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Introduction to the third issue of JALT

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The first half of 2019 was exciting for all involved with JALT. An international conference, EDU2019, took place in support of JALT (amongst other journals) in Athens, Greece, in May, 2019. EDU2019 was capably and charmingly organised by JALT Editorial Board Members Drs Margarita Kefalaki and Fotini Diamantidaki, and the action-packed conference was attended by some 100 participants from 21 countries. And then there were three exciting symposia at Kaplan Singapore, again with the offer to publish contributions in JALT: a University of Essex-Kaplan Symposium on Pedagogy and Play in Teaching Today led by JALT Editorial Board Member Dr Stevphen Shukaitis (in April, 2019); a University College Dublin-Kaplan Symposium on Applied Learning & Teaching (in May, 2019) made possible by JALT Editorial Board Members Drs Orna O'Brien and Matt Glowatz; and a Griffith-Kaplan Symposium on the Scholarship of Effective Learning and Teaching in Nursing and Clinical Education, conceptualised and executed by Associate Professor Rob Burton (yet another JALT Editorial Board Member). Becky Shelley and co-authors' and Nilanjana Saxena's contributions in this issue were presented at the University of Essex-Kaplan symposium, and we look forward to publish other contributions either in the regular, semi-annual issues or in the occasional guest-edited special issue of JALT.

We are also excited about the global character of the four peer-reviewed articles in this issue, with contributions from four continents (the U.S., Australia, Europe (the UK) and Asia (Singapore)). The international diversity of JALT is further highlighted with 'informed journalistic' contributions by Ukrainians and a Brazilian, and a book review from Lebanon.

While the editorial team of JALT certainly believes in continual improvement, we would like to take this opportunity to clarify our position when it comes to certain publication practices that we view as less-than-healthy. First the good news – also for contributors to JALT: "It is widely accepted that having an article published as open access increases citations" (Lockley, 2018, p. 150). But there is much bad news, too, even about open-access journals. Out of more than 10,000 open-access journals, 30% charge a processing fee, and perhaps shockingly, "in the UK, 81 percent" of such journals charge such a fee (Lockley, 2018, p. 150). We are less than impressed with such practices, some of which may well be considered predatory.

Discussing possible contributions to JALT with potential authors has elicited a variety of reactions over the past 18 months, from enthusiasm all the way to subtle rejection. It is in this context that the strange seductiveness of rankings and other forms of performance measurement deserve a brief discussion. In the wonderfully-titled *Learn how to write badly: How to succeed in the Social Sciences*, social psychologist Michael Billig reflects on his own vanity and insecurity with regard to the citation count:

> "It doesn't seem to matter how others are mentioning me, whether they do so in passing or at length, whether in complimentary or critical tones. All that matters is that I am mentioned, again and again. It gets worse. Sometimes, I have compared my scores with those of others. I am pleased if I am mentioned in more articles than they are, and my mood will be spoiled if their numbers surpass mine… Do I really think like this? Do I really care about the numbers? I must do. What a knob head" (Billig, 2013, p. 155).

The obsession with peer-reviewed journals and their rankings has led to "at least 22 widely available journal ranking systems" – it has been polemically asked whether we will soon witness a 'ranking of journal ranking lists' and then a 'ranking of ranking of journal ranking lists' (Tourish, Craig & Amernic, 2017, pp. 50-51). Top-tier journals have astronomically-high rates of rejection, leading to a tongue-in-cheek, spoof response in the form of a Journal of Universal Rejection (www.universalrejection.org) that devastatingly states that "all submissions, regardless of quality, will be rejected".

In 2005, physicist Jorge Hirsch came up with the Hirsch index (now popularly known as H-index), initially meant to measure the relative quality of theoretical physicists' research output and impact. Ironically, while Hirsch cautioned that the h-score "should only be used as one measure, not as the primary basis for evaluating people for awards or promotion" (cited in McDonald, 2005), this appears to be exactly what has happened in some institutions.

With Google Scholar H-scores being highly transparent and on public display, they can be (mis-)construed as the reflections of "personal qualities such as intelligence, creativity, scholarship, efficiency and commitment" (Alvesson & Spicer, 2017, p. 103). Publications become part of a positive self-image. Half-jokingly, Alvesson and Spicer (2017, p. 104) write: "Maybe the next step will be just to write your H-score on the badge each academic wears at conferences. In this way, everyone will instantly know whether you are worth talking with or not".

In such a pursuit of 'research excellence', teaching may become something to be avoided if possible (not to mention administration). The myopic focus on 'research' leads to long academic working days. Alvesson and Spicer (2017, p. 105) ask rhetorically: "And what is the result of this great labour?" – before they answer:

> "A constant flow of articles, which are judged by an increasing number of academics to be pointless technical exercises which are uninteresting, make little in the way of real contribution and have no impact beyond a marginal amount on a small group of specialists" (Alvesson & Spicer, 2017, p. 105).

It is certainly useful to be aware, and wary, of 'journal list fetishism' and the 4x4 (four articles in four-star journals) academic who, within academic managerialism, can be expressed as a number between 0 and 16 (Parker, 2017). We see JALT also as an opportunity for reflection as to what is valued by whom and why, and what is my research about and why does it matter? A famous quote by Albert Einstein comes to mind: "Not everything that can be counted counts, and not everything that counts can be counted."

Our third issue's peer-reviewed article section kicks off with an impressive contribution by Qaadir Hicks, Britanny Hammond, Runa Winters and Jess Boersma on how educators in the U.S. and elsewhere can influence their students' quality of critical reflection. The second article by Becky Shelley, Can-Seng Ooi and Natalie Moore provides a methodologically-innovative 'extreme comparison' of the Children's University in Malaysia and in Australia. This is followed by James Kwan's meticulous mixed-methods research on postgraduate business students' educational goals, assessment preferences and approaches to learning in Singapore. The section is completed with Justin O'Brien's highly readable, instructional piece that bravely discusses failures of the flipped classroom approach. He counters these with highly innovative and exciting 'extraordinary seminars' that use 'discovery learning'.

As editors of this issue, we must not be blamed to be excited about every single contribution in it. John Biggs is one of our heroes, and world-famous for his SOLO taxonomy, constructively-aligned Outcome-based Teaching & Learning (OBTL), criterion-referenced assessment and students' surface and deep approaches to learning. He made us extremely happy by first agreeing to an interview via email, and then sending us a 7,000-word document in response to our questions. It gives us a sense of achievement and also hope that John Biggs, a great supporter of open-access journals, selflessly and without hesitation made this unique contribution to JALT. Nigel Starck (one of our most prolific contributors and a JALT Editorial Board Member) responded to our interview with John Biggs with an opinion piece that also reflects on his varied experience with journalism training at the university and beyond.

This issue has two ed-tech reviews, one by Nilanjana Saxena on Pallas Advanced Learning Systems' research-informed Virtual Learning Kit, and another one by Eric Yeo Zhiwei on Kahoot!, a gamified student-response system that uses a Freemium concept.

The 'informed journalistic' section begins with a contribution from Ukraine – a country that has been much in the global news. We are grateful to four distinguished Ukrainian authors – Alevtina Sedochenko, Eduard Rubin, Ivan Prymachenko, and Serhiy Babak – to have taken some time off their busy schedules, to give us a Ukrainian perspective on adult education, and how challenges can be transformed into opportunities. Ailson De Moraes (our JALT Editorial Board Member) then gives his perspective on what it takes to be an effective and successful educator in this time and age. This section is further enriched with another contribution by Justin O'Brien on using Lego as a reflective fail-fast group challenge in higher education.

The issue would not be complete without five reviews of carefully-selected books. Pamela Moore contributes a review of Badger's Bloomsbury publication on *Teaching and Learning the English language*. This issue's second book review, by Sandra Georges El Hadi, lets us travel from language-teaching to that of literature, and is on Diamantidaki's *Teaching Literature in Modern Foreign Languages*. This is followed by Michael D. Evans's (who is the Chairman of our Editorial Board) review of yet another Bloomsbury publication on *Leadership for Sustainability in Higher Education*. Peter Waring (our Editorial Board Member) thankfully reviewed an edited volume on *Learning Analytics in Education*. Finally, Jürgen Rudolph reviews an important edited volume on *The Corporatization of the Business School* that is also cited in this editorial.

Once again, we would like to thank our wonderfully-supportive Editorial Board that has been further strengthened in 2019; Associate Prof. Rhys Johnson, COO and Provost for Kaplan Singapore, for his continued faith in us; once again, Dr Nigel Starck for his proofreading of parts of the issue (all remaining errors are solely our fault!); and our academic colleagues near and far for continuing to trust us to share the JALT initiative with your networks. Finally and importantly, we welcome all feedback and ideas for JALT.

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Identifying the influence of factors on the quality of critical reflection: Framing, frequency, and feedback

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Abstract

In this study, we sought to identify the factors contributing to the quality of student critical reflections. Prior analyses of institutional assessment and evaluation data, including student reflection scores and experience with critical reflection pedagogies, had shown us that student experience and faculty experience with particular pedagogies were not adequate predictors of students' ability to articulate their learning through reflective practices. Moreover, we suspected that instructor familiarity with critical reflection would have a much stronger impact than student's prior experiences. After conducting two focus groups faculty from the University of North Carolina Wilmington (UNCW) and bolstering our existing literature review, however, we found that instructor and student experience with critical reflection may not impact the quality of a student's critical reflection as strongly as the way in which reflective prompts were framed. Following subsequent qualitative analyses, the themes of framing, frequency, and feedback emerged, which were then used as a framework to guide the direction of future quantitative analyses. We discuss the implications for the implementation of critical reflection pedagogy and the improvement of student learning outcomes.

Introduction

There is an increasingly common critique leveled against institutions of higher education, suggesting that the knowledge and experiences students acquire are not easily transferrable beyond academia. If this were the case, then student learning outcomes would appear to have little, if any, impact on career readiness. The former president of the University of North Carolina system, Margaret Spellings, addressed this critique by emphasizing the importance of institutions of higher education in accounting for meaningful student learning, stating:

> As a lifetime public policymaker, I can tell you in no uncertain terms: Our aversion to meaningful, reasonable accountability and transparency in student outcomes has hurt us. Our collective reluctance to define measurable learning – to come up with transparent ways of owning our success and shortcomings – has undermined public confidence and emboldened a less effective, more ideological attitude of disruption (The News & Observer, 2017).

Academic outcomes and career success are not as divorced from each other as Spellings argues, as universities employ high-impact practices (HIPs) and critical reflection as tools that integrate academic learning to life beyond the academy. According to a Hart Research Associates and The Association of American Colleges and Universities (AAC&U) study (2015), 80% of employers regard critical thinking and the student's ability to apply knowledge to real world settings as very important, while 88% value applied/experiential learning experiences in college.

Experiential education is an effective, high-impact practice with the potential to increase student retention, encourage student engagement, and enhance student-learning outcomes (Brownell & Swaner, 2010). In experiential learning pedagogies, reflection is the central mechanism linking a student's experience to the learning process and facilitating meaningful learning outcomes (Eyler, Giles, & Schmiede, 1996; Hatcher & Bringle, 1997).

As both a pedagogy and a process, critical reflection often forms the cornerstone of experiential projects across disciplines. The National Society for Experiential Learning (NSEE) regards reflection as a crucial element in experiential education because not only has it been linked to deeper student learning but because it also produces actionable assessment artifacts in the reflections themselves. Furthermore, when students connect their experiences back to their learning, the knowledge gained becomes more salient (Woods, Willis, Wright, & Knapp, 2013).

The scope and scale of the impact that critical reflection has on students varies significantly across projects and even among individual students. We consider reflections to be of a higher quality when they have a greater impact on student learning outcomes, pushing students to think critically about their own learning and helping to solidify the concepts and ideas they gain through their coursework. Conversely, we consider student reflections that tend not to necessitate deep, lasting critical thought as superficial by nature as they may not have the intended benefits on student learning. If college students wish to optimize their educational experiences to compete in the global economy, it is important that they participate in HIPs that employ the critical reflection process.

Despite the demonstrable importance of critical reflection to both applied learning and the wider scope of experiential education, few studies have focused on understanding specific factors influencing the quality of reflections. To address this, we examined the extent to which student applied learning experiences, faculty training, and other factors influenced student critical reflection and the benefits students receive. Beginning with an assessment dataset constructed at UNCW that tracks faculty and student experience with critical reflection pedagogy, we took a closer look at evaluator-assigned reflection scores, which are designed with the AAC&U rubric in mind. Due to limitations in the existing data, our initial models could not explain any significant amount of variability among critical reflection scores and, at first glance, it appeared that neither faculty nor student experience with critical reflection pedagogy had much bearing on how well students reflected.

Realizing the limits of our existing dataset and the limits of our quantitative inquiry into this subject, we revisited the literature and then conducted two separate focus groups, consisting of faculty who had extensive experience with critical reflection pedagogy. The factors thought to influence students' performance in critical reflections guided both discussions. In approaching the focus groups, we explored faculty perceptions of student performance in critical reflection and then addressed the factors they felt were significant determinants of critical reflection, performance, and quality. Framing, frequency, and feedback emerged as salient themes through our qualitative analysis. We then returned to our quantitative dataset and incorporated faculty members' feedback into our final regression model.

Literature Review

Applied learning differs from traditional lecture in that students in applied learning settings are placed directly "in touch with the realities being studied. It is contrasted with the learner who only reads about, hears about, talks about, or writes about these realities but never comes into contact with them as part of the learning process" (Keeton & Tate, 1978, p. 2). Learning, however, does not occur through exposure to an experience alone but must be coupled with critical reflection exercises to maximize learning (Smith, 2011; Brooks, Harris, & Clayton, 2010; Ash & Clayton, 2009). Reflection, as defined by Lew and Schmidt (2011), is the process:

> that a learner undergoes to look back on his past learning experiences and what he did to enable learning to occur (i.e. self-reflection on how learning took place), and the exploration of connections between the knowledge that was taught and the learner's own ideas about them (i.e. self-reflection on what was learned) (p. 530).

Critical reflection is the central mechanism linking a student's experience to course curriculum (Ash & Clayton 2009; Brooks et al., 2010; Eyler, 2009). It is the medium through which students connect theory to practice. Creating meaning from applied learning experiences requires critical self-reflection; without it, these experiences may lack value and opportunities for student learning are missed or minimized (Vickers, Harris, & McCarthy, 2004). Therefore, it is important that applied learning be paired with critical reflection so that students fully integrate experiences into their learning. Ash and Clayton's (2009) Describe, Explain, Articulate Learning (DEAL) model is a common tool designed to foster deeper meaning from applied learning experiences. The DEAL model guides practitioners in creating reflections that should be effective, but this model does not necessarily address all areas of critical reflection. The model utilizes both broad-scale guiding ideologies and specific classroom practices that aid reflection practitioners in addressing student-learning outcomes through critical reflection (Ash and Clayton, 2009). While both these ideologies and practices are helpful in their own right, there is a noticeable gap between the more theoretical concepts and practical applications and there is not always a clear path from one to the other.

The positive impact critical reflection has on academic outcomes is well established. Ash and Clayton (2009) report that well-designed reflection exercises promote higher order reasoning, critical thinking, and problem-solving skills. Similarly, Chang and Chou (2011) found that reflection enhanced students' ability to learn, attitude towards learning, and application of knowledge, while Eyler and Giles (1999) suggested that positive learning outcomes, like deeper understanding, application of knowledge, and increased critical thinking skills were correlated with the rigorousness of critical reflection exercises. Scholars have focused primarily on *why* critical reflection is important, but we know very little about *how* critical reflection produces positive outcomes. That is to say, without a clear understanding of the mechanisms at play, optimizing the role of critical reflection will remain an unmet opportunity.

Research suggests that critical reflection exercises must be intentionally designed to target specific learning objectives for meaningful learning to occur (Ash & Clayton, 2009; Watson & Kenny, 2014; Hatcher & Bringle, 1997; Hatcher et al., 2004). Because critical reflection is often a foreign practice for students, faculty guidance is crucial in helping students make connections between experience and course content (Ash & Clayton, 2004). Sturgill and Motley (2014) found that students produced more meaningful reflections when given prompts designed to guide them into reflective thought. "Free" reflections, or reflection exercises without student prompts, were more descriptive, less analytical, less integrative, and more likely to be off-topic than guided reflection exercises. A similar study by Callens and Elen (2011) found that students achieved higher scores on critical reflection when they reflected using a linear approach versus a non-linear approach. Ash and Clayton (2009) posited that students "need structure and guidance to help them derive meaningful learning when they are outside the traditional classroom setting; otherwise reflection tends to be [little] more than descriptive accounts of experiences or venting of personal feelings" (p. 28). When students were guided through reflection processes, provided with multiple rounds of feedback, and given the opportunity to incorporate feedback into a final draft, the depth and quality of critical thinking improved across revisions (Ash, Clayton, & Atkinson, 2005). Thus, it appears as though instructor guidance and the framing of critical reflection influence learning outcomes.

Research also suggests that the quality of student reflections may improve over time if critical reflection is viewed as an iterative process rather than an isolated assignment. Ash and Clayton (2004) argue that critical reflection is not an innate skill for students but rather a process requiring multiple iterations of practice and revision. The more frequently a student engaged in critical reflection, the greater the quality of the reflection. Similarly, Lew and Schmidt (2011) found that students who engaged in reflective journal writing daily showed evidence of improved academic performance, though only to a minimal extent. While Hatcher et al., (2004) did not find a significant association between the number of reflections and student learning outcomes, the study did find that students who engaged in both ongoing journal reflections and a summative reflection showed greater gains than those participating in one form of reflection.

A number of studies suggested that providing students with feedback on critical reflection influences performance. Molee, Henry, Sessa and McKinney-Prupis (2010) found that when given the opportunity to incorporate feedback into future work, student's scores across various dimensions improved with each revision. These findings suggest that instructor feedback has the potential to improve student critical reflection skills (Quinton & Smallbone, 2010; Ash et al., 2005).

While the literature on critical reflection's impact on student learning outcomes is abundant, studies focusing specifically on the quality of critical reflection remain uncommon. There is no clear consensus on which factors most significantly impact the quality of critical reflection and student learning. This study attempts to fill this gap by exploring the factors that may influence student performance on critical reflection.

Methodology

Existing Assessment Data

Our investigation began with an existing set of assessment data collected over the course of three academic years from August 2013 through May of 2016. The ETEAL (Experiencing Transformative Education through Applied Learning) program provides funding for applied learning projects as part of UNCW's quality enhancement plan and all students involved in such projects complete critical reflections that are then assessed by a group of faculty evaluators. Initially, students were only required to complete summative, final critical reflections but beginning in August 2014, students participating in these funded projects were all required to complete both an initial intention and a summative final reflection. In light of our findings, this change was more

significant than we initially suspected, and we will discuss this at length further on.

While this dataset contains a wealth of information about student and faculty experience with critical reflection along with student performance scores based on common learning outcomes, our preliminary regression models could not reach any substantial level of predictive power using the variables already captured. Our next step, then, was to develop and conduct focus groups with experienced faculty to determine what variables, and by extension concepts, we might be missing.

Research Design

Given the limitations of our quantitative model and the restrictions inherent in a pre-existing data set originally collected for separate, internal evaluation purposes, we shifted the focus of our project to include qualitative methodologies for two focus groups with faculty possessing extensive experience with critical reflection pedagogy. 17 faculty members were chosen from a group of instructors who had previously received awards that required their students to complete critical reflections on their applied learning courses. We did not factor the scores of any of these instructors' students when creating our sample frame, only whether or not their students had completed critical reflections that had been previously scored in an annual evaluation. We did this to ensure a base level of faculty experience with reflective practices and, in our final sample, we had both relatively new faculty who had only utilized reflective assignments in one or two projects and tenured full professors who had regularly implemented reflection in multiple courses over the past eight years. The focus groups had representatives from all four colleges within the university, including those from Business, Education, the College of Health & Human Services, STEM fields, Social Sciences, the Humanities, and others. Our sample also included lecturers through tenured full professors, and all of the faculty contacted signed and agreed to the consent process approved by our Institutional Review Board. Our initial goal was to choose the first 16 volunteers for the focus groups and due to high response volume, we accepted a 17th participant volunteer to provide additional perspectives from other areas of campus. The final selection of participants was made to intentionally include as many representatives from different disciplines and career levels as possible with the primary common factor being their experience with critical reflection and applied learning pedagogies.

Three of the authors acted as facilitators for the focus groups with a total of 24 discussion questions. To find out which additional variables we needed to measure, questions focused on exploring student factors, faculty factors, and organizational factors that might influence the quality of critical reflections. Each focus group lasted 90 minutes with additional time for discussion. We saw a high degree of participation irrespective of participant position, title, or tenure. After the audio recordings of each focus group were transcribed, we used MaxQDA to assist in our coding and qualitative analyses.

Findings

After thoroughly exploring the information we gathered from our focus groups, we revisited our regression models with two very important insights: First, we had a better idea of which variables might explain a larger part of the variation in student scores, and second, our existing surveys and assessment tools had gathered almost nothing that could approximate those variables. The closest we came with the existing dataset was with frequency, which as mentioned above, was gathered as a self-reported number of instances in which students said they had engaged in critical reflection at various points in their academic careers. For the areas of framing and instructor feedback, we did not have distant proxy measures.

A grounded theory approach guided the analysis of our focus group data. This inductive method allowed us to uncover factors we had not considered during our initial quantitative analysis. After identifying emergent patterns, the factors faculty reported as influencing student performance on critical reflection were distilled into three primary themes: framing, frequency, and feedback.

Framing

Faculty continually brought up the importance of actively guiding students through the often-unfamiliar practice of critical reflection. One faculty member noted that, "you really can't give them a global-think-about-and-reflect [exercise], because they don't know what to do with that." Another faculty member remarked that, "the students don't necessarily have those reflective skills… and I find the better reflective thought with students when I guide the reflection and give it direction." An instructor who agreed that some students "just didn't have the skill set" addressed this by teaching students how to critically reflect. "…What I've done differently is teach them what reflection is. There's a process you go through to reflect. I model it, and I show examples. This is a reflective statement. This is not a reflective statement." It seems as though the framework through which critical reflection is introduced may affect student performance, possibly the result of students' lack of familiarity with critical reflection. When asked "what sort of framing do you think is most effective?", one faculty member responded:

> I talk about it in class. The first time I've done this I just gave the assignment. I never discussed them during lab or lecture. I found I got much better results if I not only give the assignment, but discussed it at least five, ten minutes before I let them go and work on the assignment.

For the purposes of this study, framing was operationalized as the way in which instructors present the practice of critical reflection. The context in which the reflection exercise is introduced, how the exercise is explained, and the reflection prompts used are all elements of framing. When discussing the evolution of their reflection prompts, faculty noted how, initially, prompts that were too broad or too vague yielded superficial reflections from students. Through experience, faculty found that they were able to target specific learning

outcomes through careful and intentional prompt selection. As one faculty member remarked, crafting prompts that are responsive to "what's happening in the actual application of the project" allows the instructor to probe students into deeper reflective thought and guide students into making connections between practice and theory.

Faculty members also discussed the importance of clearly articulating their expectations to students. One instructor stated, "If we actually compel ourselves to articulate here's what we'd like to see, and here's an example of that, it seems as though we're getting better results." Again, because students are often unfamiliar with critical reflection, it seems as though they are more likely to meet expectations when they are explicitly stated. Very simply, we cannot expect students to reflect critically if they are not taught what elements make a reflection "critical".

Frequency

The frequency by which instructors assigned critical reflection exercises also varied considerably. Some instructors reported assigning reflection activities every week, while others only required an initial intention and final reflection piece. Faculty who assigned multiple exercises reported improvements between reflections. An instructor who taught two different courses noticed marked improvements in critical thinking skills between the class that frequently engaged in reflection exercises and the class that only completed an intention and post-experience reflection. She noted, "It seems like the more times, the more reflections you assign, the better [they are]." One instructor who assigned reflection activities every week thought that as students became accustomed to critical reflection, they began reflecting while engaged in the applied learning experience. She noted that:

> While they're doing the activity, then they're thinking about those questions before you're even asking them, because… they know you're going to ask them anyway, so they might as well just process it while it's happening. They're anticipating your actual probe.

Recall our previous mention of the change made in August 2014 to UNCW's applied learning funding requirements and the fact that prior to that point, students were only required to complete a single, summative reflection at the end of the experience. In institutional reports, student scores improved substantially in several areas and most notably for the learning outcome of Intentionality (UNCW, 2017). While we cannot claim a firm causal link, it does appear that increasing the frequency of required reflections even by only one additional assignment has coincided with a subsequent increase in the quality of student reflections and the faculty participants in our focus groups supported this finding.

We asked instructors if they had "noticed any difference between students with prior critical reflection experiences and those who are new to the practice", and, in both focus groups, the first respondent said he or she did not know which students had encountered critical reflection prior to their course. One instructor did note that students who took multiple classes with her were essentially participating in "the next level of the same assignment" and were getting "better at it." However, it also appears that continually engaging in critical reflection even within a single given course may impact student performance. One instructor reported asking students the same types of questions for each applied learning experience, but, over time, "their answers improve and clean up." Another instructor who required students to complete a minimum of three iterations on a single reflection noted that:

> Doing repetition with an individual reflection…with multiple drafts has a massive impact… [and] it takes multiple rounds of edits before you can really get them to do it [gain control over their own learning]." Multiple iterations may help students better develop reflective skills.

Feedback

Instructor feedback also emerged as a prominent theme in both focus groups, though there was great variability among faculty with regards to providing feedback on student critical reflections. Several instructors provided feedback on every reflection, two instructors stated that they provided no feedback, and one instructor followed up only with students who were not meeting expectations. Some gave oral feedback to the class as a whole or met privately with students, while others offered written feedback on the student's work. Faculty members who provided feedback reported improvements between reflections. Not only offering feedback, but also providing students with the opportunity to incorporate instructor feedback into future reflections, appears to impact student performance on critical reflection.

Many faculty members acknowledged the value of providing individual feedback and expressed a desire to do so but, due to time constraints, felt it was unfeasible. One instructor met this challenge by using class time to reference student reflections, providing group feedback on "less reflective" pieces by integrating it into class discussion. Another instructor noted that, "students also value when you show that you immerse time in it." Providing feedback shows the students that the instructor is paying attention, thereby challenging this idea that critical reflection is just "busy work" and potentially increasing student engagement.

As discussed, our faculty focus groups uncovered three major themes regarding student performance on critical reflection: framing, frequency, and feedback. Instructor framing appears to most significantly influence student performance on critical reflection, with the best results produced when instructors explain the purpose and process of critical reflection, clearly articulate expectations, and connect prompts to course content. Instructors who were able to provide individual feedback on student work reported improvements between reflections, using a modified version of the AAC&U VALUE rubric (http://uncw.edu/eteal/resources/documents/CriticalReflectionScoringRubric.pdf). Faculty noted that reflections improved as the semester progressed, suggesting that the frequency by which students engage in critical reflection may be influencing the quality of reflections.

Discussion and Conclusion

While we initially thought that student and faculty experience might be the major determinants of whether students showed stronger learning outcomes, our analysis of existing assessment data showed that neither student factors such as GPA nor faculty factors such as familiarity with critical reflection pedagogy had a significant impact on the quality of student reflections. This made a qualitative inquiry into the subject more vital than ever, serving to not only inform and test the validity of our hypotheses but to also provide essential guidance for future quantitative data collection plans, analyses, and dissemination.

Nonetheless, our research was subject to several limitations, particularly with regarding to the existing institutional assessment data, which we used in an effort to model the influencing factors that emerged from our focus group discussions. For instance, the existing dataset only contained variables related tangentially to the frequency of reflection within a given project and there were neither variables nor proxy measures that could represent the type and level of feedback provided to students. While this did limit the present study to its qualitative components, it also provides us with a clear direction forward: future research into this topic should focus on improving data collection at the institutional level whenever possible, guided by the themes and insights drawn from these faculty focus groups.

Despite these limitations however, we were able to get a better grasp on the actual experience of faculty members While we were confronted with a number of limitations in our quantitative attempts, we arrived at a deeper understanding of the actual experience of faculty instructors administering reflective assignments to their students. Apart from the obvious goal of furthering our progress toward answering our research question, this also helped us frame our own analysis and interpretations of the data with the lens these faculty members provided us in their own words. In the end, it was neither prior exposure nor student GPA that faculty pointed to but rather a collection of factors, which all fell into one of three emergent themes: framing, frequency, and feedback. While we do not presently have the breadth of data needed to test predictive models using these variables, this has given us both a number of experience-based findings that we can disseminate to potentially foster improvement in teaching practices and a clear direction for our future work. Faculty repeatedly mentioned the importance of feedback, which included guidance, revision, and commentary on either satisfactory or unsatisfactory student reflections. Moreover, as noted by Ash and Clayton (2009), students require structure to cultivate meaning from reflective exercises. As a result, instructor feedback may help students understand what constitutes critical reflection. A report conducted by the National Research Council (2001) states that "providing students with information about particular qualities of their work and what they can do to improve it is crucial for maximizing learning" (Pellegrino, Chudowsky, & Glaser, 2001). Additionally, devoting class time to feedback on critical reflection highlights its importance and promotes student engagement (Quinton & Smallbone, 2005; Higgins, Hartley, & Skelton, 2002).

Frequency stands out as a finding of particular interest, since frequent reflection also results in students with more experience with reflection and as you will recall, this study was formed as a result of the lack of predictive power observed in models containing measures of student experience with critical reflection. It was not so much that our flow of logic was incorrect as incorrectly focused; it isn't that students who have done more reflections in their lifetime have better learning outcomes so much as that students who frequently reflect gain more through the reflection process. Literature suggests that reflection is a learned skill (Ash & Clayton, 2004; Hatcher et al., 2004), and, as our faculty reported, continual practice may improve critical reflection skills. Like all skills, however, frequency alone is not likely to result in greater learning and so it may be that we will only see strong effects in models of frequency that also contain measures of the feedback provided to students throughout their reflective assignments.

It is also important to nest these statements in the context of the particular faculty group involved in this study, as all faculty involved in the focus groups had taken part in projects which required their students to complete both initial final, summative reflections. Given this, we cannot disentangle their testimony regarding the usefulness of frequency from the presence of a summative reflection and therefore it may be, as Hatcher et al. (2004) suggest, that students need both continuous reflections and a final, summative exercise to reap their full benefits.

The way in which instructors present critical reflection to students, which we operationalized as framing, was also salient. Instructors who made learning outcomes evident to the students and had clear reflective prompts reported higher quality reflections from their students. Faculty from both focus groups voiced concerns that their students did not always understand the goals, purpose of reflective exercises and consequently produced superficial or disorganized reflective pieces. One faculty member centered their critique on their own preparations:

> I think a lot of the flaw is us. We're saying, wow. That's way too fuzzy. If we actually compel ourselves to articulate here's what we'd like to see, and here's an example of that, it seems as though we're getting better results.

The consensus in their comments leaves us with a clear outline of an unfinished portrait, one suggesting the need for intentional and clear framing for reflective exercises along with a need for future study on the ways in which we frame reflections for our students.

Ensuring that students will both achieve the intended learning outcomes is one of the primary and consistent challenges facing higher education today. How then do we approach critical reflection critically? How do we make sure that this effective practice is, in fact, being effectively implemented and that all students who engage in reflection are receiving the purported benefits? Moreover, is there a way to further increase the benefit of critical reflection, and what further impact would that have on learning outcomes?

While we do not have a definitive answer just yet, our initial work with existing assessment data and faculty focus groups has given us valuable direction. Student and faculty experience with reflection is important, but it's about more than just a raw count of how many times they have completed or implemented critical reflections in the past. The frequency of reflection within an experience, the depth and structure of framing applied to each reflective experience and activity, and the feedback provided to students to push their reflections beyond superficial responses were all key factors to ensure that students not only produced thoughtful and well-articulated reflections but also that they achieved their intended learning outcomes. While we still lack assessment data quantifying these three aspects, we now have a framework that informs our future assessment of critical reflections, recommendations for faculty implementing critical reflection, and a new perspective on student experience and engagement with critical reflection pedagogy.

While we initially began with the DEAL model as a cognitive framework for critical reflection, we did not strive to understand how faculty could apply the DEAL model at our institution. Instead, our goal was to fill in the gaps of the DEAL model and understand the factors that impacted student critical reflection, student performance, and student learning outcomes. Although the DEAL model (Ash & Clayton, 2009), is an important and influential model, it does not fully address the factors that impact student reflection scores. Through our focus groups we found a way to provide a structured best practice mechanism that can be offered to faculty and practitioners to best help students reach the intended student-learning outcomes through critical reflection. Conducting regular focus groups with practitioners should provide a foundation from which we can unite instructor practice with our broader analyses of assessment data to create new, concrete best practices and recommendations for applied learning instructors. At present, we can already suggest that instructors consider increasing the frequency with which they administer reflective activities, detail and record the techniques they use to frame those activities, and to provide consistent and timely feedback to students for each of those activities.

Future research into critical reflection pedagogy should explore the variables identified in our focus groups as potential factors influencing student performance on critical reflection. Conceptualizing and operationalizing these three predominant variables, framing, frequency, and feedback, will allow future researchers to develop research questions focusing on how these factors potentially impact student performance. Examining the nature of, and possible interplay between, these variables could lead us to a better understanding of how to best approach the practice of critical reflection.

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Appendix A

Focus Group Informed Consent Language

Student Experience, Faculty Expertise, Student Performance in Critical Reflection Assignments

Thank you for taking the time to participate in this focus group today. Our goal is to gather information about your experience with critical reflection pedagogy and the factors that may influence student performance in critical reflection.

If you agree to participate in this focus group you will be asked questions relating to experiences with student reflections, prompts and critical reflection pedagogy. You will be joined by 7-10 other faculty members. The study will last between 60 and 90 minutes. Please note that the study will be recorded for later transcription. Your responses and your participation here today will all remain confidential. Your participation is voluntary and you may leave the focus-group at any time. For participating in this focus group, you will receive a complimentary catered lunch. There are no costs for participating in this study.

Taking part in this focus group is in voluntary and not a part of your University duties, and refusing will not affect your job in any capacity. This focus group does not offer any special job-related consideration.

Again, we thank you for sharing your time and knowledge with us today.

Appendix B

Faculty Focus Group Questions

GUIDING QUESTION: WHAT FACTORS INFLUENCE STUDENTS' PERFORMANCE IN CRITICAL REFLECTIONS?

INTRODUCTION

a) So to start off, let's go around the table and state our names and our department for everyone.
b) [After introductions] And so everyone here has conducted a critical reflection exercise in one of their courses at least once, right?
c) Excellent. Alright, let's start with the first question then…

SECTION 1: STUDENT FACTORS

1) When you give a critical reflection assignment, what do you want students to get out of the critical reflection process?
   - How would you go about improving those outcomes?
   - Do you think critical reflections have any impact on the other learning outcomes for your course? In what ways?
2) How often do you think students should reflect on their learning using a critical reflection assignment during a project?
   - Can you explain in more detail?
   - [*If CR was used throughout a project*] What strategies have you used to facilitate reflection throughout the project?
3) What do you think an exemplary student reflection looks like?
4) What challenges do you think students face in regards to critical reflection?
5) What do you think could improve the quality of student critical reflections?
6) How well do you feel your students understand the goals and purpose of critical reflection?
7) Have you noticed any difference between students with prior critical reflection experience and those who are new to the practice?
   - [*If Yes*] What differences have you noticed?
   - Have you noticed any difference between students with prior experience with other applied learning?
   - What about students at different class levels, such as between first years and juniors?
   - Do you notice any differences between students who have had previous coursework in the field, particularly majors, and students who have not?

SECTION 2: FACULTY FACTORS

1) Have you used critical reflection in other courses either before or after being funded by ETEAL?
2) How do you frame critical reflection exercises for you students? What sort of framing do you think is most effective?
   a. For example: do they do this in class? Do you encourage class discussions on students' experiences? How do you explain the process of reflection to your students?
   b. Do they receive feedback on previous reflections?
3) What is the most challenging, or gives you the most difficulty, with regards to critical reflection activities?
4) Do you grade your students' reflections?
   a. If so, what criteria do you use to grade them?
   b. What rubrics (ETEAL or otherwise) do your students have access to before they complete their reflections?
   c. What do you think about making reflection assignments part of a student's grade?
5) If you perform your own assessment of reflections, can you tell us about how you assess your students' performance?
   a. To what extent do you think we can use critical reflections to assess and measure student academic progress?
6) What are your strategies for constructing critical reflection prompts?
   a. What are your main goals when you're designing critical reflection prompts?
7) Have you ever attended any workshops or institutes (Summer Institute, ALTC workshops, etc.) that dealt with critical reflection?
   a. What impact, if any, have these workshops or institutes that you've attended, had on your approach to critical reflection?
8) What do you think would improve your student's experience with critical reflection? What resources, if any, would you need to achieve this?
   a. This is not just in reference to their performance, but their overall experience with the practice of critical reflection.

CONCLUSIONS

1) Does anyone else have any other thoughts about what factors might influence or determine how well students do in their critical reflection assignments? Anything else that you think could help improve the quality of critical reflections? Anything that might limit student performance
2) Thank you all so much for taking the time to speak with us today! We have the room until 1:00pm and feel free to take as much food as you would like until then. If you have any questions please don't hesitate to ask, and thank you again for your help with this Focus Group.

