstall & Lynch, 2010). This change however cannot be simply solved by adding a business simulation game into the curriculum, rather change should involve a learning strategy which is appropriate to the institution, have output which is measurable, and suitably challenging so that the learner

develops the necessary employability skills (Barisic & Provic, 2014; Long, Mawdesley & Scott, 2009; Wright, 2013).

The Employability Skills Match

The specific focus of this research is on embedding relevant employability skills into the curriculum (Kloppenborg & Baucus, 2003) through an assessed business simulation (Bennis & O'Toole, 2005; Draycott, Rae, & Vause 2011; Ehiyazaryan & Barraclough, 2009; Kassean, *et al*., 2015; Turner & Mulholland, 2017). These employability skills are hard skills (project management, communication, creative and critical thinking, problem solving and leadership) and soft skills (confidence and reflection), (Barbar, 2014; Barisic & Provic, 2014; Department for Business Innovation & Skills, 2015; Draycott & Rae, 2011; Fiala, Gertler & Carney, 2014; Jones & Iredale, 2010). Arguably business simulation games have been proven to help develop those employability skills as well as to encourage module engagement and learning for over 50 years (Gonen, Brill & Frank, 2009; Kolb, 1984; Levant, Coulmont & Sandu, 2016; Mohsen, Abdollahi & Omar, 2018; Randel *et al*., 1992; Wells, 1990; Wood, Beckmann & Birney, 2009).

The premise of a simulation game is to allow students the opportunity to "exchange, experiment, positive mistake-making, calculated risk-taking, creative problem-solving and interaction with the outside world" (Jones & Iredale, 2010, p.12). However simulation games are not without their limitations, games could simply be that, a game which although enjoyable for students to play have little learning value (Gosen & Washbush, 2004; Kapralos, *et al*., 2015). This is why it is important for institutions to understand their students, the market and the role that a business simulation can and should play in the learning experience. Embedding business simulations into modular assessments have to be considered and not just a knee-jerk reaction to giving students a real-world business experience.

Business Simulation Games, Adding Value Or Simply An Add On?

Embedding business simulation games into the academic curriculum is seen as an appropriate vehicle to replicate business without students having to necessarily leave the classroom (Gonen, Brill & Frank, 2009; Pongpanich, Krabuanrat & Tan, 2009; Reese & Wells, 2007). Participants of these business simulation games develop learning across the business discipline (Faria & Dickson, 1994), able to understand the relationship between decision making and how it impacts on the organizational performance (Liu, Ho & Tan, 2009; Sandford & Williamson, 2005). Participants also learn to solve problem, make decisions (Barisic & Provic, 2014; Keys & Wolfe, 1990; Lu, Hallinger & Showanasai, 2014; Zantow, Knowlton & Sharp, 2005) and how to work effectively as a team (Faria & Dickson, 1994; King & Newman, 2009; Vos & Brenan, 2010). However, the limitations of business simulation games are three-fold. The first is the potential of these games to create anxiety and frustration among students because learners could feel a lack of knowledge, support and/or confidence to make decisions which has implications and consequences for the successful transfer of learning (Doyle & Brown, 2000; Vos & Brennan, 2010). Addressing this potential limitation would involve ensuring appropriate facilitator support in lectures and tutorials and having participants appropriately trained in the mechanics of the game and the expectations of the assessment (Laverie, 2006).

The second potential limitation is the timing of the business simulation game assessment. By timing we mean not only how the assessment 'fits' with other assessments in the curriculum but the length of time given to students to complete the assignment and how the timing in the game reflects real-life (Fripp, 1984; Wells, 1990; Wood, Beckmann & Birney, 2009). Addressing this limitation involves co-ordinated curriculum development across modules to ensure assessments are not concentrated at one particular time in the academic term and that

the game timeline encourages students to work to deadlines and under enough pressure so as replicate the workplace environment.

