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Breaking down the barriers: Insights into using a student centred games approach in Australian and Malaysian pre-service settings

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Teacher education in physical education has received much attention in literature over the years. Vying for our attention as teacher educators in physical education are a range of pedagogical models. Teaching Games for Understanding (TGfU) is one such model. This autoethnographical account explores our teaching of TGfU in two culturally diverse settings – one in a Melbourne university setting and one in Malaysia. It explores the similarities and differences between teaching in these different cultures and makes some suggestions for future exploration in the area.

Introduction

Teacher education in physical education is a continually evolving field. It is complex terrain, within which a range of pedagogical models exist. Quay and Peters (2007) argue that there is almost a sense of ‘competition’ around the uptake of various models across the teacher education sector. Among the more notable of these pedagogical models, exist a range of support materials providing guidelines to teachers on how to put these particular approaches into practice (Kirk & McPhail, 2002). While we recognise that it is not the ‘one true way’, we have opted to implement a Teaching Games for Understanding (TGfU) approach within many aspects of our undergraduate physical education teacher education program.

Our uptake of TGfU has its roots in the model developed by Bunker and Thorpe in 1982. This model is understood as a student and game-centred model that allows purposeful game play by developing knowledge and skill through playing games (Brown, Collins & Duguid, 1989). This paper focuses on our work with primary generalist programs where we put a strong emphasis on student centred pedagogies. Primary school students have considerable experience with student centred pedagogies in many other aspects of the curriculum so there is, we believe, vast potential for their implementation in physical education also. We advocate that, when taught well, TGfU has the potential to nurture deep understandings of games and skills and a more engaged student (Butler, 2006; Pearson, Webb & McKeen, 2008).

Rationale for TGfU in the physical education curriculum

Our support for the TGfU model has evolved as a result of years of teaching both in schools and universities exploring student centred pedagogies. The decision to use TGfU with primary generalists was to expose them to an approach to teaching physical education that was consistent with the way they were being taught to think about their teaching in other learning areas. It also came about as a result of our professional role in having to make decisions around how to best prepare generalist teachers to teach physical education within the relatively short amount of time afforded to their training and preparation in this discipline. Unfortunately, it is common for primary generalist teacher education programs to offer little time to training in physical education. The Australian Government, in the recently released Crawford Report (2009, p.122), raised concerns that sometimes training in physical education teaching is merely offered as an “optional or specialised unit” in teacher training courses. We are fortunate to have maintained twelve hours dedicated to physical education, which is more than the average amount cited in the Report. However, in keeping with the Report, the time we commit to the provision of this core area still gives pre-service teachers “little exposure to physical education training in attaining their qualification” (p.122).

TGfU features heavily in our twelve hour or four week program. Our decision to accentuate this teaching pedagogy results from the notion that teachers of TGfU do not require a mastery of a large range of content. As a student-centred pedagogy, Light and Georgakis (2007, p.25) “view the learning process as an act of interpretation rather than one of transmitting knowledge”. Anecdotally, our generalist pre-service students on the whole don’t bring to this unit significant knowledge of a range of sports and of how students learn through physical activity. They do come, however, to this compulsory fourth year unit with an understanding of how children learn and an understanding of constructivism gained from other subject areas. The TGfU pedagogy invites, “students to begin the learning experience with their previous learning experiences intact” (Singleton 2009, p.332). We value their previous learning experiences, but
recognise, as Light and Georgakis (2007) have also noted, that they are not always positive when reflecting on their own learning in physical education.

Our modus operandi is to begin by discussing with students what they know and understand both in terms of their own learning experiences in physical education and the knowledge they have acquired during their tertiary course. This process is quite cathartic for some learners. From this point, we follow the advice of Hopper (2002, p.5) who argues that, "it is too easy for teachers to focus on content, believing they are teaching tactics or techniques when in reality they are covering material but not engaging the learner". We believe that a student-centred pedagogy encourages our student teachers to be cognisant of the need to engage learners within physical education classes rather than simply delivering content.