SECTION 3: ADDITIONAL QUESTIONS

1) In what ways if any does critical reflection tie into your individual teaching practices?
   a. If at all, how does it impact your teaching practice?
2) What do you think about the way critical reflection is utilized here at [authors' affiliated university]? In higher education in general?
3) Have you utilized critical reflection pedagogies at previous institutions?
4) What do you think is the most beneficial/detrimental aspect of critical reflection?
   a. How would you enhance/mitigate that effect?
5) Do you think critical reflection is useful for faculty as well?
   a. (Specifically engaging in CR about your teaching)
   b. If so, why?
   c. Your experience in performing critical reflection?
6) What resources do you think could help improve your own experience with critical reflection?
7) Are there any other ways that you utilize critical reflection in your courses?

Playful learning? An extreme comparison of the Children's University in Malaysia and in Australia

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Abstract

Playful learning is frequently conceived in binaries: fun/hard, child/adult, and formal/non-formal learning. The term 'playful learning' lacks a coherent definition. This is understandable given it is a multidisciplinary field of research. The article develops an extreme-comparative method to analyse a non-formal learning program, the Children's University, in Malaysia and in Australia. It reveals structural differences in implementation, attitudes to playful learning, and cultural attitudes to non-formal learning. The cases draw on in-depth interviews with service providers. Finally, the article describes a 'virtual circle' which can be used to understand playful learning in different contexts.

Introduction

Educational and moral theorists assert that play is an ally of education and public improvement (Piaget, 1999; Henricks, 2008; Mooney, 2013). The benefits of play for learning are well understood, particularly in the early years of life (Papert, 1980; Piaget, 1999; Mooney, 2013; Hallet, 2017). Unsurprisingly, adults also learn through play. Yet understandings of playful learning vary widely. Play is a term used to cover a multitude of activities (Sutton-Smith, 2001). Playful learning is situated in the literature within a binary or conversely viewed as containing tensions as well as continuities (Sefton-Green et al., 2015). Play and learning are both influenced by context. Analysing the Children's University, which operates in Australia and in Malaysia, enables exploration of playful learning, particularly during non-formal learning experiences. Fundamental to the analysis is the 'extreme-comparative' method. It draws out prominent features between Children's University in Australia and Children's University in Malaysia. Our extreme comparative approach regards the two field sites as significantly different. The comparison illuminates internal biases in conceptions of playful learning, structural differences in implementation, and the influence of cultural attitudes.

Non-formal learning is defined here as learning embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support) (CEDEFOP, 2014). This kind of learning is intentional from the learner's point of view and encompasses more traditional structured extracurricular activities such as sport, music or dance as well as activities such as visiting a museum or gallery or attending a concert (Birdwell, Scott, & Koninckx, 2015). Thus, non-formal learning is possible anywhere with the participant taking a central role in the learning process. The Children's University takes this aspect of learner-centredness even further through encouraging children's agency (Macbeath, 2013). Green et al. (2015) observe that playful learning can mediate the shifting boundaries between home and school, and formal and non-formal learning. The authors have developed a framework, the virtual circle, to situate features of playful learning. The virtual circle spins. Through spinning, boundaries are blurred. The virtual circle is characterised by polyphony, in which different types of playful learning co-exist.

In the first part of the article we review the literature. We then give a brief history of Children's University and describes its features and mode of encouraging of extracurricular learning, before expanding on the research method that is used in the analysis and discussion. The discussion reveals differences across the two sites, particularly in terms of the attitudes towards non-formal learning, and the roles played by parents. In the concluding section of the paper the virtual circle is presented as a device to contribute to understandings of playful learning across contexts.

Literature Review

It has been observed that playful learning is difficult to define (Sefton-Green et al., 2015). Play is often divided into object play, in which children explore objects and their properties and use them in creative ways; pretend play, in which children experiment with fantasy and ideas, including social roles; and physical play, in which children use their bodies to run and jump, wrestle, and interact with the physical world. The ways in which these behaviours interact with and enrich learning are well-represented by Brian Sutton-Smith whose ideas about the multiple layers or rhetoric of play have been compared to the literary theorist Mikhail Bakhtin's concept of the "carnivalesque" (Cohen, 2009, p. 176). In his multilayered description of seven rhetorics of play, Sutton-Smith classifies Bakhtin's theories as a rhetoric of imagination. Sutton-Smith (2001) views play as imaginative, spontaneous, unpredictable, flexible, and powerful. These same features are also evident in Bakhtin's notion of carnival. The developmental view of play, according to Sutton-Smith, "is an ideology for the conquest of children's behaviour through organizing their play" (2001, p. 205). Open-ended play, outdoor environments and knowledge gained at home as well as school are regarded as important to learning outcomes. In contrast, a Bakhtinian carnivalesque perspective of play and language examines self in relation to the language and actions of others (Bell, 1998; Gardiner, Bell, & Gardiner, 1998; Cohen, 2009). For Bakhtin (1984, p. 8), "the unofficial carnival is people's second life, organized on the basis of laughter". Carnival is a way of breaking down barriers, of overcoming power inequalities and hierarchies (Cohen, 2009). Similarly, "pretend play can be heavy and light, ritualistic and playful, earnest and frivolous" with an ever-changing cacophony of voices (Sutton-Smith 2001, p. 128).

Bakhtin's (1986) ideas of heteroglossia and cacophony point to the dialogical relation between play and learning in understanding playful learning. Cacophony refers to multiple voices. During play, like in doing comedy, voices of seriousness and diversion are articulated simultaneously. Play often straddles the formal and accepted, together with the informal and unexpected (Sefton-Green et al., 2015). When people play, they know the multiple contexts they are bringing together, as characterised by heteroglossia. Heteroglossia points to multiple contexts, and the playful context embeds "serious" rules that guide behaviour and also can be broken allowing for irreverence, pretence and acting (Ooi, 2013). Play is serious and not serious. The playful context is also set in a formal context that allows players to strategically switch between roles and to seriously learn.

Non-formal learning may take different forms, including self-directed learning, in which individuals set out to learn something; incidental learning, in which people learn as an unintended consequence of doing something; and socialisation, also known as tacit learning, in which cultural, social and behavioural values are unconsciously incorporated into a personal framework (Holloway & Pimlott-Wilson, 2014; Erstad, Gilje, Sefton-Green, & Arnseth, 2016, p. 201). Playful learning has a role in all of these forms, from the playful creativity and serendipity inherent to self-directed

and incidental learning to the laughter-based transmission of social norms. However, perceptions of play differ, influencing what is learned, and are intimately related to one's culture: in the West, an understanding of play has been most significantly influenced by what play is not – play is not work, play is not serious. In contrast, Bakhtin regards play as dialogical (Vice, 1997). The character of the imaginary in play encompasses the internal dialogue of voices – it can be serious or silly, dark or light – there is a heteroglossia of voices characterised by fluidity and plurality (Bakhtin, 1981). Play is then a complex process with the world itself – its culture, institutions and values intersect whereby people play 'at', 'with' or 'in' their physical environment, minds, bodies, ideas, norms and language (Henricks, 2008).

The model of Children's University implemented in Malaysia and Australia started in Birmingham in the United Kingdom during the 1990s (Macbeath, 2013). It has expanded its reach globally, with the model now operating in China, New Zealand, Malaysia and Australia through 'social franchise' licence agreements with Children's University Trust in the United Kingdom. Research has not yet been conducted comparing the program across countries. Malaysia and Australia were the first countries to implement the program outside the United Kingdom and for this reason were selected to study.

Children who join the Children's University are given a 'Passport to Learning' in which they record participation in extracurricular activities at validated Learning Destinations. After the children accumulate 30+ hours of activity their achievement is celebrated with their parents at a formal graduation ceremony. The domains of learning and play overlap and are blurred within the Children's University model. This occurs intentionally through the validation process. Children's University staff validate extracurricular learning activities that are not incorporated into a formal curriculum in order that they can be counted towards the 30+ hours needed to graduate. By emphasising self-directed learning, Children's University provides a mechanism through which the transmission of values, habits and attributes of learner-centred education outcomes can be fostered.

Globally, the features of Children's Universities have evolved since the 1990s to reflect the socio-political contexts in which they exist. In each locality, the mode of delivery is attenuated for place, however, they frequently share the following characteristics:

- voluntary participation;
- part of a non-formal learning ecology;
- engage children aged 7-14 years;
- aim to foster curiosity.

Legislative and normative dimensions of extracurricular learning differ between Malaysia and Australia in several important respects. In Malaysia, education policy and legislation is regarded as a key policy lever to achieve the socio-cultural and economic goals of the state. The Education Act 1996 is founded on the National Philosophy of Education and aspirations of Vision 2020. Co-curricular activities are compulsory and essential to the education system in Malaysia (Maimunah, 1999). In Australia, whilst there is no legislative requirement to participate in co-curricular activities, education is regarded as fundamental to building a competitive workforce and competing in a global knowledge economy (MCEETYA, 2008).

Researchers in Malaysia found that low household income families are less likely to participate in extracurricular activities because those activities involve fee-based lessons or classes (Jelani, Tan, & Mohd-Zaharim, 2015). Our interviews with the Children's University providers in Malaysia supported this. Capacity to pay for non-formal learning activities is similarly a relevant consideration in the Australian context (Ooi & Shelley, 2019). For example, the Longitudinal Study of Australian Children found that children aged 10 to 11 years in low socio-economic position families spend less free time in organised activities (including organised sport on school days and less time in leisure/cultural activities outside the home on non-school days), than children in medium/high socio-economic position families (Mullan, 2014). Skattebol and Redmond (2019) reveal a tendency for young Australians living in disadvantaged locations to resist or opt-out of out-of-school hours opportunities that were costly or located in areas of perceived higher-advantage. The Children's University program design aims to offer quality extracurricular experiences for children irrespective of parental means (The Children's University Ethics Policy, 2016). In Australia, efforts are made to secure low cost, and no cost non-formal learning experiences for program participants. By contrast the cost of participating in Children's University Malaysia-Asia is intentionally higher than other extracurricular activities "because it is high level teaching" (KL2).

Methodology

The comparative method is positioned here as a small-number and case-oriented technique (Rihoux et al., 2012). We have devised an extreme-comparative methodology for this research. That is, the two sites are perceived as markedly different, and by comparing them, the study can identify deep assumptions and structural differences in the two places. Such an approach is particularly appropriate when aiming to draw out broad circumstantial lessons, and to accentuate societal issues that need to be discussed. In this case, we are looking at non-formal learning within the educational systems of Australia and Malaysia.

Pearce (1993) points out that comparative research faces three general interrelated issues. First, a comparison is only sensible if it is based on clearly understood problems. Second, there must be conceptual equivalence. Third, the studies must pay attention to contextual factors. Pearce offers a framework to conceptually structure comparative research, which this study uses as a guide.

Common Research Problem: It is thus exploratory but departs from existing research on the Children's University in terms of its scope and objectives. Existing research is concerned with the impact of the program on children's attendance, attainment (literacy and numeracy), and

aspirations (Macbeath, 2013; Hamshaw, 2015; Harrison, Adam, & Skujins, 2017; Gorard, Siddiqui, See, Smith, & White, 2017). This study examines one aspect of the comparative study focusing on playful learning in the context Children's University in Australia and Malaysia.

Conceptual Equivalence: Besides focusing on Children's University in both countries, we employ the concepts of playful learning in framing our understanding of the two sites.

Contextual Factors: This study emphasises contextual factors to highlight and contrast differences between the two cases. The common starting points for comparison are their many similar ideals, goals and purposes. The choice of implementation strategies adopted in each country reveals the functions these programs serve in society, together with the assumptions embedded in their respective education systems.

In applying our extreme-comparative methodology, we seek to identify and address deep assumptions and structures in society, forcing a holistic view. In this case, we look at the relationships between the education system, social stratification, and non-formal learning. Against this backdrop, we pinpoint what activities are considered playful learning in both societies, and the need to understand what makes learning 'fun' in both places.

In 2017, 13 participants were invited to participate in the research based on their professional involvement in the implementation of Children's University either directly or at Learning Destinations in Malaysia and Australia. These Learning Destinations are sites that offer validated learning experiences for Children's University participants. They were selected based on their type, for example, a free public service such as a library or public gallery, and private providers. In total, we conducted four interviews in Malaysia, and nine in Australia. Becky Shelley and Can-Seng Ooi have conducted in-depth interviews in Malaysia during field studies in October 2017 and in Tasmania, an island state of Australia, between September and November 2017. Because of research ethics considerations and the small groups of people working in the context of the Children's Universities, we will not be providing more specific details on the individual participants, except to identify them as Learning Destination or Children's University staff. The participant quotations in this paper come from semi-structured in-depth interviews over an hour or more conducted by the researchers and included second interviews in two instances. Interviews were recorded and transcribed and provided for member checking. In addition to the interviews, the researchers collected other types of data, including attending Learning Destinations.

In terms of research merit and integrity, unstructured in-depth interviews is a style of interviewing that emphasises the expertise of the interviewee, in contrast to structured interviewing, where the power lies with the interviewer (Fisher & Marcus, 1986). In-depth interviews reflect interest in understanding other people's experiences (King & Horrocks, 2010). To build trust, the researchers shared information about their personal connections with the topic under study. The interviews were conducted in English. Malay is the official language in Malaysia.

	Australia	Malaysia
Time at Learning Destinations recorded	Yes	Yes
Learning assessed	No or informally	Formal
Emphasis on playful learning and fun	Yes	Serious learning considered as fun
Learning Destinations validated	Yes	Yes
Wide variety of experiences available to participants	Yes, as deliberately planned	Limited, and deliberately planned

Table 1: Play, fun and assessment: Two contrasting approaches.

Findings and Discussion

Examination of Children's University in Malaysia and Australia revealed important differences in structure, notably the approach to assessment of activities, the role of playfulness, and the variety of activities. Table 1. Play, fun and assessment summarises these differences.In Table 1, differences in assessment, focus and seriousness reflect contrasting views on the goals of participation, and what constitutes success in learning. In Malaysia, equipping children to succeed in a competitive environment was a strong motivation. In Tasmania, a variety of motivations were apparent, including families doing fun things and gaining experiences together, and students discovering their ability to achieve their own goals under their own steam. In Malaysia, attention is focused on children's performance rather than parent-child interaction. For example, it was highlighted that "If we see a child not improving we tell the parents, we call them up and chat and say he is not attending properly. You want to play chess, take it seriously, you want to play hockey, you take it seriously, if you want to be a scout, be a top scout, a career scout, become a Queen's scout, not just you walk around then I am a scout" (KL1). In Malaysia, Children's University is a mechanism to support high achievement learning. In Australia, emphasis was placed on a learner-centred approach. An interview subject from a large publicly-funded institution noted that "when children bring their adults with them that can often make a successful visit. Rather than the parents bringing the children along" (LD4). Table 2 presents a selection of representative views.

Children's University participants in Malaysia frequently have their performance assessed in order to progress towards graduation. One interview participant reported that the learning process in Malaysia within the Children's University involved a similar model or approach that they would adopt with adults in corporate training (KL1). The interviewee indicated that assessments are focused on "quality control, total control. Otherwise it is just a certificate of no value. In my whole career, 50 years in education…I will never sign a letter or passport or a certificate until I know it has value there" (KL1). In Australia, the Learning Destinations and Children's University employees do not formally 'assess' the quality or standard of learning at an individual level. This was reflected in an interview, "I don't believe in worksheets, I don't think you need to have a little diploma handed out that you have taken part in it, the fact is you have been there" (LD3). Learning Destination activities are validated

by Children's University program staff, but individual performances are not a consideration in terms of progress towards graduation. In Australia, the children simply need to participate. Time on task is rewarded at the graduation ceremonies. Children can only count ten hours in any one activity so are incentivised to try new things. A perspective is that Children's University "actually allows them to take on learning that's fun and involves play that's not connected to schoolwork" (CU3).

	Tasmania	Malaysia
Fun comes first/ fun will hold you back	CU3: The holiday programs are really valuable because they bring the children and families onto Campus for example doing fun things and opening the doors of the University to families that may have never been anywhere near a University. I think that is really valuable.	KL1: In Asia, it's competition. Very competitive. The parents will tell me in the face, "If my child doesn't get anything out of it, she [the child] is not interested. She must use your certificate to increase her chance for an overseas job or go to university.
Self-drive/ discipline	CU1: If it was compulsory it wouldn't work, we are celebrating the fact that these kids are choosing to invest their own time and energies into things that they want to learn about.	KL1: We have a lot of students but most of them drop out because they have to work. This is not just about fun. It's real serious business. You come late to class, or you come late for the seminar, I don't sign the passport.
Moments of pride Personal/ competitive	LD4: We had a boy from [disadvantaged suburb] that came that was very disengaged, and he designed a 3D design and printed it out. What a joy that he could show that he could take back to his family to say that he could actually do something.	KL2: We can see that our students are beaming with pride because they have acquired general knowledge that their other classmates do not have. They can tell you the capital of Australia.
Interacting/ observing	LD5: The adults absolutely loved the activities. It crossed all the boundaries.	KL3: The moment school finishes they are at swimming, piano, and this and that…It's a competitive world, very competitive.

Table 2: Two contrasting views on success in learning.

In Australia, Children's University is marketed as fun and playful learning. The Children's University Australia web landing page features a map of Australia and invites people to "Enter the University of Fun" (Children's University Australia). In Malaysia, Children's University is regarded and situated as serious rather than fun. The authors characterise Children's University Malaysia-Asia implementation model as purposeful learning. It is purposeful learning because it incorporates independent assessments of skill/knowledge acquisition and it seeks to develop a discrete suite of attributes and knowledge that enhance public speaking and leadership skills and confidence within the formal education system (see Picture 1). This does not mean that it is not fun or enjoyable for the students. Rather, enjoyment is expected to derive from achievement and improvement rather than from the 'fun-ness' of the activity. Noting the distinguishing features between the purposeful learning associated with Children's University Malaysia and the emphasis on fun in Children's University Australia we can draw a distinction between Malaysia's emphasis on private tuition for academic subjects in contrast to Australia's emphasis on fun in learning. Our interviews in Malaysia suggest that parents may regard extracurricular activity as important for children's success and as preparation for adult life – stressing competition and accomplishment. In contrast, Australian parents are more likely to place value on enjoyment of learning.

Picture 1: Place where students learn public speaking in a Malaysian learning destination

The Children's University is also about parents and carers. It is evident in both cases that parents and carers seek to do the best they can for their children. As mentioned above, children's participation in extracurricular activities in Australia involves an economic impost and as such is influenced by capacity to pay. It also requires parents to invest time, transport children and sometimes they also need to stay and supervise or engage in activities themselves. Children's University in Australia is well supported by the parents of the children who are involved. Parents and caregivers often take children to activities and participate themselves as a family group and attend graduation ceremonies. This was reflected in an interview with a Learning Destination in a socially and economically disadvantaged region of Tasmania, "It is either a mother or a father and quite often a grandparent who will bring the children and it is very important for us to have contact with the older generation. We are very open to have a wide range of ages participating… I really encourage adult and child participation here. It is a family thing if they can" (LD3). In another interview, a staff member from Children's University in Australia noted they "had feedback from one student who said we didn't do anything on the weekends but now we go to the website and we go well what's happening this weekend and what can we do that's Children's University activity for this weekend. Therefore, it helps inform parents about some great activities that they can get involved in and it gives them a structure which is important as parents struggle sometimes with knowing what to do" (CU1).

In Australia, the Children's University Learning Destinations offer the opportunity for children and adults to learn together in a playful manner. This is often characterised by the child leading the activity and the parent co-creating and interacting with the child. An employee at a small regional art gallery in Tasmania noted "[parents] know that art and creativity is good for you (a bit like broccoli), but they haven't had the opportunities themselves, but they sense that it should be encouraged and rewarded and applauded and helped. [During activities] they also have a go and are as happy as their kids" (LD3).

In Malaysia, parents and caregivers are also trying to encourage and reward children in ways that will support their children's opportunities. They are equally engaged in supporting their children's education; however, other than

the graduation event they are not required to participate in activities with their children. In Malaysia the parents "drop them off. The [children] spend three hours and then they go" (KL2). This stands in contrast to a comment from a Learning Destination staff member in an outer-city suburb in Tasmania, highlighting: "intergenerational learning opportunities like 'Maker Space' family afternoons parents get, particularly with teenage children…. if [the activity] is not teenagers the parents are more likely to drop and go. But I think if it is teenagers, they are using it for bonding" (LD2).

Discussion and conclusion

We acknowledge that the Malaysian and Australian contexts are very different. The extreme comparison approach employed has allowed us to not only identify stark differences in contexts but also to draw lessons that have broad implications. These lessons can be divided into two areas: how to achieve success through non-formal learning; and parental and carer engagement in learning. Children's University in both countries can be regarded as mediating and supporting broader learning outcomes by shifting boundaries between formal and non-formal learning.

We have created a framework, the Virtual Circle (diagram A), to explore the dialogical dimensions of playful learning within the Children's University (Shelley & Brown, 2018). In Australia, the non-formal learning that occurs through participation in the Children's University foregrounds the following aspects of playful learning, with an emphasis on the *process*: interact; (co)create; and (re)connect. In Malaysia, the emphasis is the *outcome*: observe; engage; and change. In each context, distinct varieties of playful learning co-exist.

Diagram: A Virtual Circle (Shelley & Brown, 2018).

Different societies have different perspectives on childhood and the kind of experiences children should have (Ryan, 2008; Tisdall & Punch, 2012; James & Prout, 2015; Ember & Cunnar, 2015). In Australia and Malaysia, Children's Universities have adapted to, and reflect, the local views of childhood and education: views and values on childhood and education which are embedded in the social system of the community. But Children's University is not only reflecting. It is also transmitting values, behaviours and attitudes towards learning in both Malaysia and in Australia. Our interviews revealed a tendency within each site to underemphasise the dialogical and carnivalesque dimensions of the children's learning behaviours and describe the processes in more binary ways. This is particularly evident in the learner-centred emphasis in Australia which tends to enjoyment, and exploration. For example, an employee of Children's University in Australia commented:

> Do we want to put a test around Children's University learning? I don't think so. Wouldn't that defeat the purpose of what we are trying to say with this program, that learning is fun, it's about exploration, adventure, participation... and that you have to find what you are passionate about? (CU2)

The structures of locally-embedded Children's University programs transmit values. The graduation ceremony which is a core component of the Children's University model is a moment of pride for parents and caregivers. It caps off an achievement. However, the paths to graduation in Tasmania and Malaysia are different. The Tasmanian approach tries to be an alternative to formal learning, while the Malaysian approach affirms diligence and achievement. The Malaysian approach to non-formal learning within the Children's University places limited value on engagement unless it is tested and subjected to a quality assessment. The emphasis on fun in learning at Children's University Australia is learner-centred and aims to expose students to new experiences, such as a visit to a university or attendance at their own graduation ceremonies. However, a Bakthinian reading will highlight that the more serious learning in Malaysia has become a game for children to achieve. It is possible to be tested and have fun. Playful learning is necessarily dialogical.

Attitudes to playful learning are already, and always linked to culture. While it is not meaningful to just transplant social practices across cultures, it is healthy to reflect on our cultural imagining of how our children should be brought up in relation to learning. For example, the dichotomous positioning of fun/play and testing/assessments in Australia may be false and not helpful. The question must be asked: is there an underlying cultural attitude that if it is not fun, then it is too hard? The Malaysian case shows that more demanding learning can also be fun, particularly if the students find the learning meaningful and even purposeful. Therefore, in Australia, a more nuanced approach could be developed informed by insights from the Malaysian experience.

For Children's University in Malaysia, perpetuation of elements associated with the "Tiger Mother" image might be considered. The "Tiger Mother" – coined by Yale psychology professor Amy Chua in her autobiography (Chua, 2011) – depicts parents who prioritise school work above all else, with other activities geared towards winning awards and improving the child's future. Such parents seek to give their children the best start in life by managing the child's self-esteem and pushing them to achieve more, frequently with undesirable psychological consequences (Cheah, Leung, & Zhou, 2013; Chua, 2011). Children's University in Malaysia is arguably perpetuating the Tiger parenting phenomenon. Leisure activities are considered opportunities to support

formal learning outcomes. Here, the Australian goals of broadening student experience or encouraging family involvement may augment the existing approach.

The Children's University in Australia and Malaysia share a program logic; however, their implementation practices function differently in the different socio-cultural and political settings in which they operate. Through the extreme-comparative approach, the following issues emerged. The first involves playful learning and purposeful learning. In Australia, the emphasis is on interaction, (co)-creation, and (re)connection with parents and care givers having a role in the non-formal learning process. In Malaysia, the activities are geared towards observing, engaging, and changing student performance, where the learning outcomes are tested. The assessment in Malaysia is more formal and rigorous. Such an approach is frowned upon in Australia because it is considered too serious and intimidating to the young participants. Related to these issues, is the different parental engagement styles in the two places. The program in Australia offers a structure for parents to organize weekend and holiday activities for the whole family. Families visit places that they may not otherwise attend. In Malaysia, the parental engagement is at the level of paying for the activities and receiving feedback on the progress of their children. Yet it has been observed that when thinking about play, there is a need to be mindful that definitions, classifications, and reductions may do an injustice to the phenomena (Schwartzman, 2012). Playful learning is carnivalesque, simultaneously challenging and easy, measurable and unmeasurable, deeply serious and seriously fun.

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Educational goals, assessment preferences and approaches to learning of MBA and MPA students in Singapore

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Abstract

This study seeks to examine the educational goals, learning approach, and assessment preferences among part-time Master of Business Administration (MBA) and Master of Professional Accounting (MPA) students in Singapore. The quantitative study uses a questionnaire that employs a revised two-factor study process questionnaire (R-SPQ-2F) to identify students' approach to learning, and the adapted Assessment Preference Inventory (API) to examine students' preferences to different assessment types and tasks. The sample comprises 101 students (55 MBA and 46 MPA students) from various age groups, of which 57 are male students.

The results of this study showed that educational goals relating to career advancement/enhancement and improved knowledge and skills were the key motivational factors that lead students to pursue postgraduate studies. When it comes to approaches to learning, students generally reported adopting a deep learning approach. This approach to learning was also evident in the assessment preference where they preferred assessments that required problem solving and application of materials learnt during the course. Among the five assessment types, respondents have a strong preference for individual assignments and showed least preference for exams. However, there was no significant difference in the preference for any of the assessment items/format among gender and age groups.

The findings in this study can inform curriculum redesign for both programmes to suit the needs of existing students and also to increase their appeal to prospective students. The respondents' views on their learning approach and assessment preferences allow instructors and module leaders to rethink the teaching pedagogy and current assessment structure that favour assignments in order to improve students' learning experience.

1. Introduction

With the rising emphases on innovation, the knowledge-based economy, international mobility of the workforce, and the impact of globalisation, the higher education sector in Singapore is evolving. Based on a recent JobsCentral Learning Survey Report (2016), 73% of the respondents (2,932) intend to further their studies, and 45% of them intend to pursue a postgraduate course. The survey also reported that 71% of the respondents would like to pursue their studies on a part-time basis, and more than 25% of the respondents seek to pursue their education at a Private Education Institution (PEI) in Singapore where the degree is awarded by foreign universities. Career advancement, self-improvement, and improved employability were among the top three reasons for pursuing further studies. However, the survey does not show the breakdown of these reasons between respondents who intend to pursue undergraduate studies and those eyeing for postgraduate studies. In addition, in spite of this overview of students' intentions for postgraduate routes either into further study or employment, there is little known on how they relate to the learning and assessment during their studies. Informally, it has been observed by the researcher and his fellow instructors that many part-time students adopting a surface or strategic approach to studying and put in a minimal effort to their assessments as they see their job and family commitment as more important priorities. Consequently, this would have a negative impact on their career advancement, especially where their job requires them to apply the knowledge gained from their studies.

Empirically, Asian learners, particularly the Chinese students from China, Hong Kong, Malaysia and Singapore are perceived as exam-oriented rote learners and adopt a surface approach to learning (Hing, 2013; Samuelowicz, 1987; Snider, 2005). However, the rote learning approach is usually employed by Chinese students pursuing their full-time studies overseas where English is the only medium of instruction (Chang & Ho, 1992). Lacking in the current literature are studies conducted in identifying part-time postgraduate students' educational goals, their approaches to learning and assessment preferences for programmes offered by overseas universities but administered by PEIs in Singapore. The rationale for this study is presented below in the dedicated literature review part via the literature background that provides an overview of relevant studies and presents the research gap the study aims to address.

The framework of this pilot study is to evaluate the educational goals, approaches to learning and assessment preferences of the part-time postgraduate students who are currently pursuing their Master of Business Administration (MBA) or Master of Professional Accounting (MPA) programme with one of the largest PEIs in Singapore, and the degree is awarded by an Australian university. The programme comprises 12 modules and each module comes with a varied assessment structure such as individual/group oral presentation or/and assignments, test, exam, and class participation. The exam component usually comes with the largest weightage (30% - 50%).

Specifically, this study aims to address the following research questions:

- What are the key educational goals of the MBA and MPA students? Are there any significant differences in the educational goals among these postgraduate students with respect to course of study, gender and age groups?
- What are the assessment preferences of the MBA and MPA students? Are there any differences between their assessment preferences with respect to course of study, gender age groups, and learning approach?

2. Literature review and theoretical framework

2.1 Educational goals

Postgraduate education such as MBA or MPA is perceived as a necessity in securing a better job to live a 'good life' and minimise the risk of being unemployed (Teowkul et al., 2009; Uka, 2012). This security and risk-avoidance orientation can be seen as educational goals, which are defined as "statements that describe the competences, skills, and attributes that students should possess upon completion of a course or program" (Simon Fraser University, n.d.). Students can be led by achieving extrinsic and intrinsic gains. Extrinsic gains including career advancement, career switching, acquiring business and technical skills and financial rewards predominate over intrinsic rewards such as personal development, self-esteem and gaining respect (Bruce, 2006; Simpson, 2000; Zolfo, 2004).

2.1.1 Individual factors related to educational goals

Individual factors such as self-improvement, boosting confidence, gaining respect from others, and strong advocacy of lifelong learning play an important role in increasing a student's motivation to pursue postgraduate education (Uka, 2012). Highly motivated individuals consistently seek ways for self-improvement by gaining access to different educational programmes (Deci & Ryan, 2000). Based on student development theory, a highly motivated student is more likely to spend more time and effort studying (Labosier & Labosier, 2011) and interact more frequently with instructors and peers (Astin, 1999) in achieving better academic performance (Elias et al., 2011).

Motivation theorists argue that individuals desire a need for self-esteem which is strongly associated with competencies, achievement and respect from others (Maslow, 1943; Samdal et al., 1998). Thus, students are seen to pursue postgraduate education to acquire new skills, improve their competencies and knowledge so as to boost their self-esteem, gaining higher status, and earning respect from others (Boekaerts, 2002; Gawel, 2008; Harter, 1998; Lin & Tsai, 2008; Yorke, 2006).

2.1.2 Career advancement/switching and job security as educational goals

In today's increasingly competitive economy and the emphasis of higher education across many sectors and industries, students see the need of pursuing a postgraduate degree to stay competitive in the job market (Dugan et al., 1999; Edington & Bruce, 2003; Marks & Edington, 2006; Powell, 2010; Williams & Mujtaba, 2008). Placing the initials 'MBA' or 'MPA' in their resume is more likely to boost their chances of securing jobs that will allow them to increase their earning power or to gain promotion in their current organisation (Baruch & Leeming, 2001; Dailey et al., 2006; Heslop & Nadeau, 2010; Lewis, 1992; Mihail & Elefterie, 2006; Zhao et al., 2006).

Baruch and Leeming (2001) conducted a study to examine the perceptions of MBA graduates from the UK based on 12 categories of expectations these graduates held at entry. They found that the top three expectations were: business understanding and business skills, improving or changing careers, and higher income. They also found one in six graduates identified the credential itself as an important educational goal. In another context, Selvarajah (2006) compared the perceptions of students from New Zealand and China pursuing postgraduate management studies at Massey University in New Zealand. He reported that the top three most important educational goals for the New Zealand students were "to learn new skills so that I can change my career", "to improve my management skills", and "to undertake a personal challenge". As for the Chinese students, he found that their top three motivational drivers were "to obtain a qualification essential to my career", "to discover things that may be useful for my business", and "to improve my management skills".

Postgraduate programmes provide an excellent platform to enable students to expand their social network with their classmates which may translate into many business and career opportunities (Teowkul et al., 2009). Through networking, there could be possibilities of gaining career switch and job changes, regardless of gender and current experience (Mark & Edington, 2006).

Prior studies reported mixed results on the relationship between age, gender and experience effects on pursuing an MBA (Simpson et al., 2005; Thompson & Gui, 2000; Zhao et al., 2006). For instance, Thompson and Gui (2000) reported that the younger students (under 35) placed more importance on career switching for pursuing an MBA while mature students with eight or more years of work experience placed greater emphasis on improving analytical skills as the key reason for taking an MBA. They also argued that men see an MBA as more important than women when it comes to a career switch. On the other hand, Simpson et al. (2005) reported that the most common reason for pursuing an MBA is to gain more job opportunities, especially for younger men and older women. They found that younger women placed more emphasis on career change while older men placed greater importance on intellectual stimulation. Marks and Edington (2006) surveyed 709 men and 759 women to determine which of the three categories of reasons (career enhancement, career switching, personal development) motivate them to pursue an MBA. They found that approximately one quarter of both men and women fall into all three categories, and men are more driven by career switching while women are more motivated by career enhancement. Their findings lend support to an earlier study conducted by Simpson (2000) where he reported that women are more likely to pursue an MBA to seek career enhancement while men see career switch and personal development as key motivation drivers. Other studies found no effects for gender and experience (Zhao et al., 2006). These mixed research findings on age, gender and experience are at best inconclusive, suggesting further research is needed.

2.1.3 Professional development and credentials as educational objectives

Professions in the fields of accountancy, banking and finance, information technology, and law are facing many challenges in view of the rapidly changing business environment. Thus, the professional bodies mandate their members to upgrade and keep abreast of the latest development so as to remain relevant and updated in their profession. These motivate students to pursue postgraduate qualification such as MPA, MSc Finance, MSc IT and LLM to enhance their credentials and improve their job performance (Carrel & Schoenbachler, 2001).

2.2 Students' Approaches to Learning (SAL)

One of the key areas examined by higher education scholars in describing and enhancing the quality of learning in universities is students' approaches to learning (Dickie, 2003; Entwistle & Waterson, 1988; Phan & Deo, 2007; Ramsden, 1985; Regan & Regan, 1995; Trigwell & Prosser, 1991; Van Rossum & Schnk, 1984; Zain, Malan, Noordin, & Abdullah, 2013). The term 'approach' is used to signify the students' intention and the way they process information (Garrison, Andrews, & Magnusson, 1995). It is perceived by many educators as a powerful means of conceptualising students' learning and the quality of students' learning outcomes (Duff, Boyle, & Dunleavy, 2002; Streitwieser & Light, 2010).

The concept of approaches to learning was first introduced by Marton and Saljö in 1976, where they identified two learning approaches, deep and surface. Theoretically, students may adopt a deep approach to learning with an intention to understand the concepts and theories, being able to link them to their prior knowledge and experience, and examine the logic of the arguments and relate the task to personal experiences outside the study context (Beattie, Collins, & McInnes, 1997; Entwistle, McCune, & Walker, 2000). In contrast, students who adopt the surface approach to learning are merely relying on rote learning with the objective of 'learn for the sake of learning' and information reproduction without having the intention to fully understand or analyse it, and they are unreflective about their learning experience (Byrne, Flood, & Willis, 2001; Eley, 1992; Hassall & Joyce, 2001; Spencer, 2003; Tiwari et al., 2006). It is believed that the use of a deep learning approach contributes to a positive and higher quality learning outcome and academic performance which are critical for the students' professional

and personal development as compared to a surface learning approach (Biggs, 1993; Diseth, Pallesen, Hovland, & Larsen, 2006; Felder & Brent, 2005; Gijbels, Dochy, Van den Bossche, & Segers, 2005; Smith & Miller, 2005; Spicer, 2004; Tiwari et al., 2006).

Biggs (1987) extended Marton and Saljio's work by including a third learning approach – achieving, where he sees students apply this approach to learning are based on the motivation to achieving good performance and having strategies to achieving high marks. These can be done by developing effective study skills such as good organisation, speed reading, effective note-taking, and 'cue-conscious' strategies that adapt to the learning environment and the degree of instructor involvement (Akande, 1998). Thus, the achieving approach is highly context driven whereas the deep and surface approaches involve general cognitive processes of coding and mere rehearsal, respectively (Entwistle, 2000). Essentially, Biggs' (1987) theoretical conception of learning approaches from other theorists in two aspects: how students approach a task (strategy), and the reasons for using the approach (motive).

Over the past three decades, there were several instruments developed to evaluate students' approaches to learning (SAL) in the higher education context. These instruments include the Study Process Questionnaire (SPQ) (Biggs, 1987) and its revised version, the R-SPQ-2F (Biggs, Kember, & Leung, 2001); the Approaches to Study Inventory (ASI) (Entwistle & Ramden, 1983) and its revised version, the RASI (Entwistle & Ramsden, 1983); Lancaster Approaches to Study Questionnaire (Ramsden, 1983); Inventory to Learning Styles in Higher Education (Vermunt, 1994); and Approaches to Study Skill Inventory for Students (Tait, Entwistle, & McCune, 1998).