The final limitation is the level of student experience, with the potential of students losing interest in the game over a period of time (Wolfe, 1978). If students lack the appropriate motivation the learning potential will be reduced (Ahmed & Sutton, 2017; Buil, Catalan and Martinez, 2019; Laverie, 2006) and therefore the employability skills which could be developed would be limited. Addressing this limitation involves having a simulation game which is engaging, adds value to the student experience and is supported by facilitators who are both enthusiastic and supportive.

The Business Strategy Game

The business simulation game, which is the focus of this research, is the Business Strategy Game (BSG) developed by Thompson and Miller in conjunction with GLO-BUS software and marketed by McGraw-Hill (Thompson, *et al*., 2018). Similar to other strategy games, the BSG attempts to simulate a business environment and exhibits similar strengths and weaknesses to those associated to other simulation games. The strengths of the BSG, are its ability to encourage learning by doing (Beard & Wilson, 2006), encouraging students to understand the risks and consequences of making a decision and the relationship between a decision and organisational performance (Barisic & Provic, 2014; Liu, Ho & Tan, 2009; Lu, Hallinger & Showanasai, 2014; Sandford & Williamson, 2005). As a result of the number of interlinked business decisions students have to make during the course of the game, the BSG further develops individual and collective problem solving and team working skills which includes having to resolve conflicts within the team (Gonen, Brill & Frank, 2009; King & Newman, 2009; Vos & Brenan, 2010; Zantow, Knowlton & Sharp, 2005).

The weaknesses of the BSG are the time limits imposed on students playing the game, with each weekly decision representing a financial year in the business which, as argued by Fripp (1984) is not particularly realistic and representative of real business life. The counter to this limitation is that given the semester constraints of modules having to operate over 14 weeks, this simulation game is as realistic as it could be, giving student's insight into how a business operates and the opportunity to apply their learning to a realistic scenario. Despite the BSG being no more expensive to purchase than other competing simulation games previous participants considered the cost a limitation of the BSG (Turner, *et al*., 2019). A final limitation of the BSG is the level of learning support participants receive whilst playing the game and its linkage to modular content (Ahmed & Sutton, 2017; Laverie, 2006). If facilitators do not provide the necessary level of support and make clear linkages between theory and practice, students may not understand the value of the simulation game and view the theoretical content as disconnected from the practical application.

The Business Strategy Game - How it works

Participants of the BSG have to make decisions through 8 'decision screens' which involved: production operations (relating to branded and private label footwear); upgrading a specific plant or plants and/or increasing or decreasing capacity; workforce compensation and training; shipping and inventory management; pricing of products, marketing and celebrity endorsement; social responsibility and citizenship; and the financing of company operations (Thompson, *et al*., 2018).These decision screens relate to the BSG assessment measures which are earnings per share, return on equity investment, stock price, credit rating and image rating.

With regards the practical, administrative aspects of the game, students self-selected their groups, appointed a project manager to liaise with the module facilitators and assigned managerial positions among their group, which constituted no more than 5 members. Competing against other teams in their respective tutorials and with other groups from more than 100 universities and colleges across the world (BSG, 2017), each team had to take decisions on a weekly basis and to a deadline. Student groups could see the market impact of their decisions prior to making a final decision, these results were however, in isolation and did not take into account the decisions of other competing groups. The decisions of all groups were calculated and published within an hour of the deadline. This process allowed students to understand the impact of the competitive market on their decisions and therefore reinforced the theoretical aspects of the module, applying academic theory to practice, with students able to understand how the 8 decisions impacted on each other and that of the competition.

In line with good practice (Laverie, 2006; Lu, Hallinger & Showanasai, 2014; Peters & Vissers, 2004; Young, 2002), students made their decisions in class which allowed for module facilitator input, encouraging reflection and discussion on the mechanics of the game and how it related to academic theory. These support sessions as well as the lectures and tutorials blended theory with practice and allowed teams to understand strategy in practice, applying their learning and seeing the results of the decisions they made in the context of the competitive market (Chen, Kinshuk & Liu, 2011; Lean, Moizer & Newbery, 2014;).