Importantly, many of our pre-service teachers identify with the application of a student centred pedagogy and see it as vastly different to how they experienced physical education classes themselves. This immediate connection with the pedagogy that often occurs when confronted with TGfU for the first time is triggered in many by the fact that the small-sided games we use through this pedagogy enable them to participate more actively and gain instant success due to the modified nature of the game. During reflective discussions we find that for some it is completely analogous to their experiences of standing on the fringes of a whole class game in their own school physical education involvement. To compound this feeling of connectedness, many of our pre-service teachers feel empowered by the similarities to student-centred approaches that they are comfortable with in other areas of the curriculum and enjoy (and are somewhat surprised) the fact that physical education has a dimension that Alexander et al. (1996) and Howarth (2000) term "intellectual".

Transferring the pedagogy to a culturally diverse setting

Subsequent to teaching through this method to students on our Melbourne campus, we had the opportunity to work with a cohort of students at a Malaysian University. Similarly, the Malaysian students were pre-service generalist primary teachers close to the conclusion of their course. A conscious decision was made to utilise the same student-centred pedagogy based on the rationale laid out for our Melbourne cohort. The difference though, was that the Malaysian students did not have the same background in student-centred pedagogies - either as learners or as pre-service teachers. On commencing the program we assumed that this would present new challenges.

Aside from this being a new pedagogy for the Malaysian students there were other disparities and similarities in the experiences of both cohorts of pre-service teachers, and for us as their teachers. This paper will consider the similarities and differences between the settings and the interesting parallels in each groups' inability to fully integrate the TGfU pedagogy into their own teaching. We will consider this in recognition of Lortie's "apprenticeship of observation" (1975) which acknowledges that beginning teachers socialisation into teaching begins when they are students and tends to perpetuate the sensibilities they form from their own personal experiences as students (Schempp, 1987). Embedded in this is our analysis of the value of a student-centred approach in a setting such as Malaysia where this pedagogy is incongruous with previous learning.

We have chosen autoethnography as a means of expressing our personal accounts of teaching TGfU in these culturally and socially diverse settings. Here, we draw on our experiences in order to extend our understanding of what it means to teach a student-centred pedagogy in physical education to pre-service generalist teachers in Melbourne and as a first experience for us and the pre-service teachers in Malaysia. Hesse-Biber and Leavy (2006) describe autoethnography as sharing, "our thoughts, feelings and experiences as a means of understanding the social world or some aspect of it" (p.xxii).

This paper will highlight issues for further scholarly (including practical) attention in relation to crossing the cultural divide in a pedagogical sense. Our autoethnographical approach is not designed to be self-indulgent, but rather to reflect on our successes and challenges in an effort to contribute to the body of knowledge around the teaching of TGfU and of teaching in settings that are culturally and socially disparate from our own.

Games teaching in physical education

An abundance of literature informing teaching and learning in physical education through TGfU has proliferated since the inception of the concept nearly 30 years ago (Bunker & Thorpe, 1982). It is being adopted in countries around the world under various guises including Game Sense (Australian Sports Commission, 1999) Play Practice in Australia (Lauder 2001); the tactical games approach in the USA (Mitchell, Oslin & Griffin, 2005); and Singapore's Games Concepts Approach (Light & Butler, 2005).

However, little research has been undertaken outside of Australia, UK, USA and Canada to explore issues of culture and the teaching and learning of TGfU (Light, 2005; Light & Tan, 2006).

The importance of addressing research around games teaching is that the teaching and learning of games in physical education attracts a significant curriculum time allocation. Werner, Thorpe and Bunker (1996, p.28) suggested that approximately 65% of physical education curriculum time is allocated to games. The way in which we teach games, therefore, stands to have a significant impact on learning in physical education and the students we teach. Taught well, TGfU can help students make connections between technique development and tactics and strategies within the context of games, encouraging the use of higher-order cognitive skills (Light, 2002a).