The R-SPQ-2F model has been widely used to examine SAL at undergraduate level from different disciplines such as biology (Skogsberg & Clump, 2003), information systems (Halawi, McCarthy, & Muoghalu, 2009), law (Gijbels, Van de Waterning, Dochy, & Van de Bossche, 2005), mathematics (Chan & Mousley, 2005), management (M'Hamed Taher & Chen, 2011), nursing (Bernal & Montalbo, 2014; Snelgrove & Slater, 2003), psychology (Justicia, Pichardo, Cano, Berbén, & De la Fuente, 2008; Skogsberg & Clump, 2003), science (Güner & Ali Riza, 2008; Zeegers, 2001), and statistics (Bilgin & Crowe, 2008). Most of these studies focused on undergraduate students and none of these studies examined postgraduate students in Singapore.

Prior studies reported that SAL have been correlated with personal factors (e.g. gender, age, prior experiences) and contextual factors (e.g. teaching/learning activities, assessment types, institutional values) (Biggs, 1987; Zeegers, 2001). Essentially, it is believed that surface approach to learning is generally associated with excessive workload, assessments that emphasise reproductive learning and poor teaching (Leung, Mok, & Wong, 2008; Lizzio et al., 2002; Prosser, 2004).

In terms of differences between students' learning approaches, gender and age, there were mixed results reported (Bilgin & Crowe, 2008; Duff, 1999; 2002; Gijbels et al., 2005; Elias, 2005; Ellez & Sezgrin, 2002; Goh, 2006; Groves, 2005; Güner & Ali Riza, 2008; M'Hamed Taher & Chen, 2011; Shaari et al., 2005; Siddiqui, 2006; Wilson, Smart, & Watson, 1996). For instance, Gijbels et al. (2005) examined 133 second-year law undergraduates to assess their learning approaches to learning. They found that male students adopted a significantly higher level of SA than their female counterparts and older students adopted significantly higher level of DA. On the other hand, Goh (2006) and Siddiqui (2006) employed R-SPQ-2F to examine the SAL of 368 Malaysian and 13,331 Pakistani students respectively and both concluded there was no significant difference in the learning approaches between gender and age. Bilgin and Crowe (2008) also reported no significant difference in SAL with respect to gender in Australia. However, they concluded that the postgraduate students were more likely to adopt a deep approach to learning while the generally younger undergraduate students were more inclined to a surface learning approach. In Malaysia, Shaari et al. (2005) who examined 354 postgraduate students in Universiti Teknologi Malaysia and they found significant differences on SAL across age, discipline, and year of work experience. However, there were no significance difference on SAL on gender and mode of study. In a more recent study involving 208 Chinese local MBA students at Zhejiang University, M'Hamed Taher and Chen (2011) reported that deep learning approach was found dominant among these MBA students regardless of their age and gender difference. Their findings differ from several cross cultural studies where Asian students, particularly the Chinese, were perceived as surface learners (Biggs, 1990; Fan, 2007). A detailed discussion on cultural context and SAL is beyond the scope of this paper.

The use of inventories in examining SAL have been criticised by numerous higher education scholars (Chambers, 2002; Entwistle, Meyer, & Tait, 1991; Haggis, 2003; Lindblom-Ylänne, 2003; Richardson, 2004; Setlogelo, 2008). Specifically, the quantitative nature of the inventories may not provide an in-depth examination of students' epistemological believes on the relation between learning approaches and academic performance and learning outcome. In addition, the influence of context such as students' diverse cultural (Kember, 2000; Fung, 2010; Marton, Alba, & Kun, 1996; Ramburuth, 2001) and linguistic (Richardson, 2004; Setlogelo, 2008), subject discipline (Booth, 1992; Drew, Bailey & Shreeve, 2002; Ramsden, 1984), work commitment and parental responsibilities (Haggis, 2003), level of intellectual curiosity and personal relation with a subject (Marshall & Case, 2005), and overloaded curriculum (Cope & Staehr, 2005; Newbie & Hejka, 1991). It has also been noted that deep and surface approaches to learning are not personality traits or fixed learning styles as students may vary their approaches depending on the demand level of each activity, perceived difficulty level and time constraint to completing the activity (Laurillard, 1997; Trigwell & Ashwin, 2003).

In sum, SAL is influenced by students' personality, learning environment, course undertaking, and learning outcome (Skogsberg & Clump, 2003). It is believed that a deep learning approach will contribute positively to the learning outcome and academic performance (Booth, Luckett, & Mladenovic, 1999; Davidson, 2002; Gow, Kember, & Cooper, 1994; Murphy & Tyler, 2005). Adequate teaching

pedagogies and creation of a positive learning environment might move students learning approaches from a surface to a deep orientation. This means that further examination of teaching and other factors that may affect "approaches" is needed to complete "the picture" of approaches to learning. The degree and variation of SAL could be dependent on the context, circumstances, subject, and so on. Hence, it cannot be said that one student can adopt only one approach to learning. The interaction between different context and SAL are complex and often counterintuitive effects can be observed (Struyven, Dochy, Janssens, & Gielen, 2006).

2.3 Assessment preferences

Assessment is a key driver of and a tool for learning as it provides learning opportunities which challenge students' intellectual and critical thinking while preserving the legitimacy of the institution (Dochy & McDowell, 1997; Pio, 2004). Traditionally, assessment is seen as a way to determine students' performance and the extent to which learning outcomes have been achieved. It also forms a basis for gaining the relevant qualification which is vital for students to gain better employment and enhance their professional development (Lee, 2005; Pearson & Chatterjee, 2004; Sen Gupta, 2003; Wong, 2001).

In this study, assessment preference follows the definition provided by Van de Watering et al. (2008), where they defined assessment preference as "imagined choice between alternatives in assessment and the possibility of the rank ordering of these alternatives" (p. 647). Zoller and Ben-Chaim (1988) examined students' assessment preferences based on six dimensions: type (examination/project); mode (oral/written); time (limited/unlimited); location (class/home); support materials (allowed/disallowed); and participants (individual/group). They found that students preferred to have assessments that eased their time and memorisation pressures, and have least preference for oral examination. In terms of gender preference, they reported that female students preferred take-home assessment which they can apply a higher level of thinking and problem solving skills, and they showed less preference to oral examination. Prior studies reported that male students generally have stronger preference for multiple choice formats, or simple and de-contextualised questions over essay type assessments or constructed-response types of questions (Beller & Gafni, 2000; Traub & MacRury, 1990). Male students perform better on multiple choice questions (MCQs) than female students and female students do better on open-ended questions than male students (Ben-Shakhar & Sinai, 1991). One reason for the difference could be students perceive MCQs are easier to prepare and complete, and thus reducing stress and anxiety during test, resulting in producing better results (Birenbaum & Feldman, 1998; Traub & McRury, 1990). On the other hand, female students are more likely to adopt a deep learning approach and thus perceive essays as a better assessment of their analytical and critical thinking skills, and with adequate preparation and correct study approach (deep approach), they perform better in essay type questions (Van de Watering et al., 2008). Discussion of perceptions of assessment and the actual outcome are beyond the scope of this study.

Students' assessment preferences are considered a highly relevant and valuable source of evidence for test validity (Nevo, 1985; Zeidner, 1987). However, it must be noted that student assessment preferences do not imply effective and reliable assessment outcomes (Selvarajah et al., 2010). For instance, group assessment such as group projects would enhance team work and promote collaborative learning, which may contribute to more effective learning and better academic achievement (Bejarano 1987; Ghaith & Yaghi, 1998; Kagan 1989; Ghaith, 2002; 2003). However, group assessment may not be an equitable and accurate way of assessing student performance (Garfield & Gal, 1999). Specifically, a varied quality of contributions by each team member due to language deficiency, heavy work and family commitments, and individualistic personalities may lead to dissatisfaction among members. Consequently, it is believed that only the committed and hardworking students benefited most from group assessment (Clark, 2002; Leask, 2001). To alleviate some of these limitations, self and peer assessment ratings may be introduced (Barfield, 2003; Sherman, 2000).

In order to ascertain students' assessment preferences, Birenbaum (1994) developed a questionnaire which he called the Assessment Preference Inventory (API) for various facets of assessment. The API consists of three dimensions of measuring assessment preferences: assessment form related (assessment type, item format/task type and pre-assessment preparation); examinee-related (cognitive processes, students' role/responsibilities and conative aspects); and grading and reporting. Prior studies reported that there was a relationship between SAL and their assessment preferences (Baeten, Struyven, & Dochy, 2008; Birenbaum, 1997; Gijbels & Dochy, 2006; Magnussen, 2001; Parsa & Saketi, 2006; Sabzevari, Abbaszade, & Borhani, 2013; Scouller, 1998). Essentially, assessment methods which focus on data recollection and lack knowledge application would entail students to adopt a surface learning approach (Magnussen, 2001). Students adopting a deep learning approach will favour essay type questions (Baeten, Struyven, & Dochy, 2008; Birenbaum & Feldman, 1998; Scouller, 1998).

Educators play a critical role when designing assessments to test on students' deep understanding, they may lead students to adopting a deep learning approach and improve on their critical thinking ability (Akinsanya & Williams, 2004; Morrison, 2003). They are more effective when the students are given an opportunity to gain a comprehensive assessment of their learning and understand their own learning style but also have continuous and comprehensive understanding of their performance (Watkins, Carnell, & Lodge, 2007).

Based on the prior literature discussed above, it is evident that there are numerous studies examining students' educational goals, approaches to learning and assessment preferences for both undergraduate and postgraduate students in public universities and private institutions in many countries. However, there is a big gap in the literature regarding these areas in the Singapore context, in particular part-time students pursuing postgraduate studies at Private Education Institutions (PEIs). Thus, this study seeks to shed some light on these areas and it is believed to be the first study examining postgraduates' educational goals,

approaches to learning and assessment preferences in the private higher education sector in Singapore.

3. Methodology

The target participants for this study are part-time MBA and MPA students pursuing their studies at a private education institution in Singapore. Their degree is awarded by an Australian university and the programme takes about 16 to 24 months to complete. In order to address the research questions for this study, a semi-structured questionnaire was designed and distributed to these students during their lessons. The questionnaire comprises four sections (see Appendix). Section A deals with the educational goals for pursuing a postgraduate study, where the 20 statements are mostly adopted from the study conducted by Selvarajah (2006). Each question comes with a 5-point Likert scale (from 1 = strongly disagree to 5 = to a great extent). Section B employs the revised two-factor study process questionnaire (R-SPQ-2F) developed by Briggs et al. (2001) where it contains 20 items to examine students' approaches to learning. The responses for each item are measured by a 5-point Likert scale (from 1 = this item is never or only rarely true of me to 5 = this item is always or almost always true of me). The R-SPQ-2F was selected as it is one of the most widely used tools to evaluate SAL (Richardson, 2004) and it has been validated (Biggs et al., 2001) and replicated by many higher education scholars (Fox, McManus, & Winder, 2001; Gijbels et al., 2005; Goh, 2006; Leung & Kember, 2003; M'Hamed Taher & Chen, 2011). Studies have shown that a two-factor model (deep and surface) has a better fit than the three factor-model (deep, surface and achieving; Kember & Leung, 1998; Zhang, 2000). Section C measures students' assessment preferences, and it covers 26 items which are mainly adapted from the assessment-form related dimensions of the Assessment Preference Inventory (API) developed by Birenbaum (1994). Each item is measured by a 5-point Likert scale (from 1 = not at all to 5 = to a great extent). This section also includes additional six items where students are required to rank their preferences (from 1 = most to 5 = least) for each of the current five assessment methods. Section D covers students' background which includes the course they are pursuing, gender, and age group. Ethics approval has been obtained from the University and all participations were voluntary.

4. Findings and Discussion

The questionnaire was distributed to the students during their classes held between 25 March and 3 April 2016. A total of 101 students (55 MBA and 46 MPA) participated in the survey, which represents around 30% of the population, of which 57 are female students (27 MBA and 30 MPA) and the remaining 44 are male students (28 MBA and 16 MPA). Table 1 summarises the students' profiles by programme of study and gender. In terms of age group, the majority of the students are 35 years and below, which accounted for more than 55% of the sample. Less than 10% of the students are above the age of 45 years. Table 2 summarises the age distribution of the students. It is evident from the table that there is a higher percentage of younger female students pursuing postgraduate studies than their male counterparts in the same age group (35 years and below), suggesting these students may see the MBA/MPA as an important credential to build their career (Carrel & Schoenbachler, 2001).

	MBA		MPA		Total	
Female	27	49.1%	30	65.2%	57	56.4%
Male	28	50.9%	16	34.8%	44	43.6%
Total	**55**	**100.0%**	**46**	**100.0%**	**101**	**100.0%**

Table 1: Sample Distribution - Program and Gender.

	MBA		MPA		Total			
Age Group	Female	Male	Female	Male	Female	Male	Total	%
>30	7	1	10	2	17	3	20	19.8
31-35	13	4	11	8	24	12	36	35.7
36-40	6	9	3	3	9	12	21	20.8
41-45	0	11	3	2	3	13	16	15.8
46-50	1	3	2	1	3	4	7	6.9
>50	0	0	1	0	1	0	1	1.0
Total	**27**	**28**	**30**	**16**	**57**	**44**	**101**	**100.0**

Table 2: Sample Distribution - Program, Gender and Age Group.

4.1 Educational goals

Table 3 summarises the educational goals mean score and rank for the MBA and MPA students. The top three most important educational goals for the MBA and MPA students are "to learn new skills so that I can enhance or change my career" (G1), "to discover knowledge that may be useful for my job" (G6), and "to improve my management/technical skills" (G2). It is telling that MPA students see the qualification as essential as many of them do not possess an accountancy undergraduate degree, and this programme is targeted at professionals who do not have a background in accounting and therefore, students with accounting bachelor's degree are not allowed into the programme. They believe the MPA credential will allow them to acquire new skills to enhance their career in the accountancy profession.[1] It must be noted that having completed the MPA programme, students can proceed to pursue the CPA Australia examinations with the maximum number of exemptions granted. The CPA Australia designation is one of the most highly sought-after accountancy qualifications in the world (Chong, 2015). Thus, it is believed that the MPA students see this qualification as a stepping stone to pursuing the CPA Australia programme to further enhance their professional status.

From the survey results, it appears that the students see career enhancement and sharpening their business and technical skills as important motivational goals when pursuing a postgraduate degree. The findings are consistent with the results reported by Baruch and Leeming (2001), Selvarajah (2006), and Marks and Edington (2006). To further examine the relationships between the educational goal variables and programme, the Kruskal-Wallis test was performed. The significant differences (p-value < 0.05) in educational goals between the MBA and MPA students are summarised in Table 4. Six educational goals (G8, G9, G10, G11, G13, G16) were found to be significantly different between the two groups of students.

[1] The entry requirement for MPA is the student must possess a non-accountancy bachelor degree.

No.	Educational goals	MBA (mean)	Rank	MPA (mean)	Rank
G1	To learn new skills so that I can enhance or change my career	**4.42**	**1**	**4.50**	**1**
G2	To improve my management/technical skills	**4.25**	**3**	**4.15**	**3**
G3	To undertake a personal challenge	3.87	8	3.89	5
G4	To obtain a qualification essential to my current job	3.76	10	3.67	7
G5	To get a qualification that will look good on my resume	3.89	7	3.85	6
G6	To discover knowledge that may be useful for my job	**4.31**	**2**	**4.17**	**2**
G7	To help me to look for a new job	3.62	11	3.91	4
G8	To enhance my leadership skills	4.07	4	3.54	8
G9	To improve my skills of working with other people	4.07	4	3.43	9
G10	To be able to work more effectively in group situations	3.95	6	3.43	9
G11	To establish new business contacts	3.53	12	3.09	16
G12	To show my friends the importance of continuing education	2.82	18	2.70	18
G13	To improve my ability to work with people with different culture	3.53	12	3.11	15
G14	To improve my standing with business associates and friends	3.36	14	3.13	14
G15	To make new friends	3.22	16	3.15	13
G16	To improve new communication skills	3.82	9	3.39	11
G17	To improve my knowledge just for the sake of it	3.22	16	3.00	17
G18	To meet my employers' requirements so that I can be promoted or to take on additional responsibilities where this qualification helps	3.25	15	3.24	12
G19	To show my parents I can do something worthwhile	2.67	19	2.52	19
G20	To use up my spare time	2.51	20	2.48	20

Note: A higher score suggests students agree with the statement and a score lower than 3 suggests students tend to disagree with the statement

Table 3: Educational goals of MBA and MPA students.

Rank (p-value)	No.	Educational goals	MBA (mean)	MPA (mean)	MBA vs. MPA (p-value)
1	G9	To improve my skills of working with other people	4.07	3.43	0.000
2	G8	To enhance my leadership skills	4.07	3.54	0.001
3	G10	To be able to work more effectively in group situations	3.95	3.43	0.003
4	G16	To improve new communication skills	3.76	3.39	0.006
5	G13	To improve my ability to work with people with different culture	3.53	3.11	0.013
6	G11	To establish new business contacts	3.53	3.09	0.021

Note: A higher score suggests students agree with the statement and a score lower than 3 suggests students tend to disagree with the statement

Table 4: Significant different goals betweens MBA and MPA students.

Table 5 summarises the mean scores and rankings of the educational goals by gender for the MBA and MPA programmes. The top three educational goals (G1, G2 and G6) among the male and female MPA students are essentially the same. As for the MBA students, the female students ranked G6 as their top educational goal, which is not within the top three educational goals of their male counterparts. The male MBA students perceived enhancing their leadership skills (G8) as one of their top three educational goals. A closer examination of those MBA students who cited this as a very important goal are those whose age group fall between 41-45 years old, suggesting that these students could be in their mid-level or senior level managerial role, and thus they see effective leadership skills as of paramount importance in their job. The other two educational goals, G1 and G2, are perceived as among the top three goals for both the female and male MBA students, albeit the male students gave an overall higher mean score for these two goals compared to the female students. The Kruskal-Wallis test was performed and on the whole, there are no significant differences in educational goals between male and female MPA students. However, there are significant differences between educational goals and gender for the MBA students: G2, G8 and G16 (see Table 6).

Further analysis on the educational goals are performed by age group for both programmes. Table 7 presents the overall mean score for each of the educational goals by age group of the MBA students. It is evident that G1 remains as one of the top three goals across all age groups. G2 is another important educational goals among the students, other than those whose age falls within 31-35. The findings are not in line with those reported by Thomson and Gui (2000) where they found that only younger students saw career switching as an important driving factor and the older students placed greater emphasis on acquiring technical skills. Interestingly, students from this group see putting an MBA in their resume (G5) as one of the top three goals, suggesting they value the three letters behind their name highly. Apart from G1, students who are 40 and below see G6 as the other important educational goal for pursuing an MBA. Those who are above 40 see enhancing leadership skills as crucial. The Kruskal-Wallis test was performed and on the whole, there are no significant differences in educational goals between age group among the MPA students.

No.	Educational goals	MBA Female (mean)	Rank	MBA Male (mean)	Rank	MPA Female (mean)	Rank	MPA Male (mean)	Rank
1	To learn new skills so that I can enhance or change my career	**4.30**	**2**	**4.54**	**1**	**4.47**	**1**	**4.56**	**1**
2	To improve my management/technical skills	**4.07**	**3**	**4.43**	**2**	**4.17**	**2**	**4.13**	**3**
3	To undertake a personal challenge	3.93	5	3.82	9	4.00	5	3.69	5
4	To obtain a qualification essential to my current job	3.81	8	3.71	11	3.60	7	3.81	4
5	To get a qualification that will look good on my resume	3.81	8	3.96	8	3.93	6	3.69	5
6	To discover knowledge that may be useful for my job	**4.37**	**1**	4.25	4	**4.07**	**3**	**4.38**	**2**
7	To help me to look for a new job	3.63	10	3.61	13	4.03	4	3.69	5
8	To enhance my leadership skills	3.85	7	**4.29**	**3**	3.60	7	3.44	8
9	To improve my skills of working with other people	3.96	4	4.18	5	3.53	9	3.25	12
10	To be able to work more effectively in group situations	3.89	6	4.00	7	3.50	10	3.31	11
11	To establish new business contacts	3.41	13	3.64	12	3.07	16	3.13	13
12	To show my friends the importance of continuing education	2.56	17	3.07	17	2.77	18	2.56	18
13	To improve my ability to work with people with different culture	3.30	15	3.75	10	3.17	13	3.00	16
14	To improve my standing with business associates and friends	3.44	12	3.29	18	3.17	13	3.06	15
15	To make new friends	3.07	18	3.36	14	3.03	17	3.38	9
16	To improve new communication skills	3.48	11	4.14	6	3.33	11	3.50	10
17	To improve my knowledge just for the sake of it	3.30	15	3.14	15	3.13	15	2.75	17
18	To meet my employers' requirements so that I can be promoted or to take on additional responsibilities where this qualification helps	3.37	14	3.14	15	3.30	12	3.13	13
19	To show my parents I can do something worthwhile	2.67	19	2.68	19	2.70	19	2.19	19
20	To use up my spare time	2.67	19	2.36	20	2.67	20	2.13	20

Note: A higher score suggests students agree with the statement and a score lower than 3 suggests students tend to disagree with the statement

Table 5: Educational goals of MBA and MPA students - Gender.

Rank (p-value)	No.	Educational goals	MBA (female)	MBA (male)	MBA vs. MPA (p-value)
1	G2	To improve my management/technical skills	4.07	4.43	0.013
2	G8	To enhance my leadership skills	3.85	4.29	0.019
3	G16	To improve new communication skills	3.48	4.14	0.009

Note: A higher score suggests students agree with the statement and a score lower than 3 suggests students tend to disagree with the statement

Table 6: Significant different goals between gender - MBA.

A closer examination on the important goals among the various age groups of the MPA students (see Table 8) resulted in the observation that they are largely similar to those reported for the MBA students. Interestingly the youngest group here have rated G5 as one of the top three goals, which is similar to the 31-35 years MBA group. It is also telling

that the youngest group and those aged between 36-40 perceived the MPA qualification as an important credential for seeking new jobs (G7). The findings here may suggest that some students in these two groups may be dissatisfied with their current employment and hoping to gain better opportunities with this qualification. The Kruskal-Wallis test was performed and on the whole, there are no significant differences in educational goals between age group among the MPA students.

No.	Educational goals	<30	31-35	36-40	41-45	46-50
1	To learn new skills so that I can enhance or change my career	**4.63**	**4.06**	**4.47**	**4.55**	**5.00**
2	To improve my management/technical skills	**4.25**	4.00	**4.20**	**4.55**	**4.75**
3	To undertake a personal challenge	3.88	3.88	3.87	3.91	3.75
4	To obtain a qualification essential to my current job	3.50	3.94	3.73	3.73	3.75
5	To get a qualification that will look good on my resume	3.63	**4.18**	3.73	3.73	4.25
6	To discover knowledge that may be useful for my job	**4.50**	**4.29**	**4.33**	4.18	4.25
7	To help me to look for a new job	3.63	3.53	3.73	3.45	4.00
8	To enhance my leadership skills	**4.25**	3.82	3.73	**4.64**	**4.50**
9	To improve my skills of working with other people	4.00	4.00	3.93	**4.36**	4.25
10	To be able to work more effectively in group situations	4.13	3.82	3.67	4.18	4.50
11	To establish new business contacts	3.00	3.76	3.53	3.55	3.50
12	To show my friends the importance of continuing education	2.38	2.82	2.67	3.55	2.25
13	To improve my ability to work with people with different culture	3.25	3.47	3.40	3.73	4.25
14	To improve my standing with business associates and friends	3.50	3.59	2.87	3.64	3.25
15	To make new friends	3.13	3.24	2.80	3.82	3.25
16	To improve new communication skills	3.63	3.65	3.73	4.18	4.25
17	To improve my knowledge just for the sake of it	3.75	3.29	2.80	3.64	2.25
18	To meet my employers' requirements so that I can be promoted or to take on additional responsibilities where this qualification helps	3.13	3.59	2.87	3.45	3.00
19	To show my parents I can do something worthwhile	3.00	2.47	2.53	3.09	2.25
20	To use up my spare time	3.25	2.59	2.00	2.73	2.00
	Total number of students	***8***	***17***	***15***	***11***	***4***

Note: A higher score suggests students agree with the statement and a score lower than 3 suggests students tend to disagree with the statement

Table 7: Education goals of MBA students - Age Group.

No.	Educational goals	<30	31-35	36-40	41-45	46-50	>50
1	To learn new skills so that I can enhance or change my career	**4.75**	**4.47**	**4.67**	**4.00**	**4.33**	4
2	To improve my management/technical skills	4.08	**4.21**	**4.33**	3.80	**4.33**	4
3	To undertake a personal challenge	3.83	3.74	4.00	**4.00**	**4.33**	**5**
4	To obtain a qualification essential to my current job	3.33	3.58	4.00	**4.00**	**4.33**	4
5	To get a qualification that will look good on my resume	**4.17**	3.63	3.50	**4.00**	4.00	**5**
6	To discover knowledge that may be useful for my job	4.00	**4.05**	**4.17**	**4.40**	**5.00**	**5**
7	To help me to look for a new job	**4.50**	3.58	**4.33**	3.40	4.00	3
8	To enhance my leadership skills	3.50	3.47	3.67	3.20	**4.33**	4
9	To improve my skills of working with other people	3.67	3.16	3.83	2.80	**4.33**	4
10	To be able to work more effectively in group situations	3.58	3.11	**4.17**	3.00	4.00	4
11	To establish new business contacts	3.33	2.95	3.00	3.40	3.00	2
12	To show my friends the importance of continuing education	2.75	2.47	3.00	2.80	3.33	2
13	To improve my ability to work with people with different culture	3.25	3.11	3.17	2.40	4.00	2
14	To improve my standing with business associates and friends	3.33	3.05	2.67	2.80	4.33	3
15	To make new friends	3.08	3.21	3.17	3.20	3.33	2
16	To improve new communication skills	3.50	3.32	3.50	2.80	**4.33**	3
17	To improve my knowledge just for the sake of it	2.83	2.84	2.83	3.40	4.00	4
18	To meet my employers' requirements so that I can be promoted or to take on additional responsibilities where this qualification helps	3.08	3.21	3.67	3.40	3.00	3
19	To show my parents I can do something worthwhile	2.83	2.63	1.67	2.60	2.33	2
20	To use up my spare time	2.75	2.58	1.83	2.60	2.33	1
	Total number of students	***12***	***19***	***6***	***5***	***3***	***1***

Note: A higher score suggests students agree with the statement and a score lower than 3 suggests students tend to disagree with the statement

Table 8: Education goals of MPA students - Age Group.

4.2 Learning approaches

The students' preferences for deep learning or surface learning were assessed based on the R-SPQ-2F developed by Biggs et al. (2001). The 20 items consist of 10 items for a Deep Approach (DA) and the other 10 items for a Surface Approach (SA). Within each of these two approaches, there are two subscales focusing on motive and strategy. Based on a 5-point Likert scale, students with higher DA scores (out of a maximum score of 50) than SA scores suggest a deep approach to learning while students with higher SA scores indicate a surface approach to learning.

Table 9 presents a comparison of the Cronbach's alpha for internal consistency of the two approaches and their subscales with the earlier studies (Biggs et al, 2001; Leung & Chan, 2001; Siddiqui, 2006). The reliability indices for both DA and SA and the four subscales are all higher than those reported in their earlier studies, and also the indices are close to, or higher than, 0.70, suggesting they show relatively high internal consistency and are acceptable for general assessment (Nunnally & Bernstein, 1994).

Table 10 presents the mean scores and standard deviations of students on DA and SA and its subscales. Students generally recorded a higher mean score for DA and its subscales compared to SA and its subscales, suggesting that postgraduate students are motivated and see the importance of adopting a deep approach in learning in order to gain more managerial and technical knowledge in order to propel their career to greater heights. In terms of gender, male students recorded a higher mean score across both approaches and their subscales compared to their female counterparts. Specifically male students reported the highest and lowest mean scores of 3.52 and 2.60 for DM and SA respectively whereas female students recorded the highest mean and lowest mean scores of 3.48 and 2.21 for DS and SM respectively. When it comes to courses, MBA students reported a higher mean score for both approaches and their subscales compared to the MPA students. They reported a joint highest mean score of 3.50 for DA and DS, but with the lowest mean score of 2.51 for SM. On the other hand, the MPA students reported their highest and lowest mean scores of 3.47 and 2.47 for DS and SM respectively. The t-test results between gender and course are summarised in Table 11. The results show that there are statistically significant differences in the SA and its subscales between female and male students, and also between the MBA and MPA students. Thus, the findings suggest that female students adopted a significantly higher level of SA than their male counterparts. This is in contrast to the results reported by Gijbels et al. (2005) where they found that male students adopted a significant higher level of SA than the female students. One possible reason for the difference could be the sample examined here are all part-time postgraduate students compared to the full-time undergraduate students sampled by Gijbels et al. The part-time female students may have heavy work and family commitments, with some of them having young children. Consequently, they may adopt a surface approach to learning and due to time constraints and excess workload. The results also differed from the study conducted by M'Hamed Taher and Jin (2011) when they found no significant differences in learning approach among female and male part-time MBA students in China.

Scales and Subscales	Cronbach alpha value			
	Current study	Biggs et al. (2001)	Leung & Chan (2001)	Siddiqui (2006)
Deep Approach	0.79	0.73	0.76	0.75
Deep Motive	0.65	0.62	0.61	0.58
Deep Strategy	0.66	0.63	0.63	0.63
Surface Approach	0.86	0.64	0.73	0.73
Surface Motive	0.74	0.72	0.59	0.59
Surface Strategy	0.76	0.57	0.58	0.58

Table 9: Reliability coefficient for the scales and subscales - A comparison.

	Deep Approach		Deep Motive		Deep Strategy		Surface Approach		Surface Motive		Surface Strategy	
Gender	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Female	3.43	0.95	3.39	0.97	3.48	0.92	2.40	1.11	2.21	1.07	2.59	1.12
Male	3.51	0.99	3.52	1.01	3.50	0.98	2.60	1.17	2.41	1.14	2.80	1.17
Course												
MBA	3.50	0.94	3.49	0.97	3.50	0.92	2.67	1.15	2.51	1.14	2.88	1.11
MPA	3.42	1.00	3.40	1.01	3.47	0.98	2.26	1.09	2.04	0.99	2.45	1.15

Table 10: Mean scores and standard deviations of students on Deep and Surface Approach and its subscales.

	Deep Approach	Deep Motive	Deep Strategy	Surface Approach	Surface Motive	Surface Strategy
	p-value	*p-value*	*p-value*	*p-value*	*p-value*	*p-value*
Gender	0.195	0.124	0.789	0.004*	0.041*	0.041*
Course	0.170	0.301	0.704	0.000*	0.000*	0.000*

Table 11: The p-values on gender and course of Deep and and Surface Approach and its subscales.

The t-test results also suggest that MBA students adopted a significantly higher level of SA than the MPA students. A possible explanation for this observation could be the MPA students are fully aware that they need to have a strong foundation and technical background in order to boost their chances of passing the highly demanding CPA exam after attaining the MPA qualification. Thus, many of them will tend to adopt less of a surface learning approach compared to their MBA counterparts, who may see this qualification as an end to their academic progression and the modules offered in the MBA programme are less technically demanding. Another possible explanation could be the number of modules taken by some of the MBA students within the sample period could be relatively more than the MPA students. As a result, they may be struggling with coping with their studies in addition to work and family, so they may be 'forced' to adopt a more surface approach to learning and may not be aiming to achieve high grades. Due to the confidentiality of their grades and also because they are sensitive to reveal their grades, this study is unable to examine any relationship between performance and SAL.

Table 12 presents the mean scores and standard deviations on the two broad approaches and their subscales of the students by age group. It indicates that the students within the 41-45 year-range and the 46-50 year-range recorded higher mean scores for DA and its subscales, compared to other younger age groups. The ANOVA results in Table 13 indicate there is a significant difference in deep leaning approach between age groups, suggesting that older and mature students tend to exhibit deep approaches to learning, which is in line with prior studies (Biggs, 1987; Bilgin & Crowe, 2008; Gow & Kembert, 1990; Harper & Kember, 1986; Shaari et al., 2005). There is no significant difference between age groups for surface learning approach.

	Deep Approach		Deep Motive		Deep Strategy		Surface Approach		Surface Motive		Surface Strategy	
Age group	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
≤30	3.46	1.05	3.42	1.08	3.50	1.02	2.49	1.10	2.23	1.05	2.74	1.09
31-35	3.42	0.90	3.41	0.94	3.43	0.86	2.50	1.10	2.32	1.03	2.68	1.14
36-40	3.34	1.00	3.37	1.06	3.30	0.95	2.51	1.16	2.31	1.15	2.70	1.14
41-45	3.65	0.96	3.61	0.92	3.83	1.00	2.56	1.23	2.41	1.20	2.70	1.25
46-50	3.64	0.96	3.46	0.95	3.49	0.95	2.33	1.24	2.17	1.25	2.49	1.22

Table 12: Mean scores and standard deviations of students (by age group) on Deep Surface Approach and its subscales.

	Deep Approach	Deep Motive	Deep Strategy	Surface Approach	Surface Motive	Surface Strategy
	F-value	*F-value*	*F-value*	*F-value*	*F-value*	*F-value*
Age group	0.014*	0.550	0.013*	0.738	0.781	0.858

Table 13: ANOVA results for age group of Deep and Surface Approach and its subscales.

4.3 Assessment preferences

Students were asked about their preferences for assessment types and item format/task types in Section C and the mean scores and standard deviations by course and gender are summarised in Table 14 and 15 respectively. A higher mean score suggests more preference was given to the item. A comparison between the MBA and MPA students reveal that MBA students prefer questions that require: problem solving (item 26); application of materials learnt during the course to the new situations (item 15); and provide examples (item 16). On the other hand, MPA students have stronger preference, with a higher mean score for the top three items, for: written test/exam with supporting materials (item 1); questions that require application of materials learnt during the course to the new situations (item 15); and open-ended questions requiring short answers (item 7). The findings are in line with those reported by Van de Watering et al. (2008), Ben-Chaim and Zoller (1997) and Traub and McRury (1990) where students prefer the use of support materials. In addition, the findings also suggest that students appreciate assessments that require applied learning and in line with the earlier findings discussed in Section 4.2, postgraduate students in this study are more likely to adopt a deep approach in learning. The findings support the suggestions that students adopting a deep approach to learning favour assessment that allows them to demonstrate their understanding (Entwistle & Tait, 1990). It is also evident that both groups of students do not favour questions that require reproduction and memorisation of facts (item 12), which is what surface learners would prefer (Magnussen, 2001). In terms of gender, female students have stronger preference for open-ended questions with short answers (item 7), and questions that require: application of materials learnt during the course to the new situations (item 15); and critical thinking (item 23). Male students have stronger preference for written test/exam with supporting materials (item 1); questions that require: application of materials learnt during the course to the new situations (item 15); comparing different concepts/ideas; and data analysis and interpretation. The findings suggest that on the whole, both female and male students adopt a deep learning approach and prefer assessment types that come with higher order level of learning (applying, analysing, evaluating) under Bloom's (1956) taxonomy of learning. Table 14 also recorded the lowest mean score for item 12 for both sexes, which suggest they do not favour a surface approach to learning.

In order to examine further the preferences of assessment types by gender, a t-test was conducted on five types of assessment items/format which are currently used for most of their modules: individual presentation, group presentation, multiple choice questions (MCQ), open-ended questions and essay questions. The results are summarised in Table 16, which shows that there is no significant difference in the preference of assessment items/format between the female and male students. The findings are in contrast with those reported by Beller and Gafni (2000), Zoller and Ben-Chaim (1989) and Zeidner (1987) where they found male students prefer MCQ, while female students favour essay questions. The difference in the findings could be due to the current study examining postgraduate students while the sample used for the aforementioned studies comprised high school/ college students, who may have different educational goals influenced by their parents. Despite there being a difference in age group between this study and the prior studies, Table 17 presents the ANOVA results for the age group of the chosen five assessment items/formats, and the results show that there is no significant difference in preference for any of the five assessment items/format among different age groups.

	Assessment Type	MBA		MPA	
		Mean	SD	Mean	SD
1	Written test/exam, with supporting materials (notes, books)	3.76	1.03	4.13	0.77
2	Written test/exam, without the use of supporting materials	3.05	1.17	2.65	1.22
3	Individual oral presentation	3.45	1.14	3.13	1.10
4	Group oral presentation, where the instructor observes and assesses the contribution of each of the participants, with marks awarded to each participant may be different.	3.55	1.11	3.33	1.08
5	Group oral presentation, where the instructor observes and assesses the contribution of each of the participants, and will award the group with the same mark.	3.24	1.19	2.83	1.11
6	Multiple choice questions	3.22	1.33	3.61	0.92
7	Open-ended questions requiring short answers	3.87	0.79	4.07	0.70
8	Open-ended questions requiring long answers (essays)	3.40	1.09	3.46	0.99
9	Individual assignments	3.89	0.91	3.96	0.83
10	Group assignments	3.89	0.78	3.65	0.89
11	Dissertation	2.89	1.09	2.98	1.09
12	Questions making an appeal to the reproduction and memorization of facts	2.84	1.16	2.63	1.07
13	Knowledge related questions to check the understanding of the readings provided	3.75	0.92	3.98	0.82
14	Comprehension questions related to the materials taught by the instructor	3.69	0.76	4.09	0.69
15	Questions requiring the application of material learnt during the course to the new situations	3.95	0.64	4.13	0.68
16	Questions that require you to provide examples	3.95	0.75	3.96	0.72
17	Questions that require comparing different concepts/ideas	3.91	0.69	3.89	0.79
18	Questions that require data analysis and interpretation	3.80	0.92	4.04	0.93
19	Questions that require drawing conclusions	3.78	0.82	3.80	0.92
20	Questions that require an overall view of the relations among all topics learnt	3.65	0.88	3.70	0.78
21	Questions that require creativity and imagination	3.76	0.97	3.43	0.99
22	Questions that require a personal explanation or opinion	3.93	0.89	3.76	0.86
23	Questions that require critical thinking	3.93	0.89	3.98	0.79
24	Questions in which you are asked to evaluate others' solutions or opinions	3.62	0.94	3.46	0.93
25	Questions that require scientific investigation	3.29	1.02	3.22	1.16
26	Questions that require problem solving	4.04	0.79	4.00	0.96

Table 14: Mean scores and standard deviations of assessment type by course.

