A PBL APPROACH TO TEACHING BAHRAINI PERSPECTIVES AT BAHRAIN POLYTECHNIC

H. Huijser and F. Wali

School of General Studies, Faculty of Humanities
Bahrain Polytechnic
Kingdom of Bahrain

ABSTRACT

This paper reports on an evaluation of a course called *Bahraini Perspectives* at Bahrain Polytechnic. The PBL version of the course is being implemented in Semester 1, 2011, and this paper reports on an evaluation of its first iteration. It will thus test some of the key assumptions about what PBL is said to be able to deliver. The methodology is a combination of literature review, self-reflective journals of both students and teaching staff, and course feedback surveys, the data of which is analysed in relation to student results in the course. The results are presented in the form of an analysis of the qualitative data, and a comparison to earlier iterations of the course, which used a much more content-heavy and didactic approach. *Bahraini Perspectives* has faced numerous challenges in the past, as it aims to develop an understanding amongst all of the Polytechnic's students of their heritage, as well as about Bahrain's contemporary position in a global context. As this course is compulsory for all students, as part of their degree, one of the difficulties has been to make the content relevant to whatever degree they do. The other main difficulty has been to pitch the course at the right level for a group of students with different levels of knowledge about Bahrain. Negative student feedback in the past has stressed the point that much of the material has already been covered during their primary and secondary schooling. With this in mind, a decision has been taken to develop the course instead with a complete PBL approach. The initial evaluation that this paper reports on suggests that students are more engaged and are developing generic employability skills, even if there are some doubts about the level of depth when it comes to engagement with content.

KEYWORDS

Problem Based Learning, *Bahraini Perspectives*, Transferable Employability Skills, Embedding Cultural Perspectives, Bahrain Polytechnic

INTRODUCTION

Bahrain Polytechnic was established in 2008 (by Royal Decree No. 65 for the year 2008, Bahrain Polytechnic website) after a tendering process that saw a New Zealand based consortium win the contract, and subsequently begin to develop the curriculum and the Polytechnic overall. As a 'green fields' start-up initiative, the Polytechnic was soon after its establishment to admit students, which meant that timelines were tight and there was relatively little time to develop curriculum from scratch. In response, the Polytechnic entered into a series of contracts with established institutions (such as Auckland University of Technology and Monash University) to

obtain 'ready-made' curriculum that could be taught straight away with minimal initial need for adaptation. Furthermore, most of the initial teaching staff came from New Zealand, and they were familiar with the type of curriculum materials thus acquired. However, the idea from the beginning was always that these materials would just function as an interim measure until the Polytechnic was adequately staffed to begin developing its own materials (which is by now indeed the case). One of the key ideas around this was 'contextualisation' of the acquired materials on the one hand, to make it relevant to a Bahraini cultural, social and economic context, and developing PBL based curriculum on the other hand.

Bahraini Perspectives is an interesting course to evaluate on a number of levels, as it has been a 'problem child' of the Polytechnic to some extent. It was seen from the beginning as an important course because it was seen as one non-negotiable element of the curriculum where Bahrain's cultural, socio-economic context and history took centre stage, in a curriculum otherwise dominated by 'foreign' content. However, its first iterations also showed up some considerable problems. These were to some extent related to the material that was taught, and to some extent to *the way* in which the material was taught. In terms of the material itself, students frequently complained that it was not challenging enough, and indeed that they had already learned most of this material at school. Moreover, as this was a 'generic' and compulsory course for all students (from Business students to Engineering students) there was a strong perception amongst them that the material was not relevant to the programme they had chosen to study. In terms of the way in which it was taught, the first iterations were characterised by a classic 'textbook' approach, where content was 'delivered', and students were primarily assessed on how much of this knowledge they could 'reproduce' in an exam or essay. On both counts, the course did thus not really align with what the Polytechnic is aiming to achieve, which is to develop work-ready graduates, with a set of key employability skills, and PBL is seen as the way to achieve this. A committee was subsequently established to explore different ways of teaching *Bahraini Perspectives*, and PBL was ultimately chosen as the best way to turn the course around. The expectation from the outset was that PBL would make the material more relevant and more targeted at the level that different groups of students were at. This was reinforced by the decision to develop different problems for students in different programmes. Thus, in the current semester, we have designed one set of problems for two groups of Logistics students, and a different set of problems for two groups of ICT students, while the overall structure (with regards to assessment and schedule) is the same.