Despite its longevity TGfU is still an emerging pedagogy in Australian physical education. Pearson, Webb and McKean (2005) describe it as having made little progress since it was introduced to Australia in the 90's. Alexander (2008), reflecting on his work in schools, noted that only occasionally has he sighted a school offering anything but traditional models of physical education teaching. Anecdotally, numerous teachers at professional learning workshops conducted by the lead author continue to suggest that they do not use or understand this particular pedagogy.
Borne from constructivist theories of learning (Kirk & Macdonald, 1998), TGfU challenges long-established understandings of 'engagement' in physical education classes and what constitutes good teaching (Light, 2006). At its most fundamental level, TGfU presents a tactical and cooperative approach to learning through games rather than the traditional skill-based approach. This is based on an assumption that students need to know not only how, but also when and why to perform skills in games (Bunker & Thorpe, 1982). TGfU utilises modified game play as a means of early engagement with the activity. The teacher takes on the role as a facilitator rather than the pedagogue who might frequently be engaged at the front of the class in explanations and demonstrations. Light and Georgakis (2006) acknowledge that physical educators have moved slowly to adopt this student-centred approach, showing some resistance to the model. Being an enormous shift from how teachers themselves learned (Light & Georgakis, 2007) is one significant reason for their uncertainty in moving from a traditional style of teaching where they feel more familiar and in control to a more open and interactive way of teaching. This is not surprising given what we know about the difficulties of educational change, particularly deep change (Sparkes, 1991). The more consolidated our assumptions are the more difficult they are to change; this is particularly evident after about 10 years of teaching (Ennis & Chen, 1995).

Pre-service teachers come to physical education teacher education (PETE) programs with varied experiences, some influenced by years immersed in the social settings of sport and school (Kirk & Tinning, 1990; Light & Georgakis, 2007; Templin & Schemp, 1989; Tinning, Macdonald, Wright & Hickey, 2001) and many who have not actively engaged in sport. These years of experience referred to earlier in this paper as "the apprenticeship of observation" (Lortie, 1973), can amount to at least thirteen years of observation and evaluation of teachers in their own learning settings. This provides pre-service teachers with "default cœtions" or "a set of tried and tested strategies to which they can revert in times of indecision or uncertainty" (Tomlinson, 1999 as cited in Borg 2004, p.274) in their own teaching practice. The apprenticeship of observation contributes to the preconceptions pre-service teachers bring to PETE programs.

Methodology

Autoethnography serves as a way to focus outwardly on social and cultural aspects and then reflect inwardly on how we are attempting to understand cultural and academic perspectives in relation to our personal experiences (Ellis & Bochner, 2000).

We have been involved in producing this narrative through our involvement in teaching within this university's pre-service teacher education PETE program in Melbourne and in a Malaysian University. Here, we have collected data in the form of informal observations and discussions with pre-service teachers over several years, both within the pre-service teachers' learning environments at university and within the backdrop of the primary school physical education program in their practice teaching. In our collegial discussions we have explored the teaching contexts of each culture; our experiences teaching the pre-service teachers TGfU; our observations of their teaching practice; and students' informal responses in discussions of their own teaching experiences. We make no assumptions about the pre-service teachers' perceptions (although we have mentioned perspectives they have shared with us) but attempt instead to report our own experiences and introspections as a primary data source.

The learners and their setting

The intervention at the heart of this paper involved university pre-service teachers learning using a constructivist or cooperative teaching approach (TGfU) in physical education. For the Malaysian students, it was their first foray into teaching and learning using a constructivist approach. Inclusion of TGfU as an element of both primary generalist programs was with a view to pre-service teachers utilising it in their future teaching upon entering the teaching profession as primary school teachers. Subsequent to their learning in the university setting, the pre-service teachers then had the opportunity to undertake the teaching of TGfU to children learning in primary schools in their respective countries. This was designed to aid the pre-service teachers in practising and reinforcing the concept.