	Assessment Type	MBA		MPA	
		Mean	SD	Mean	SD
1	Written test/exam, with supporting materials (notes, books)	3.76	1.03	4.13	0.77
2	Written test/exam, without the use of supporting materials	3.05	1.17	2.65	1.22
3	Individual oral presentation	3.45	1.14	3.13	1.10
4	Group oral presentation, where the instructor observes and assesses the contribution of each of the participants, with marks awarded to each participant may be different.	3.55	1.11	3.33	1.08
5	Group oral presentation, where the instructor observes and assesses the contribution of each of the participants, and will award the group with the same mark.	3.24	1.19	2.83	1.11
6	Multiple choice questions	3.22	1.33	3.61	0.92
7	Open-ended questions requiring short answers	3.87	0.79	4.07	0.70
8	Open-ended questions requiring long answers (essays)	3.40	1.09	3.46	0.99
9	Individual assignments	3.89	0.91	3.96	0.83
10	Group assignments	3.89	0.78	3.65	0.89
11	Dissertation	2.89	1.09	2.98	1.09
12	Questions making an appeal to the reproduction and memorization of facts	2.84	1.16	2.63	1.07
13	Knowledge related questions to check the understanding of the readings provided	3.75	0.92	3.98	0.82
14	Comprehension questions related to the materials taught by the instructor	3.69	0.76	4.09	0.69
15	Questions requiring the application of material learnt during the course to the new situations	3.95	0.64	4.13	0.68
16	Questions that require you to provide examples	3.95	0.75	3.96	0.72
17	Questions that require comparing different concepts/ideas	3.91	0.69	3.89	0.79
18	Questions that require data analysis and interpretation	3.80	0.92	4.04	0.93
19	Questions that require drawing conclusions	3.78	0.82	3.80	0.92
20	Questions that require an overall view of the relations among all topics learnt	3.65	0.88	3.70	0.78
21	Questions that require creativity and imagination	3.76	0.97	3.43	0.99
22	Questions that require a personal explanation or opinion	3.93	0.89	3.76	0.86
23	Questions that require critical thinking	3.93	0.89	3.98	0.79
24	Questions in which you are asked to evaluate others' solutions or opinions	3.62	0.94	3.46	0.93
25	Questions that require scientific investigation	3.29	1.02	3.22	1.16
26	Questions that require problem solving	4.04	0.79	4.00	0.96

Table 15: Mean scores and standard deviations of assessment type by gender.

	Individual Presentation	Group Presentation	MCQ	Open-ended Questions	Essay Questions
	p-value	*p-value*	*p-value*	*p-value*	*p-value*
Gender	0.576	0.473	0.542	0.130	0.928

Table 16: The p-values of assessment types by gender.

	Individual Presentation	Group Presentation	MCQ	Open-ended Questions	Essay Questions
	F-value	*F-value*	*F-value*	*F-value*	*F-value*
Age group	0.434	0.526	0.423	0.759	0.625

Table 17: ANOVA results for age group of assessment types.

Table 18 summarises the mean scores and standard deviations of the five assessment types (individual assignment, group assignment, oral presentation, test, exam) in terms of enjoyment, learning value, fairness, ability, and preference among MBA and MPA students. A lower mean score suggests a higher ranking compared to a higher mean score. It is telling that both groups of students gave individual assignment and exam as the highest and lowest ranking respectively for all the attributes. The findings suggest students have a strong preference for individual assignments compared to the other four assessment types. This could be because these part-time students feel that they have more control and better time management in doing individual assignments compared to group assignments where there could be difficulties faced in coordinating and meeting their group members for discussion and distribution of task among members, which may lead to issues on fairness and different degree of commitment among members. This is evident from the highest mean score (lowest rank) recorded for fairness and ability in group assignments. In a similar vein, Selvarajah et al. (2010) also reported the postgraduate students from universities in Australia, Thailand and New Zealand also favour individual assignments over group assignments.

Assessment Types	MBA		MPA	
	Mean	SD	Mean	SD
Enjoyment				
- Individual assignment	2.20	1.33	2.37	1.15
- Group assignment	2.53	1.25	2.61	1.52
- Oral presentation	2.98	1.24	3.22	1.30
- Test	3.45	1.23	3.07	1.07
- Exam	3.87	1.36	3.74	1.54
Learning value				
- Individual assignment	2.16	1.39	2.20	1.23
- Group assignment	2.58	1.30	2.72	1.39
- Oral presentation	3.45	1.20	3.26	1.28
- Test	3.22	1.19	3.39	1.05
- Exam	3.67	1.38	3.50	1.60
Fairness				
- Individual assignment	2.40	1.46	2.30	1.25
- Group assignment	3.58	1.34	3.72	1.26
- Oral presentation	3.35	1.28	3.54	1.23
- Test	2.84	1.22	2.74	1.05
- Exam	2.87	1.54	2.70	1.67
Ability				
- Individual assignment	2.55	1.51	2.24	1.16
- Group assignment	3.75	1.15	3.54	1.43
- Oral presentation	3.29	1.40	3.35	1.31
- Test	2.71	1.11	2.96	1.02
- Exam	2.80	1.51	2.91	1.69
Most preferred				
- Individual assignment	2.36	1.41	2.22	1.16
- Group assignment	2.93	1.33	2.80	1.47
- Oral presentation	3.18	1.24	3.28	1.39
- Test	3.02	1.26	3.07	1.09
- Exam	3.53	1.57	3.63	1.49

Table 18: Comparison of assessment preferences between MBA and MPA students.

On the other hand, students ranked exams as the least desirable, especially when it comes to enjoyment and learning value. This could be the anxiety and stress they face before (preparation), during (time management and ability to answer the questions) and even after the exam (worrying about the results). In addition, they may perceive that the exam cannot reflect and measure their ability fully. Similar results are also found between female and male students' preference of assessment types (see Table 19).

Tables 20-23 present the correlation coefficients between assessment types and learning approaches for MBA, MPA, female and male students respectively. It can be seen that there is no significant correlation between assessment types and learning approaches among these variables apart from a significant negative correlation between group assignment and Surface Approach (SA) for MBA students and a significant positive correlation between test and Deep Motive (DM) for the female students, both at 0.05 significant level. It suggests that MBA students who adopt a Surface Approach (SA) to learning may favour group assignment as they may not put in as much effort and rely on other group members, especially those committed and members who may adopt a Deep Approach (DA) to learning, to completing the assignment. Such behaviour and attitude are unacceptable and unfair to those students who put in their effort. It is also telling that the female students who adopt a DM approach to learning do not favour test assessments. Perhaps it could be due to the fact that these tests are normally conducted during the mid-trimester, which could fall within the sixth or seventh week after the trimester commences. They may not be well-prepared for it since as deep learners, they believe they need more time to learn the topics and concepts well.

Assessment Types	Female		Male	
	Mean	SD	Mean	SD
Enjoyment				
- Individual assignment	2.26	1.18	2.30	1.34
- Group assignment	2.61	1.42	2.50	1.32
- Oral presentation	3.14	125	3.02	1.31
- Test	3.14	1.19	3.45	1.14
- Exam	3.84	1.47	3.77	1.41
Learning value				
- Individual assignment	2.35	1.34	1.95	1.24
- Group assignment	2.75	1.38	2.50	1.29
- Oral presentation	3.33	1.23	2.41	1.25
- Test	3.18	1.23	3.45	0.96
- Exam	3.39	1.58	3.86	1.31
Fairness				
- Individual assignment	2.46	1.34	2.23	1.40
- Group assignment	3.58	1.26	3.73	1.37
- Oral presentation	3.44	1.32	3.43	1.18
- Test	2.84	1.14	2.73	1.16
- Exam	2.68	1.62	2.93	1.56
Ability				
- Individual assignment	2.37	1.29	2.45	1.47
- Group assignment	2.47	1.29	3.89	1.25
- Oral presentation	3.53	1.33	3.05	1.35
- Test	2.79	1.12	2.86	1.01
- Exam	2.84	1.64	2.86	1.53
Most preferred				
- Individual assignment	2.32	1.16	2.27	1.47
- Group assignment	2.96	1.44	2.75	1.33
- Oral presentation	3.35	1.36	3.07	1.23
- Test	2.95	1.21	3.16	1.15
- Exam	3.42	1.59	3.77	1.44

Table 19: Comparison of assesssment preferences between female and male students.

MBA	DA	DM	DS	SA	SM	SS
Individual Assignment	0.030	0.185	-0.051	0.130	0.118	0.049
Group Assignment	-0.122	-0.235	0.061	-0.304*	-0.248	-0.144
Oral Presentation	0.123	0.121	-0.060	-0.042	-0.104	-0.226
Test	-0.108	-0.046	-0.106	0.172	0.179	0.170
Exam	0.056	-0.036	0.129	0.019	0.029	0.109

**Correlation is significant at the 0.05 level*

Table 20: Correlation matrix between assessment types and learning approach - MBA.

MPA	DA	DM	DS	SA	SM	SS
Individual Assignment	0.151	0.141	-0.105	-0.119	-0.142	-0.128
Group Assignment	0.066	-0.005	-0.031	0.255	0.025	-0.154
Oral Presentation	0.007	-0.021	-0.133	0.032	0.058	-0.037
Test	-0.030	0.092	0.130	-0.195	0.033	0.223
Exam	-0.168	-0.151	0.141	-0.045	0.007	0.122

Table 21: Correlation matrix between assessment types and learning approach - MPA.

Female	DA	DM	DS	SA	SM	SS
Individual Assignment	-0.012	-0.142	0.106	0.098	0.047	-0.011
Group Assignment	-0.158	-0.162	-0.087	-0.126	-0.062	-0.162
Oral Presentation	0.047	-0.108	0.086	0.103	0.138	0.215
Test	0.127	0.261*	-0.092	0.012	-0.058	0.029
Exam	0.016	0.145	-0.002	-0.054	-0.052	-0.051

**Correlation is significant at the 0.05 level*

Table 22: Correlation matrix between assessment types and learning approach - Female.

Male	DA	DM	DS	SA	SM	SS
Individual Assignment	0.177	-0.022	0.101	0.078	0.093	-0.220
Group Assignment	-0.090	-0.066	-0.230	-0.192	-0.111	0.016
Oral Presentation	-0.029	0.137	-0.195	0.107	0.134	-0.022
Test	-0.126	-0.097	-0.002	0.028	-0.067	0.156

Table 23: Correlation matrix between assessment types and learning approach - Male.

Clearly these mid-trimester tests may not fully examine and reflect their competence and ability on the subject. Another possible reason could be due to heavy work and family commitment, these students may only study hard and adopt a DA to learning just prior to the exam as it carries a heavier weightage to the overall module grade.

5. Implication of findings

This pilot study was designed to examine part-time postgraduate students' educational goals, learning approaches and assessment preferences. In terms of educational goals, the respondents cited "to learn new skills so that I can enhance or change my career", "to improve my management/technical skills" and "to discover knowledge that may be useful for my job" as among the most important goals in pursuing postgraduate studies. When it comes to SAL, the respondents generally adopted a deep approach to learning, especially among the MPA respondents and those who fall under the age group of 41-45 years and 46-50 years. This approach to learning is also evident in the assessment preference among the respondents, where they prefer assessments that require higher order level of thinking such as problem solving and application of materials learnt during the course to the new situations. When it comes to the five assessment types, respondents have strong preference for individual assignment and showed least preference for exam. However, there was no significant difference in the preference for any of the five assessment items/format among gender and age groups.

5.1 Curriculum redesign

Based on the key educational goals cited by the respondents, the University may redesign the curriculum by continually updating the topics covered for each module so as to enable students to learn cutting-edge knowledge that can be applied to their work. Subjects like Effective Leadership, Risk Management, Strategic Decision Making and Strategic Marketing Management in the MBA programme may include more case studies in the Asian context and cover a wider range of industries, especially those that are of high relevance to Singapore. For the MPA course, as the accountancy profession has been undergoing many changes in the International Financial Reporting Standards (IFRS) and other regulatory changes in Singapore with respect to corporate governance, taxation and finance, the University may consider updating the syllabus for subjects like Corporate Accounting, Accounting Theory and

Governance, and Business Finance. Some respondents have also expressed their concern over the auditing, corporate law and taxation modules covered in the programme that are not in accordance with the Singapore regulatory framework. Perhaps the University may also consider revising and adapting its auditing, law and taxation subjects to the Singapore context to ensure a higher degree of relevance and applicability for the students. It must be noted that both the CPA Australia exam and the Singapore Qualifying Program exam for aspiring certified/chartered accountants have their taxation modules designed to cater to the Singapore context. Thus, it would be a big plus for the University to consider the adaptation to make the MPA programme more appealing and competitive to existing and prospective students.

5.2 Instructors' role

In order to encourage more students to adopt a deep approach to learning, instructors need to emphasise that learning is about developing meaning and understanding, especially at the postgraduate level, where students are expected to learn the concepts and theories and be able to relate and apply to their working environment and profession. Instructors can promote the deep learning approach by developing class activities that support collaborative learning in a safe, supportive and engaging learning environment (Dart et al., 2000). This can be achieved by introducing problem-based learning which involves solving complex problems in real world scenarios. Studies have shown that students taught using problem-based learning became increasingly deep in their approaches to learning (Newbie & Clarke, 1986; Scheau & Marina, 2008). In addition, instructors can present opportunities by providing practical problems that allow students to work in groups to explore, inquire, and experiment. Instructors may play the role of facilitators to encourage students to interact and share their ideas with fellow classmates. As the MBA/MPA programme offered by this university typically comes with a small class size of 10-20 students, interaction in small groups around the problem stimulates students to adopt a deep learning approach (Dolmans, Wolfhagen, & Ginns, 2010).

5.3 Re-examination of assessment types

The findings from this study suggest that students have a strong preference for individual assignments and least preference for examinations. Most of the modules in the MBA/MPA programme have summative assessments such as examinations, which typically carries a weightage between 30% - 50%. The University may re-examine the possibility of giving a higher weightage to individual assignments and less weightage to examinations. This may motivate students to work harder and hopefully help change students' approach to learning from surface to deep. Having less examination weightage may also reduce students' tension and anxiety during the exam preparation, and they may feel more motivated to perform at their best during exams, resulting in higher passing and lower attrition rates (Birenbaum & Feldman, 1998).

As most of the MBA/MPA students are part-time working adults, having heavy work and family commitments, having too many assessment components may lead them to adopt a surface learning approach as they may see career and family being more important than studies. Thus, the University may consider reducing the assessment components to just two or three instead of the current four to five components, and if feasible, some modules may not even have any exam component. The University may also introduce more electives for students to choose from. This will also motivate them to take up modules which interest them and benefit them in their workplace. Alternatively, the University may consider to let students choose their assessment types for the electives, though such an approach may require the approval from the Dean of the business school, and strong justifications are required to ensure fairness and true appropriateness in measuring students' performance.

5.4 Limitations of study

As the study focuses only on the existing postgraduate students who have not completed their degree, it did not obtain views from MBA/MPA graduates on how the qualification had benefitted them in their career and personal development after obtaining it as compared to before the programme began. Furthermore, the results gathered come from a relatively small sample size of students from two postgraduate programmes in one university, and they may not be representative of other postgraduate students within the university and other universities.

When it comes to students' approaches to learning (SAL), this study did not consider the contextual factors that may affect students adopting different approaches when faced with different circumstances. It also did not consider instructors' teaching effectiveness as prior studies suggested that instructor's teaching effectiveness may have an impact on SAL (Halawi, McCarthy, & Muoghalu, 2009). Despite these limitations, it is hoped that the findings from this study provide a valuable contribution to the scholarship on education goals, learning approaches and assessment preferences among part-time postgraduate students in Singapore. It is believed to be the first study that examines the effects of gender and course on these areas in the postgraduate studies in Singapore. Qualitative research methods such as interviews and focus groups can be conducted in order to gain more in-depth views and reasoning on students' perception of teaching effectiveness, assessment preferences and their educational goals. Other variables such as mode of study (part-time vs full-time vs distance learning), delivery (online vs blended vs face-to-face), years of working experience, and assessment results (if available) can be included for future studies.

6. Conclusion

This study is believed to be the first to examine part-time postgraduate students' educational goals, learning approach and assessment preference for an Australian MBA

and MPA programmes offered in Singapore. The overall findings from this study will enable the University to gain insight into the reasons for pursuing a postgraduate degree in Singapore, which will be beneficial for the University to consider redesigning the curriculum for both programmes to suit the needs of existing students as well as to increase their appeal to prospective students. The respondents' views on their learning approach and assessment preferences will allow instructors and module leaders to look into the teaching pedagogy and current assessment structure for each module so as to improve students' learning experience and satisfaction. Encouraging students to adopt a deep learning approach and changing the assessment structure aligned with this approach may motivate students and reduce their anxiety and fear in pursuing these programmes to meet their educational goals. With the rising trend of students in Singapore pursuing further studies on a part-time basis, there will be ample opportunities for higher education scholars to examine their aspirations and learning approaches, and perform comparative studies among local and international students from the public universities and PEIs.

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Appendix: Questionnaire

Please shade the answer of your choice where appropriate.

SHADING INSTRUCTIONS			
Correct Shading	●	Wrong Shading	⊗ ⊕ ∅

A. Why you study

Please provide your position with regard to the following statements connected to your current educational goals and aspirations for pursuing your postgraduate study.

Please tick the following number accordingly to indicate that you:

1 - strongly disagree

2 - disagree

3 - neither agree or disagree

4 - agree

5 - strongly agree

Or add a statement of your own.

	Your current educational goals and aspirations for pursuing your postgraduate study:					
No.		1	2	3	4	5
1.	To learn new skills so that I can enhance or change my career	O	O	O	O	O
2.	To improve my management/technical skills	O	O	O	O	O
3.	To undertake a personal challenge	O	O	O	O	O
4.	To obtain a qualification essential to my current job	O	O	O	O	O
5.	To get a qualification that will look good on my resume	O	O	O	O	O
6.	To discover knowledge that may be useful for my job	O	O	O	O	O
7.	To help me to look for a new job	O	O	O	O	O
8.	To enhance my leadership skills	O	O	O	O	O
9.	To improve my skills of working with other people	O	O	O	O	O
10.	To be able to work more effectively in group situations	O	O	O	O	O
11.	To establish new business contacts	O	O	O	O	O
12.	To show my friends the importance of continuing education	O	O	O	O	O
13.	To improve my ability to work with people with different culture	O	O	O	O	O
14.	To improve my standing with business associates and friends	O	O	O	O	O
15.	To make new friends	O	O	O	O	O
16.	To improve new communication skills	O	O	O	O	O
17.	To improve my knowledge just for the sake of it	O	O	O	O	O
18.	To meet my employers' requirements so that I can be promoted or to take on additional responsibilities where this qualification helps	O	O	O	O	O
19.	To show my parents I can do something worthwhile	O	O	O	O	O
20.	To use up my spare time	O	O	O	O	O
21.	Other: please state what:					

B. How you study

This section comprises of 20 statements about your attitudes towards your studies and your usual way of studying.

There is no *right* way of studying, there is only a way of studying that you find works for you.

If you think your answer to a question would depend on the subject being studies, give the answer that would apply to the subject(s) most important to you.

The number at the top of this questionnaire for this section stand for the following response:

1 - this item is *never* of *only rarely* true of me

2 - this item is *sometimes* true of me

3 - this item is true of me about *half* the time

4 - this item is *frequently* true of me

5 - this item is *always* or *almost always* true of me

	Your attitudes towards your studies and your usual way of studying.					
No.		1	2	3	4	5
1.	I find that at times studying gives me a feel of deep personal satisfaction.	O	O	O	O	O
2.	I find that I have to do enough work on a topic so that I can form my own conclusions before I am satisfied.	O	O	O	O	O
3.	My aim is to pass the course while doing as little work as possible.	O	O	O	O	O
4.	I only study seriously what's given out in class or in the course outline.	O	O	O	O	O
5.	I feel that virtually any topic can be highly interesting once I get into it.	O	O	O	O	O
6.	I find most new topics interesting and often spend extra time trying to obtain more information about them.	O	O	O	O	O
7.	I do not find my course very interesting so I keep my work to the minimum.	O	O	O	O	O
8.	I learn some things by rote, going over and over them until I know them by heart even if I do not understand them.	O	O	O	O	O
9.	I find that studying academic topics can at times be as exciting as a good novel or movie.	O	O	O	O	O
10.	I test myself on important topics until I understand them completely.	O	O	O	O	O
11.	I find I can get by in most assessments by memorizing key sections rather than trying to understand them.	O	O	O	O	O
12.	I generally restrict my study to what is specifically set as I think it is unnecessary to do anything extra.	O	O	O	O	O
13.	I work hard at my studies because I find the topics/subjects interesting.	O	O	O	O	O
14.	I spend a lot of my free time finding out more about interesting topics which have discussed in different classes.	O	O	O	O	O
15.	I find it is not helpful to study topics in depth. It is confusing and waste time, when all I need is to obtain a pass for each subject.	O	O	O	O	O
16.	I believe the lecturers shouldn't expect students to spend significant amounts of time studying material everyone knows won't be examined.	O	O	O	O	O
17.	I come to most classes with questions in mind that I want answers.	O	O	O	O	O
18.	I make a point of looking at most of the suggested readings that go with the lectures.	O	O	O	O	O
19.	I see no point in learning materials which is not likely to be in the examination.	O	O	O	O	O
20.	I find the best way to pass examination is to try to remember answers to likely questions.	O	O	O	O	O

C. Assessment Preference

This section comprises of 32 items covering your preference with regard to assessment. There is no correct or incorrect answer as different students have different personality and preferences.

The number at the top of this questionnaire for this section stand for the following response:

1 - not at all

2 - to a small extent

3 - unsure

4 - to a certain extent

5 - to a great extent

No.		1	2	3	4	5
	To what extent do you think your achievements in the course can be addressed by each of the following assessment methods?					
1.	Written test/exam, with supporting materials (notes, books)	O	O	O	O	O
2.	Written test/exam, without the use of supporting materials	O	O	O	O	O
3.	Individual oral presentation	O	O	O	O	O
4.	Group oral presentation, where the instructor observes and assesses the contribution of each of the participants, with marks awarded to each participant may be different.	O	O	O	O	O
5.	Group oral presentation, where the instructor observes and assesses the contribution of each of the participants, and will award the group with the same mark.	O	O	O	O	O
6.	Multiple choice questions	O	O	O	O	O
7.	Open-ended questions requiring short answers	O	O	O	O	O
8.	Open-ended questions requiring long answers (essays)	O	O	O	O	O
9.	Individual assignments	O	O	O	O	O
10.	Group assignments	O	O	O	O	O
11.	Dissertation	O	O	O	O	O
12.	Questions making an appeal to the reproduction and memorization of facts	O	O	O	O	O
13.	Knowledge related questions to check the understanding of the readings provided	O	O	O	O	O
14.	Comprehension questions related to the materials taught by the instructor	O	O	O	O	O
15.	Questions requiring the application of material learnt during the course to the new situations	O	O	O	O	O
16.	Questions that require you to provide examples	O	O	O	O	O
17.	Questions that require comparing different concepts/ideas	O	O	O	O	O
18.	Questions that require data analysis and interpretation	O	O	O	O	O
21.	Questions that require drawing conclusions	O	O	O	O	O
22.	Questions that require an overall view of the relations among all topics learnt	O	O	O	O	O
21.	Questions that require creativity and imagination	O	O	O	O	O
22.	Questions that require a personal explanation or opinion	O	O	O	O	O
23.	Questions that require critical thinking	O	O	O	O	O
24.	Questions in which you are asked to evaluate others' solutions or opinions	O	O	O	O	O
25.	Questions that require scientific investigation	O	O	O	O	O
26.	Questions that require problem solving	O	O	O	O	O

Item 27-32 require you to rank your preference for each of the current assessment methods, where ranking from 1 = most to 5 = least.

27. In terms of enjoyment — Rank
- Individual assignment ____
- Group assignment ____
- Oral presentation ____
- Test ____
- Exam ____

28. In terms of learning value — Rank
- Individual assignment ____
- Group assignment ____
- Oral presentation ____
- Test ____
- Exam ____

29. In terms of fairness — Rank
- Individual assignment ____
- Group assignment ____
- Oral presentation ____
- Test ____
- Exam ____

30. In terms of measuring ability — Rank
- Individual assignment ____
- Group assignment ____
- Oral presentation ____
- Test ____
- Exam ____

31. In terms of most preferred — Rank
- Individual assignment ____
- Group assignment ____
- Oral presentation ____
- Test ____
- Exam ____

32. What other assessment method(s) you would like to include in the course, if any?

_____

_____

_____

D. Information about You

33. Which course are you pursuing?

O Master of Business Administration (MBA) O Master of Professional Accounting (MPA)

34. Gender

O Male O Female

35. Age group

O ≤ 30 O 41 – 45
O 31 - 35 O 46 – 50
O 36 - 40 O 51 and above

Thank you for completing this questionnaire.

Has your flip flopped? Discovery learning with extraordinary seminars

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Abstract

This instructional paper addresses the often encountered, but rarely published challenge of flipped classroom flops or failures, explaining key wrap-around interventions that were implemented to address observed flip shortcomings using a case-based methodology. Discovery learning with extraordinary seminars was conceived as a lean forwards or active pedagogy for an undergraduate digital marketing module. It comprised three distinct elements: firstly, never-the-same interactive seminars; secondly, conversational plenaries with industry practitioners; and finally, an emboldened 'fly from the eagle's nest and soar' approach to assessment. This learning engagement innovation aims to inspire higher education professionals to overcome their time and risk innovation hurdles. It concludes by sharing a summary of qualitative student feedback and instructor reflections.

Introductory problem statement: Flipped flop in rooms full of strangers

Student experience insight across a number of larger business school cohorts from undergraduate teaching interactions in UK, France and Singapore highlighted that management students, even after three years studying together, were often found to be strangers to each other in the classroom. Rather surprisingly, students would not engage with each other, many stating that they only knew the person who sat next to them, operating, it seemed, as digital nomads who preferred to connect through their technology (Barkhuus & Tashiro, 2010). However, Marozzi (2012) identified university student socialisation to be an important factor that had not been widely considered, and found, notably, that interactions with other students can significantly influence student satisfaction. The author's observed experience of insufficient peer interaction in workshops was augmented by poor attendance (Parslow, 2012), limited preparation, and low levels of in-class participation (Bergmann & Sams, 2012). This typically resulted in expressions of dissatisfaction from the most engaged, confident and vocal students, who felt their learning environment had been diluted by their instrumental or surface learning peers (Hay, 2007) who were often strongly focused on primarily optimising their input to maximise their assessment performance.

Understandably, the deep learners (Beattie, 1997) resented the fact that the few carry a disproportionate workload and lamented the lack of quality sparring from their underprepared or absent peers. Student feelings of inequity were further exaggerated when a low engagement strategy was shown, if anecdotally, to result in strong grade performance. The author found that these problems were further exacerbated when a flipped or inverted pedagogy was deployed. A flipped classroom uses formal contact time to foster active learning using collaborative problem based learning (Song et al., 2017) by engaging beyond the material that had already been introduced to students before class, often using a mix of video and reading materials (Waldrop, 2013) aiming to develop more sophisticated cognitive abilities. It seems that pre-sessional preparation from all the students is an essential requirement for the success of a flipped classroom (Gilboy et al., 2015) and if absent it can result in an embarrassingly hollow in-class interaction and a disheartening flipped flop for enthusiastic pedagogic innovators who know they have failed to achieve their planned learning outcomes. It seems that savvy instructors learn to prepare not only the exciting flip content but also have a tactical plan B ready, to seamlessly implement when a class was unprepared (Song et al., 2017), resulting in a doubling of the preparation workload. This tactical juggling exercise, sadly, often requires the tactical deployment of a sub-optimal sage-on-the-stage information cascade (Parslow, 2012).

Flipping promise, but limited proof in the literature

Parslow (2012) astutely opines that students have changed, but lectures have not. Flipped classroom pedagogy appears to have evolved just after the millennium as a form of blended learning (Harris & Fu, 2017), when the internet had become mainstream, with early authors in the field comprising Rogers (2001) and Garrison and Kanuka (2004), inter alia. But despite its fifteen-year plus pedigree, the vast majority of research on flipped classrooms dates from 2015 or later (Talbert, 2018). This supports anecdotal evidence from pedagogic conferences that have indicated surprisingly low levels of flip adoption. Enthusiastically, Bergmann and Sams (2012, p. 1) claim that flipping can "reach every student in every class every day".

However, it seems the much-heralded flipped classroom fails to live up to its promise, even though published articles (e.g. Critz & Knight, 2013; Rotellar & Cain, 2016) tend to proclaim the technique's triumphal success, for both students and faculty. Outliers such as Straver (2007), however, found flipped students were less satisfied and Song and Kapur (2017) showed a reverse flip (explore in class, consolidate afterwards) to be more effective than both traditional and flipped methods. Bishop and Verleger (2013) found a generally positive view, albeit based on mostly single-group studies that explored student perceptions. Compelling meta-research by DeLozier and Rhodes (2017) highlighted the complex, multi-factor, and heterogeneous nature of flipped implementations. They found little extant evidence of the efficacy (or otherwise) of the nascent flipped technique compared with traditional learning approaches, perhaps because, as Song et al. (2017) posit, in-class engagements vary greatly and it is unclear which activities contribute to higher order critical thinking development. However, frank admissions of failure, such as Towey (2015), were very rare in the literature. Perhaps tellingly, Imhof (2017) found flipped teaching to be personally very enjoyable, particularly being able to get to know students in the class, but admitted facing an ethical dilemma when only 50 students in her class of 350 chose to be involved. Clearly the majority of Imhof's class believed the video support would be sufficient to pass the assessments.

It would seem that the appetite for publishing potentially reputationally damaging accounts (for instructors and institutions) of flipping failures is understandably small in this nascent body of literature. Hence also the potential explanation for the prevalence of positivist accounts of self-serving pedagogic innovation, such as Keengwe (2014) and even 'broken but here is how to fix it' accounts such as this paper. Given the promise of flipped classrooms, the lack of evidence of a groundswell shift in campus practice is rather surprising. Talbert (2018) found statistically significant quantitative measures of learning gain were quite modest, results varied widely according to implementation, but noted that it was unusual for flipped classes to do worse. Critically, they identified that active learning students showed higher satisfaction ratings, and flipped learning increased attendance.

However, students were often found to be very negative about flipped learning when first initiated. Waldrop (2013) pragmatically emphasises the terrible learning experience offered in passively listening to lectures, whilst highlighting that collaborating with friends using interactive modes of engagement can deliver superior learning outcomes for students. Could it be that the challenging implementation of the flipped implementation is what is holding the damned reservoir back? Talbert (2018) highlights the significant cost of both time and effort born by the innovative flipped instructor, which, combined with the not insignificant risk of loss of face and potential negative impact on continuing employment and/or promotional prospects, are perhaps the major barriers to more widespread adoption.

Methodological approach

This instructional paper uses a case study methodology to evaluate a flipped classroom pedagogic innovation that initially took place in the 2017/18 academic year for the Digital Marketing module MN2325, an elective pathway option offered in the second term of an undergraduate business and management programme. Talbert (2018) identifies that often, flipped classroom research has a tendency to be limited, using a single professor's single classroom context, and carried out using unsophisticated measurement tools with methodological flaws. They also state that it is usually not generalisable, too often carries an unintentional 'sales' bias, but demonstrates pedagogic heart and passion.

The author was responsible for teaching all the ten, two-hour plenary lectures and all six repeats of the weekly one hour seminars. Student testimonies were taken from the Digital Marketing course evaluation surveys, with responses from 30 of 118 registered students. Further student testimony was collected in the summer, following the completion of the learning programme, via in-depth interviews with five students, where it was hoped students were able to reflect more profoundly about their module learning, with the benefit of no assignment or exam deadlines and knowledge of their year's grade performance profile.

The paper aims to primarily provide the academy with a detailed instructional account of the innovation, addressing a gap in the extant literature (Rotellar & Cain, 2016), highlighted above, that addresses the much heralded flipping promise but reality of flopped adoption, and its limited evidence of efficacy according to DeLozier and Rhodes (2017). Provocative, emotive language is deliberately deployed, passionately to inspire other educators to implement their own flipped pedagogic innovations. Qualitative evidential results, from students and the instructor, are provided that very much recognise and embrace the limitations and shortcomings of this single instructor, single class approach, as outlined above by Talbert (2018). This research investigation was validated by Royal Holloway University of London, School of Management's ethics approval process.

Successfully implementing the flipped classroom

According to Bishop and Verlerger (2013) students prefer in-person lectures to video, but interactive classrooms over lectures. The key to making flipped classrooms work better, it appeared, was to develop peer-to-peer social ties to engage students in the early stages using ice-breakers to build trust, and to design diverse seminar activities that were rich in social interaction (Flynn, 2015). To make allowances for the competing time demands students experience during the end of term or semester assignment rush, strong motivation was provided to undertake wider reading early and prepare for classes by explicitly linking learning activities to the assessments and employability, becoming work ready.

In recognising the challenge of successfully implementing flipped classrooms, Rotellar and Cain (2016) call for the academy to share good practices and offer detailed implementation guides. This paper, therefore, continues by explaining the discovery learning philosophy before discussing the origination of the extraordinary seminars concept. A summary description of the workshop series is then outlined before the paper concludes with student reflections on their perceptions of the learning experience.

Learning to fly with discovery learning

Perhaps with the exception of (optional) dissertations, business school pedagogy, with its tightly scaffolded assessment regime and adherence to perfunctory learning outcomes, has unlearnt the joy of learning through personal discovery journeys. Would you like/have liked your child(ren) to have developed their primary maths competency by measuring the height of sunflowers planted in the school garden? Discovery learning (Hammer, 1997) embraces the idea of the unintended learning outcomes (Jones, 2007), by driving a profound exploration of a topic, rather than following a risk free, metrics friendly, painting-by-numbers structural approach that can reward surface learning skating. It embraces the reality that in fast moving fields, such as digital marketing, the instructor does not know everything and that the curriculum can and perhaps should be extended into the unknown zone (see Barnes, 2008).

Although it must be recognised that pure, unstructured discovery learning has been criticised (e.g. Mayer, 2004), as part of a diverse diet of assessment there is a place for less tightly scripted and more open-ended assignments. Rather than requiring a safety rope-guided regurgitation of a digitised SWOT, PESTEL or Porter's Five Forces analysis, treading the same boringly predictable furrow that previous generations of business school students have followed, discovery learning uses a more flexible, non-linear approach. For example, immersive, experiential open space learning (OSL; Monk et al., 2011) workshops that utilised text-free images to develop a grounded analysis of the good and bad of social media, or a gamified escape room competition, where clue solving against the clock unlocks an amusing Rick Rolling video surprise, whilst familiarising students with new analytical tools. The final, real world audit assessment

emboldens students, like a fledgling's first flight, to choose to take to the air of their own accord, in their own way, rewarding scholarly endeavour more than for reaching any pre-ordained destination. This is an approach, which very much embodies Royal Holloway University of London's motto; *esse quam videri*, 'to be rather than to seem' (Royal Holloway, n.d.).

The discovery learning concept, seemingly successfully trialled on a second year digital marketing module, used a combination of extraordinary seminars, significant industry plenary conversations (not lectures) and a provocatively unstructured final assessment. The aim was to address dissatisfaction amongst the more engaged students, who were resentful at the failings of a flipped classroom approach, namely inconsistent and inequitable pre-class peer preparation. In the same way that innovative Dutch towns have enhanced road safety by controversially removing street signs (Hamilton-Baillie, 2004), discovery learning encourages students, like nervous drivers approaching a signless junction, to take risks and explore their ambiguous environment.

In so doing, students not only developed resilience but the confidence to take on extreme problem-solving challenges, where the answer and the process to get there are both unknown, a skill that is highly valued by employers (Barnes, 2008). Non-spoon feeding instruction facilitated students through an array of innovative and provocatively ambiguous exercises, where the instructor is a facilitating river rather than a fountain of knowledge (Wong, 2009). A term ending multiple choice test was used to incentivise students to read and, counter-culturally, learn the whole core text and wider Virtual Learning Environment (VLE) content, with no question banks to commit to heart, past papers to memorise or cheat sheets to revise with. Repeated messaging emphasised the connection between in- and beyond-class participation and the achievement of successful grade outcomes. Heightened anxiety amongst some of the student body was a predictable bedfellow of this novel, deep learning innovation, as elucidated by Talbert (2018). Some hyper-connected students were found to vent their concerns a little too easily, mostly mis-perceptions pertaining to their performance in the multiple-choice test.

A three-pronged intervention was adopted to wrap around the flipped classroom concept; initial ice breakers to help start to build study tribes (or groups), a varied active learning seminar format that recognised assignment season demands, and challenging assessments were used to motivate deep engagement with the classes and freely available core electronic text book and learning support materials hosted on the virtual learning environment (VLE).