Research gap

Investigating participant perceptions of the BSG as a platform to engender employability skills and address the graduate skills gap consolidates existing literature in the field of business simulation games (Ahmed & Sutton, 2017; Gonen, Brill & Frank, 2009; Pongpanich, Krabuanrat & Tan, 2009; Reese & Wells, 2007). The research addresses an identified gap in the literature by examining a specific business simulation game, examining the perspectives of learners supported by insight from facilitators of the BSG to understand the role the game plays in developing hard and soft employability skills and preparing the student for work. The results from this research will complement existing research in the area, specifically the work of Avramenko (2012), Gonan, Brill & Frank (2009), Faria (1987), Turner, *et al*., (2019) and Vos & Brenan (2010).

Methodology

Between December 2017 and March 2018, the study used a survey method with students participating in a business simulation game on a final year Strategic Management module. Interviews with graduated students and academic facilitators were used to follow up themes to emerge from the survey. The research used a mixed methodology to gain insight from three groups of stakeholders into the effectiveness of a business simulation game to address the employability skills gap of graduates and its capacity to engender appropriate employment skills among participants. The research conducted quantitative research with 105 participants of the BSG simulation game and qualitative research with 10 graduated students who had previously participated in the simulation game and 4 academic staff involved in facilitating the simulation game. The survey was conducted at the end of the semester after the respondents had submitted their assignments related to the simulation game. For the quantitative and qualitative components of the research, convenience sampling was used as this approach allowed for access to a wide range of students who were broadly representative of students both past and present at the university and other universities who operate similar business simulation games (Easterby-Smith, Thorpe & Jackson, 2010). It is acknowledged that this approach carries the limitation that only those students who attended the final sessions of the module were

surveyed, however this was not considered a major limitation as 105 respondents constituted 63% of the total number of students on the module and therefore not considered a bias or unrepresentative sample. Regarding the academic staff, the figure of 4, represents the total number of academic staffs involved with the BSG and who agreed to participate in the study. For the qualitative approach interviews were conducted either face-to-face or by using the telephone, depending upon the preference of the respondents.

With regards those graduated students, 10 students represent those who agreed to participate and although a relatively low number, allows the research to explore perceptions of those students currently employed and who are able to reflect on their BSG experiences. The limitations of this sample size are that perhaps only those graduated students who enjoyed the experience responded, however it should be noted that the majority of this cohort were particularly positive about their experiences with the BSG (Turner *et al.*, 2019) and therefore considered a relatively minor limitation of this research. The limitation of sample size is further being addressed in a larger, comparative study of universities in Malaysia who use the BSG developed by Thompson and Miller and GLO-BUS software and which is marketed by McGraw-Hill (Thompson *et al*., 2018). That research intends to develop the themes to emerge from this study, particularly those emerging from the perspectives of facilitators, and to explore the capacity of the BSG to develop the softer employability skills including the emotional intelligence of participants.

To ensure the questions in the research instrument were understandable and in line with good practice (Zikmund, 2003), a pilot study was conducted with 10 business school students. The results from this pilot confirmed that respondents understood the questions and did not think there was any redundant or misleading questions. In order to measure the internal consistency of the survey instrument a Cronbach's Alpha coefficient test was used, which revealed a figure of 0.939, representing an appropriate and good scale and valid test model (Malhotra & Birks, 2006).

Results
In terms of respondent's background, there were 52% females and 48% males, of which the majority (71%) were Malaysian. With regards the respondent's respective programme of study, 41% studied Accounting & Finance, 36% studied International Business & Marketing, 11% studied Banking and Finance, 6% studied Business Administration, 2% studied International Business, 2% studied HRM, 1% studied Marketing and 1% studied Finance & Economics. Although respondents came from a diverse range of programmes from within the Business School, they were all studying the same module, 'Strategic Management', and the research wished to understand if a respondents programme of study was significant in responses relating to the BSGs ability to engender employability skills. The diverse respondents represent the generalisability of the survey where 'Strategic Management' is a core module for all business programs in the business school.