Both the Australian and Malaysian pre-service teachers were taught the same game-centred teaching concepts which required them to play modified, small-sided games utilising teacher questioning between opportunities to play so that students could think and discuss strategies then enact these in further games. The four genres of net/wall, striking/fielding, target and invasion games were covered over a semester, in learning groups of approximately 25. They received instruction in the form of a one-hour teacher-directed lecture and a two-hour student-centred practical once a week over four weeks of the semester, supported by appropriate online journal articles for further reference.

Both groups subsequently implemented five games sessions with the assistance of a partner or small group in a primary school setting using a game-centred pedagogy. The teaching practice was designed in a pair or group format anticipating that pre-service teachers would work with only a small group of children to enable them to feel supported in their first attempts at teaching. This occurred in the Melbourne setting but was not the case in Malaysia where the pre-service teachers were confronted with groups of thirty to forty children. This group size is not uncommon to primary schools in Malaysia. Learning groups at each school were supervised by a university lecturer.

Consultation with, and feedback from, both the Melbourne and Malaysian lecturers in the respective
Learning in the university setting

The discrepancies between the two teaching settings included, but were not limited to simplistic practical differences such as sports equipment. Both settings offered a large practical teaching space and a theory room but in the Malaysian setting there was very little sporting equipment for use in the university practical classes. In many cases, improvised equipment such as rolled up newspaper for bats, and quoits instead of balls, were used. In the Australian university setting, equipment was in abundance.

The greater and more obvious differences between the two settings could largely be defined as cultural. The contextualised nature of learning means that in order to understand these cultural differences, we must first understand what culture means. We must then attempt to conceive how culture affects our teaching in each setting. Here we take advice from Kirk and Macdonald (1998) who argued that learning is strongly influenced by the social and cultural contexts in which it takes place. In defining culture, we found that the literature offered a range of definitions. In the end we chose a definition best suited to both contexts and learning in physical education as, “the set of values, conventions, or social practices associated with a culture, we found that the literature offered a range of definitions. In the end we chose a definition best suited to both contexts and learning in physical education as, “the set of values, conventions, or social practices associated with a culture, which attract groups with different values and societal practices embedded in their culture that reflect how they were taught at home.”

In terms of these cultural differences, we experienced some initial barriers to teaching in the Malaysian setting. These included language differences between pre-service teachers; unexpected cultural expectations of both the teacher and the learner; and most significantly, Malaysian pre-service teachers’ limited background experiences of student-centred learning. The student-centred games teaching model was completely incongruous with their previous learning experiences.

Distinctly different, yet not diametrically opposed, were our experiences with the Melbourne students. These students also brought to the setting a range of learning experiences, but adjusted more quickly to the student-centred manner in which the game-centred aspect of the unit was conducted. We concluded that similar experiences in other method areas within our own university would have contributed to their level of comfort and familiarity with this pedagogy.

The Melbourne cohort was primarily taught by the Melbourne university staff, who have significant experience in teaching using a game-centred pedagogy. This was dissimilar to Malaysia where most Malaysian lecturers had no experience working with the game-centred model in the university setting. The Malaysian lecturers were involved in learning with the pre-service teachers under the tutelage of the Melbourne lecturer. The Malaysian lecturers were then empowered to continue to explore the game-centred model in the university and school settings with their Malaysian pre-service teachers.

The make-up of the Melbourne student cohort was less diverse than that of the Malaysian group. Australian university cohorts in pre-service education regularly draw upon people from a range of cultural and religious backgrounds, however PETE programs in Australia differ slightly in that they often attract Anglo-Saxon enrolments (Tinning et al., 2001). All Melbourne students spoke English as their first language. Unlike the comparatively generic Melbourne cohort, the Malaysian pre-service teachers were an extremely cultural, religious and linguistically diverse group of people from Malay, Indian and Chinese backgrounds. They had come to university from a range of school settings which included Tamil, Chinese and National schools. Likewise, the Melbourne cohort most likely came from a range of school types. The striking difference, though, being that the Malaysian schools elect to speak their preferred language, excepting in Mathematics and Science where English is the mandated language for teaching and learning. Thus, physical education in Malaysia is taught in a range of languages.