Inspiring extraordinary seminars

The inspiration for taking a fresh approach to designing seminars came after attending the medieval castle-hosted College of Extraordinary Experiences, a LARP (Live Action Role Play) infused business conference that was focused on co-creational experience design (Extraordinary College, n.d.). The conference, which banned death by PowerPoint presentations, used arts-inspired experiential learning that was anchored by the principles of design thinking (co-creation, rapid prototyping and flexible focus) (Dorst, 2011). The digital marketing lead instructor sought to infuse the teaching design with the energy and positivity they had experienced at the conference, which had been co-created with a heady blend of creative performing artists, academics, industry practitioners and event designers, and powerfully underpinned by Pine and Gilmore's (1999) experience economy framework.

A flying faculty, international teaching week in France had revealed a key insight, that large cohorts of management students in seminars were often complete strangers. Even in the final year of their programme, randomly assigned classes were just not peppered with friendly faces. Whilst this is to be expected in the first year, it was a surprising revelation for the instructor, who was able to validate this insight on other programmes in both Singapore and the UK. Rather than talking to each other, students were more often found with their heads down on their phones, no one was talking in real life, but communicating virtually!

A number of effective ice-breaking activities adapted from an MBA induction programme were repurposed to encourage name learning and introduce a sense of unexpected fun. It was considered desirable to design and implement a varied seminar diet that was stimulating to deliver (repeated six times over two days) and make students want to attend and actively participate. A strong, interwoven, triad of sticky themes were engineered into the programme comprising: theoretical engagement (e.g. academic journals and core text), real world applicability (e.g. process mapping using dating website analysis) and study skill bites (e.g. analysis, academic writing structure). Second-year undergraduates were found too often to be underperforming because they lacked vital analytical skills and research rigour.

Students studied award-winning industry exemplars, edgy WARC case studies (WARC, n.d.) written by persuasive advertising professionals and elevator pitched (one minute summary presentation) high quality journal papers to reinforce familiarity with these too often overlooked electronic library sources. Students who arrived under-prepared were invited to take time out to catch up and drop into a later seminar, which enhanced preparation noticeably. To address tactical attendance during assignment season, students were promised low and no preparation seminars in the second half of term, which included a Twitterstorm debate and an Escape Room inspired challenge. The open space learning visual analysis exercise co-created a surprisingly impactful reflection on structuring effective essay writing, which was a serendipitous success. Attendance exceeded expectations and the instructor very much enjoyed the novelty of walking out of class behind enthusiastically chattering and energised students.

Seminar series outline

In line with Flynn (2015), a markedly different format was used every week, with more student preparation required at the beginning of the term and little or none during assignment

season. Teams often jump too quickly to the assigned task before taking the time to form powerful alliances; developing social ties, building trust, and establishing effective collaborative processes (see: Smith et al., 1994 on team process and social integration). So rather unorthodoxly, social interaction exercises were prioritised (the how) in the first three weeks, with less focus given to expected academic content (the what), which was emphasised later.

Week 1: Social engagement

Unconventionally, the first seminar was designed to build a strong circle of trust within the group by focussing not on content, but on group dynamics. The session started with everyone in a circle playing name pop (individuals were identified as 'popped' when their name was called three times, shown by either standing up or crossing their arms) and name catch (identifying the next catcher for an invisible ball or energy). The instructor then plays a notional spin the bottle 'ask me anything' game that encourages students to take turns putting difficult, challenging and revealing questions to get to know the instructor on a more human level, breaking down the instructor-student power-distance divide. The class is concluded by explaining the flipped classroom philosophy using a question and answer discussion, which is likely to be different to others they have attended, by underscoring student expectations; to read the assigned textbook and to be prepared for active seminars. Students are then encouraged to meet up after class for a purely social activity using the "start with a party" (O'Brien, 2012) mantra, emphasis being put on strong groups proactively seeking to move down Tuckman's Form, Storm, Norm, Perform curve (Bonebright, 2010).

Week 2: Elevator pitching

Using the employability-inspired "imagine you had to sell your idea orally without any visual aids to your time-poor boss in a short, corridor or elevator encounter", students were invited to introduce themselves and offer a pithy one-minute summary of a digital marketing academic journal paper they had found to be of interest. To ensure there was no duplication, test effective Harvard referencing capability and encourage timely preparation, students were required to post their reference only (not summary) on a Moodle forum in the virtual learning environment. This highlighted the activity to the entire cohort (particularly if entries generated an email notification to all) and for the enlightened, provided a co-created contemporary digital marketing reading list reflecting the interests of the students (rather than the instructor). Well-prepared students often achieved the 60 seconds cut off, whilst others either took just 30 seconds or needed shutting down. With a short brief and transitions, larger groups would use 30 minutes, leaving 20 minutes for a group discussion on topics raised and reflection on their presentation skills performance. Instructors might draw out the groups' strengths and weaknesses and emphasise the noticeable impact preparation can make.

Week 3: Process mapping

The session started with a shortened version of name pop (as detailed above). Email marketing uses automated workflow tools to systematically lead a customer through the engagement funnel. The instructor sketched a simple process chart on the whiteboard to explain the symbol meanings; ovals (start/stop), rectangles (activity), arrows (flow direction), diamonds (yes/no decision points) and parallelograms (input/output). A favourite design challenge invites consideration of a fictional tooth brushing service, but nail or shoe polishing would also work. Using large paper sheets, Post It squares and thick pens, small student groups were invited to create a flowchart for an email marketing campaign that has a clear goal (e.g. email address capture). To encourage question forum posting, students were asked to take a photo of their final version and share it with the cohort via the virtual learning environment. Where physically possible, students were invited to move around the room to look at the other groups and reflect on key points of difference. The workshop was closed with a discussion of the challenges that were faced in completing the task and explaining that process mapping was used as a work design and performance management tool. Lucidchart (n.d.) is a useful briefing package.

Week 4: SAP Scenes (2016)

Cartoon storyboards are often used by professional user experience designers to visualise potential design solutions. By applying personas or avatars (typical customer profiles) to particular cut out and named characters, a number of digital customer journey scenarios can be created and performed, to help identify potential pain points and uncover emotional dimensions. Sequential image capture of typical scenarios (e.g. the screens for a sign-up process) can be used to create evocative, comic book-like storyboards. The projection of student-improvised dialogue onto an often humorous, lower risk role-playing situation using a mini theatre 'scene' makes for an engaging small group classroom encounter. Consider using live screen interaction (position cartoon cut outs around a physical screen) with the sign-up process for a range of dating apps and summarise in plenary discussion, to analyse key points of difference (e.g. intuitiveness, data privacy concerns, time taken). A free starter toolkit can be accessed from SAP (n.d.), just add your own scissors.

Week 5: WARC advertising agency awards

This seminar sought to encourage students to critique warc.com hosted advertising agency awards (subscription required). We selected reasonably current campaigns which hosted rich video exemplars and a social agenda (e.g. #likeagirl and P&G's Proud Sponsor of Mom) to include some ethical focus, juxtaposing the overtly commercial context of this FMCG (fast moving consumer goods) heavy database. The discussion sought to compare and contrast advertising agency awards with academic journals, to encourage exploration of more critical analysis required in the final undergraduate year (level 6). The conversation should cover source credibility and persuasive writing,

WARC authors (advertising copy writing experts) look to win the competition and position their work favourably. We used this exercise to highlight critical comparison link words as a tell tale sign of analytical writing (see: Compare and Contrast, n.d.).

Week 6: Escape room

This jeopardy-inspired concept draws on the collaborative gaming trend for experiential group puzzle experiences, where the themed room and props are replaced with a series of exploratory research challenges. Use a projected internet countdown timer to start the session, focusing on the finite time window to attempt to inculcate urgency and a degree of shared voluntary suspension of disbelief. Working in small groups, clues point students at websites where they need to retrieve specific answers. Groups competed to crack the code before the end of the 50-minute seminar to be able to exit the room. Of course, health and safety rules prohibit real door locking and students know they will leave the room whatever happens. A range of free analytical websites were used, e.g. Social Blade, Social Bakers, SimilarWeb, SEMrush, all exemplars of the sorts of tools students should use for the terminal assignment.

The seven clues each provided a single letter or number that combined to complete the URL (https://youtu.be/dQw4w9WgXcQm) to be Rick Rolled, the internet joke phenomenon of blind linking to a video of British singer Rick Astley performing 'Never gonna give you up' (with its 500m+ views). Analogous to real escape rooms, satisfactory experiences come from most groups successfully navigating all the clues and being able to open the virtual treasure chest in the last five minutes, which necessitates active facilitation by the instructor, using some helpful steers to correct erroneous answers and lead strugglers.

Week 7: Case study

In this seminar, students were set two case studies to link to one of the week's lecture topics, 'trust', Airbnb 'never a stranger' (Perrin, 2016) and Wu and Yuan's (2016) 'Helping Chinese Consumers Making the Informed Choices: the Challenge of Trust'. In self-selecting groups, students were invited to discuss one of the papers and then present back their discussion in plenary. Many students had used Airbnb and were able to relate to the key issue of stranger danger, both as a host and guest. The video 'How Airbnb designs for trust' from one of Airbnb's co-founders (Gebbia, 2016) is a useful additional resource.

Week 8: Live Twitterstorm discussion

Sharing failures is not commonplace as discussed above. This activity failed spectacularly, despite being one of the more exciting and potentially engaging concepts from the design phase (Chamberlin & Lehmann, 2011). Essentially, it was conceived as a social media-based balloon debate, using the module code hashtag to host the exchange of opinions and ideas via Twitter. It aimed to generate a multi-seminar, beyond class discussion on a range of topics that students found interesting, and deliver the kind of digital innovation that features in leading pedagogic journals. Despite the ability to create an impersonal handle (user identity) the majority of students were found to be extremely reluctant to participate in this activity. They were concerned about creating digital content that might come back to haunt them later in their career, although online privacy and fear of being indelibly flamed were also major hurdles. Plan B for this seminar was to host a discussion about contemporary digital marketing, and emphasise the value of signing up for specialist marketing media channels such as Gartner's L2 and Mark Riston's Marketing Week.

Week 9: Social media: good or evil? using open space learning

The assignment question inherited with this module invited students to write an essay addressing whether they thought social media was a force for good or evil. This challenging question was repurposed into a seminar activity, drawing on a standing, group activity inspired from Monk et al.'s (2011) open space learning. Fifty contemporary images were collated on double side, colour printed on A5 paper (for desk top, but A4 laminates worked better for a floor-based activity if there is enough open space for this). Puzzling, text-light pictures of: influential religious and political world leaders, social influencers, current news items including data privacy, and dark social media stunts were selected. In small groups, students were given half the seminar time to organise the images into a story, with no further instruction, beyond identifying what some of the more left field images were depicting. Without being guided (honestly!), three different formats of answers usually emerged in each of the six workshops: (1) an entirely fictional story with made-up protagonists using a page turning narrative, (2) two groupings of images showing the good and evil side of social media, and (3) a model-like circular framework that sought to describe and explain social media systematically. Where there was limited floor space, two rectangular desks pushed together provided an optimally large working space. To bring the session together, students were invited to vote for their favourite by physically moving next to the preferred collection of images and invited to explain their choices. The instructor asked students to recommend which of the three approaches would deliver the best assignment outcome. The given answer was that a strong essay would have all three elements; a strong narrative, clear analysis and a coherent framework.

Week 10: Assessment Q&A

At this point in the term, students were very comfortable and the last, additional session was used as an unstructured opportunity for students to ask questions about the upcoming digital audit case study assignment. This was unequivocally a provocative and ambiguous assignment, where the instructor encouraged students to deploy discovery learning, formulating both their own process and content. Frequent student requests for exemplar model answers and step-by-step scaffolding were politely declined,

with an accompanying rationale that sought to explain the higher order problem solving process they were being challenged to engage with. Students were invited to identify and use new, free data scraping tools, create original, layered graphical analysis in Excel and use a grounded evaluative approach to explore a range of complex digital marketing metrics. Many engaged students seemed to excel, whilst surface learners, many of whom had missed the in-lecture briefings, often failed to address the question appropriately.

Results and conclusions

By way of imparting an inspiring impression of the flip fix innovation, that has been dubbed 'discovery learning with extraordinary seminars', this paper concludes with a summary of student and instructor reflections.

Student feedback

Student testimony ascribed significant value to the practical, real world nature of discovery learning and extraordinary seminars, a key institutional priority:

> The opportunity to explore and engage with real-world scenarios was great because it made our learning much more tangible and understandable than just abstract theory.
>
> Honestly, I have never learnt so much theory as well as practical life skills in any module and [this was] better than I ever thought it would be in terms of practical application for real life.

However, there was some initial apprehension to this innovative, less structured approach in line with Talbert's (2018) findings:

> I was apprehensive as to how the teaching style would impact me as an individual and a learner, [the instructor] committed to keeping workshops different and insightful, [introducing] controversial topics [and] pushing us to think critically.
>
> At the start, I found this difficult, as normally there is always a right and wrong answer for tutors, but [the instructor] wanted us to dig deeper, to push the boundaries and to question everything we read.
>
> I found it very challenging but insightful, as normal assignments have a concrete structure and a checklist for students to go through when writing, but [we had] the freedom to develop as writers outside the normal structures.

Students recognised the benefit of individual and collaborative group development (Waldrop, 2013), and Marozzi (2012) highlighted the positive relationship between increased in-class interaction and enhanced student satisfaction ratings:

> During the audit I got frustrated as I could not find any examples, thus did not know if I was on the right path or not. This pushed all [the] students to work together, exchanging ideas and applications.
>
> [Discovery learning] helped me make connections within my class as it made people communicate.
>
> I am sure I will take forward to other modules…. learning how to get the best out of people in a team.

Student reflexivity after the module highlighted deep learning:

> I was pushed to think for myself, …[questioning] all aspects of the surrounding topics, which helped me see things from different perspectives.
>
> By creating a never done before assignment [we were pushed] to think outside the box.

Rather than the typical fall off in attendance, numbers actually grew in the early weeks of term, seminars averaging 90% for the term, at the top end of the department's distribution. This outcome supports the findings of Parslow (2012) and Bergman and Sams (2012), indicating that flipped pedagogies can boost engagement and improve attendance. Students were observed smiling and chatting with each other as they left seminars and were markedly more prepared for and engaged in the seminar learning activities. One visibly surprised student, noting that all the chairs were occupied, remarked "but this is two classes together, right ?" (It was just one.)

Instructor reflection and conclusion

Peer reflection highlighted the potential for extreme instructor anxiety from adopting these sorts of highly experimental techniques (even informally dubbed 'winging it'), that did not adhere to tightly scripted and rigid lesson plans. Implicit is perhaps supreme teacher confidence to be able to adapt and respond in real time, in an environment where some of the control of the formal learning encounter has been ceded to the students. Additionally, the importance of developing trust and a powerful rapport between students and with the lecturer was identified as a critical success factor when deploying such varied and unorthodox approaches. In truth, not every seminar was truly extraordinary, but innovating seminar formats and learning to be comfortable with more open-ended, flexible and co-created learning was profoundly rewarding and certainly worth any perceived risk.

This innovation experience was found to be quite liberating, a bit nerve-racking and not without the odd bump in the road, particularly around the 'engage in deep learning or underperform' messaging and trying to find the sweet spot in Vygotsky's zone of proximal development (Chaiklin, 2003), positioning the learning challenge as neither too difficult nor too easy (DeLozier & Rhodes, 2017). Flipping the classroom and overweighting delivery with industry guest

speakers allowed for a more flexible, contemporary and non-linear lecture series that could concentrate on bringing alive the most appropriate and relevant subjects, rather than jogging through all the driest content from the index of a door stopping text book. Waldrop (2013) highlighted the terrible learning experiences offered in passively listening to lectures, emphasising the need for innovation. Talbert (2018) surmises that although there was only very modest quantitative evidence to support learning gain from flipped pedagogies, it had a positive impact on both student satisfaction (increasingly important for university rankings) and attendance, which is clearly evidenced in the student testimonies above. Building students' confidence to be able to flap their wings and soar, to operate confidently in a scaffolding free zone by clearly linking the skill of higher order problem solving (that is highly valued by employers) was something that several successful students also remarked on following their summer internship or year in business placements. Go on, give the flipped classroom another try.

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Teaching for Quality Learning at Changing Universities. A tour de force of modern education history – an interview with Professor John Biggs

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Abstract

Professor John Biggs is a world-famous psychologist and educationist who in 2017, was invested as a Member of the Order of Australia (AM) for "significant service to tertiary education, particularly in the fields of curriculum development and assessment". John Biggs has been actively involved in education for six decades and has been a Professor of both Education and Psychology. Professor Biggs' most ground-breaking and innovative contributions – such as SOLO taxonomy, constructively aligned OBTL (Outcome-based Teaching & Learning), criterion-referenced assessment and students' surface and deep approaches to learning – are all discussed in this wide-ranging interview. Moreover, Biggs discusses his illustrious academic career, his concerns about the corporatisation of universities and his alternative vision of higher education, and also what he refers to, tongue-firmly-in-cheek, as his "constructive but misaligned retirement".

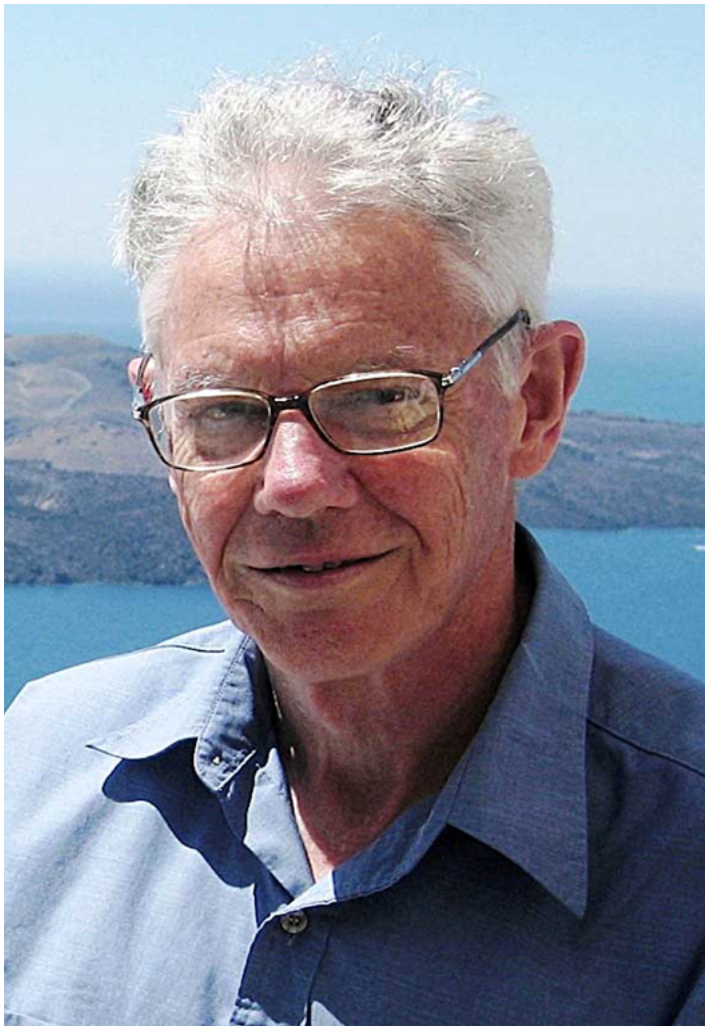

Figure 1: John Biggs. Photo Source: John Biggs

Eds.: Professor Biggs, thank you so much for making yourself available via an email interview. For both of us, you are one of our great heroes, and we feel tremendously honoured by the occasion. We are huge fans of your seminal book *Teaching for Quality Learning at University*. **So much so that when Chris was at a former institution, the International College of Management, Sydney (a partner of Macquarie University), as part of his induction as Adjunct Faculty to the School, he had to partake in Macquarie's excellent Principles of Learning and Teaching programme, a programme which bore your work's footprint strongly. And when Jürgen did a Specialist Diploma of Applied Learning & Teaching at Republic Polytechnic in Singapore,** *Teaching for Quality Learning at University* **was referred to as the 'bible', and when he took an M.Ed. from the University of Adelaide in Singapore, again your book was one of the few that he purchased — and it turned out one of his best book buys ever, as he has, to the best of his abilities, attempted to apply much of it in his work.**

We very much enjoyed reading your academic memoir *Changing Universities*. **It is a riotous read and we had to laugh at many occasions. As you write yourself, your rich experiences across four continents at seven universities "range from the traumatic, through the hilarious, to the highly rewarding". In your academic autobiography, you describe your experiences at the University of New England (which you have characterised as "pretentious foolery"), Monash University (where you experienced an "academic vacuum"), and as Professor of Education and Dean of the Faculty of Education at the University of Newcastle (your verdict was that by the 2000s, the University of Newcastle had exhibited a "culture of bullying, lying and cover-up" that "had become endemic to the institution". When you compare your various experiences at Australian universities, what are your views of Australian universities through the years and at present?**

Prof. Biggs: I wouldn't want to generalise from my personal experiences to the system as a whole. But let me say first why I wrote as disparagingly as I did. Monash was an academic vacuum for me personally because in my haste to get out of UNE [University of New England], I had found myself in what I was told was a research post but in fact it was keeping student statistics in Administration: not my thing at all. Monash itself was young and very vigorous at that stage in the late '60s. My experience, and more so the experiences of others, at the University of Newcastle is a long story of a weak Vice Chancellor and a very strong Deputy VC who ran the show with amazing incompetence. Specifically, he tried to stave off amalgamation with the Newcastle CAE [College of Advanced Education] by handing over our teacher education programme to NCAE [Newcastle College of Advanced Education] without consulting the Faculty of Education. That created uproar through the university. So did several cases of plagiarism where, believe it or not, the plagiarists (one staff and several students) were rewarded and the whistle-blowers brutally marginalised, resulting in court cases that the university lost. That was during the best phase of Australian universities (see below), but as always one rogue gameplayer can wreck a good system.

But to the general picture, Australian universities went through three phases. Phase 1 took us up to 1957, when universities were state-owned and run, with very varying results. Tasmania where I studied until 1956, was a shambles, run by local businessmen and lawyers who saw it as "their" university and dictated academic matters to the professorial board who revolted. Things were so bad it led to a Royal Commission in 1954.

The best thing Prime Minster Menzies ever did was to commission the Murray Report which led to Phase 2: a national system in which universities were to expand, their function to teach and to conduct "untrammelled" research to discover knowledge for its own sake, and staff were to be social critics within their areas of expertise. This phase saw Australian universities at their best (except Newcastle), although as noted I was irritated by the pretentious aping of British universities.

Phase 3 started in 1988, when Universities and colleges of education (CAEs) were merged, all called universities but with a CAE management structure and CAE funding levels, which made it necessary for fees to be re-introduced. Thus began the corporatisation of universities, which has been greatly increasing under successive neoliberal governments. Universities today are businesses, run by managerial types who may or may not have a strong academic background. Staff have to toe the line, meet Key Performance Indicators and are placed on contracts to make sure they do what they are told. Displease the powers-that be and your contract

might not be renewed. Research is to feed into industry and the Minister of Education has rejected grants for funding for interest driven research, as I explain later. Thank God I went to Hong Kong University when I did, and when I retired seven years later, I became a private consultant on teaching & learning issues.

Eds.: When compared to your experiences at some of the Australian universities, you had a much more positive experience at the University of Alberta, where at the young age of 38, you were appointed as a full professor, without even applying?

Prof. Biggs: Correct. At that time, the University of Alberta was quite rich from oil royalties but even more important, the Canadians generally respected education much more than Australians did. They trusted academics to get on with their job with few constraints and with lavish resources, and if you did well, you were promoted. There was little of the pretentious carry-on that had so irritated me at New England and later at Newcastle. Canadian universities were so sensible. In the long summer vacation they didn't stand empty as Australian universities did, but held summer sessions for older students, which meant staff could get extra pay and travel to other provinces. I went to the Universities of Victoria on Vancouver Island and to the University of British Columbia combining business with holiday.

Eds.: You describe a summer session at the University of Victoria as your "best".

Prof. Biggs: Yes, best in the sense of most interesting. It was in 1971, when Americans who didn't want to be packed off to the totally immoral Vietnam War, were readily accepted into Canada by PM Pierre Trudeau (the current Canadian PM's father). They were a radical lot, into Ivan Illich's idea of "deschooling society". I had the challenging job of educating future teachers who didn't believe in formal schooling to operate in a formal school system. I was teaching psychology, or "head shit" as they called it. So I gave them their head: their work was to research a chosen topic about schooling that an individual was interested in, using psychological concepts in discussing that topic. They loved it and we had a great and fruitful time.

Eds.: As somebody who has always been open to innovation in education, you appear quite positive about this experience, when you write: "The whole philosophy of alternatives to formal schooling, the wild side of hippiedom, the counter-culture inhabited by these draft dodgers, were eye-openers" (Biggs, 2013a)?

Prof. Biggs: Yes that sums it up. To a staid Australian the North American experience in the Age of Aquarius was very stimulating, to say the least.

Eds.: Your world-famous SOLO (Structure of the Observed Learning Outcome) taxonomy of learning was first introduced in *Evaluating the Quality of Learning* **(with Kevin Collis) in 1982. Why did you decide to come up with an alternative taxonomy (as compared to the ones by Bloom and Anderson) and where do you see the differences?**

Prof. Biggs: It started with Collis's work in seeing how children at different Piagetian developmental levels performed in different school subjects. However, the structures displayed by children in those contexts were found by Swedish researcher Ference Marton in students' different understandings of university level subjects (he had a different system of classification he called "phenomenography"). Similar structures can also be found when infants learn at sensorimotor levels of development. That is, the same structures occur during learning in infancy, in primary and secondary children and in adulthood. What Collis originally saw as stages in development, I saw as stages in learning at almost any level and in any content. Basically, the pattern is that unsuccessful attempts to learn I called prestructural; then one aspect of a learning object is acquired (unistructural), then several unconnected aspects (multistructural), then those aspects became integrated (relational: you "get the picture" as it were), and finally that integration may be generalised to a new level of abstraction, such as solving an unseen problem from first principles (extended abstract). Here was a hierarchical taxonomy of increasing complexity that occurs during learning, based on studies of people learning different content. I have used SOLO in two ways: as targets for learning, and for assessing the level of learning achieved.

You can distinguish *verbs* that correspond to each level in the hierarchy: for example, naming and identifying are examples of unistructural verbs; describing and listing of multistructural verbs; explaining and integrating of relational verbs; and hypothesising and solving unseen problems are examples of extended abstract verbs. Note that *all* levels can be described as "understanding": but *different levels* of understanding. Thus, when we say proudly we teach for "understanding" the reply is: Of course you do, but at what *level* of understanding, eh?

SOLO levels are very useful in settling curriculum targets. The verb you choose identifies the *level* of understanding desired, and the object of the verb the content area or topic. Thus, *"explain"* is a verb that takes an object: Newton's first law of motion, say, if that is what you want your students to learn. "*Apply* Newton's first law of motion to kicking a football" can be an intended learning outcome. How well the law has been applied becomes the assessment.

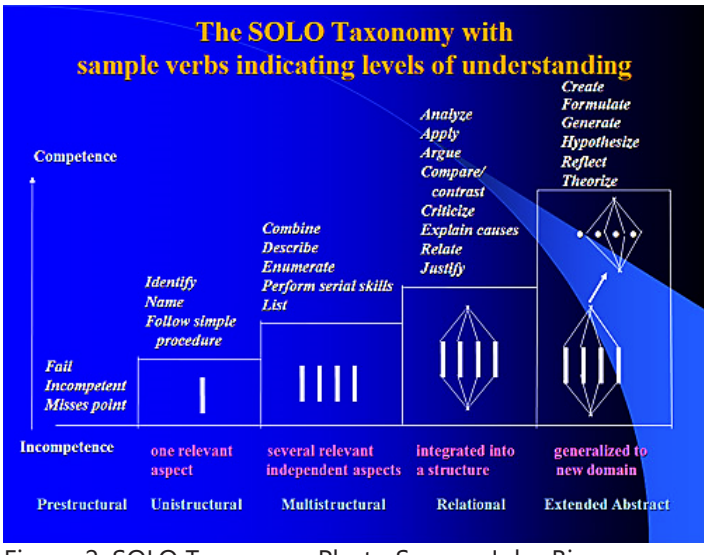

Figure 2: SOLO Taxonomy. Photo Source: John Biggs

The original Bloom taxonomy was not based on research on student learning, as is SOLO, but on the judgments of educational administrators; it is not hierarchical, as is SOLO, and is therefore not a true taxonomy. Anderson and Krathwohl's revision is an improvement over Bloom's original, but their term "understanding" can be applied to virtually any of the SOLO levels.

Eds.: Still on SOLO, it is a taxonomy Chris has used in all three institutions in which he has worked. Yet reading your works now makes us see that the pressure to ensure the outcomes (knowledge-centred rather than a means of playing out institutional politics or serving other masters) are the right ones is even more crucial. Who should set outcomes and how should they go about it?

Prof. Biggs: A huge question. Institutional outcomes are usually stated as graduate attributes like creativity, problem solving, critical thinking, ethical dealing, and so on – general attributes that should be applied to all programmes. Such graduate attributes then tell teachers of units in the programme to require creativity, critical thinking etc in their intended outcomes where appropriate. That is the upside of graduate attributes, but I think there is a lot of BS about attributes: in some universities they become advertising slogans with universities trying to outdo their competitors like selling washing powder ("ours washes whiter …").

…there is a lot of BS about attributes: in some universities they become advertising slogans with universities trying to outdo their competitors like selling washing powder ("ours washes whiter …").

Who sets the outcomes? In large classes there should be a team who sets the outcomes and who agree on methods of teaching and assessment. I have been lucky: in my day the teacher was usually free to makes these decisions – academic freedom, you know – but I don't think that's how it goes today. Professional associations have an input in courses like pharmacy, medicine, architecture and so on, which can be useful in keeping graduates in touch with professional needs. However, sometimes the relevant people in the profession giving advice do so from their own educational background of some years ago and they can be a drag on innovation. Within institutions, there is often a great deal of bureaucratic control over assessment procedures particularly, including grading on the curve (with the absurd claim that it maintains standards) and a proportion of final assessment to be by invigilated exams in order to minimise plagiarism.

How do you design intended outcomes? That's quite a detailed issue, but the basic pattern is simple: use a verb that indicates the sort of level you are after and then describe the content you want the verb to apply to. For some outcomes it might be simply a matter of listing: "List the most important points contained in the Declaration of Independence" which is a multistructural level. "Why did Jefferson and his colleagues think it necessary to proclaim the Declaration of Independence?" Ideally a response to this could be relational or extended abstract.

Eds.: We would like to request that you discuss assessment. You advocate portfolio assessment, and in *Changing Universities*, you have a beautiful quote from one of your former students (Cheung Chi Ming):
"Teacher: How many diamonds have you got?
Student: I don't have any diamonds.
Teacher: Then you fail!
Student: But you didn't ask me about my pearls, my jade, and my amethysts" (cited in Biggs, 2013a).

You also write that you see "final exams as damaging" (Biggs, 2013a). In the same book, you also discuss a capstone projects for final-year undergraduate students, called "Practical Wisdom" "in which they are required to reflect in the broadest terms on what they have achieved over the whole of their university studies that hopefully would lead to a lifelong pursuit for the getting of wisdom". Of course, your seminal *Teaching for Quality Learning at University* discusses assessment in Biggs and Tang (2011). Any advice on setting meaningful assessments?

Prof. Biggs: The short answer: Read Chapters 10, 11 and 12 in Biggs and Tang! That quote from my student says it all. There are more valuable and relevant things that are learned than can be assessed in a final exam. So how do we find out the richness and value of what students have learned? Ask them. Tell them what the criteria or rubrics are for good learning in the unit in question, which is one case where SOLO is useful, and place examples in a portfolio and explain how they meet the criteria for the course. This is a demanding task, requiring them to reflect on their learning and how good they think it is. It is also demanding on the teacher in assessing a number of portfolios but that is another question. An assessment portfolio is rather like a job application: You put together your best work and explain why you think it is your best.

Meaningful or authentic assessments, as they are sometimes called, assess what it is the students are supposed to have learned. Simple as that. Final exams are rarely authentic in the sense that they can neither assess much of what students have learned, especially at the higher SOLO level outcomes, nor replicate the context in which they will eventually perform their learning. Multiple choice tests are obviously inauthentic. Their best use is that they can tell you if a student was present – and awake – when a particularly topic was dealt with in class.

Meaningful or authentic assessments… assess what it is the students are supposed to have learned… Final exams are rarely authentic… Multiple choice tests are obviously inauthentic.

Just a brief aside about norm-referenced assessment which used to be the go but is less common today (I sincerely hope). That is "grading on the curve", as if it is a natural law that a few students will do very well, most will fall in the middle, and a few will do poorly and so you allocate As, Bs Cs Ds and Fs, by comparing proportions of students with each other – which entirely misses the point of what

students have learned and how well they have learned it. But that assumes that when students are selected for university they are normally distributed within a class. Of course they are not. I'm still baffled that grading on the curve was so popular and still is in some institutions. In any case, good teaching beats the so-called normal distribution of ability. Norm-referenced assessment is appropriate when trying to select students for competitive purposes, like awarding scholarships, but that is not what we are trying to do in ordinary class work. Trying to find out who is better than who else is not only irrelevant, it can be damaging.

Assessment is part of the educational system and can't be adequately discussed as separate from the whole teaching/learning process. That said, students learn what they perceive will be in the assessment, rather than what is in the curriculum. This has long been perceived as a problem. However, if we ensure that students are assessed on what we want them to learn, that problem becomes the solution. In what I call a constructively aligned system of teaching, the intended learning outcomes of a unit are defined in terms of what students are to do with the content learned. Teaching involves students in learning activities appropriate to achieving those outcomes, and assessment tells us how well students do so. It is important then to define upfront the outcomes intended in teaching a unit and to align teaching and assessment accordingly. Thus, constructive alignment is the context in which assessment should be discussed.

When students attend lectures, however, their main activity is receiving, not doing. CA [constructive alignment] differs from traditional teaching in that it points to the need to devise Teaching/Learning Activities (TLAs) that require students to apply, invent, generate new ideas, diagnose and solve problems, or whatever other things they are expected to be able to do after they graduate. Similarly, we need Assessment Tasks (ATs) that tell us, not which students are better than others, not even how well students have received knowledge, but how they can use it in academically and in professionally appropriate ways, such as solving problems, designing experiments, or communicating with clients.

Outcomes-based teaching and learning, of which constructive alignment (CA) is one form, is based on such questions as: What do I intend my students to be able to do after my teaching that they couldn't do before, and to what standard? How do I design and implement learning activities that will help them achieve those outcomes? How do I assess them to see how well they have achieved those outcomes?

CA starts with clearly stating, not what the teacher is going to teach, but what the outcome of that teaching is intended to be. This is expressed as the Intended Learning Outcome (ILO), which is a statement of what the learner is expected to be able to do and to what standard. Each ILO contains a verb – such as *explain* Newton's First Law of Motion – and that verb tells you what learning activity the student is to engage: in this case, explain. Usually the teacher does the explaining, but in CA we should get the students to do the explaining. We could get them to use a set of rubrics for the various levels of a good explanation and then get the student to explain to, and assess, each other against the rubrics for a good explanation. Usually, of course, the teacher does the explaining and then hopes that the students will reach the desired level of understanding. No. The students should do it and be given feedback on the quality of their explanations.

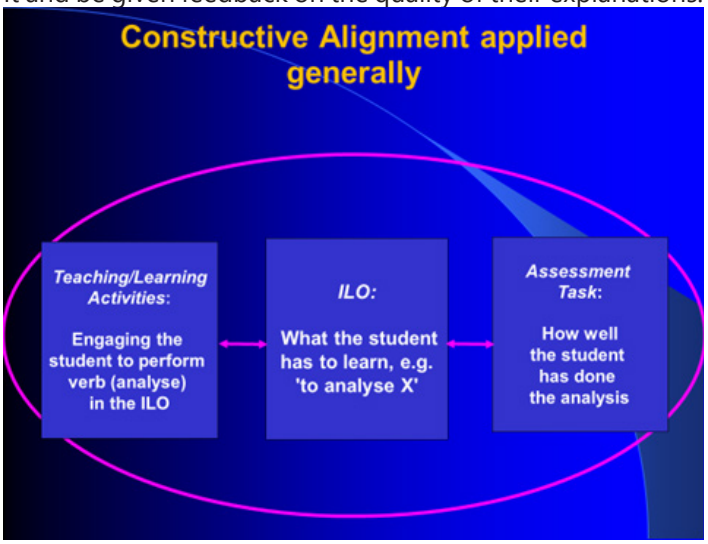

Figure 3: Application of Constructive Alignment. Photo Source: John Biggs

Eds.: You have said that the root problem of universities is that they are structured like an oligarchy (Biggs, 2013a) – variously, this unfortunate development of institutions of higher education has also been described as the neo-liberal corporatisation of universities and managerial feudalism. What do you see as the purpose of universities and what would it take for them to become better at fulfilling their actual purpose?

Prof. Biggs: I said the University of Newcastle in the 1970s – '80s was structured like an oligarchy when it shouldn't have been in the Phase Two university. Today, they are deliberately structured as oligarchies – literally a rule by the few – the few being the corporate managers with their strategic plans and KPIs stuffed into their pigskin briefcases. Academic decision-making bodies, like faculty boards and professorial boards manned by elected academics, used to steer the academic ship, but no longer.