The Role Of The BSG In Student Understanding Of Business
To investigate the role of the BSG in participants understanding of business and their own skills set, respondents were asked a series of questions (see Table 1) which revealed moderate levels of agreement and strong agreement with the exception of responses to the question 'The BSG does not effectively replicate business' which revealed a sizable level of neutrality. The variables gender, nationality and programme of study were tested for significance using multiple regression, none of the variables proved significant. Responses were further tested for

variance between groups, but there was nothing significant probably as a result of the fact that no one group perceived the BSG significantly different from the others.

Table 1: Statistics Relating To The BSG And The Role They Play In Student Understanding

Question	Percentage of those of strongly agreed/agreed	Percentage of those who were neutral	Percentage of those who strongly disagreed/disagreed
I enjoyed playing the BSG	62%	26.7%	11.4%
The BSG allowed me a deeper understanding of business	66.7%	24.8%	8.6%
The BSG allowed me a deeper understanding of my own skills set	62.8%	25.7%	11.4%
The BSG allowed me to apply what I've learned in my business-related programme of study	60.9%	30.5%	8.6%
The BSG does not effectively replicate business	40.0%	33.3%	26.7%

As it may be observed, respondents had moderate levels of agreement to statements, with 62% agreeing and strongly agreeing that they enjoyed the BSG. In terms of the BSG allowing a deeper understanding of business 66.7% agreed and strongly agreed, with 62.8% agreeing and strongly agreeing that the BSG allowed them a deeper understanding of their own skills set and 60.9% agreed and strongly agreed that the BSG allowed them to apply their business learning. However, only 40% agreed or strongly agreed that the BSG does not effectively replicate business. One would have expected this figure to be higher given the literature argues that business simulations replicate real-life (Gonen, Brill & Frank, 2009; Pongpanich, Krabuanrat & Tan, 2009; Reese & Wells, 2007). Taken holistically the levels of agreement to questions are lower when compared to a similar study conducted among students who participated in the BSG a year earlier. In that study, 84.1% agreed or strongly agreed that they enjoyed playing the BSG, with 80% agreeing or strongly agreeing that the BSG allowed them deeper understanding of business and 78.6% agreeing or strongly agreeing that the BSG allowed them deeper understanding of their own skills set (Turner *et al*., 2019). This comparison raises the question why is there such a marked difference in opinion between the past and present cohorts of participants? Why did between 8% and 11% of respondents in the current study disagree or

strongly disagree that the BSG was not enjoyable and did not allow them to get a deeper understanding of business or their skill set? Could the answer lie in the Hawthorne effect, with business simulations losing their unique appeal? (Randel *et al*., 1992). This is unlikely given this engagement with a business simulation was a first experience for both cohorts. Rather the answer perhaps lies in the cohort itself and their particular experience on the module which shall be investigated later.

The majority of respondents enjoyed the BSG, getting a deeper understanding of business and applying what they learned in the classroom to practice which is supported by the literature (Herro & Clark, 2016; Lu, Hallinger & Showanasai, 2014; Cross, 2009; Zantow, Knowlton & Sharp, 2005; Faria & Dickson, 1994) and the qualitative component of the research. The majority of respondents, who provided an opinion, in the open questions indicated that the BSG developed their understanding of business as it replicated the real-life environment, with a typical response being "I enjoyed the simulation game because it made me feel like we have our own company". A minority did not enjoy the experience, blaming the complexity and financials associated to the BSG with a typical response being "[the BSG] was too complex, too many numbers and hard to understand". However, overall, it would appear that respondents, who expressed an opinion, thought the BSG allowed them to apply and transfer their learning (Wagner, 1993), understanding the complexity of decision making and its relationship to the working environment and preparation for employment (Gonen, Brill & Frank, 2009; Liu, Ho & Tan, 2009; Sandford & Williamson, 2005; Wolfe & Roberts, 1993).

The Role Of The BSG In Developing A Student's Business Knowledge
When the data in Table 2 relating to the role the BSG plays in developing a student's business knowledge is examined a trend begins to emerge. Similarly, to statements relating to the role the BSG plays in a student's understanding of their own skills set and business there were only moderate levels of agreement and strong agreement with statements in Table 2. Of the variables gender, nationality and programme of study which were tested for significance using multiple regression, none proved significant. Similarly, to the testing of variance between groups with regards responses in Table 1 the lack of significance was probably as a result of the fact that no one group perceived the BSG significantly different from the others.