This had implications for physical education specific language used by the Melbourne lecturers in the Malaysian setting. As lecturers we found that the Malaysian pre-service teachers were interested in speaking English to improve their language skills but occasionally a Malaysian pre-service teacher would be required to interpret the workshops for those who were challenged by speaking and understanding English. Periodically, questions relating to culturally specific understandings in teaching, learning and sport were raised. In these situations the Malaysian lecturers sought to clarify certain subject matter with the Melbourne lecturers in order to find common ground. Most of these issues were resolved through peer teaching Malaysian lecturers who in turn informed their pre-service teachers.

Whilst both the Melbourne and Malaysian cohorts attracted groups with different values and societal practices embedded in their culture that reflect how they were taught in their schooling years, teaching in the Malaysian setting had some added complexities. Malaysian pre-service teachers had a history of learning predominately through teacher-directed learning. During our time working with the Malaysian students we used an explicit teaching technique to model both a traditional teacher-directed mode of delivery and a student-centred approach to encourage discernment by the Malaysian cohort. It also took some time and encouragement for the pre-service teachers to develop the confidence to answer and ask questions and contribute to class discussions. However, it was apparent through their responses and interactions that they had understood the workings of the student-centred model in application.

In addition, some of the Malaysian cohort came from religious and gender-segregated experiences of learning in physical education but were now being asked to work...
together in this program. This challenged the learning culture of these pre-service teachers as conventions were displaced and values and social practices were challenged. The issue of mixed gender learning was examined by the Malaysian pre-service teachers. The outcome was an overwhelming agreement that as learners they would stand to gain from participating cooperatively in games. These pre-service teachers were expected to collaborate, discuss and share as is consistent with the game-sense based pedagogy (Wright, McNeill & Butler, 2004). It was evidenced through their practice that the Malaysian pre-service teachers eventually embraced this in practical activities.

Tensions around gender and religion were not evident in the Melbourne setting. These pre-service teachers were already familiar with working in mixed-gender groups and using a student-centred approach to teaching. They had investigated constructivism as a pedagogy in their first year of their teaching course and had been relatively well-acquainted with learning in a more student-centred manner through their own learning. Most of them have been immersed in this orientation for at least some part of their own primary and secondary learning experiences. Unfortunately, not many of them had experienced this student-centred style of learning in physical education. As previously alluded to, there are still many teachers in Australia reticent to embrace the new ways of thinking and doing involved in teaching using a student-centred pedagogy in physical education (Light & Georgakis, 2007).

Teaching and learning in the primary school setting – discussing the outcomes

The settings in which these pre-service teachers completed their teaching practice in many ways reflected the very differences we noted in the university environment. Equipment was plentiful in the Australian schools and makeshift in the Malaysian schools. The Melbourne cohort taught a diversity of children in a range of English-speaking independent and government primary schools whilst the Malaysian cohort taught across a range of different settings including Tamil, Chinese and National schools thus had differing language requirements in each school. Students in those Malaysian schools were experienced in learning in a teacher-directed manner. The Melbourne children had a range of experiences including mostly student-centred learning in the classroom. Interestingly, game-centred models in physical education were not being used in the primary schools where these students did their practice teaching. In Malaysia, game-centred pedagogies are not visible in the primary school setting at all. The heavy emphasis on the 'academic' curriculum such as languages, sciences and maths are prioritised, whereas physical education is not highly regarded and often delivered by teachers untrained in the discipline (Rashid, 1994 as cited in Marshall & Hardman, 2000). In comparison, game-centred pedagogies in Australia are more frequently accepted and utilised by a range of sporting bodies such as Australian Rugby Union, Australian Football League (Rossi, Fry, McNeill & Tan, 2007) and Cricket Victoria. These organisations provide professional development opportunities to Australian teachers of primary and secondary school physical education, and have done so for over a decade (Webb & Pearson, 2008). Australian schools are slowly taking up TGfU and many teachers are seeking professional development in the area through this state's teacher professional development body.