What is the purpose of universities? We need to rethink where we are with respect to higher education. The new university would also need to be an agent for changing society by educating students so that they can think at a meta-theoretical level, enabling them to challenge the linear paradigms that lock us into unsustainable policies. That is not what existing universities are doing while they are in managerial mode, where the order of the day is to put in place online strategies for cost-effectively achieving managerially imposed institutional outcomes. No radical ideas, please.

I am not recommending a return to Phase 2 universities. Students emerging from Phase 2 universities have their paradigm-busting potential nested in the highly specialised areas in which they did their PhDs. This is of course highly desirable in itself but we need to go further than that: to operate at an extended abstract level across a broad front, to put it in SOLO terms. In present day society, while some specialists continue in one career path throughout their professional life, many change their career paths frequently.

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Years ago, Vice-Chancellor Steven Schwartz of Macquarie University proposed that final year students do a capstone course, called 'Practical Wisdom', in which they reflected in the broadest terms on what they have acquired over the whole of their university studies. Schwartz thought this could lead to a lifelong pursuit for the getting of wisdom. One final year project is obviously not enough, but it suggests the kind of approach that might encourage the sort of broad, extended abstract thinking that needs to be fostered. The needs, financing, administration and governance of institutions designed to teach professional and vocational courses are one thing. The needs, financing, administration and governance of institutions in which research and teaching not only in the basic disciplines, but for addressing problems requiring multidisciplinary approaches, and in which the role of academic as social critic is deliberately fostered rather than suppressed, are very much another.

How universities are to get from where they are at present to where they should be in order to serve a sustainable, just and ever-changing society in the face of terrible threats of climate change and huge inequalities is the massive educational challenge that we face.

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Eds.: You seem to advocate open-access publications when you write: "The search for knowledge and knowledge itself should belong to all of us for the benefit of humankind, and not for the benefit of someone in order to make money out of it" (Biggs, 2013a)?

Prof. Biggs: Absolutely. Menzies' Murray Report nailed it with "untrammelled" research, that is research that is untrammelled by commercial interests or government interference, and is designed to open out a storehouse of knowledge. That is what universities were for and should be still. However, corporatisation has meant running an academic institution on monetarist values. It just doesn't work well.

Thus, when powerful corporations commission research, they do not do it to be altruistic; they want a particular result. Hence, academics hired to carry out contract research for large corporations are under pressure to produce the desired results if they want their funding to continue. The outcomes of that research are all too often "commercial-in-confidence", which means that the patents are owned by the company and that academics may not publish that research. This privatises what would otherwise be public knowledge, whereas building upon public knowledge is what universities are theoretically there to do. The search for knowledge and knowledge itself should belong to all of us for the benefit of humankind, not for the benefit of someone in order to make money out of it. Knowledge, and the research that produces it, should be people-proof, it needs to be published so that it is replicated, and either disconfirmed, or confirmed and extended. If it is locked away we are all deprived. Yet universities have been known to discipline academics who offend powerful sources of funding by publishing results of their research.

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Perhaps even worse is when politicians censor funding of research grants. In 2017, the Australian Research Grants Council funded through peer review 11 research grants but the Minister for Education, Simon Birmingham, cut their funding saying that most Australian taxpayers would prefer their funding be directed to other research. All the dropped projects were in the humanities. Birmingham thought that publicly funded research should address industrial needs only and that research into the humanities, history, arts and the like was a waste of resources. In one hit he'd undermined confidence in Australia's world-leading peer review system, and had incalculable effects on the lives of not only those academics involved but throughout the system. Minister Birmingham and many governments in general simply have no idea of what universities should be about. Neoliberalism has reduced everything to money. Civilization is about more than money, much more.

Eds.: Your wife Dr Catherine Tang has identified "deep memorising" (or meaningful memorisation) as a standard practice amongst ethnic Chinese students (Biggs, 2013a). Deep memorisation involves reflective repetition in learning anything complex. As the majority of our students here in Singapore are ethnic Chinese, this sounds like an important observation to us. You have also referred to the "paradox of the Chinese learner" and the "multiple paradox" of approaches to learning of Asian students (Biggs, 2013a, chapter 13; Watkins & Biggs, 1996). Could you please elaborate?

Prof. Biggs: The paradox is simply that according to western ideas of good teaching – and we are talking about 20 years ago – Chinese and to a lesser extent, classrooms all over the Confucian heritage (that is, Singapore, Hong Kong, South

Figure 4: Dr Catherine Tang in Budapest. Photo Source: John Biggs.

Korea and Japan at least), classes were fierce and crowded, teaching seemed to emphasise repetition, rigid discipline and reproduction of content in final exams – all instances of what was thought to be inimical to good teaching and learning. Yet in international comparisons particularly, and not only in maths and science, CHC [Confucian heritage culture] students were way ahead of western, with the exception of Finland, which on the other hand had excellent learning environments by western standards. Likewise international students in Australian and other western countries cleaned up first class honours – and they couldn't do that by sheer rote learning and regurgitation.

There are several factors involved in explaining this apparent paradox: good learning in supposedly bad teaching environments. In CHC cultures, education is afforded a much higher value than in the West, students are pushed hard by parents, it has even been suggested that Chinese students are simply born brighter but I don't accept that myself. But the factor you are referring to, deep memorizing, is certainly part of the reason for CHC success. An Asian aphorism says that "repetition is the route to understanding" but that is true anywhere. You won't get a deep understanding of a Mahler symphony on one listening, or even one sitting through a complicated movie. You get something more at each repetition – or you do if you are reflective while doing so. This is partly cultural. For example, the US curriculum in maths was described as "a mile wide and an inch thick" – and US students were near the bottom of the pack in international studies. Coverage is all important to many western educators – but as one US psychologist, Howard Gardner, said "coverage is the enemy of understanding". So that urgent push by teachers "I've got to cover that!" is counterproductive.

In Japan, on the other hand, a teacher can spend an hour or more drilling down on a mistake made by a student, until all understand. In China's crowded classrooms, excellent teachers are picked out to give workshops to their fellows,

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students are encouraged to think internally and not just jot down quick notes. Repetition with a focus on meaning, is not just repetition in order to rote memorise. But of course, rote memory has an important role to play: you can't learn a language or scientific terminology without rote memorisation, but there's more to it than memorization pure and simple. Western observers seeing Asian students repeating material over and over mistake that for rote memorization when much of it is not.

David Watkins and I edited a book, containing our contributions and those of others working in the field, called *The Chinese Learner* (1996) and *Teaching the Chinese Learner* (2001) which summarise the work on this up to the end of the last century. I have to add that it is 20 years since I was working in this area so I can't say how the study of Asian students has developed since.

Eds.: Singapore's post-secondary education landscape appears to be headed for a conflation of pre-employment training (higher education) and continuing education and training (CET's for professional development). This is evident through the mandatory formation of CET centres in the public polytechnics and universities. What might the implications be for curriculum design under such a convergence?

Prof. Biggs: Sounds good to me. In Australia, for some reason – almost certainly to do with cost saving and forcing paying students through the fast expanding university sector – we have wound down vocational and technical education and broadened university courses to take in some of the technical content previously taught in technical colleges. A massive mistake, leaving us with a dire shortage of technicians and apprentices and overcrowded and downgraded universities. Your question of implications in Singapore for curriculum I couldn't possibly comment upon, except to state that educational institutions should do what they are good at.

Eds.: While browsing your website (http://www.johnbiggs.com.au/), we realised that you have been incredibly prolific also in other areas in what you have called "a constructive but misaligned retirement". You have also published six novels, a collection of short stories, and a socio-political history of your home state Tasmania. Could you please tell us more about these works and how the creative process differs or indeed does not from your academic work?

Prof. Biggs: Yes, I have long held a desire to write fiction but was always too busy to do much about it until I retired. I've written in a variety of genres: romance, sci-fi, history, politics. In The Girl in the Golden House, for example, I wanted to express appreciation of Hong Kong and its people (and one person in particular) and so I wrote sympathetically about

the terrible trauma Hong Kong people went through when they realized that their shortly-to-be-rulers had perpetrated the Tiananmen Square Massacre. Accordingly, I wrote in the first person, present tense, in the voice of a young Chinese lawyer to give an impression of immediacy. Pauline Hanson, a notoriously racist Senator in Australia, inspired Disguises, did she but know it; I imagined how a teenage Australian-born Chinese girl, who sees herself as thoroughly Australian, would feel at being told: "Go back to where ya come from!" She tries to be as Australian as possible, which alienates her from her family: a sad but common story with second generation immigrants. Tin Dragons stemmed from stories told by my family: I knew that part of NE Tasmania well. It is about Chinese tin miners in the late 19th century who longed for love as well as hard fought for riches. Ashes to Ashes is a family saga about a school teacher in NSW who goes through the life cycle of solving, only sometimes successfully, the life tasks that face people in different phases of their lives. (It also contains the male teacher's nightmare: finding that the pickup of last night is a student in his new class). I wrote this one because I had spent years in teacher education in Newcastle where I picked up a lot of stories, most second hand (as was the last unsavoury incident!).

Each of these novels – and a couple of others – came out of my general experiences. Experience and hearsay are bricks which you put together to make build your story. I am impatient with people who try to read autobiography into my stories, or "that's me you're writing about. Take it out!" (which I have been accused of). About halfway through my first novel I found I had dropped any tendency to write in academic-ese. Sentences became shorter and not qualified with such things as "It would therefore follow that …". When writing in different genres I find I tend to adopt the style of that genre. With experience it happens. Characters also emerge that I've not based on anyone at all; they just happen. The story demands a certain character and up they come.

Tasmanian Over Five Generations: Return to Van Diemen's Land? is a social-political history of Tasmania as seen through the eyes of five father-son generations of the Biggs family. It starts with Abraham Biggs, who arrived in Van Diemen's Land in 1833 to preach temperance to the convicts (unsuccessfully), and ends with me. This is not a family history so much as a ground level look at Tasmania's political progress, or otherwise, over 180 years. I left Tasmania for nearly 40 years after I'd graduated, and when I returned I found a tapestry of Byzantine complexity: an overheard conversation about a pulp mill that later split the State destructively, attempts to quell public protest with lawsuits, a shredded letter here, ministerial heads rolling there, governments legislating against the public interest for the benefit of the already rich and powerful. My forefather Abraham, I thought, would experience *déjà vu* in present day Hobart: and hence the subtitle of the book.

The creative process is different in fiction but somehow similar to the way I worked academically. I wasn't a hardnosed hypothetico-deductive scientist, as I worked inductively. I once thought I could apply psychology to education, after all both are about learning, but it doesn't work like that. SOLO and CA (Constructive Alignment) both arose out of the practical context of the classroom. I like to see simple connections between things that once pointed out seem so obvious. For example, Piagetian stages of development morphed into increases in complexity during the process of learning. Constructive alignment is an extension of learning to drive a car. ILO: To drive a car to a given standard. TLA: Driving a car. Assessment: Has the required standard been met? In fact, almost all everyday learning is outcomes-based and constructively aligned when you think about. It has only gone strange in institutions, where we lecture about things rather than engage students in constructing knowledge.

So in fiction, the process tends to be inductive once you have got your bearings. The context, the plot, the situation, demands characters who behave in believable ways that drive the plot forward, and so on. Very rarely is the plot worked out at the beginning and then logically unfolds.

I also like writing travel stories, lavishly illustrated, that I put up, along with much else, on my website: www.johnbiggs.com.au

Eds.: As somebody who has been actively involved in education for six decades and who has been a Professor of both Education and Psychology, what do you consider your most important contributions? Some obvious candidates would be the SOLO taxonomy, constructively aligned OBTL (Outcome-based Teaching & Learning), and criterion-referenced assessment.

Prof. Biggs: Yes, SOLO and constructive alignment, but also students' surface and deep approaches to learning which we have barely alluded to here. Approaches to learning are all part of the system comprising SOLO and CA. Let me start with Susan and Robert.

Susan is academically committed; she is bright, interested in her studies and wants to do well. She has clear academic or career plans and what she learns is important to her. She comes to the lecture with sound, relevant background knowledge, possibly some questions she wants answering. In the lecture, she finds an answer to a preformed question; it forms the keystone for a particular arch of knowledge she is constructing. She reflects on the personal significance of what she is learning. Students like Susan virtually teach themselves; they do not need much help from us. She has a deep approach to learning.

Robert is at university not out of a driving curiosity about a particular subject, or a burning ambition to excel in a particular profession, but to obtain a qualification for a decent job. He is less committed than Susan. He has little background of relevant knowledge. He comes to lectures with no or few questions. He wants only to put in sufficient effort to pass and obtain that meal ticket. Robert hears the lecturer say the same words as Susan is hearing but he doesn't see a keystone, just another brick to be recorded in his lecture notes. He believes that if he can record enough of these bricks and can remember them on cue, he'll keep out of trouble come exam time. He has a surface approach to learning.

The trick is to get Robert involved in a similar way to Susan.

This is where CA comes in. The Teaching/Learning activities in CA require Robert to enact the verbs that Susan uses spontaneously: he is required to question, to reflect, to apply, to question, instead of taking down notes to remember. Maybe he will not do quite as well as Susan, but he will do better than he had in the past. Several studies done by me and many others (Google "constructive alignment" and see Chapter 13 of Biggs and Tang) have shown that, using my Study Process Questionnaire or any similar one, pre/post studies indicate that students have lower surface and higher deep scores after being taught using constructive alignment. However, the effect is usually restricted to their approaches in the subject being taught; it doesn't necessarily generalise to the way they approach other subjects. These approaches to learning are thus contextual: Susan may well adopt a surface approach if she has to do a subject she is not interested in.

Eds.: Would you have any advice that you could offer to teachers / tutors / lecturers / professors who are involved in higher education today? Specifically, how can we be more reflective practitioners?

Prof. Biggs: In a word, use constructive aligned teaching, which is about being a reflective practitioner. However, that may be difficult if you have a huge class, a heavy teaching load, scrambling around trying to get the number of publications the KPIs demand, attending those meetings and online activities you are now required to do. In *Whackademia*, Richard Hil deplores the massive workloads young academics have to shoulder; he notes that the stress rate of academics is as high as 70% whereas it is more like 10% in the general workforce.

So my advice is rather to the CEOs of universities: for God's sake and for the sake and sanity of teaching staff, make your institution one in which innovative teaching is welcomed and made possible, where staff and students find it a pleasure to work in. For good teaching and learning is a pleasure, or should be. Run your institution in the interests of good teaching and learning, and untrammeled research, not as a ruthless business.

So my advice is rather to the CEOs of universities: for God's sake and for the sake and sanity of teaching staff, make your institution one in which innovative teaching is welcomed and made possible, where staff and students find it a pleasure to work in.

Eds.: Is there anything else that you would like to share?

Prof. Biggs. I think I've said enough! But thank you for the opportunity.

Eds.: Thank you so much!

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Opinion Piece: Journalism training at university

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Professor John Biggs, elsewhere in this *JALT*, expresses alarm at the gaudy ubiquity of university education, noting a consequent decline in the craft schools of old. As he puts it:

> We have wound down vocational and technical education and broadened university courses to take in some of the technical content previously taught in technical colleges. A massive mistake, leaving us with … overcrowded and downgraded universities.

I can assert – on the basis of 25 years as a university teacher and another quarter of a century in mainstream journalism – that his argument makes considerable sense. In semi-retirement (and working part-time as a newspaper sub-editor), I am able to reflect with some authority on what universities can achieve and what they are less equipped so to do when it comes to the craft of journalism. 'Craft' is the term, I feel, that best describes it, for it cannot truly claim to be a profession as its practitioners do not require any specified qualification or formal registration. Nonetheless, it remains a singularly demanding practice, requiring in addition to a sound command of written expression:

- An awareness of, and persistent interest in, matters political, economic, fashionable, unfashionable, literary, historical, animal, vegetable, and mineral – all allied to unfettered curiosity.
- A tough hide – in order to withstand criticism, learn from one's inevitable mistakes, and penetrate the lying and obfuscation peddled by authorities and corporations.
- Self-discipline and abundant energy, along with a healthy streak of cynicism and an ability to eschew political correctness.

In my own case in the UK, more than half a century ago, those qualities were encouraged through what was known as a 'sandwich' course, offered in an era when technical colleges flourished in tandem with industry. Within journalism training, it worked this way:

- Newspaper companies (there were few trainees in broadcasting back then) would hire school leavers on three-year cadetships. We would work four days a week (and inevitably on weekends too, without overtime), then attend the local technical college on
- Fridays for a course operating under the aegis of the National Council for the Training of Journalists (NCTJ). The course was the filling in the sandwich.
- Over those three years, it embraced English literature, creative non-fiction, media law, civics (a study of the rights and duties of citizenship), current affairs, politics, and shorthand. A certificate was awarded to those who passed its examinations. I remain grateful to it, in particular, for instilling in me an enduring passion for Orwell, Waugh, Steinbeck, Trollope and Austen.

With the general decline in newspaper circulation figures and a consequent loss of job opportunities, much has changed. The NCTJ still exists in the UK, though, and delivers a variety of courses, in a variety of packages to suit contemporary demands. They include an online option, offering the same certificate as pursued in my own formative years. Overall, the NCTJ curriculum appears both practical and versatile.

The system in Australia has operated rather differently. It has long hired graduates in journalism from the universities and the colleges of advanced education (now transformed into university status themselves). The progress of trainees in the craft – or 'cadets', as they are officially defined – was supervised in most newsrooms by counsellors. These were generally veteran reporters who would set the resident cadets a series of practical exercises and work with them on their drafts of actual assignments. That in-house exercise had the capacity to be cosy and productive, as indeed was the old UK sandwich affair.

I say 'was', 'were', and 'had'. Cadets and cadet counsellors alike are few in number now, owing to staff cut-backs. Media organisations, however, still look – when they are able to look at all in these times of financial restraint – to the universities for new talent. Cadets, for the most part, then learn their trade through on-the-job enlightenment.

This brings us, consequently, to that key point raised by John Biggs in his *JALT* interview: the ability of universities to offer adequate training of a practical and technical nature so that transition to the workplace is not too much of a shock. In reflecting on those questions, I restrict my observations to the training encountered within journalism awards at Australian universities. While my postgraduate research in the field has embraced a substantial overseas element (largely concerning media history), especially in the USA, the UK, and Canada, I have not taught in those locations and must limit any judgment accordingly.

The major obstacle, as I see it, to effective university-based delivery of hard-core training is that of class size. When my teaching engagements began, in the 1980s and early 1990s before the broadening and overcrowding defined by Biggs, some institutions were still able to rule off their annual journalism intakes to manageable numbers (of, say, 30-50). With astute streaming, notably in applying separate print and broadcast specialities, it was possible to restrict classes to even more workable totals. This enabled lecturers to:

- Demand a dozen or more individual written assignments, in the print element, each term. This was not as instructive perhaps as a newspaper cadetship, where trainee reporters would write that number in a single week; but it was not a bad alternative.

- Mark them in fine detail, addressing errors and omissions in much the manner that a sub-editor or cadet counsellor would in the workplace. In one course with which I was involved, any assignment with a name misspelt (a cardinal sin in the industry) would automatically be failed.
- Apply practical techniques to publishing them in a course newspaper (and even, in fortunate locations, distribute the newspaper through local shopping centres). The best experience I enjoyed in that regard was a print production class back in 1990 when I had just 17 students to instruct, a feat accomplished in part through a final examination conducted on floppy discs.
- Devise broadcasting courses that gave students a reasonably frequent opportunity to write and report for radio, and – albeit less frequently because of equipment restrictions – gain some television expertise too.

I concede that I have long left that field, shifting to the teaching of graduate research methods 15 years ago and then, in 2014, retiring from university employment. My observations retain a measure of currency, nevertheless, through guest lecturing, a research fellowship, and contact with old acquaintances in the field. Further, through my part-time employment today as a sub-editor for a major Australian newspaper, I encounter final-year students when they come to the newsroom on internship.

On the basis of all that, the areas of journalism education that I believe the newly developed and heavily populated universities cannot address with unalloyed assurance are these:

- Setting an appropriate number of written assignments; with intakes of 100 or more today, the sheer weight of assessment can become prohibitive.
- Assessing assignments with the rigour and detail found in the workplace – again, because of substantial intake growth.
- Offering realistic opportunities to practise broadcast journalism technique, especially in television training. Equipment in some instances is of indifferent quality; editing sessions and facilities are often limited in terms of accessibility.

In addition, in the broadcasting field, I have long held reservations about the ethical nature of assessing students for their on-air or on-camera proficiency. There is a real danger of subjectivity intruding when tasked with awarding a grade; accent and appearance might well influence the assessor's opinion. Can a tyro television reporter truly be marked according to a pedagogical rubric? My inclination is opposed to such a belief.

What then, with apparent imperfections in the university model, is the best choice confronting those who still harbour ambitions of a journalism career? I recommend the following

- Take a classic university degree, majoring in a discipline of a type that the universities do well: law, economics, politics, modern languages, history, the natural sciences.
- Read, read, read: newspapers of quality (in print and online), and authors of renown.
- Study a copy of news organisation's style guide (available in book form); this conveys an understanding of precise, regimented composition. Apply its lessons in emulating published reports. It's not difficult. All those years ago, it took me only a day to grasp the principles of paragraphing and quoting, along with identifying the leading angle and telling a story with clarity so that the reader is not left wondering. You really don't need three years of on-campus lecture-theatre simulation.
- Travel. Study the atlas and learn the names of capital cities, rivers, mountain ranges.
- Get your hands dirty and mix with workers. In my schooldays, I had a marvellously instructive job on Saturday mornings at a butcher's shop. I was offered an apprenticeship, too; might own a chain of shops by now and a villa on Santorini instead of writing esoteric articles and vacationing at Butlin's on Barry Island. (OK, that unpretentious Welsh holiday camp closed in 1996, but its alumni will get the point.)
- Seek an industry placement for a month; if this can't be done through a university-linked internships, then fix it yourself. This might require the purchase of a public-risk insurance policy – an eminently worthwhile expense.

to any who seek my advice:

I must acknowledge, too, that the process is subject to persistent change. On a recent visit to the London newsroom of *The Times*, I encountered a concentrated variant of the old sandwich course. The newspaper had employed two trainee reporters who were then despatched to an intensive three-week 'boot camp' with News Associates (a specialist training organisation), followed by refresher courses during their two-year programme. At face value, it appears a workable model, with international possibilities – and of greater substance than a university-based journalism award.

In conclusion, I am grateful for being prompted, by the Biggs interview, to offer these thoughts. He raises some important questions in response to the Rudolph/Harris interviewing duo. The *JALT* initiative has produced a singularly rewarding exchange; it warrants global reflection, and citing, by scholars of repute.

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Pallas Advanced Learning Systems – A research-informed virtual learning kit

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Introduction

The concern over gaps between industry requirements of graduate skills and attributes of the current workforce is one of the key public policy challenges (Mourshed, Farrell & Barton, 2013; World Economic Forum, 2018). High levels of youth unemployment are not uncommon on account of a skills mismatch between job seekers and skill requirements of the industry, thereby bringing into question education design and delivery.

As education institutions recalibrate curricula in light of evolving job roles and skill sets, developing critical and creative thinking, interpersonal and collaborative skills is paramount (World Economic Forum, 2018). Furthermore, the need for developing competencies such as resilience and learning from failure is of particular importance. While curricular re-alignment may be a first step, re-thinking teaching and re-designing learning have equally important roles to play in preparing learners with 21st century skills and competencies.

Historically, many EdTech products have been created embodying attractive user interfaces and superior usability but several still primarily feature transmission of knowledge from instructor to learner. Such transmission of knowledge may be insufficient in preparing learners for the 21st century skills and competencies (Gysi, 2017).

This product review is about a Virtual Learning Kit (VLK) designed by Pallas Advanced Learning Systems, using Learning Sciences research. Learning Sciences is an interdisciplinary field which looks at the pedagogy behind learning and how people learn (Sommerhoff et al., 2018).

Production Description

PALLAS Advanced Learning Systems (*Pallas*), is a research-based EdTech startup in Sydney, Australia. The company was recognized one of Ten to Watch global edtech startup companies (Pallas, n.d.-b). *Pallas* learning products are designed on Productive Failure (Kapur, 2014) utilising interactive 2D and 3D computer applications for engaging and impactful collaborative learning (Jacobson et al., 2017). These applications serve as supplementary teaching aids to be integrated into the classroom teaching.

Productive Failure (PF) is a learning design strategy, which runs counter to a traditional Direct Instruction methodology. In PF, challenges are designed to create failure as learning through guided failure brings about higher and deeper learning gains (Kapur, 2014). PF learning design is aimed at exposing learners with open-ended, low-structure tasks to induce struggle or even failure, followed by high-structured experiences such as direct instruction by a teacher, worksheets or scaffolds built by intelligent agents inside collaborative virtual worlds (Jacobson et al., 2011).

Pallas 2D and 3D virtual worlds are designed and applied to the promotion of playful investigations as opposed to teaching scientific concepts and methods. The Virtual Learning Kit (VLK) replaces early Direct Instruction with real world challenges which require learners to offer potential solutions by activating their intuitive experiences, informal knowledge, and reasoning. Through data collection, observations, inferences, analysis and report writing, all of which are at the core of a STEM programme, students learn the ways of scientific inquiry as they investigate simulated phenomena, versus being taught. Students are immersed as scientists into virtual worlds which mirror real-world, gaining perspectives and forming habits which are unlikely in most science courses for initial learning of concepts.

Specifications

According to the Pallas product brochure (Pallas, n.d.-b), the **3D virtual world** is a game-like virtual system compatible with both Windows and Mac, designed to create interactive experiences for individuals or small groups. The **2D computer model** is powered by NetLogo, a scientifically accurate computer modelling application (Welinsky, 1999). Figure 1 above shows a screenshot of the *Pallas* 2D computer model. Guided by local and regional science standards, these models are similar to systems used by real scientists, enabling visualization of scientific phenomena based on quantitative data and information.

These products are created and validated by discipline experts, working in collaboration with learning science researchers. Furthermore, **comprehensive student and teacher guides** help participants navigate through the PF learning scenarios step-by-step guidance in implementing PF in the classroom. The teacher's guide incorporates flexible lesson plans, interactive professional development videos, whilst the learner's guide encompasses challenge problems, directions for using the software as well as scaffolds to maximise learning.

Test Drive

At first blush, the *Pallas* website might appear less glamorous compared with other popular EdTech websites.

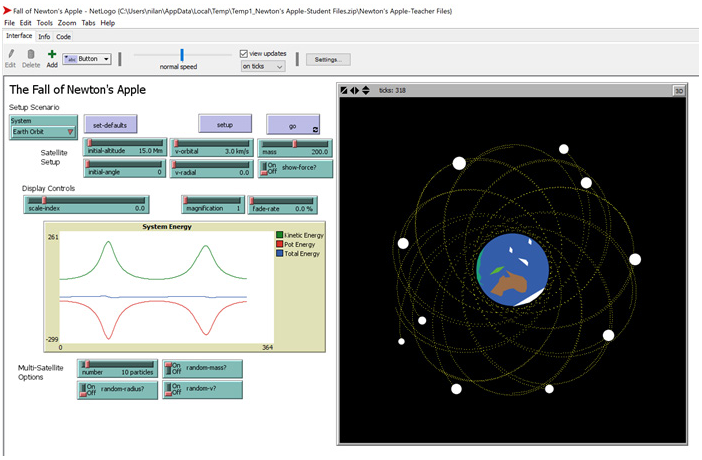

Figure 1: Screenshot of the Pallas 'Fall of Newton's Apple – Physics Virtual Learning Kit' depicting gravitational attraction between satellites. Retrieved February 2018.

The unique selling point which stood out was the underlying methodology i.e. learning from failure, Productive Failure.

Upon further exploration, it was observed that the VLK immersed the learners in solving real world problems using a system thinking approach. In this process of investigation, learners assumed the role of a scientist and engaged in scientific inquiry, by developing their own research questions, hypothesis, and running experiments to test and analyse their ideas.

In the following paragraphs, reflections stemming from experiencing the VLK as a learner and as a learning designer in an educational setting are shared.

From a learner's perspective, I found the VLK challenging and engaging. The challenge perhaps lies in the fact that there is no teacher instruction at the outset. The learners are immersed into the virtual world, guided by tasks much like games such as Warcraft. Such independence also adds to the engagement as one tends to forget that they are at school, but rather in a game. Elements such as competition, collaboration, strategizing, and improvisation emerge. The visualizations of basic scientific phenomena such as gravity, chemical reactions helped in providing perspective of how such phenomena occur and relate to one another. An example of such a visualization can be seen in figure 2 below. Understanding causal relationships was a lot easier and also intriguing when compared with watching a video or attending a lecture. In addition to the pull factor of the virtual world, there was a strong motivation to continue to be vested in inquiring and reaching the end. It was as if I was on a exploratory journey, tasked with searching for the answers, working with peers and helping each other out when stuck.

From **a designer's perspective**, the experience of designing for the VLK pushed me to move out of my comfort zone as a teacher where I was used to teaching using books and pre-defined curricula. My primary involvement was with creating a narrative for science scenarios which would then be integrated into a Chemistry VLK. Having content knowledge was essential, however not sufficient, as I found out. Building a narrative required thinking like a storyteller, writing like a playwright and at all times not forgetting that the end goal is to elicit learning through authentic questions which served as yardsticks to explore the virtual world. This is very different from teaching along disciplinary lines, discrete topics from a pre-defined curriculum. In order for the learner to assume the role of a scientist, I as the designer of learning also had to assume the role of a scientist in devising the narrative. Perhaps, the most challenging facet was to ensure that this inquiry aligns with the concept of Productive Failure and calibrating challenging tasks which could only be solved through investigations and collaborations.

Since PF is a deep learning methodology, teaching and designing for it require mindset shifts. The impulse to provide hints in the initial exploratory stage has to be resisted not just in the delivery of the lesson but also in the construction of the narrative.

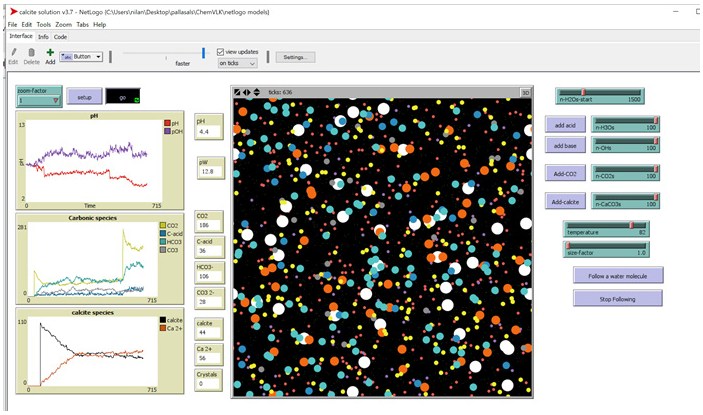

Figure 2: Screenshot of the Pallas 'Carbane Virtual World -- A Chemistry Virtual Learning Kit' depicting the effect of carbon dioxide and high temperature on calcite (white dot) in shelled species.

Critique and Limitations

Considerable time and effort in setting up

While the instructors' time in class might be freed-up to interact and scaffold the learners, the pre-lesson setting-up can be substantial especially for instructors new to the methodology. Secondly, deploying the VLK requires several iterations and learning cycles. It is not a short 40-minute, one-off lesson.

Furthermore, in this day and age where there is a high premium placed on products providing 'just in time bite-sized' learning, how does this VLK stand in comparison to popular bite-sized learning tools? The VLK is not a plug and play tool as it requires understanding of 'deep learning and Productive Failure' before it can be deployed. This can be time consuming if not taxing. On the learners' side as well, it requires them to completely immerse themselves in the problem before the 'learning' can take place.

Mindset Shift

Culturally failure is not something which schools and educational systems readily embrace. Thus, it requires buy-in from not just management, but other stakeholders such as instructors, students, parents, and maybe even employers.

The curriculum too, needs to make space for deeper learning strategies such as 'Productive Failure' before the VLK can be deployed.

Portability

On the technical side, the VLK has to be downloaded on either a laptop or PC which limits portability to heavy devices compared to smartphones.

Comparision with similar research based Collaborative Virtual Worlds (CVW)

CVWs have been around for more than a decade (Ascilite, 2010; Metcalf, Clarke & Dede, 2009), one example being ecoMUVE, a middle school CVW developed at the Harvard Graduate School of Education, illustrates how the study of ecosystem science concepts through authentic virtual simulations enable deeper scientific inquiry by requiring learners to think about complex causality.

While inquiry-based and apprenticeship-based learning are forms of deeper learning (NMC, 2017), the USP of Pallas lies in the fact that it only scaffolds once learners are unable to complete the task or move ahead. PF and Pallas show results that optimum learning takes place when scaffolds are provided only when learners are unable to solve the task and thus the role of the teacher and the learning environment is paramount, here.

Recommendations

As higher education institutions look towards immersive and work integrated learning solutions for improved graduate readiness, *Pallas* may consider collaborating with Higher Education Institutions to explore using cases for this VLK in the HE sector. Secondly, hosting VLKs on the Cloud may increase accessibility and reduce the hardware requirements for storage. This will also allow for the VLK to be deployed across devices, especially smartphones. Lastly, the website may be spruced up to make it visually attractive and an 'on-demand demo' of the VLK might be of relevance in marketing, as well as for garnering feedback.

(The author interned at Pallas from Dec 2017- March 2018, on a purely voluntary basis. Currently the author is not employed nor affiliated to Pallas Advanced Learning Systems in any manner.)

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Bridging the gap in learning with the effective use of Kahoot!: A review

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As educational instructors, one of the many ways we garner feedback from the class is through asking questions between segments of the lesson. I must admit, there were times when I felt pressured when nobody raised their hand to contribute an answer. Could it be that my students have not learnt anything from the three-hour lecture I just gave? This practice for me has often been an ineffective gauge of students' understanding, even if there were students who raised their hand to proffer an answer. Firstly, students who were quick thinkers and fully engaged with the class would often participate in answering questions and respond actively. On the downside, their willingness to answer might lead to the end of the thought process for other students who needed more time to come to a conclusion for themselves. It might have also given me, the instructor, an illusion that the entire class had fully understood the concepts I was trying to convey during the lesson.

A study by Jin (2013) on Asian students studying in an English-medium university in Asia found that students remained silent when engaged by the instructor for various reasons. Some students who were interviewed were found to be silent due to being in deep thought. Some knew the answer, but did not want to volunteer their answer as they were not proficient in the English language and were afraid of getting the answer wrong. There was also another group of students who were not engaged with the lesson and did not know how to answer (or be bothered, to say the least).

With the development of the internet and the ubiquitous smartphone which has made its way to almost every Singaporean pocket (Singapore Business Review, 2018), educators and education institutions are embracing new technologies to enable effective learning and teaching. The intention is to provide each student with "useful feedback, self-discovery through online tools, individual reflection, along with class participation and team dynamics" (Gan, Menkhoff & Smith, 2015, p. 652). The overall goal is to increase engagement with each individual student, which leads to learning.

Having students use their smartphones in class to assess their own understanding of concepts has been very important to me. I've had students taking selfies, face-timing their friends, and scrolling through social media during lessons (to name a few). How much better would it be for me to be in control of what they see on their smartphones for the sake of learning!

Introducing Kahoot!, an online platform that I have been using to address some of these issues. The beauty of Kahoot! is that it is device agnostic and can be accessed by students through an internet browser on a smartphone or laptop. Alternatively, it can be downloaded as an application through the play store. Most importantly, it is free for both students and teachers! Only the content creator is required to create an account while participants will only need to key in a customised pin number created by the system and give themselves a nickname which will appear on the instructor's screen.

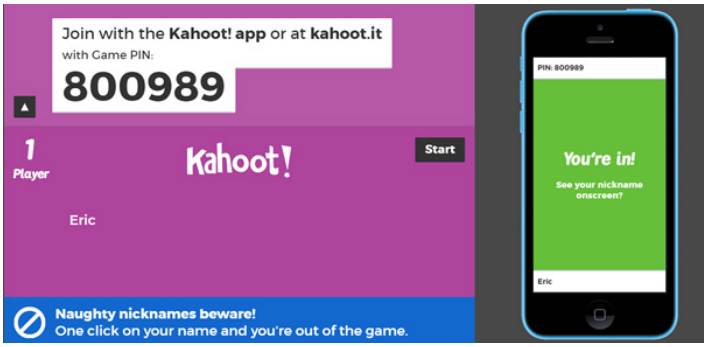

Figure 1: Logging in to Kahoot! as a participant.

Instructors can create a variety of games to be played in class to assess student knowledge and according to the creators of Kahoot!, "make learning fun, inclusive and engaging in all contexts" (What is Kahoot!, 2019, p. 1). How does it work? The content creator can choose to create a quiz, jumble (arranging various options in the right order), or a survey, to engage the audience and to elicit participation. Each individual game created is known as a "kahoot" and there are various tweakable components that allow the creator to achieve their desired purpose for running the activity. In the example of a quiz I commonly use, you can choose to award scores for participants who answered the question correctly as well as adjusting the duration each participant is given to answer each question. There is also an option to let the kahoot run by itself, proceeding from question to question automatically. The alternative would be for the instructor to control the pace of the session and answer any questions that might arise in between. This is my preferred option as it allowed me to address key concepts that students might not have grasped.