Two more important issues came out of the discussions about *Bahraini Perspectives*. Firstly, there has been considerable debate about whether it should be a separate course at all, as there is a good argument in favour of a fully integrated approach, where Bahraini perspectives are 'naturally' part of every course in a contextualised curriculum. While this argument has some traction, it has been decided for now that the course will continue as a stand-alone course. Secondly, there have been some concerns around the issue of non-Bahraini teachers teaching *Bahraini Perspectives*, which instinctively feels wrong to many people. However, in both instances, PBL becomes an integral part of the argument, albeit for different reasons. In the first case, a curriculum that is completely designed as a PBL curriculum would by definition be fully contextualised, which in turn would remove the need for *Bahraini Perspectives* (Williamson & Dalal, 2007). However, we have some way to go before the PBL approach is fully implemented across the curriculum, even if this is definitely the ultimate aim. In the second case, using a PBL

approach turns the teacher into a facilitator, and it shifts the focus in the classroom to a highly student-centred environment. In other words, the teacher becomes a co-creator of knowledge, rather than a 'sage on a stage' (Barrows, 2000; Wee & Kek, 2002), and an in-depth knowledge of Bahraini culture and history is an advantage, but not necessarily a pre-requisite.

BACKGROUND: WHY PBL AT BAHRAIN POLYTECHNIC?

There is a by now common perception amongst employers globally, and in Bahrain in particular, that most students upon graduation from tertiary education have not acquired the necessary skills and levels of skills as much as they could, particularly when it comes to generic skills and attributes such as critical and creative thinking, initiative and enterprise, planning and organization, and problem solving. Indeed, Bahrain Polytechnic was established to address precisely this shortfall in graduate skills and attributes. The challenge for many higher education educators is thus how such generic and transferable skills and attributes can best be taught in an integrated manner in an already busy and discipline or content heavy curriculum, without it being approached as merely an add-on to the existing curriculum. This begs the question of how to teach traditional domain-specific knowledge and critical and creative thinking skills simultaneously. Problem-based learning has been identified as a particularly powerful pedagogy and teaching and learning approach to promote and develop transferable employability skills amongst students, while they simultaneously acquire domain-specific knowledge or content (Kek & Huijser, 2011). Thus, problem-based learning is seen here as an integrated pedagogical approach to developing work-ready graduates, rather than a specific teaching activity.

In light of this potential, Bahrain Polytechnic is currently engaged in a process of implementing Problem Based Learning (PBL) across its curriculum, which means all programmes and courses as appropriate. As noted above, *Bahraini Perspectives* is probably only a temporary step on the way to a complete PBL curriculum, at which point it is likely to become obsolete. The key reason for the Polytechnic's choice of PBL as a learning and teaching approach is that PBL is considered the most likely approach to deliver on its graduate profile, and in particular to deliver work-ready graduates. In theory, this makes perfect sense, and it fits with what most tertiary education institutions are concerned with on a global level: to develop graduates with good communication skills and problem solving skills; graduates who can take initiative and who are critical thinkers; graduates who are lifelong learners and reflective practitioners; and graduates who can work in teams, are enterprising and technologically savvy Davies, Fidler & Gorbis, 2011). These qualities are specifically sought after by industry in Bahrain, and more generally in the Gulf region and globally (Crebert et al., 2004; Leggett at al., 2004; Drohan, Mauffette & Allard, 2011).

Majoor and Aarts (2010, p. 249, our emphases) cite the following summary about higher education by the World Bank:

> The world today is increasingly dependent on knowledge and therefore on people who are capable of *generating* and *applying* knowledge. Thus, the potential of a society to develop is critically related to the comprehensiveness and quality of its educational system and rate of participation of the population in that system.

The emphasis here is thus on *generating* and *applying* knowledge, rather than *reproducing* it, which is what more traditional approaches are focused on. Majoor and Aarts further argue that the problem with traditional teaching approaches is not only that the knowledge thus acquired is static, but more importantly that it is often outdated in a global context in which knowledge changes rapidly. They note that the qualitative challenges in higher education have their roots in the traditional lecture-based didactic tradition, which continues to dominate education in many developing countries (including Bahrain), and is not being adjusted to the changing needs of society (Majoor & Aarts, 2010; Davies, Fidler & Gorbis, 2011). Bahrain Polytechnic's adoption of PBL as its main pedagogical approach is an attempt to address these changing needs. More specifically, the needs of industry in a broad sense were an integral part of the development of Bahrain Polytechnic's graduate profile, which includes the eight 'soft' employability skills that are mentioned above and are based on various surveys with employers in Bahrain, as well as continuous consultations with those employers. It is in this higher level context that the decision to use a PBL approach in *Bahraini Perspectives* was made.