Table 2: Statistics Relating To The Role The BSG Plays In Developing Business Knowledge

Question	Percentage of those of strongly agreed/agreed	Percentage of those who were neutral	Percentage of those who strongly disagreed/disagreed
The BSG sharpened my business judgement	61.9%	28.6%	9.6%
The BSG gave me experience and practice in assessing business risk	70.5%	20.0%	9.6%

The majority of respondents (70.5%) agreed and strongly agreed that the BSG gave them experience and practice in assessing business risk, with 61.9% agreeing and strongly agreeing that's the BSG sharpened their business judgement. These findings support the result in Table 1 which revealed that 66.7% agreed and strongly agreed that the BSG allowed a deeper understanding of business. However, there was a sizeable number of respondents who were neutral to statements which implies that some respondents were indifferent to the capacity of the BSG to develop understanding of specific business skills. This finding is perhaps a little surprising for two reasons, the first is that the majority of the literature supports the idea that business simulation games provide participants with a better understanding of business (Gonen, Brill & Frank, 2009; Pongpanich, Krabuanrat & Tan, 2009; Reese & Wells, 2007). The second is that a previous study of the BSG revealed particularly positive perceptions of the simulations games ability to sharpen business judgement with 84.1% agreeing and strongly agreeing, and 88% agreed and strongly agreed that the BSG gave them experience and practice in assessing business risk (Turner, *et al*., 2019). As previously mentioned, there is perhaps something about the cohort itself and their particular experience on the module which is influencing perceptions of the BSG and is one of the reasons why this research has sought insight from students who had previously experienced the BSG to perhaps explain the results and/or shed further light on the importance of the environment into which the game is presented to participating students.

The Role Of The BSG In Developing A Student's 'Hard' Skills

In terms of the hard skills the BSG developed, the majority of respondents agreed and strongly agreed with statements, with lower levels of agreement related to leadership, communication and creative thinking skills (see Table 3). Of the variables gender, nationality and programme of study, which were tested for significance using multiple regression, again no variables proved significant. The sample also tested for variance between groups, but the variance was not significant probably because opinion on the ability of the BSG to engender hard skills cuts across nationality, programme of study and gender and is based on individual preference.

Table 3: Statistics Relating To The Hard Skills Engendered By The BSG

Question	Percentage of those of strongly agreed/agreed	Percentage of those who were neutral	Percentage of those who strongly disagreed/disagreed
The BSG improved my project management skills	68.5%	21.0%	10.5%
The BSG improved my leadership skills	57.2%	31.4%	11.5%
The BSG improved my communication skills	53.3%	30.5%	16.2%

The BSG improved my team working skills	71.4%	17.1%	11.5%
The BSG improved my creative thinking skills	58.1%	34.3%	7.6%
The BSG improved my problem-solving skills	71.4%	21.9%	6.7%

The majority of respondents thought that the BSG improved their team working skills (71.4% agreeing and strongly agreeing), their problem-solving skills (71.4% in agreement and strong agreement) and improved their project management skills (68.5% agreeing and strongly agreeing). Levels of agreement were slightly lower with regards the BSG's ability to improve creative thinking (58.1% agreeing and strongly agreeing), to improve leadership skills (57.2% agreeing and strongly agreeing) and for improved communication (53.3% agreeing and strongly agreeing). When the research considers the participant responses collectively, with the exception of communication skills, the levels of agreement to questions relating to the BSG's ability to improve a student's hard skills are moderately high. Although it should be noted again that when compared to a previous study on the BSG the figures of agreement and strong agreement with regards team working skills are lower. In that particular study, levels of agreement and strong agreement was 83.4% (Turner, *et al.*, 2019).