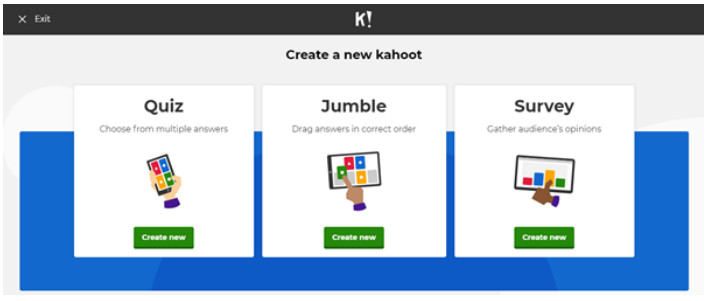

Figure 2: Different types of "kahoots" available for instructors.

Kahoot! has managed to successful gamify formative assessments in class with the clever introduction of a scoring system and intriguing soundtrack that creates a competitive environment within the classroom. A leaderboard would also appear at the end of each question, displaying the names of the top five participants with the highest scores,

effectively turning the quiz into a friendly competition which students enjoy. This highly motivates the students of today to participate as games are something they enjoy playing. With their ever increasing popularity and accessibility on smartphones, everybody would have been exposed to games in one way or another. It has also been encouraging for me as the instructor to see the excited faces on students when I declare it is time for a round of Kahoot! as at times (I'm not kidding), students will shout in elation "Oh yes! I love Kahoot!" This is testament to the effectiveness of Kahoot! and what they have set out to do, making learning fun and engaging, and individualized for the student. There will nonetheless be students who do not wish to engage with the platform and choose not to participate. This would usually be a fraction of the class in which other ways must be adopted to engage them.

Figure 3: Kahoot! Leaderboard.

For those who participate, some would see it as a competition and want to let their classmates know how they had performed by keying in their real name to identify themselves. As for the other group of students who wish to remain anonymous, a fake identify is usually provided, protecting them from any potential embarrassment of being in the limelight or for getting an answer wrong. Answers are revealed at the end of every question and an individualized overall score will be provided once all the questions have been answered.

For students who performed poorly, they are given a rude awakening as to their lack of understanding and can better "perceive the gap between where they currently are and where they should be" (Biggs, 1998, p. 104). This should motivate them even more to close their gaps in learning.

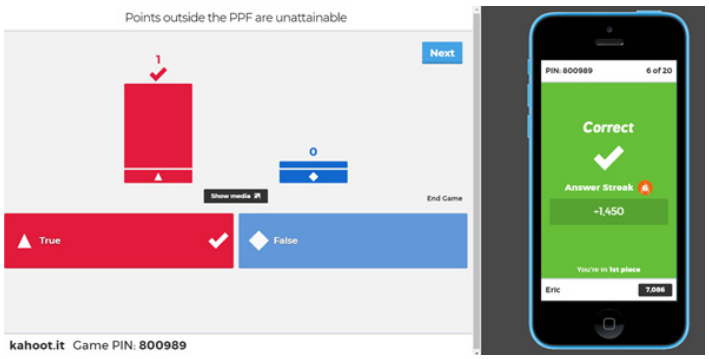

Figure 4: Answer presented after each question.

Evidently, students who are engaging with Kahoot! will also not be using their phones for other purposes. It allows them to focus on the questionnaire and give the tutor undivided attention to elaborate on answers where they might have gone wrong and reinforce their knowledge. What might be even better (and I have tried this effectively in class), is to find a student on the leader board to explain the answer. In this manner, both the student who is explaining as well as the other students in the class benefit in different ways.

Kahoot! also serves as a form of informal evaluation to the instructor. By running these kahoot sessions regularly, I was able to assess whether students of a particular cohort have been receptive to my teaching methods. Should there be a time where students did not perform well for the questions I had prepared for them in Kahoot!, I would be informed of it earlier, allowing me to critically reflect on my teaching methods and whether they are suitable and effective in the learning of the students. Brookfield (1995) highlights the importance of reflecting on one's teaching practices to accommodate the various learning characteristics of different students and to adopt teaching methods to stimulate the visual, auditory, tactile and kinaesthetic learners (Ding & Lin, 2012). Although Kahoot! doesn't provide a qualitative summary of what type of learner your students are, it does give preliminary insight as to whether changes might be required in teaching delivery.

There is also an option to upgrade to the paid subscription plans of Kahoot! to "Kahoot! Plus" or "Kahoot! Pro". The paid versions allow the user to access advanced reports that can be shared between educators and administrators within an institution, and to share prepared quizzes among a group of faculty members. Additional benefits come mainly in the form of aesthetic upgrades and allows the content creator access to the Kahoot! image library to beautify their kahoot sessions further. The upgrade would make sense if Kahoot! is being incorporated into the curriculum of an educational institution supported by a strong data analytics team to analyse the results of the report. Otherwise, the free version is more than enough for instructors to make sense of the progress students have made in their class.

Despite the many great things that come with Kahoot!, there are some aspects of the platform that did raise my eyebrow. Take the survey for instance. Students are required to perform the same login procedures as the quiz and to also key in their nickname. Once the survey began, the same tense music kicked in as the countdown timer ticked down. Students keyed in their preferred choice for the survey, frantically doing so under artificial pressure imposed by the platform. The survey results are subsequently revealed and the instructor can either choose to move on to the next survey question or to end the session.

As compared to another platform which was reviewed in a previous issue of this journal – Mentimeter (Rudolph, 2018), Kahoot! does not have the option to allow for real-time survey results to be flashed onto the screen. Also, the activity I did with my students fell a bit flat, as there is no customisable option to reveal which student might have chosen which option (unless I downloaded the analysis in the form of an excel sheet) that might have created some form of positive commotion and debate before I stepped in to facilitate discussion. The additional step of creating a nickname then felt pointless, and precious time was

wasted in the classroom due to the need to start the activity together, as like the quiz.

The quiz also has some limitations. There is a limit to how many words you can squeeze into a question as well as the answer options. The content creator must be careful in crafting the questions such that the answers do not require too many words. The duration of each question must also be suitably adjusted such that they give the participants enough time to read the question, digest it, and then go through the answers before choosing their preferred option. Failure to time your session appropriately will end up giving your students too much to read with too little time to think before answering. This might result in the student answering the question based on a random guess due to inadequate time given, defeating the purpose of running the kahoot in the first place.

Nonetheless, Kahoot!'s benefits outweigh its limitations and it has been a brilliant tool in the classroom for me as a lecturer, to assess students' current level of understanding and to reflect upon the effectiveness of my teaching. The limitations did not pose too big an obstacle to me and I would still strongly encourage teachers of higher education to utilize Kahoot! as a tool to motivate and engage each and every student in the classroom or lecture theatre, and to experience the benefits for themselves.

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Adult education in transformation - challenges as opportunities in Ukraine

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According to the Global Competitiveness Report 2017-2018, Ukraine ranks 16th in the world in terms of tertiary education enrolment. Up to 82% of its population have either degrees or certificates of higher education. With its 657 universities, Ukraine has about 6.35 universities per 1 million people (versus 2.48 universities per 1 million people in Britain and 5.28 universities in Germany).

At the same time, there is a significant gap between the requirements of employers and the education outcomes. Higher education in Ukraine today hardly meets the needs of the economy, and importantly, does not appear to address the interests of the students themselves. More than 30% of Ukrainians, having graduated from higher education institutions, feel that they have a higher level of education than required for the work available in the labour market. Up to 80% of university graduates, having spent up to five years in their alma mater, most probably will hardly find jobs in their fields.

The 2014 Ukrainian revolution led to a visa-free regime with EU countries, thus opening up opportunities for Ukrainians to travel, study and work in the European Union. Many graduates, including young and skilled professionals, strive to build their careers abroad.

Being not effective in developing employee-employer relations and vocational training, as well as attracting and retaining talents, the country faces hard challenges at present and in the future. National education reform started in 2018 and aims to modernize school education and give stimuli for professional education development, although higher education still remains unchanged.

Speaking about today's global transformations, Klaus Schwab, founder and executive chairman of the World Economic Forum, says that "we stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another... We do not yet know just how it will unfold, but one thing is clear: the response to it must be integrated and comprehensive, involving all stakeholders of the global polity, from the public and private sectors to academia and civil society" (Schwab, 2015). These transformations have their manifestations not only in the technological shift but also in economic, social and personal dimensions, where education is one of the key factors.

Recent debates on education have repeatedly raised concerns on its ability to cope with current challenges. We especially refer to adult education and its institutions, as they, above all, contribute to the formation of a specialist, professional, and an individual personality.

So, what are the challenges facing adult education today? What is the role of adult education and does it have to reposition itself? Can the challenges be turned into opportunities?

There are three Ukrainian experts in adult and higher education who joined the discussion on today's education challenges and trends, analysing them from their national perspectives. Eduard Rubin is the former head of Kharkiv Computer and Technological College and former head of the National Technical University, Kharkiv Polytechnic Institute. Rubin is co-founder of Telesens Academy, IT and business education, and currently develops a number of public/private projects in the sphere of adult business education and international programmes for talented teenagers (in Ukraine, Israel and Lithuania).

Ivan Prymachenko, a co-founder of Ukraine's most popular Massive Open Online Courses (MOOC) platform Prometheus, cooperates with leading national and international universities, including Teachers College Columbia University, Queensland University of Technology, and Massachusetts Institute of Technology. At present, Prymachenko is Visiting Practitioner, Ukrainian Emerging Leaders Program (UELP) at Stanford University.

Dr Serhiy Babak, another expert who joined the discussion, is the head of the Scientific Center at the National Academy of Sciences of Ukraine, a member of the National Agency for Quality Assurance in Higher Education of Ukraine, and the former Vice-Rector of a private university. At present, Babak is the Director of Educational Programs at the Ukrainian Institute for the Future.

Talking about the challenges and opportunities of higher and adult education, Eduard Rubin mentions three of them – relevance, intensity, and practicality. Lifelong Learning has fundamentally changed the goals and formats of contemporary education. Accelerating the pace of society's development and the technological revolution led to the need to prepare people for life in rapidly and constantly changing conditions. Deep structural changes in the sphere

of employment determine the constant need for retraining workers, and the growth of their professional mobility. The gap between those who succeed in the labour market, constantly maintaining and updating their skills, and those who hopelessly lag behind, not keeping pace with rapidly growing professional requirements, is getting ever larger. Adults thoughtfully choose the spheres and place of the study looking for practical, relevant and fresh knowledge.

As a person who came to education with a solid business background, Rubin states that the main task of higher and adult education institutions is to provide individuals with a strong, intense training in their chosen professional field. Alongside traditional universities with competitive selection, high requirements, and serious theoretical trainings, many other types of institutions have appeared – among them, technical institutes offering short programmes, colleges, polytechnics, distance learning centers, and open universities. They create ample opportunities to meet the growing public demand for practical experience in a particular industry and the ability to teach in a 'practical situations mode' with reduced curricula, but offering a degree. There are many teaching methods, and not all of them are effective. The main indicator of the quality of education here is the ability of a graduate to find a job within his/ her specialty or a related one, or the ability to start a business based on the knowledge gained.

For this, universities and businesses should work as trusted partners and develop a high level of business confidence that determines the high degree and high quality of their cooperation. Each educational department and faculty should cooperate with companies of the corresponding profile, draw up curricula, and define the quality criteria for specialists' training and practice. There is a mutually beneficial process based on transparency and trust.

Thus, maximizing employability – the attributes of a person allowing to gain and maintain employment - becomes one of the key objectives for the institutions of adult education. Closer co-operation of academia with other fields, focused on the students and employers' needs, should be the vector of the transformation of adult education, in order to cope with current challenges and remain a key factor of the economic and social change through the provision of fresh knowledge, and competencies for the future professional and personal development.

Like Rubin, Ivan Prymachenko considers lifelong learning a factor that determines the trends and models of the development of modern education. The times when a person received education once or maximally twice in life to pursue a good career are long gone. Now a person needs to practice continuous learning in the form of 'study-work-study-work' in order to remain competitive.

According to an Annual Trends in Online Education report (Best Colleges, 2018), 73% of online students in the US report job and employment goals as a reason for enrolling. These include students planning transition to a new career field (35%) and those who want to earn academic credentials to bolster their standing in their current line of work (30%). This requires, from the educational providers, great flexibility and ability to effectively supply the students with necessary knowledge and skills within a short period of time and at the convenience of the students.

Rapid development of educational internet and mobile technologies and the constantly growing rate of distance learning courses which offer a handy format and fresh knowledge, confirm their attractiveness and competitiveness. In many areas, notably in the field of IT, business and entrepreneurship, where dynamics and fast feedback are very important, distance education successfully competes with traditional education models.

However, the main challenge and, at the same time, an opportunity, for adult education institutions is to break through into principally new teaching-learning formats. At present, online courses usually reconstitute offline ones (video lectures, practical tasks, etc.). Although it may still be prevalent, this approach does not employ all the opportunities of web-based and blended learning. It also has quite limited room for further development. Distance education in this 'rehashed' format lacks dynamism, interaction, live communication and reflection. At the same time, distance students are often unprepared to study and to manage their time independently, without tuition. It often causes high student attrition rates in MOOCs.

The transition from the reproduction to the designing of online courses on a principally different basis – technologies, mobility, interactivity, hybrid classes with blended online education and traditional face-to-face teaching and instructions — allows to employ the internet potential for teaching and learning, and to capitalize on mass coverage and possibilities for development of individual learning trajectories.

This leads to another big challenge of finding an effective way of scaling up best cases and practices. The methods that work with a limited group of students in a private institution may not work well, if at all, with a larger number in public institutions or MOOCs. In this instance, we have to pay special attention to evidence-based education. There are many experiments and best cases, but none of them can turn into the best practice that can work in other circumstances. Processes and strategies that have empirically demonstrated successful learning outcomes in different groups and environments should be evaluated and implemented. It ensures the quality of education products and satisfactory results for students.

And, finally, Prymachenko draws attention to an extremely important but quite underestimated aspect – the psychological component of education and the necessity to elaborate on the approaches to personalized education. Numerous students face behavioural and emotional disorders such as depression, anxiety, etc.; which, are not easily recognised as impeding effective learning (especially online). Being unable to concentrate and independently follow the learning plan without instructions or control, students are rarely successful in distance learning. Thus, the teaching of strategies of psychological self-tuning, modification of behaviour and adaptation to changing environments, is one of the key conditions of efficient online

education.

When speaking about modern trends of adults and especially university education, Serhiy Babak notes that in the absence of unconditional income, fresh knowledge becomes a real value – it allows you to be competitive in the labour market, and at the same time, to be a member of communities. This forms strong self-motivation for constant knowledge updates and self-development. Thus, the goal of higher education here is to provide conditions for professional / personal development and networking.

Considering the development of online and traditional learning institutions, Babak argues that we should not underestimate the unique resources of traditional universities — on-campus training, possibilities of direct communication and collaboration of participants within the educational process, interaction, live discussions and face-to-face mentoring, building teams and communities, and also huge intellectual and financial resources of the graduates. These opportunities are difficult to realise solely through online education.

Referring to improving the effectiveness of the results of adult education institutions, Babak notes the need to develop dual education, retraining, and training for contiguous professions. Formation of professional competencies actualizes the need to change the traditional training formats and instruments. The use of augmented reality (AR) and interactive tasks allows for greater involvement and simulates certain conditions to practice necessary knowledge and skills. Educational environments that combine a variety of life situations and professional orientation of the educational and extracurricular spheres of development of participants in the educational process are the most relevant for meeting demands and goals of modern education.

However, these innovations may lead to a rise in the cost of educational content and may result in the need to increase study fees. This may also force educational providers to search for private-public partnerships or diverse cross-sector partnership formats for the benefit of adult education and all its stakeholders.

As a result of the discussion, one can conclude that adult education is an important economic and societal influence by providing necessary knowledge and competencies. Four main theses can be outlined in terms of the challenges and opportunities of adult education in the current socio-economic transformation:

- co-operation of academia and business and a cross-sector partnership provide a more balanced 'demand-and-supply' educational product, and thus, more value in the market; this also may open new opportunities, funding and financial support;
- online education and its products need to be transformed on the strength of the optionalities and scope of the internet and mobile technologies in order to effectively respond to the technological revolution;
- evidence-based methods, and priorities/ needs of the learners should be in focus since they increase quality and results of education, especially for people having difficulties with effective distance learning;
- traditional universities need to ponder on their opportunities to provide both offline and online training, combining them to take advantage of both resources and in order to cope with current trends.

There is still an open question on how policy makers see a role of the sector in socio-economic development and in meeting the challenges caused by the global transformations today.

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What does it mean to be an effective educator? Analysing the qualities for a successful and interesting career as an educator in the 21st century

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"It appears, therefore, that of all secular professions, teaching is the most profoundly important" (Menzies, 1945). These are the words of the leader of the opposition, the politician Mr Robert Menzies, to the Australian House of Representatives in 1945 (Robertson, 2015). Although these words were spoken quite long time ago, the echo of Menzies' words seems to still reflect the present time. Therefore, one can rest assured that "teaching is the world's most important profession" (Cox, 2019). If you are an educator reading this article, you may know from your own professional experience that educators (teachers in general) can make a positive impact in students' lives. In the eyes of Rose (2014), in general, the whole teaching process can be immensely satisfying. Similarly, for Cox (2019), "teaching is immensely satisfying and exciting".

To me, teaching is my true passion. Having worked for multinationals and small and family businesses in different countries, in my early thirties, I decided to engage fully in teaching. I have never regretted this decision. I enjoy teaching as much as I enjoy life itself. Teaching is 'the element' of my true professional satisfaction. As Ken Robinson, the author of the book *The Element: How Finding Your Passion Changes Everything*, says, "too many people never connect with their true talents and therefore don't know what they're really capable of achieving. In that sense, they don't know who they really are" (Robinson, 2009, p. 23). To be a successful educator, one must be connected with one's talents and abilities, or as Robinson says, to be within the element. In today's climate of accountability, high-stakes testing, and legislation (valid in different countries), however, becoming a successful teacher is challenging and requires professionalism and commitment (Parkay, 2020). However, remember that teaching, the job of an educator (teacher, professor instructor or tutor), has never been easy, and it never will be. It takes heart, commitment and passion to be an effective educator. Educators frequently share that teaching is the most difficult job that anyone can have — and the most rewarding (Duncan, 2015). Now, at a time when educators are courageously raising the bar for student achievement higher than ever before – particularly in developed economies, but more recently in developing economies – the job of a professional educator has never been more critical to the success of young minds and to the prosperity of economies.

Why professional development and empowerment?

"Let he who would change the world first change himself." (Socrates)

"I know that the only way to live my life is to try to do what is right, to take the long view, to give of my best in all that the day brings and to put my trust in God."
(Queen Elizabeth II, 25 December 2002)

There is no better resource for an academic institution than educators who are empowered and equipped to solve problems using their own talent and experience. Some governments such as Japan, South Korea, Finland and Singapore have been empowering their educators for quite a long time, and the results are clear in the statistics. The world education rankings from the OECD and The Programme for International Student Assessment (Pisa), which is highly respected across the globe, and enables politicians and policy-makers to assess how different countries' education systems compare, show that the performance in these countries are higher than in many others. Empowering educators means offering appropriate professional development to educators at all educational levels (from primary school to university level). Professional development is an ongoing process, one that evolves as you assess and re-examine your teaching beliefs and practices. Some of the approaches can be pursued individually while others prove to be more beneficial if done collectively. Some activities can be done informally (journals, study groups, etc.) and some follow more traditional formats (e.g., workshops, conferences; Murray, 2010). According to Murray (2010), one of the main reasons to pursue professional development is to be empowered — to have the opportunity and the confidence to act upon your ideas as well as to influence the way you perform in your profession. The main focus is on empowering educators for inclusive practice. First, the meaning of 'empowerment' should be clarified. According to the Oxford English Dictionary, "empower" can mean "to make (someone) stronger or more confident" – in this case, increasing educator confidence to include all learners in their classes. It can also mean "to give someone the authority or power to do something" (ibid.). Teachers need to be confident in carrying out a range of key tasks – for example: assessing, analysing information, planning, putting plans into practice, adapting as needed, evaluating and critically reflecting – with all learners in mind. They need to shift their thinking from "ideas of 'most' and 'some' learners to everyone" (Florian & Linklater, 2010, p. 370).

Empowerment is the process through which educators become capable of engaging in, sharing control of, and influencing events and institutions that affect their lives. As educators, we have the capacity to empower ourselves if we keep in mind the following precepts:

- Be positive.
- Believe in what you are doing and in yourself.
- Be proactive, not reactive.

- Be assertive, not aggressive.

Feeling empowered can also manifest leadership skills, and educators' empowerment leads to improvement in student performance and attitude. To be an effective educator requires a combination of professional knowledge and specialized skills as well as your own personal and professional experiences and qualities. And adding to their knowledge base and acquiring new skills are among the main reasons teachers participate in professional development activities (Bailey, Curtis, & Nunan, 2001). For both a novice educator and a veteran, learning about new ideas and techniques in their teaching discipline can be motivating and encouraging. The university I work for, for example, provides all academics with an annual personal development budget. We, as academics, are encouraged to improve ourselves and the teaching discipline we are in charge of, to teach the students on campus and abroad. Academic institutions, like the one I work for, are encouraged by the national government (the British government in this case) to keep professional development programmes to empower the educators. The result is visible in the university's ranking which has been improving considerably in the last few years. Student satisfaction also has improved markedly due to educators' commitment and passion for their teaching and their research expertise.

Educators all around the world face similar challenges due to the very nature of educational environments. They teach their classes independently from their colleagues, which makes them feel isolated. Sometimes these educators, especially those who are new to the field, can become overwhelmed by the demands of the educational institution bureaucracy (particularly in some countries) and if they do not receive regular supervision or feedback, they can become frustrated. Therefore, professional development activities can alleviate some of these issues. Such activities can also bring together educators who have similar experiences and interests. Just having the opportunity to share experiences and ideas with colleagues can help an educator gain a sense of community and belonging. I, for example, regularly participate in academic conferences and workshops worldwide where I am able to learn and share ideas, and at the same time feel being part of the community. The most recent conference I had the privilege of attending was EDU 2019 in Athens run by the Communication Institute of Greece (in May 2019). This is a type of professional development programme that brings educators from different countries into a friendly environment, and we all can contribute and share teaching and educational ideas from around the world. We learn from each other, and take the lessons to our own educational environment.

It does not take a miracle to solve the biggest challenges in education in many countries, but real transformation can take some time; the transformation of the Finnish education system, for example, began some 40 years ago as the key propellant of the country's economic recovery plan (Hancock, 2011). National and local government and educators, together, can truly lead large-scale transformation; government and local systems must be willing to provide educators both time and training to exercise empowerment and leadership in appropriate professional development programmes. Successful teaching systems that we hear of in the news are those that are supported and encouraged by local authorities for their efforts. This results in an achievement for the whole economy and society. By empowering educators at all levels in the educational system, we are creating a better and integrated educational environment for effective educators in the 21st century. Empowerment and professional development is not something new, Socrates already mentioned centuries ago that 'the life which is unexamined is not worth living.' I would say that an educator who does not keep improving and empowering him- or herself is not a true professional engaged with the students and colleagues, and the whole academic community overall. To succeed as an educator, you must master a variety of different skills and competences constantly. The full complement for an educator to empowerment is self-management.

What makes a successful and empowered educator?

If you were to ask any observer you may hear things like, the teacher kept the students engaged via unique teaching strategies, and the classroom basically ran by itself. But, if you were to ask a student, you would probably hear a different response along the lines of "they (teachers/ educators) make learning fun" or "they (teachers) never give up on me." There are countless teaching strategies you can use to achieve success in the classroom, but irrespective of the teaching style, the most effective educators have one thing in common — they know how to reach their students in a long-lasting, positive manner. In this section, I present and critically discuss some of the most relevant qualities that contribute to a long-lasting successful teaching career. To be honest, an exciting, successful and happy teaching career, regardless of the teaching style, seems to be offered by those educators who have one main aspect in common – they impact their students' life personally and professionally in a positive manner. The following successful teaching strategies are based on Cox (2019).

1. Successful teachers have high expectations of their students.

The most effective teachers expect their students to succeed, they believe in them, and motivate them to keep trying until they reach their goal. As a result, they set the bar high and create an environment where students can push themselves beyond their comfort zone to reach their goals, but also have a safety net to catch them if they fail.

2. Successful teachers have a sense of humour.

If you ask a student who their favourite teacher is, they are more than likely to tell you about the teacher that makes them laugh, but also, and more important and relevant, make them 'think critically'.

Making learning fun does not mean you have to put on a comedy show, but definitely humour may help to create that lasting impression, and at the same time to address difficult topics.

3. Successful teachers are knowledgeable in their field.

Successful teachers are masters in their subject area. They know their craft and never stop learning. They are curious, confident, and do not (always) need a textbook, or a full set of PowerPoint slides in front of them to teach their students. They stay abreast of their subject and transfer their love of knowledge to their students.

4. Successful teachers use teaching strategies that cause them to think outside of the box.

Successful and productive teachers think creatively and try and make classroom experiences exciting for students. They identify ways to leap outside of the educational norms and create experiences that are unexpected, unique, and ultimately more memorable.

5. Successful teachers take risks.

A popular saying is, "If there is no risk, there is no reward." Successful teachers know that risk-taking is a part of being successful. Children learn by observing, and when they see you try new things (and watch how you handle success and failure) they too will know how to handle similar situations.

6. Successful and productive teachers are consistent.

Successful and productive teachers are consistent in all that they do (related to their profession). They apply and enforce class rules, a consistent grading system, and the expectations for all (possible) students. They do not play favourites or make special exceptions.

7. Successful and effective teachers communicate professionally with students and colleagues.

Successful and effective teachers know that communication is the key to student success (and colleagues). They create an open path of communication between themselves and students (and colleagues), and recognize that a united front between these groups lowers the chance that no student is left behind.

8. Successful teachers are up-to-date with the latest in technology.

Great and successful teachers take the time to explore new tools and stay up-to-date with latest technology. They are not afraid of what technology holds for education in the future, and are willing to learn and incorporate the new trends into their classroom. They are willing to learn even from their own students (usually young bright fellows).

9. Successful teachers make learning fun.

This goes hand in hand with having a sense of humour, but making learning fun does not mean you have to put on a comedy show. Find ways to mix up your lesson plans based upon your students' interests. When they see you putting in effort to get to know them and mould your teachings around their lives, the more successful you will become.

10. Successful teachers can empathize with students.

The best teachers are patient with students, and understand when they are under stress or have problems with the material. They do whatever is necessary to get their students back on track, and are able to recognize that everybody has bad days.

Despite mistakes, disasters, failures, and disappointments, Leonardo Da Vinci never stopped learning, exploring, and experimenting. He was persistent in his quest for knowledge (Gelb, 1998).

I strongly believe that a successful educator is the one who understands and follows Leonardo's philosophy. I have been trying myself, and the rewards are visible, for the last 6 years, I have received teaching awards from students and the university I work for.

To conclude I would leave you with a quote from one of my recent undergraduate students at Royal Holloway, University of London:

> 'More than a teacher, a motivator. Ailson has always been able to inspire the classroom, making every subject interesting. He has the great capability of being able to find the right angle to share his knowledge, both theoretical and practical. Whether in or outside the classroom, he is always ready to offer advice and guidance and always with a smile!"
>
> Paul Messian-Imbert,
> undergraduate student, 2016/17.

Receiving these words is what makes life as a professional educator worthwhile, and there is no better reward than to see the development and empowerment of young minds in this chaotic society we live in. Teaching is the world's most important (and rewarding) profession indeed on this planet!

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Forming powerful MBA teams using Lego architecture

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Learning objectives

This intervention will help students;

- Augment their self-confidence and be more comfortable to engage in open, reflective class discussions,
- Develop resilience by failing fast in a low stakes task,
- Accelerate the peer bonding process, and
- Experience working with ambiguity under pressure

Inspiration

Creating inspiring, interactive and educationally valuable induction activities can be challenging, particularly when your class is shoehorned into space that is just configured all wrong, student expectations are stratospheric and as module leader or programme director you just want to 'start right'.

This two to three-hour long experiential exercise using Lego Architecture has been developed and deployed successfully over four academic cycles, as part of an extended management masters degree induction programme, but could be used across most academic disciplines as a team-working activity, to offer theory in practice for a management or leadership class or be situated in an employability module as preparation for an assessment centre. The problem based learning exercise introduces students to two theoretical team-working frameworks, Belbin (Belbin, 2012) and Tuckman (Tuckman & Jensen, 1977), before challenging groups to build a plastic brick model of an unknown iconic building without any instructions. Groups are invited to use the After Action Review knowledge management technique as part of the debriefing exercise.

Ideation

The idea was inspired by Krivitsky (2011), but there are a number of other interesting pedagogic constructs available in journals (Pike, 2002; Wolz 2001; Lawhead et al, 2002) and more widely on the internet (Weedmark, 2017; Lean Simulations, 2011; Kay, n.d.), perhaps also popularised by the emergence of more creative approaches in the areas of entrepreneurship (Sohn & Ju, 2015; Bulmer, 2011) and design thinking teaching (Leifer & Steinert, 2011). However, these exercises had a strong technical focus, often in software development, and there was an opportunity to develop a wider, generic team-working focussed exercise, which is presented in this paper.

Implementation

To encourage task engagement and more profound self-reflection, the workshop might discuss, in plenary for up to 30 minutes, the applicability of Belbin's (2016) six team role summary descriptions; resource investigator, plant, teamworker, coordinator, specialist and monitor/evaluator. Students were encouraged to grasp the opportunity to try out new roles and to form diverse, often higher performing groups. They were discouraged from forming comfortable, homogeneous choices. Highlighting the university's risk-free, safe learning environment was emphasised with the mantra 'no one is getting fired today'.

Then, Tuckman's Form-Storm-Norm-Perform group evolution model (Tuckman & Jensen, 1977) was introduced (10-15 minutes) using a single visual slide. Tuckman observed groups moving through an evolutionary, stepped process from Form (group begins to establish), Storm (disagreements manifest themselves), Norm (effective communication and mediation groups begin to agree and accept new ways of working effectively together), before the group moves on to the final Perform (working effectively) stage. The MBA students were encouraged to use their new learning to organise themselves into small groups, each with four to six members, according to their business backgrounds and recent insights about their Belbin role preferences. I carefully, and in retrospect probably over emphasised to cover my discomfort, the symbolic role being taken by the Danish company's bricks as a proxy for work. Each group was given a clear, up cycled plastic take away food box that contained one of six different Lego Architecture kits (lego.com/en-gb/themes/architecture), minus all the packaging, images, instructions and critically, the name plaque that identified the specific model. (These were stashed in a small bag at the front of the class for later, but never did anyone investigate this nirvana.) The instruction given was pared back to the extreme; "Build it", which was repeated three or four times because student body language suggested they were a little shocked with the brevity. Importantly, no other rules or information were provided, provocatively creating a feeling of uncertainty, augmented by the passive observational instructor role I chose to adopt, silently making mental notes of the discussions and activities. The set task required groups to use the plastic blocks to create a scale model of a global, iconic skyscraper from the premium priced, Lego Architecture collection; Chicago's Willis Tower, Dubai's off shore luxury hotel Burj Khalifa, Seattle's Space Needle, London's Big Ben, Paris's Eiffel Tower and New

York's Empire State building. It did not matter that groups rarely got even close to completing the task. The black glazed Willis Tower, with fewer, more uniform blocks was often the most complete model. Big Ben's four, round clock face tiles usually gave away the model identity, but it also had the most bricks that required strong building design capabilities, uninhibited skills that many of us lose in early adulthood. The task was set up so groups were likely to fail, and by failing fast hopefully students would accelerate through Tuckman's four stage process, developing a keen sense of self-awareness and foster effective, open team communication.

Piling on the pressure

It was important not to allow too much time for detailed building, with the initial conceptual inputs and debriefing, this team building challenge would typically fill the majority of a half-day workshop, but could be condensed into a two-hour workshop with some pre-class preparation. To create some additional pressure after circa 25-40 minutes, a five or ten minute warning notification, shouted loudly to the groups, created a stress-inducing pivot. The majority of groups at this point were usually some way off completion, perhaps having organised all the pieces into neat piles and having iterated a few unsuccessful design options. It was instructive to observe and reflect back to students the behaviour changes that took place at this point. Initially, of course, no time limit had been given. After around an hour the exercise was stopped and students were invited in their groups to reflect for 15 minutes. This is the first step in preparing for the debrief which uses the US military knowledge management technique of After Action Review (Morrison & Meliza, 1999). This approach encourages groups to consider more and less effective behaviours and enable formal, wider (organisational) dissemination of useful learning insights. This included prompted and pointed facilitation evaluation of individual and group performance, seeking to draw out elucidations of lessons learnt and explicitly identifying what the groups would do differently next time.

The big reveal

At this stage there was usually quite a lot of casual banter in the classroom. The incomplete models created an effective centrepiece for informal photos (with prior permission) of the team members holding up their creations. Several groups had clearly failed fast, but the idea of winners and losers was de-emphasised. Students recognised that the tasks had differing levels of complexity, with two distinct phases comprising model identification and then building. A further 30-45 minutes would be used to share insights in plenary.

To encourage students to begin to feel more comfortable speaking out in class (essential for peer infused MBA learning) groups took turns to present their creations, with everyone involved. They often needed to be quite alternative and require an amusingly creative narrative to be developed. With facilitator observations gently introduced into the discussion, the groups were asked to describe their process, highlighting strengths and weaknesses. To conclude each group's presentation I would, with theatrical aplomb, reveal the relevant box, often to gasps and unknowing chuckles, without doubt providing some unadulterated edutainment to the proceedings (5 mins).

Student groups found the less well-known Seattle Space Needle the most challenging to identify and build. I had considered using the cheaper Japanese Nanoblocks (nanoblockus.com), because they have a much wider and more globally representative choice of landmark buildings, but the bricks are quite small for bigger fingers like mine and more difficult for group interactions. Some Lego Architecture models have subsequently been retired by the manufacturer and replaced by cityscapes, which would work equally well. A number of similar and cheaper model kits from other suppliers are also available.

Debriefing instructions

In plenary, by way of debriefing, I would ask the groups four reflective questions, detailed below with typical responses;

What did you learn ?

Although often quite jolly, the discussions were not in any way frivolous, for example students reflected; (1) Lego models often have spare pieces, which was confusing, (2) they valued the experience dealing with ambiguity and not knowing everything and the ability to problem solving confidence and (3) learning to trust one another.
Students gained resilience from coping with uncertainty. The exercise did not provide any form of scaffolding, or way markers, students did not know how to evaluate their performance. I would point out that this was something that is not untypical in the work place and a challenge that students often found adjusting to their university assessment requirements too.

Can you identify examples of effective behaviour(s)?

Students would often identify group members communicating effectively and introducing a different approach to the problem solving. Some participants would be recognised for their story telling.

What didn't go so well?

Failure to complete the task was often raised here, which provided an opportunity to emphasise the fail fast, safe learning objective. I would often need to explicitly link back to Tuckman and the importance of matching skills and orchestrating the team activities.

Students frequently missed the opportunity to legitimately observe and/or collaborate with the other groups (facsimile for 'market research' and 'the competition') as no anti-trust rules applied, demonstrating, often, an overly myopic task focus.

What would you, individually and as a group, do differently next time?

Ready. Aim. Fire. At this early stage in their programme groups routinely skipped the important plan and role allocation phases. Often, I found little evidence of groups putting learning into action by engaging systematically in reflective After Action Reviews, even when prompted to do so.

Although there were undoubtedly a myriad of power-status constructs in play, the lesson to think out of the box and challenge assumptions, particularly when none were stated, was powerful, particularly when linked to examples of disruptive business innovators who dare to paradigm shift.

Summary

Often with the next class clawing at the window to be allowed in, the final act was to share the big bang kicker, and the call to arms to take risks and think creatively outside the box. My closing piece: "You will remember there were no rules in this exercise. Only one group, in one cohort, has ever been cunning enough to go online with their phones and look up the freely available Lego Architecture building guides and used the step-by-step numbered building guide".

This ambiguous and at times stressful building block teaching innovation was designed to fail fast, memorably. I have, however, been delighted at its effectiveness in accelerating peer bonding and encouraging students to engage in open, reflective discussion. Blending theoretical inputs in the form of the Belbin self-evaluation, the Tuckman model and debriefing using the After Action Review exercise with a more playful series of discussions around the Lego Architecture fail fast challenge created an enjoyable and impactful team building learning encounter.

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Appendix A: Instruction list

Pre class preparation materials

- ✓ Printouts or paper handout copies of the Belbin role preferences descriptors
- ✓ Lego Architecture sets, denuded of their packaging and instructions, a range of different models, enough for one per group of 4/5 students
- ✓ A PowerPoint slide showing Tuckman's Form, Storm, Norm, Perform framework
- ✓ No student preparation is necessary

Key interventions

[Total time circa 121-181 minutes]

[5 mins] Explain the structure of the class and present the Belbin framework.

[5 mins] Hand out or show the Belbin role preference descriptor summary.

[10-20 mins] Invite students to consider which of the team working roles they can identify for themselves. Sometimes two or three roles might be identified. Encourage consideration of roles that are uncomfortable and discuss how university is a safe place for relatively risk free learning.

[10-15 mins] Introduce the Tuckman model using a single visual slide, with some time set aside for student questions and plenary discussion.

[up to 10 mins] Encourage students to organise themselves into groups of 4-6 members in light of their experience and Belbin role preferences.

[5 mins] Give each group an anonymised kit and invite them to "Build it".

[25-40 mins] Instructor silently observes groups, making notes. Do not provide any further guidance. Students work in groups to attempt to identify what they are being asked to build and then attempt to build it.