On a more pragmatic level, Pepper (2009, p. 129) identifies the following key benefits of PBL:

- Students deciding on the information and skills they need to investigate issues while building on their current knowledge to synthesise then integrate new information
- Students taking responsibility for the learning that occurs within their group while instructors monitor and facilitate student learning
- Students engaging with the learning experience more fully

The last point in particular is important, for as Hu (2010) notes, 'student engagement is considered the pathway to success in college'. Furthermore, as Johnson et al. identify, 'the world of work is increasingly collaborative, giving rise to reflection about the way student projects are structured' (2011, p. 3). In *Bahraini Perspectives*, all the problems (and resulting projects) are therefore group-based. As part of this process, students are also required to regularly write in their reflective journals, for as Gilardi and Lozza argue, 'being an effective practitioner means being able to construct *situated* and *local* knowledge. The ability to learn from experience through reflection on one's own actions becomes crucial in this situation' (2009, p. 247, our emphases). This draws attention to both the reflective element that a PBL approach stimulates, and the 'situated' and 'local' knowledge, which again suggests that there would not be any need for *Bahraini Perspectives* if the rest of the curriculum was designed according to PBL principles, because the knowledge would naturally be contextualised. Finally, in her research on student perceptions of PBL, Pepper (2010) quotes one student as saying: 'there's a lot of learning going on but NOT much teaching!' All of this is remarkably positive and makes perfect sense in theory. We will now test this to see how this material compares with our evaluation of what is occurring in *Bahraini Perspectives*, with a particular focus on teacher and student reflections.

METHODOLOGY

As noted above, the key advantage that has been identified for PBL as a teaching method is that it is good at developing 'soft skills', which we have called employability skills. The difficulty with such skills is that their development is not easy to evaluate, as they are notoriously difficult

to measure. Measuring these skills requires a certain amount of 'professional judgment', which is by definition subjective, which places it in sharp contrast to measuring factual knowledge acquisition through exams. By contrast, evaluating the acquisition of 'soft skills' involves a combination of peer observation, peer assessment, self-assessment, surveys and in-depth interviews, in short a series of qualitative measurement techniques (Marcangelo, Gibbon & Cage, 2009). Thus the teachers of *Bahraini Perspectives* have done a certain amount of peer observation and peer assessment, as have the students, even if the notion of peer assessment raises some interesting cultural issues in a Bahraini context, with students finding it very difficult to 'publicly' critique their peers, regardless of how 'safe' an environment the teacher creates. However, the qualitative methods reported on in this paper include student surveys, which simply asked two open-ended questions: what they liked about the PBL approach in this course, and what they disliked about it. This was then supplemented with an analysis of reflective journals by both teachers and students. Since the course is still running at the time of writing, institutional course and teacher evaluations are not yet part of this paper, but will be incorporated and taken into account at a later stage.

Overall then, this paper reports on the initial stages of an action research model to continue to improve the teaching practice at Bahrain Polytechnic, and in particular in *Bahraini Perspectives*, so that it can serve as a model for others, as it ultimately works towards its own demise, which would mean that the course has served its purpose.

FINDINGS & DISCUSSION

This semester, *Bahraini Perspectives* had close to 80 students, with about half taking the course as part of their Logistics degree and the other half as part of their ICT degree. The two teachers on the course were the authors of this paper, one of whom is Bahraini and not experienced in PBL in the beginning, while the other is an expatriate (with Australian and New Zealand higher education experience) who was specifically employed by the Polytechnic as a PBL specialist.