When the research attempts to address why there was a lower rate of respondent agreement with regards the capacity of the BSG to improve a respondents communication skill there could be two viable reasons. The first reason could be that respondents had not experienced a situation during their time participating on the BSG where they had the opportunity to improve their communication skills. The second reason could be that respondents simply did not think the BSG developed their communication skills. Similarly, to the results from a previous study on the BSG (Turner, *et al.*, 2019) and supported by the qualitative component of the survey we can observe that many respondents enjoyed the discussions while participating on the BSG, with a typical response being: "I enjoyed the group discussions involved in making decisions". However, respondents perhaps did not think that the BSG improved their communication skills beyond group discussions unlike their team working and problem solving skills which were clearly improved, an observation supported by the literature (Vos & Brenan, 2010; King & Newman, 2009; Faria & Dickson, 1994).

The Role Of The BSG In Developing A Student's 'Soft' Skills
In terms of the soft skills the BSG developed, the majority of respondents agreed and strongly agreed with statements, however it should be noted that levels of agreement towards the BSG improving confidence levels were the lowest across all statements (see Table 4). Of the variables gender, nationality and programme of study, which were tested for significance using multiple regression, again no variables proved significant. Similarly, when the research tests for variance between groups, the variance was not significant probably because, as mentioned

earlier, that opinion on the ability of the BSG to engender soft skills was based on individual preference and not a student's programme of study, nationality or gender.

Table 4: Statistics Relating To The Soft Skills Engendered By The BSG

Question	Percentage of those of strongly agreed/agreed	Percentage of those who were neutral	Percentage of those who strongly disagreed/disagreed
The BSG encouraged me to reflect	57.1%	32.4%	10.5%
The BSG improved my confidence	50.5%	38.1%	11.4%

The majority of respondents thought that the BSG encouraged them to reflect (57.1% agreeing and strongly agreeing) and improved their confidence (50.5% agreeing and strongly agreeing). When the results are compared to a previous study on the BSG the figures of agreement and strong agreement with regards reflection are significantly lower. In that particular study, levels of agreement and strong agreement was 73.8% (Turner, *et al.*, 2019). The quantitative results are broadly supported by the qualitative component of the survey, with the majority of respondents indicating that they thought the BSG allowed them to reflect on decisions, with typical responses being "the game made us think about decisions from the previous week, what went right and what went wrong". A minority of respondents mentioned that they learned from their reflection with a typical response being "it made us better prepared to consider possibilities and risks". With regards the BSG improving levels of confidence, the qualitative component of the survey provides some insight into the reasons why there was such a low level of agreement. Many respondents cited time constraints, a complex interface and complicated decisions to make as the reasons for having low confidence in their decisions. Typical responses were: "it was hard to find time to discuss with group members on our own"; "it took a lot of time to make a decision"; "the interface was too complicated"; "too much detailed decision to make that we are so unfamiliar with". Some of these comments are supported by the literature as limitations of simulation games (Doyle & Brown, 2000) and underline the importance of timing and facilitator support to ensure participants receive the best possible learning experience from the simulation game. In the next section the research examines respondent perceptions of the BSG in comparison to more traditional methods of assessment.

Is The BSG More Effective At Improving Business Thinking And Skills Than Traditional Approaches To Assessment?

The majority of respondents agreed and strongly agreed (see Table 5) that the BSG was more effective at improving business thinking and skills when compared to traditional approaches to assessment. Of the variables gender, nationality and programme of study, which were tested for significance using multiple regression, once again none of the variables proved significant. The sample also tested for variance between groups, but the variance was not significant probably, as mentioned earlier, as a result of opinion being based on individual preference and not a student's programme of study, nationality or gender.