The “apprenticeship of observation”

Undertaking this autoethnography exposed some issues worthy of further discussion. Even though our questioning of, discussion with, feedback from, and observation of pre-service teachers in both settings indicated their understanding of the game-centred model in practical classes, this did not correlate with their teaching in the primary school settings in most cases.

Observation of the micro-teaching environments in primary schools in both countries with both cohorts revealed that many pre-service teachers were grappling with class control, safety and the use and distribution of equipment, unable to apply the teaching model to the primary school environment. When put under pressure in a new and often unfamiliar situation, as is the case with pre-service teachers working in schools for the first time, many reverted to what was comfortable, which in most cases seemed to be a teacher-directed style of teaching. These are often congruous with previous learning experiences and are referred to as the “apprenticeship of observation” (Lortie, 1975). Lortie purports that pre-service teachers tend to replicate previous styles of instruction learnt through years being apprenticed as a learner in schools. Johnson (2002, p.154) claims that “the predispositions teacher education students bring to teaching are a much more powerful socializing influence than either pre-service education or later socialization in the workplace”. As observed in many cases with both the Malaysian and Australian pre-service teachers, despite what we believed to be excellent teaching in the teacher education environment, pre-service teachers regressed to what Tomlinson (1999 as cited in Borg 2004, p.274) referred to as a set of “default options”.

If we consider available equipment in terms of the apprenticeship of observation, there was little impact on the two cohorts' ability to teach using the game-sense pedagogy. Malaysian university students have learnt using little equipment in their own schooling and will therefore have developed what Tomlinson (1999, as cited in Borg 2000, p.274) referred to as "a set of tried and tested strategies", or a practical versatility in being creative with equipment. Likewise, the Australian cohort did not need to adapt at all, having similar constraints in the primary settings as they did in their learning at both school and university. The people most affected by the difference between the settings were, in fact ourselves, having transported this pedagogy into a setting where conventions differed greatly from what we knew and had experienced. However, once immersed in the setting, our level of experience and flexibility allowed us to adapt to working with little or no equipment and resources in modelling the game-sense pedagogy.

Adding a third layer to an already complex situation, the students that the pre-service teachers were teaching in primary schools were also undergoing their own “apprenticeship of observation” (Lortie, 1975). The grade 6 students they were working with, for example, had at least 6
years of their own apprenticeship already built into their understanding of what it is to learn in physical education. Butler (1996), in her study of teacher responses to teaching TGfU for the first time, indicated that teachers were concerned that students were unable to change to a student-centred model if their background was in learning skills in a traditional manner. This, however, was not an issue, as the model presented to them was a traditional teacher-centred one.

Of course there are a number of additional reasons why pre-service teachers had difficulty implementing this student-centred pedagogy and lack of time committed to teaching pre-service teachers physical education is just one of them. In Malaysia, most students experienced a very rigid curriculum in their practicum experiences. These experiences formed a large barrier to them even contemplating implementing an alternative pedagogy. Whilst they had agreed with it conceptually, in practice it jarred with the known and familiar!

**Implications for teacher education**

When working with pre-service teachers, any meaningful change in teaching requires a conceptual shift in the way instruction is presented. Fullan (1993) argued that change does not have a blueprint, it is not linear, and is loaded with uncertainty. The introduction of any new instructional format is likely to raise issues and tensions, as students wrestle to let go of the previous knowledge and practices they have forged. Understanding what, how, and why particular innovations work – particularly transferred into culturally diverse settings, remains an interesting field of inquiry.