[5-10 mins] Facilitator shouts loudly "Five minutes left" and look out for different (stressed) behaviours. Observe for approximately 10 minutes before calling the build phase to a close.

[15 mins] Invite groups to reflect amongst themselves using the After Action Review process.

[5-10 minutes] Take photos of student groups with their creations (with prior permission) and theatrically 'reveal' each group's model. Start with the easiest/most complete models first, building tension until the most difficult/least complete builds.

[30-45 mins] Discuss debriefing exercise questions in plenary

- o What did you learn?
- o Can you identify examples of effective behaviour(s)?
- o What didn't go so well?
- o What would you, individually and as a group, do differently next time?

[5 mins] Ask groups to break up their models and return all the parts to their boxes and give them back.

[1 min] Close the session with the kicker "You will remember there were no rules in this exercise. Only one group, in one cohort, has ever been cunning enough to go online with their phones and look up the freely available Lego Architecture building guides and used the step-by-step numbered building guide".

Badger, R. (2018). *Teaching and learning the English language: A problem solving approach*. London, UK: Bloomsbury Academic.

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In the preface to his book, Richard Badger states "My aim as a teacher educator is to support teachers as they try to help their learners use English more effectively, and I hope this book will contribute to the problem-solving that goes on in your classrooms" (xvii).

The author addresses the three stages involved:

i. Identifying the problem

ii. Collecting information about ways of addressing the problem

iii. Trying out possible solutions

This book would be an excellent introduction to and overview of TESOL teaching along with providing a revision of TESOL theories, methodologies and strategies (past and present) for practising teachers and teacher educators. It is extensively researched with around 500 references to enable readers to extend their knowledge and skills in TESOL.

This book is reader-friendly, and devoid of a lot of the jargon associated with TESOL theory and practice. The layout adds to the readability through generous use of space, lines, and bold headings / sub-headings to clearly distinguish between chapter sections, although the fonts could possibly be changed in some Activities to differentiate between the author's instructions and the actual task.

There are five sections:

1. The fundamentals
2. Teaching knowledge and skills
3. The language elements
4. Language skills
5. Conclusion

Each chapter has a clear introduction and summary plus suggestions for further reading. Also included in every chapter are Activities for the teacher to undertake either alone or with colleagues. These selected Activities are where possible 'problems' are addressed, and lend themselves more to group discussion that would be relevant to teacher training and ongoing staff development.

The accompanying website is in its early stages but looks promising. It focuses on classroom activities in skill areas and includes video clips of teachers in action.

Badger explains simply and in context many of the theories of language learning, giving the kind of overview that would have been very welcome when I was gaining TESOL qualifications and struggling with Transformational Grammar and other such mysteries.

My initiation into the TESOL world in the early 1980's was as a team teacher for an On-Arrival group of refugees from the former Kampuchea, now Cambodia. The young and enthusiastic teacher was keen to use the SCAV approach, (Structuro-Global Audio Visual – not one, I noted, mentioned by Badger!) which seemed to involve a lot of moving around and beating out rhythms on the backs of other learners and such activities. I was as uncomfortable – and as bewildered – as the group. The method was not only culturally unsound but psychologically disastrous. These people were so traumatised, they all gave their occupation as 'farmer' and denied (through an interpreter) speaking any other language other than Khmer. Months later, when the trauma had abated a little we discovered that in fact most were from professional backgrounds: doctors, accountants, lawyers etc., and many could speak both English and French. Badger's underlying theme of Know Your Students gets a big tick of approval. However, as we all know, this focus on learners is subject to the constraints of the teaching and learning context, the motivation and goals of the students, requirements and expectations of the funding source (private, government, NGO's or the learners themselves), available facilities and resources, and geographical/cultural considerations, to name a few.

Badger also examines theories behind the teaching and learning of the four language skills: reading, writing, listening and speaking. Many of the approaches and strategies are applicable to L1 English students.

But of course, if TESOL teachers are to be 'supported' by this book (and the accompanying website), they will be seeking practical strategies to implement in their classrooms and to solve related problems as they arise. Badger gives examples with references on where to find further ideas and information and these are the book's main strength.

I did find the Index inadequate, and sometimes rather puzzling regarding what the author chose to include and exclude. There also needs to be a comprehensive list of acronyms. Often I had to thumb back through a chapter to confirm the meaning of an acronym.

Badger did not touch upon an aspect of TESOL particularly relevant to learners who are settling permanently in an English-speaking country such as Australia. As mentioned, I taught Communication in TAFE for years and know the importance of tone (especially on the telephone when there is no visual contact) and what can loosely be called 'body language'. I include just one example out of hundreds I could recount.

An Afghani refugee, a doctor in his own country but not accepted as such here, came to see me extremely upset

after an unsuccessful job interview for a position as Records Clerk in a Sydney hospital. I asked him to demonstrate what happened in the interview.

This question was put to him by a member of the panel:

"You were a doctor in Afghanistan. How will you feel just working in an office?"

My student apparently almost leapt across the table shouting:

"*NO! NO". It is ok!! It is OK!*" thumping his fist on the table and looming very close to the faces of the interview panel. When asked, he demonstrated how all four panel members shrank back into their chairs looking 'upset' (his word).

We practiced culturally appropriate body language and suitable voice tones and facial expressions for different situations. We also created and practised scripts with utterances along the lines of "I know I have been a doctor but I understand my qualifications are not accepted here. So I would be very happy to just find a good job" etc. He was successful in a job interview two weeks later.

Still along the lines of Communication, I often muse that a penchant for acting would be a useful attribute in a TESOL teacher. After all, so much of meaning comes through tone, facial expressions, gestures and body language.

Finally, I was aware of the one area not covered adequately by the author, understandably, given the chosen length of this compact book. This concerns the increasing and ubiquitous use of smartphones with Translate functions by learners in class situations, indeed the growing use of communication technology devices and e-learning in general and how these are incorporated into the learning context by both teachers and learners today.

Diamantidaki, F. (Ed.). (2019). *Teaching literature in modern foreign languages*. London, UK: Bloomsbury.

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As a linguist and former English language instructor, I greatly enjoyed and benefitted from reading this book of which the title sets clear expectations for the content. In *Teaching Literature in Modern Foreign Languages*, Fotini Diamantidaki brings together eight authors whose work is directly related to the topic at hand as professors, researchers, and language teachers. While each chapter covers the topic from a different angle, they all utilize learner-centered approaches. Indeed, Diamantidaki, who is a lecturer in Education at the UCL Institute of Education and has taught French in London secondary schools, highlights the importance of the incorporation of literature into teaching foreign languages and ensuring that the "learner… reacts as a human being, reconnecting with the context they are living and the context they are studying" (2). This is emphasized throughout the book, where the authors provide various class activities in which students are active participants in the language-learning process rather than passive recipients.

This book is a particularly useful resource, as each chapter includes reflection points, classroom tasks, and research boxes. Thus, much like the authors ensure their proposed teaching activities are learner-centered, the structure of the book itself keeps the reader actively engaged from cover to cover, as he/she reflects on the points raised and how they relate to his/her own experience, explores activities designed by other educators, and considers relevant areas of research (and perhaps chooses to delve deeper into some of them, using the suggested resources as a starting point).

Ruth Heilbronn's chapter entitled Literature, Culture, and Democratic Citizenship is informed by ideas developed by Martha Nussbaum and John Dewey. She argues that the main goal of education should not be achievement in examinations; rather, the starting point should be the "human qualities and capabilities we wish to nurture and what kind of society we hope for" (11). Heilbronn draws the link between teaching literature and students' positive social engagement and refers to Nussbaum's argument that literature enables students to develop "moral imagination" (13), which, in a nutshell, is the ability to put oneself in another's shoes. As the world becomes increasingly interconnected, I believe this "skill" is no longer merely a desirable trait; rather, it is quickly becoming a requirement for success in a world where multicultural, multilingual, and multinational settings are becoming increasingly common.

While Heilbronn explained how literature can help students' put themselves in another's' situation, Jane Jones, a comparative linguist, takes the reader on a journey across primary languages classrooms in Germany, Spain, and England, and provides the teachers' accounts of their experience. This sneak peek into other teachers' classrooms allows the reader to learn from other educators' best practices and inspires his/her design of future classroom activities. Indeed, as Jones argues, visiting "other classrooms in other contexts" could be highly beneficial for teachers' professional development (42).

Jennifer Eddy explores how creativity, drama, and novelty can help students understand literature and involve them actively in the learning process. She explains that "with transfer tasks, the learner demonstrates understanding of a concept by demonstrating it within the context of something else" (46). For example, students could be asked to turn a painting into a poem, or a dance into a song. Colin Christie's chapter on literature and the target language also incorporates the concept of transfer. He argues that an important step in teaching literature is equipping students with the language they need to be able to discuss literary texts, and that students will then be able to "transfer such language to other contexts and also to adapt language from other contexts" (136). Isn't this where the beauty of language lies? Students should be encouraged to employ their creativity and be able to use language in contexts different from those they learned it in, in their own way, to express their own thoughts.

This creativity and ownership are emphasized in the storyline approach. Drawing on the work of socio-constructivists Jerome Bruner, Lev Vygotsky, and Jean Piaget, Verna Brandford explores how the storyline approach can be used to teach literature in a foreign language classroom "in an integrated way that closely mirrors real life" (63). Brandford presents the storyline approach, using a set of tasks designed for *La Pluie* in *Le Petit Nicolas et les copains* as an example, and demonstrates how the teachers' role is to provide the students with the required tools and linguistic knowledge, but the learners fill out the storyline themselves and are able to express their thoughts in the target language.

In the only chapter on a non-European language, Frances Weightman acknowledges the challenges of introducing literature into the Chinese language classroom. Nonetheless, she argues that these challenges are not insurmountable, and puts forth suggestions to overcome them. To illustrate, she advises teachers to take advantage of technological developments, such as online teaching materials, to facilitate reading for students, by, for example, playing audio recordings next to the characters. In addition to her eloquent explanation of the importance of reading literature in the target language to experience the culture instead of just read about it, Weightman's chapter neatly explores the use of technology in foreign language teaching and learning, an element that I felt was either lacking or not adequately covered in other chapters.

Diamantidaki's chapter presents different ways for teaching poetry in modern foreign languages and underlines the importance of poetry not only for linguistic purposes per se, but also for "encouraging students' engagement and personal interpretations" (97). She provides examples of exercises on poems and demonstrates how the questions vary from the first reading, where they center on who, when, what, and where to the second reading where they thematically focus on verses, words, and expressions, to the third reading where there are multiple "accepted" answers, as they center on the learner's personal interpretation of the poem. This move from denotation to connotation, from literal meanings to personal interpretations, evinces the importance of taking into account the multifaceted purposes of language learning.

The book ends with Steven Fawkes' chapter on "Teachers Supporting Teachers", in which he provides an overview of the context that led to the creation of a collaborative wiki that brought together language teachers in the UK to exchange their knowledge, resources, and advice, in what Fawkes refers to as a "celebration of professional generosity in the service of students…" (158). Among the examples of fora topics that Fawkes shares is the discussion of what could fall under the heading "Literature". The answers are varied and include short stories, posters, song lyrics, letters, and cartoon strips, among others. It would be interesting to see how these answers change over time. For example, the list currently include cartoon strips. Will the list one day include the Internet's popular memes? Tweets? Online fan fiction?

Teaching Literature in Modern Foreign Languages not only provides the reader with an interesting perspective on various areas in foreign language teaching and learning, but also it offers a multitude of resources for exploration and inspiration. While the examples in the chapters were mainly French, Spanish, German, and, in one chapter, Chinese, the book is rich in ideas that, needless to say, could be applicable to any modern foreign language.

That said, not all the examples in the book were coupled with a translation, which could deprive the reader of fully benefitting from all the resources provided. Additionally, it would have been interesting to see more chapters on non-European modern foreign languages, especially as the gap in the literature is greater in this area. Lastly, a chapter on how the internet in general, and social media in particular, are affecting foreign language teaching and learning would have been timely and thought-provoking.

Overall, I would highly recommend this book to anyone interested in teaching and learning modern foreign languages, and in enhancing that through the introduction of literature to the language classroom. The resourcefulness and generosity of language teachers are remarkable indeed.

Fraser, J. H., Rand, P., & Scoffham, S. (2018). *Leadership for sustainability in higher education.* London, UK: Bloomsbury.

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My daughter recently came home with a T-shirt that she planned to wear to vote in the Australian general election; the T-shirt said: "Sustainability – treating the planet as if we were planning to stay". It jolted me into action because I have been sitting on a book that I had agreed to review: *Leadership for Sustainability in Higher Education*, by Janet Haddock-Fraser, Peter Rand and Stephen Scoffham. It is the second book that I have reviewed in a series, Perspectives on Leadership in Higher Education, published by Bloomsbury.

Before reviewing the book, it might be worthwhile reflecting upon an Australian election that was supposed to be fought on issues of climate change and Australia's response. The result was overwhelming support in at least one state of Australia for coal mining, when what was expected was overwhelming support for action on climate change.

Personally, I have always seen debates on climate change through the lens of a researcher and in particular, the Type I and Type II errors that confront researchers. Recall that a Type I error is the rejection of a true null hypothesis. A Type II error is acceptance of a false null hypothesis. If I relate this to the climate change debate, to me, the consequences of rejecting a true null hypothesis that the climate is indeed changing and it is caused by human activities, leads to catastrophic climate change. Alternatively, if a Type II error is made and a false hypothesis of human cause of climate change is accepted, the consequence would be killing off the coal industry, etc. prematurely and a cleaner more sustainable future. Accordingly, one could argue that the consequences of the Type II error are far less, than the consequences of a Type I error, but then again, I do not work in the coal industry.

Within this context, let me review the book *Leadership for Sustainability in Higher Education*, by Haddock-Fraser, Rand and Scoffham. The book is divided into four sections. The first section covers the core concepts underpinning the book in discussion of leadership perspectives on sustainability and the higher education sector. The second section develops processes and frameworks for decision-making within a sustainability context, while the third section focuses on leadership and sustainability at an individual level reflecting upon the actions and the qualities required of a leader within a sustainability context. The final section provides case studies of sustainability leadership across four different countries: the United Kingdom, the United States, Australia and India.

The first chapter aims to develop an overview of leadership and leadership qualities for sustainability. This is the most ambitious chapter considering the sheer volume of literature available. However, the chapter provides a good framework for understanding the traits required of sustainability leaders. The chapter incorporates the situational leadership model of Hershey and Blanchard (1988) and the transformational leadership model of Burns (1978). The author notes that the role of power is an important element missing from these models and includes a section with a view to understanding the power dynamics in organisations. The authors note it was unsurprising that there was no one best way to be a leader identified from the models reviewed. They then seek to develop and explore where the general leadership models and theories can help identify the best way to lead for sustainability. This is a rather ambitious objective. However, they do provide a good discussion of the factors that can lead to development of a better understanding of how to successfully lead for sustainability.

Chapter 2 provides some perspectives on sustainability noting that the term itself is relatively recent and only appeared in dictionaries in the 1970s. There is an interesting observation that *sustainability* is hard to characterise - as opposed to its opposite, *unsustainability*. The latter is much easier to recognise since it is evidenced by pollution, extinction of species, and shortages of basic needs such as drinking water in some parts of the world. I quite like their definition, however, fundamentally it is about finding the best possible way to live our lives and to flourish within the limits of the planet which support us – 'treating the planet as if we were planning to stay'.

This chapter takes the reader back to the very origins of sustainability thinking in the 1960s up to the present day with the United Nations attempts to lead discussion and development of sustainable development goals. The authors also note the Paris climate agreement of 2015 and the aspiration to limit global warming to 1 ½° centigrade, and the consequences of a Type I error in terms of its impact on food security, energy and water, and health.

The authors then raise the issues of sustainability within a higher education context. They note that there is a major challenge in building sustainability issues into university agendas because there are often competing and conflicting agendas. Notwithstanding those constraints, the authors note the actions of higher education institutions in terms of greening of the estates, building awareness of sustainability into curriculum, and the development of strategies for promoting sustainability in higher education. The role of higher education is seen as needing to be broader than simply developing sustainable projects on campus. Institutions should provide thought leadership, teaching students and developing knowledge and promoting the critical evaluation of sustainability issues and research. The authors argue that these should be essential elements of the graduate attributes in higher education. The authors make it clear, however, that students would not be expected to

keep abreast of all issues related to sustainability. Rather, they should have "sufficient knowledge and understanding to make a good enough choice or decision", quoting Parkin (2010).

Chapter 3 provides an overview of higher education as a sector. It begins by noting that higher education has become a big business and while this notion is potentially not popular amongst academics, the data shows its rapid growth. The number of students in higher education in most of the developed world has increased, indeed exploded, in recent years. It has also become a major export industry for a number of countries. The same experience is true in China with rapid growth in higher education paralleling that occurring in the west, as they import education and develop their own import-competing capability.

This chapter also provides some discussion of whether higher education is a public or private good. More importantly, it raises the issue of whether universities are for the public good. They note that in the UK, universities are increasingly balancing the need to operate as a business with the need to operate for the public good. They note the mission statements from a number of universities that include notions of contribution to the public good.

The chapter also outlines the different stakeholders in higher education, staff, students, employers, the business community and government. They also note the somewhat unique environment within a higher education institution and the fact that universities can have different structures and cultures partly dictated by their history and partly dictated by trends. The trends that sometimes could be put under the heading of the rise of managerialism and increasing bureaucratic decision-making. The influential and distinctive role and power of academic freedom in Western society is also noted and potential tension created through growing managerialism.

The second section of the book aims to develop decision-making models for sustainability within a higher education context. In chapter 4, the authors rightly note that there is a massive literature on decision-making just like there was a massive literature on leadership. Notwithstanding that, the authors present and discuss four models and concepts for decision-making for sustainability.

The first model is the *Core Business Integration for Sustainability Model*. They note that this model is an essential component of the executive programs run by Harvard University in its executive education for sustainability courses. A case study of its application at Canterbury Christchurch University is provided. The second decision-making model discussed is *Living Labs*. The application of this concept is discussed at the University of Newcastle in the United Kingdom. Other approaches discussed include communities of practice, and mutual confidence building.

In their overview of these models and concepts, the authors note that there are synergies with the theories developed in chapter 1 for leadership for sustainability. Of particular note: "the need for strong interpersonal skills; to manage follower (and stakeholder) thought and action; to operate empathetically; to cooperate, collaborate and share information and to hunt for and develop mutuality of incentives and goals, with an understanding of the complex human societal environmental in the 21st-century university" (87).

Chapter 5 puts together the decision-making frameworks discussed, with the models for sustainability. The authors recognise that for sustainability leaders to maintain the voice within the modern higher education organisations, sustainability needs to be valued. They outlined a number of ways that this can be achieved and the different terminology employed to achieve this, including triple bottom line reporting, green business, ethical business, to name a few. They outline an approach to modelling sustainability, the *Global Reporting Initiative*, and discuss its application through the case of Campus Brussels at Odisee-KU Leuven University, Belgium.

They also discuss the Five Capitals model of sustainable development as developed by Porritt (2005) which provides a means to view sustainability from the perspective of both capital and value. The definition of capital is broadened to include financial, manufactured, human, social and natural capital. A case study of Canterbury Christchurch University is provided to show how integrated reporting can be undertaken using this expanded notion of capital.

The authors then move to discuss whether these various forms of capital can be valued. They recognise that in many cases, a market value will not exist and a proxy value would need to be used with consequent limitations. Such limitations lead to trade-offs and a pragmatic way for handling the trade-offs is suggested. The so-called 'Five R' approach is outlined – Reducing cost, meeting Regulatory requirements, reducing Risk, Reputation enhancement, or if it is simply the Right thing to do. These five elements enable the development of a framework for evaluating the costs and benefits of sustainability decisions from both an organisational perspective and society as a whole.

Part C of the text focuses on sustainability and the leader as an individual. The authors firstly seek to establish the link between the literature on what makes a good leader in sustainability, to leaders in universities. They then research trends or commonalities between a sample of universities in the United Kingdom to identify good practice or areas of similar challenges, applying the Cambridge Sustainability Leadership Model within this context. Data was collected through a questionnaire developed based upon that Cambridge model covering leadership context, leadership attributes and examples of success and challenges, and influences on the leader's role. They interviewed 34 respondents representing 25% of the universities in the United Kingdom. The choice of respondents was based on identifying those known for being active and successful in sustainability leadership, which may be a limitation of the research. As the authors note, it does not capture the breadth and depth of sustainability awareness across the sector. The results of this research are outlined in three chapters, firstly leadership context and sustainability, secondly leadership and the individual, and finally, leadership actions and sustainability.

Part D of the book provides case studies in sustainable leadership from individual institutions in individual countries. These include Canterbury Christchurch University based in the UK, Massachusetts Institute of Technology in the US, Macquarie University from Australia and Kerala University in India.

Overall the book provides a valuable contribution to understanding of leadership, sustainability and the higher education sectors, as well as their interconnectedness. My only criticisms are that issues of building awareness of sustainability into curricula could have been more explicitly covered, and some discussion of the role of university research strategies would have added to the discussion. Overall, however, the models developed, research undertaken and applied case studies presented make it compelling reading for leaders and aspiring leaders in higher education.

Niemi, D., Pea, R. D., Saxberg, B., & Clark, R. P. (Eds.). (2018). *Learning analytics in education*. Charlotte, NC: Information Age Publishing.

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Recently, I attended my 12 year old son's Parent-Teacher Interviews at the secondary school he attends. These consisted of a series of five minute meetings with individual Subject Teachers where evidence of my son's learning was presented in the form of test results, samples of his work and his teacher's opinion of his performance. While useful, I found myself wanting more information on my son's strengths and weaknesses, his motivation, level of persistence, classroom interactions and learning style. Moreover, some evidence-based advice on what actions he could take to improve his learning would have been valuable. Further, I could not help but observe the extent to which Teachers relied upon their own frame(s) of reference when providing advice.

My son attends a modern international secondary school in Singapore that prides itself on the strong academic performance of its students, a number of whom are able to articulate to well-ranked Universities around the world. Over the last few years, the School has introduced more technology into the curricula. Students use tablet computers to access a range of educational apps that invariably use gamified methodologies to enhance students' learning in everything from Mathematics and English to Science and Languages. Apps such as 'Seesaw' also capture key learning moments in which Teachers record student learning achievements in video which are shared with parents, while 3D printers and Lasers dominate the 'Design and Technology' curricula. This is a School which Behrens, Piety, DiCerbo and Mislevy (in their chapter in *Learning Analytics in Education*) would describe as standing at the 'shore front of an ocean of data', and this certainly came through in the Parent-Teacher Interviews.

The promise of the emerging field of Learning Analytics (LA) is that the additional information I sought for my son will not only be regularly captured by the increasing multi-modal array of 'electronic sensors' in and outside of the classroom but that higher quality learning data will inform improved learning strategies or provide a 'deep dive into an ocean of data'. Thus a key theme that emerges from *Learning Analytics in Education* concerns the necessity of putting into service data that records learning experiences, transactions, achievements and deficits. As the book presents, the field of LA therefore, is defined as "the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs" (xii).

This edited collection offers an impressive introduction to the inter-disciplinary field of Learning Analytics (LA). The editors claim that the field of LA can be traced to a symposium held at MIT in 1956 which brought together computer scientists, psychologists, linguists and others to consider the operation of the human mind. This meeting led to new developments in cognitive science and learning theories. However, as the book explains, the field of LA was given a significant boost when a Learning Analytics Workgroup was established in 2012 through funding made available from the Gates and MacArthur Foundations.

This edited collection articulates the benefits and applications of Learning Analytics in great detail. For instance, it is suggested, that LA could be used to develop highly personalised learning approaches that are tailored to the individual's dispositions, cognitive abilities and psychological states. LA can also be used to monitor learning motivation and engagement and suggest strategies for improvement. Advanced data mining and artificial intelligence can be used as a decision-making tool for Education policy makers and help direct resources to improve equitable outcomes in learning attainment. Multiple data streams can also guide teacher-student interactions and provide clear evidence for modifying pedagogical approaches. What is to be admired about this book is that these advantages are explored in a critical way with the editors noting that the biggest challenge for the field of LA is demonstrating its utility and positive impact on learning and instruction. They argue that there is a risk that LA could remain an 'unfocused conglomeration of disconnected research and analytics groups' unless the contributing disciplines are able to unify their approaches and demonstrate that LA can make a positive difference.

The book is organised around nine chapters contributed by internationally renowned experts with each demonstrating the complex, multidisciplinary nature of Learning Analytics. It is also interesting to note that the authors come to the field of LA from a variety of occupations and public and private organisations. Some are leading academics, others education technologists or luminaries from the private sector.

In the first chapter by Behrens, Piety, DiCerbo and Mislevy, the authors confront the notion of the 'digital ocean' in which the challenge of LA experts is to make sense of multiple streams of abundant data. Their chapter outlines three theoretical frameworks in which questions regarding how and why learning data will be explored and to what end can be considered. The second chapter, 'Towards Demonstrating the Value of Learning Analytics for K-12 Education' by Baker and Koedinger, outlines two powerful examples of the value of LA. The first concerns assessing student mastery and the structure of student knowledge in online learning. The second example focuses on automatic assessment of student engagement in online learning. These examples offer fascinating insight into how algorithms can be used to reshape and personalise the student learning experience.

The third chapter by Niemi, Clark and Saxberg, examines how LA can be used to improve a critical attribute in learners – persistence. By analysing data around the

attributes of those with persistence, the goal is to try to improve the level of persistence in others. The fourth chapter by Bilkstein & Worlsey examines the prospect of 'high frequency, multimodal data collection techniques' to develop new insights into the learning process. These new techniques include text, speech, handwriting, sketch, action and affective analysis which the authors explain could become the basis of novel assessment processes and help to discover new elements of otherwise opaque learning processes. The fifth chapter by Bienkowski explores the way in which LA could be used to involve learners as the active participants in their own learning. This is fascinating since it holds the possibility of students using LA to direct their own learning. Discourse analysis is the subject of the sixth chapter by Clarke, Resnick and Penstein Rose. Here four case studies are used to illustrate the utility of new technological approaches to discourse analysis in learning.

The seventh chapter will most likely only be of interest to those education professionals in the United States, although some of the discussion could also be applicable to policy makers elsewhere. The author, Hammer, focuses on Institutional Review Boards (IRBs) which are required by United States federal regulations and the role they could play in fostering LA. The penultimate chapter by Wolf, Jones, Hall and Wise continues the discussion of the importance of policy. In this chapter, the authors review the current status of data and analytics policies in different States. Again, their chapter will be of value for policy makers keen on removing barriers to LA and enabling the responsible use of LA in education systems in different jurisdictions. The final Chapter by Piety and Pea, seeks to demonstrate the utility of LA in operating at a macro level to address large scale learning problems and deficits, and also at a micro level to capture and address individual deficits. In this way, Piety and Pea's objective is to distinguish LA from other ways in which education data have been historically used.

A particular strength of the book is its acknowledgement that while LA offers a remarkable opportunity to educators, students and policy makers, there are also substantial risks. Capturing ever growing quantities of data raises a range of privacy questions – what if, for instance, data was accessed and issued by prospective employers to make judgements on the cognitive skills of employees? What if, as Bror Saxberg asks, learning data led to the labelling of some children as 'unlikely to succeed'? Moreover, LA could be used to reduce social inequalities by tackling the underlying educational deficits that are often the cause of inequality, or LA could inadvertently exacerbate existing inequalities. It is not beyond imagination for policymakers to use LA to direct increased funding to already privileged schools if the data suggests that the return on investment would be more worthwhile. Thus as is so often the case with novel technologies, the promise of LA very much depends on the morality of its users.

This is a book that satisfies in a number of ways. It is scholarly and regularly deploys theory, but also demonstrates a keen understanding of the practical. It addresses novel technologies and considers policy implications. It illustrates the power of Learning Analytics while also cautioning about its inherent risks. It will undoubtedly prove to be of enduring value to educational professionals and all those with an interest in this exciting field.

Huzzard, T., Benner, M. & Kärreman, D. (2017). *The corporatization of the business school: Minerva meets the market*. London, UK: Routledge.

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Since the 1980s, business schools have spread globally, and at present, there are more than 14,000 of them worldwide (usually as part of a university – with notable stand-alone exceptions such as the London Business School or INSEAD). This fascinating volume critically explores "the lived experience of those who inhabit the business school" (xii) and brings together first-hand accounts from the 'front line'.

I came across this book as a result of reading Martin Parker's Shut down the Business School (reviewed in the previous issue of JALT). This volume, edited by Professors Tony Huzzard, Mats Benner (both from Lund University) and Dan Kärreman (Copenhagen Business School and Royal Holloway, University of London), contains an excellent contribution by Martin Parker on journal publishing (that I was naturally very interested in) as well as 13 other thought-provoking pieces around global trends of corporatising business schools.

The past few decades have witnessed a Tayloristic shift, with global pressures of commercialisation and managerialism shaping contemporary business schools. To use Roman mythology, as the editors do: can Mercury (the god of merchants) and Minerva (the goddess of science and wisdom) get along? Or are their agendas contradictory? The book explores various aspects of commercialisation, such as global performance rankings (including school league tables, journal rankings, citations and international accreditations), branding, resource competition, competition for students, faculty and staff. Rituals of verification sometimes assess "not what its members publish but rather, where they publish" (2).

In chapter 2, Mats Benner (a co-editor) explores the historical evolution of the marketized university paradigm for contemporary universities with a broad brush. While historically, German universities had shaped the Humboldtian era of research universities with considerable academic freedom, US universities – that dominate in contemporary global ranking exercises – have heavily influenced the marketized university paradigm. It is this paradigm that is critiqued from a multitude of angles in the volume at hand.

In chapter 3, Dennis Tourish (Royal Holloway, University of London), Russell Craig (various universities) and Joel Amernic (University of Toronto) challenge the audit culture – a.k.a. a "mania for constant assessment" and "fast academia" (35) – which has developed in business schools (and universities in general) and critique it as damaging individual scholarship and threatening academic freedom. The New Public Management ideology is perceived as Orwellian, perverting concepts such as quality and professionalism. An illustration of the audit culture is the assessment of academic journals by quantified impact factors, and published articles by citation counts. An example of this 'fetish for quantitative measurement' is the University of Queensland's 'Q index' in which academics essentially become a number. "The focus of such performance indexes represents a shift towards industrial measurements of productivity that do not involve serious considerations of intellectual quality" (36).

The audit culture may lead to a counter-productive gaming of the system, for instance through the poaching (rather than development) of research stars and the active encouragement by university managers to publish in easily-auditable A* journals (as opposed to books and book chapters, amongst other publications). Other negative consequences are staff disengagement and a focus on the quantifiable (such as journal impact factors and journal rankings metrics).

In chapter 4, Alexander Paulsson (Lund University) explores the implications of New Public Management policies on academic freedom. Business schools have taken the lead in the corporatization of universities – something that Martin Parker has coined "McUniversity". I may as well confess that it amused me greatly when I read that the term Triple Crown in the so-called triple crown accreditation (consisting of EQUIS, AMBA and AACSB accreditations) "originates from some horse racing competitions in the early twentieth century" (66).

In chapter 5, Nick Butler (Stockholm University) and Sverre Spoelstra (Lund University) sarcastically seek to become less excellent in their engagement with the fetish of excellence at business schools! They probe:

> "Would it be an exaggeration to say that we target journals not because they publish interesting or worthwhile research but because they are highly ranked; that we collaborate with esteemed colleagues not because we value their input, but because they increase our chances of getting published; and that we revise our papers not because we believe such changes are needed, but because we hope to appease reviewers and journal editors?" (74).

A "publish-or-perish mentality" produces stress and anxiety, and leads to publication gamesmanship such as "impact factor manipulation by journal editors and strategies of self-citation of authors" (76). There are practices of "cash for co-authorship" – where a European business school pays 6,000 Euros if you make one of their employees a co-author of your paper in a 3- or 4-star journal – or mutual co-authorship ("I'll put you on my paper if you put me on your paper" – 80-81).

In chapter 6, Mats Alvesson (Lund University) and André Spicer (City University London) reconstruct how academics in business schools have progressively surrendered their autonomy and complied with the demands of managerialism, producing "increasingly uninteresting and irrelevant research" (13).

> "There has been a movement from more pluralistic approaches to research (where a wide range of forms of research were seen as appropriate) to a myopic focus on publishing in highly ranked journals. The number of journal articles published by a researcher and the level of the journal in which they appear has moved from a modest issue to a major concern. For some it has become almost the only concern. Having something important, relevant and meaningful to say seems to have become comparatively less important than doing and publishing research that appears in the right journal" (95).

A few publications in highly-ranked journals may lead to professorships and some European business schools have been known to offer tens of thousands of Euros for the publication of articles in such journals! The '4 by 4' formula – an overriding concern for many academics, apparently – refers to the publication of four journal articles in journals which are ranked as four-star by lists like the Association of Business Schools (ABS). While there is a myopic focus on academics publishing their research in highly-ranked journals, it is no contradiction that there has been a simultaneous rise of the "all administrative university" (Ginsberg) with many 'deanlets' and 'deanlings' (associate and assistant deans) doing all sorts of things that are not directly related to teaching or research.

In chapter 7, Mats Alvesson and Dan Kärreman argue that the key dynamic in business schools is increasingly a matter of various stakeholder at universities and business schools engaging in positional games. Reminding us of Shakespeare's Hamlet, they write: "There is something rotten in higher education today" (112). When quantitative concerns overtake qualitative concerns, quality inevitably will suffer. Chapter 7 discusses the increased focus on accreditation (with its many measurable key performance indicators) and the significant cost that comes with it:

> "i. The financial cost of paying the accreditation institute and of doing the necessary work (e.g. producing the required documents);
>
> ii. The increased bureaucracy and standardization of operations required to satisfy the institute that the 'right' modes of operating are in place (this presumably reduces creativity and originality); and
>
> iii. The moral costs of faking when developing illusionary tricks so that everything looks good in the eyes of the accreditation committee" (122).

In chapter 8, Tony Huzzard and Allanah Johnston (Newcastle University, UK) explore the implications of employer branding in academia. In chapter 9, Consuelo Vasquez, Sophie Del Fa, Viviane Sergi and Benoit Cordelier (all from UQAM, Canada) explore the commodification of students (using the example of a failed advertising campaign at a North American university). Commodification does not stop with knowledge, teaching and academics, but is extended to students who are commodified in two ways: (1) they are branded and sold as ideal types, and, (2) as *prosumers* (consumers and producers at the same time), are put to work in the branding of universities.

In chapter 10, Peter Svensson) and Jens Rennstam (both from Lund University) analyse the introduction of a new education programme (a Swedish vocationally-based business administration programme called *Civilekonomerna*) as an attempt at deprofessionalising business school academics by granting more influence over education to market forces.

In chapter 11, Ekaterina Chertkovskaja (who is a member of the editorial collective of ephemera) and Peter Watt (York St John University) critically examine the centrality of the idea of employability in UK universities. Like the authors of other chapters, Chertkovskaya and Watt not only critique their topic (by challenging the employability agenda of universities), but also provide practical recommendations as to how universities can change for the better. They write:

> "[W]e do not want to end up in box-ticking, game-playing, cynicism or academic self-hatred…, with all these actions leading to complicity in reproducing the problematic trends in higher education. Instead, we suggest sticking to and acting upon our ideals and it is in relation to this that we have formulated this chapter" (183).

In chapter 12, Martin Parker (University of Leicester), drawing on his experience as an editor of the journal *Organization* (from 2008 to 2012), analyses the market for publishing journal articles, and considers the consequences of the ranking and monetisation of journals. Parker argues that this has negative consequences for all stakeholders, i.e. students, academics, and taxpayers. Although there are many reasons to cheer the development of open-access journals, the publication process may not change fundamentally in Parker's view till the time where the critically important issue of the corporatization of the university has been addressed.

In chapter 13, Alan Irvin (Copenhagen Business School) argues that the 'two worlds' of 'academic excellence' and 'societal / business relevance' in business schools are not separate, but inextricably intertwined. Finally, in chapter 14, it is back to two of the co-editors, Mats Benner and Tony Huzzard, who conclude the volume. They argue against the nostalgia of the Humboldtian university ideal and suggest three ways forward: alternative takes on performance management systems, an expansion of the role of critique in business training, and, finally, a widening of the social and societal remit of business schools. The authors of this volume share the hope that Minerva can be "unified with reflexivity rather than with the market" (243).

From the above discussion, it can be gleaned that this is an excellent (in the true sense of the word!) collection of critical reflections of the corporatization of universities and

in particular, business schools. The 22 authors are almost exclusively from reputable European and Canadian business schools. The well-informed introductory chapter makes some references to Asian business schools, and of course the US business schools serve as a model for the marketized business school. It could have been useful to have some contributors from Asian universities and perhaps also from US universities to expand the diversity of viewpoints even further. While personally, I found the numerous vignettes and examples particularly from the UK and Sweden most interesting, the occasionally narrow geographical focus could be regarded as a relative weakness of a volume with numerous strengths.

All articles are very well-referenced and the bibliographical references show that the authors are very much on top of the current literature. The book also comes with a useful index, contributors' biodata, and unsurprisingly for a renowned publisher like Routledge, the book is professionally edited and well-produced.

I found the insights on journal publishing which are spread over various chapters most insightful, albeit somewhat depressing, and this very well-researched book has clarified to me why my editorial colleagues and I have started our humble JALT venture in the first place: an open (in many senses of the word) journal that challenges conventional wisdom and that provides a convivial platform for a multiplicity of approaches to higher education.