Table 5: Statistics Relating To The BSG Being More Effective Than Traditional Assessments

Question	Percentage of those of strongly agreed/agreed	Percentage of those who were neutral	Percentage of those who strongly disagreed/disagreed
The BSG encouraged me to think more about business compared to other assessments like a case study, exam or coursework	64.8%	21.0%	14.3%
The BSG improved my business skills better than traditional methods like teaching or reading	65.7%	27.6%	6.7%

The majority of respondents thought that the simulation game improved their thinking about business (64.8% agreeing and strongly agreeing), and their business skills (65.7% in agreement and strong agreement) when compared to more traditional assessments and approaches to teaching. The findings would suggest, at least on a superficial level, that students felt they learned more about business from the BSG than from more traditional assessments. This argument is supported by (Svitak, 2015; Strauss, 2014; Edwards & Muir, 2012; Beard & Wilson, 2006; Bennis & O'Toole 2005) who argue that applied learning is perhaps the most appropriate assessment tool to prepare graduates for the world of work with some more traditional assessments a little outdated for today's disruptive business market. The BSG allows students to think and learn about business (Kassean, *et al.*, 2015; Avramenko, 2012; Ehiyazaryan & Barraclough, 2009; Pongpanich, Krabuanrat & Tan, 2009; Wood, Beckmann & Birney, 2009; Wolfe & Roberts, 1993) and develop their hard, and to a lesser extent, soft employability skills (Department for Business Innovation & Skills, 2015; Barbar, 2014; Fiala, Gertler & Carney, 2014; Barisic & Provic, 2014; Draycott & Rae, 2011; Jones & Iredale, 2010).

Emerging Themes And Perspectives Of Facilitators And Past Students
The research has revealed that the majority of respondents agree with the statements relating to the capacity of the BSG to enhance student understanding, subject knowledge, and their hard (particularly team working and problem solving) and reflection skills. The majority of respondents also felt the BSG was a more effective platform to learn about business than more traditional assessments. However, when the results are compared to the previous cohort who had experienced the BSG, the research observed lower levels of agreement across the majority

of statements which can partially be explained by investigating the perspectives of facilitators who had engagement with both cohorts and students from the previous cohort.

The majority of facilitators felt that the BSG played a significant role in a student's understanding of business with a typical response being "Yes certainly. The BSG game actually provides a good platform for students to understand how business projects a strategic plan through decision making on financial performance of a company". However, students did not necessarily perceive the game in the same way, based on feedback from the previous cohort the majority of students, although acknowledging that they had enjoyed the BSG and found it useful, indicated that many of their colleagues had found the BSG a rather complex, time-consuming and pressured scenario. A typical response from those respondents who had engaged with the BSG previously was "I enjoyed the BSG and found it helped my understanding of business but many of my colleagues found it difficult as there was a lot to read and think about in a short period of time, every week we had a decision to make based on the previous performance". This is an important observation as it not only links to a recurring theme in this research surrounding time pressures, it highlights one of the issues surrounding student learning, namely the balance between academic performance and subject learning. On the one hand we have employers who wish employment ready graduates, on the other hand we have education providers who need to provide a balanced curriculum which allows students to understand and practice business. Then you have the student dimension who have to balance learning with academic achievement. In a perfect world the various stakeholders priorities go hand in hand however in reality do students perform an effort versus reward analysis and prefer the path of greater academic reward at the expense of academic learning? If we are to take the perspectives of previous students who participated in the BSG then the answer would be yes. A typical response to the question on whether they preferred the BSG to more traditional assessments with regards to understanding business, was "the BSG makes you think about business, but it takes a lot of time and you have to balance other assessments. There are other module assessments which require less effort but give better grades". This observation supports the argument that perhaps students are more focused on academic performance than learning which impacts on their engagement and perceptions of the BSG experience as well as their preparedness for the employment market.

Both facilitators and previous students agreed with the respondents in this research that the main employability skills developed through the BSG were a mixture of hard and soft skills, particularly team working. Typically, all facilitators stated that the BSG developed "thinking skills, team work, good communication, project management and creative thinking". Regarding previous students, a typical response was "team working, confidence and problem solving". One interesting aside from a past student was that internships were considered the most appropriate vehicle to encourage the development of employability skills, stating "business simulations are a kind of tool that will enhance my employability skills because we work in a group and we will see different types of persons doing different types of things in their own ways. Even though it's enough for us to face the world, I would rather find an internship out of the university, that's going to be more challenging". This observation is linked to the debate surrounding the impact of business simulations and how alternative real-world and experiential engaging activities are perhaps better at developing a graduates employability skill (Svitak, 2015; Strauss, 2014; Edwards & Muir, 2012; Beard & Wilson, 2006).