The barriers to our teaching in Malaysia are somewhat consistent with the barriers the Malaysian pre-service teachers were confronted with in their own teaching practice in primary schools. Issues of language in a multilingual system, cultural expectations associated with groupings, new game-centred specific language and the practice of questioning and discussing, and an apprenticeship of observation in teacher-directed learning were hurdles to be overcome in both the university and primary school settings. As a result of these experiences we have even reconsidered the way we approach our initial discussions around why this game-centred model would even be appropriate for the Malaysian setting. Perhaps the GCA, as adopted in Singaporean schools might well suit this setting – maintaining the integrity of a more teacher-directed approach to learning but subtly introducing such concepts as discussed earlier in relation to TGfU. We can't help but revisit the students' positive responses to learning through TGfU in tutorials. Despite obstacles, Malaysian pre-service teachers demonstrated willingness to embrace such a pedagogy based on successful outcomes in those university teaching spaces. It has more recently come to our attention that another driving force behind the Malaysian lecturers' desire to implement TGfU into their university practices is the Malaysian Ministry of Education who plan to roll-out TGfU as a mandatory pedagogy in physical education in the future. This accentuates the need for the teaching of TGfU to be further explored in a culturally diverse setting.

In the Melbourne setting there were no obvious hurdles to teaching pre-service teachers a student centered approach to physical education. However, for the transfer of this practice into their teaching of primary school children, the Melbourne cohort required a real conceptual shift to occur. This is likened to the conceptual shift required for the Malaysian pre-service teachers, however the Malaysian setting is complicated by the cultural issues mentioned above. Breaking down the expectations of learners (their 'apprenticeship of observation') requires substantially more time and support for pre-service teachers – time not available within the semester in the crowded curriculum of university PETE.

**Conclusion**

In drawing this autoethnography to a conclusion, it is apparent that many issues have arisen that are worthy of further research. Pre-service teachers embraced the TGfU concept in both settings and applied it within their tertiary practical activities but could not readily transport this in their teaching of primary students. A conceptual shift from an experience so heavily embedded in teacher-directed learning is not easy, nor clear-cut as to how it is best approached. Certainly, the added complexities associated in transporting a new pedagogy into a learning environment that is culturally inconsistent with the model requires further attention. The notion of adapting TGfU for a culturally diverse setting, such as is the case in Singapore is certainly a possibility.

Our experience in crossing cultural boundaries meant reviewing the core of what teaching physical education is all about. The Malaysian pre-service teachers were empowered by the student-centred model as they had only known a traditional and authoritative style of teaching. The Melbourne cohort were not as confronted, nor as excited by the model as it was not significantly different to what they had already been presented at university regarding student-centred learning.

What became particularly evident though, was both groups' inability to reproduce the model in their own teaching. Lack of opportunity to practice will certainly have affected both groups of pre-service teachers' abilities to implement the model effectively. Of course, we are commenting on their practice after only one unit of learning in the university setting and five sessions of implementation. Primarily though, given the opportunity to teach in the school setting, teaching through the game-sense model is only one priority for the pre-service teachers. Many other obstacles contributed to their inability to teach in a composed and confident fashion which included basic group management skills in the outdoors, understanding the teaching content, modifying lessons to cater to a range of abilities to name a few.

If lack of time was a major factor in the pre-service teachers' inability to merge new understandings with those that are deeply embedded, perhaps there are consequences for a number of ways of doing in teacher education. These include time spent supporting the practice and implementation of such pedagogical models in schools in order to break down the 'apprenticeship of observation' (Lortie, 1975) in their learning experiences in university.
Implications for greater time in teacher education courses given to training in integral areas such as physical education also arise. Once these pre-service teachers enter the profession and have a greater sense of classroom management, the need for excellent professional development is also highlighted in order to focus on the development within their repertoire of such pedagogical models.

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