The feedback from both facilitators and previous students of the BSG were not however able to explain the reduced levels of agreement and higher levels of neutrality to statements relating to the capacity of the BSG to improve their employability skills, when compared to the previous

cohort of students. Facilitators did not indicate any issues relating to the administration of the BSG on this occasion, nor were there any problems identified relating to student understanding, the only concern, which ties in with what students from the previous cohort identified, was the pressures of other assessments. A typical response from the facilitators was "to [a] certain extend, other assignment did affect the students' performance in document preparation, however …with good time planning they should be able to complete the assignment in time". Students from the previous cohort reiterated this issue of time with a typical quote being "the BSG was pretty intensive, many students felt it was a lot of work". One student summarised the situation quite well, "you probably don't appreciate how much you are learning when you are participating on the BSG, it's only when you start working you realise that you have to work under pressure". If we are to take the three themes to emerge from previous students of the BSG in particular, we perhaps have a partial explanation as to why there were lower levels of agreement to many statements relating to the BSG in this research. These themes surround some students perception of effort versus reward, i.e. academic performance versus learning, the time-consuming nature of the BSG and the fact that appreciation of learning perhaps is more likely to occur when the BSG is completed rather than during the experience.

Conclusion
This research examined the capacity of the BSG to bridge the graduate skills gap, through developing the hard and soft employability skills among participants. Using quantitative research, and supported by qualitative responses, the research consolidated the current literature on the effectiveness of simulation games to enhance learning and the engendering of employability skills among participants (Gonen, Brill & Frank, 2009; Pongpanich, Krabuanrat & Tan, 2009; Reese & Wells, 2007). The study also takes research forward in terms of identifying the potential benefits of and barriers to learning with the BSG, the employability skills participants felt they developed while participating on the BSG and the use and usefulness of the BSG in terms of actioning business theory into practice (Faria & Dickson, 1994; Wagner, 1993). Such findings should inform the policies of education providers and how they intend to implement experiential learning into their respective curricula.

The research found that participants were positive about engaging with the BSG, they enjoyed playing the BSG and generally felt it helped improve their understanding of business. The majority also thought the BSG developed their hard employability skills, namely, team working, problem solving, and project management skills but were less convinced that the BSG developed their communication skills and confidence. These findings combined with the relatively high levels of neutrality to many statements when compared to a previous study conducted among participants of the BSG indicate that the value of this business simulation is perhaps not as significant as it could be in terms of developing employability skills. The qualitative component of the research was unable to provide any further conclusive evidence into the reasons why this particular cohort had lower levels of agreement and higher levels of neutrality to statements beyond the students perception of effort versus reward, the fact that appreciation of learning perhaps only occurs when the student graduates into the world of work and the time-consuming nature of the BSG in the context of other module assessments. With regards the latter point, this is interesting from a further research perspective, to examine the impact of other modules on the capacity of the BSG to be successful. It is all very well introducing real-world scenarios into modules but if this is in a context of over-assessing students, then the benefits of such initiatives may be lost.

With regards other areas for further research, it is the intention to conduct further comparative research across other educational establishments in Malaysia to allow the perspectives of

facilitators and participants of the BSG to be better understood and generalised. It is also the intention to gain more insight from previous participants of the BSG to understand the impact of the game on their work, what they perceived as beneficial and not so beneficial in practice. Another area for further research is to investigate in more depth the perspectives of those students who did not enjoy the BSG. Those students who provided responses to the open-ended questions in the survey were predominantly positive about their experience, participants who appeared not to enjoy the experience either provided a very limited one word or one phrase qualitative response or no response at all. Understanding the opinion of learners who did and did not enjoy the experience is important in order to make it a more inclusive experience for all learners not just in terms of the BSG but for other simulation games and business engaged activities across modules and programmes.

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