Teacher Reflections 1: Fatima

Bahraini Perspective as a course was revamped to be driven differently based on Problem Based Learning, based on the expectation that PBL can approach the content of the course in a more realistic and simulating manner. Designing and teaching Bahraini Perspectives as a PBL-based course was a big challenge especially since I had no literature background around it. Doing my PBL reading homework, I got to understand that PBL is an unintentional daily practice in my writing courses and e-writing projects even if none of the relevant terminologies are used. Nevertheless, I still felt a bit uneasy about applying PBL in its new form 'for me' and did not want to start without observing a PBL class prior to my first class! Thus, I started observing the PBL expert in my team for around 3 weeks through which I got a better understanding of how PBL works and should be operated. I started my first session (with one of the ICT groups) with the understanding that students knew nothing about PBL but on the contrary they were well-informed practitioners! Classes were livelier and engaging for both students and myself, as discussions and presentations of ideas were taking place in every session.

I experienced a new approach to teaching and got to observe how students question certain matters but not others depending on their interest and to some extent secure zones. This directed me, as a tutor, to question other areas within the same tasks and highlight their importance so that students would cover all the relevant areas. That was really helpful in guiding students through by questioning certain problems highlighted by students and dividing these into other problems. This was clearly reflected in their submitted PBL tasks. Students got to facilitate their own learning with confidence, employing their problem solving skills. Students were also responsible for submitting reflective feedback on the PBL tasks. They were reflecting on their own approaches to the tasks and organising their strategies to solve each problem addressed in the tasks through their e-journals. They were even suggesting how to approach class members with whom they faced some conflicts. I trust PBL has shaped the way students think in general, not necessarily academically. The e-journals faced some resistance at first but were received more appropriately as the PBL tasks progressed.

Throughout the 8 week PBL process, the challenges I faced as a tutor were group-related issues. This was observed in getting groups working collaboratively together with all the different personalities, attitudes and attributes in each. Conflicts continued to rise at different submission stages of either class work or the main assessment tasks, due to lack of communication and negotiations. Students also showed different degrees of commitment to the PBL tasks which highlighted some students' professional manner in a specific stream handling tasks more efficiently than the other stream.

Teacher Reflections 2: Henk

My main anxiety before stepping into the classroom was my lack of classroom experience in a Bahraini context. Up until now, I have worked in an academic development unit as a non-teaching academic, tasked with implementing PBL across the Polytechnic. However, due to my intimate involvement in the new PBL design of *Bahraini Perspectives*, and due to current staff shortages, it was decided that it would be a good idea for me to do some teaching. Although there are obvious similarities between students wherever you go, there are specific cultural elements that take some time to get used to, and can be rather subtle. This was brought home to me during the first session, when it quickly became clear that the class had organised itself along political lines. I only knew this because the course coordinator sat in on the class, otherwise I would not have noticed, as my knowledge of the Arabic language is in its very early stages...To avoid potential conflicts early in the course I then decided to let students choose their own groups, which has proven to be a good decision.

The other slight anxiety was about student engagement and whether they would engage with PBL and with their groups. This proved to be unfounded, as most groups are working very well together, with one or two exceptions, which are mostly a few individual students who are not particularly motivated. However, this is not dissimilar from more traditional classes. For the most part students are working hard, are engaged and are largely self-directed. Indeed, they have asked me on numerous occasions if they could be excused to work on their projects, rather than do this in the classroom, where they have no access to resources. So far so good, and the employability skills appear to be well taken care of. In other words, students communicate well, they work well in groups, they show initiative and reflect on their practice. However, when you

purely concentrate on the content, the picture becomes slightly less clear. I am convinced that the critical and creative thinking skills required to approach a topic in depth are being developed in these PBL classrooms, but in a Bahraini context, where students are used to didactic teaching approaches, and are not used to questioning everything they encounter, it may take some time to fully develop such skills. It certainly feels like it takes a lot of facilitation in the classroom and consistent questioning to get them to justify their arguments and to approach knowledge in a critical manner. Creativity on the other hand comes naturally in the Bahraini context.

The Student Voice

Interestingly, the student feedback is mostly positive, and the key theme is that the PBL approach allows them to think for themselves, which they appear to relish. '*Well to be honest, there is nothing I don't like about his course; I feel comfortable about being able to think for myself and develop understanding and thinking skills*', and '*I like depending on myself*'. Others focus on the learning itself: '*I think it is more effective from a learning perspective*'. In contrast to the teacher perceptions above, some students thought that PBL helped them to think more critically and in depth: '*The good thing about it is that I feel like I gain more knowledge from the in depth thinking I do during the course. Another thing is that I learned to how to be a problem solver, and develop thinking skills*'. Some also like sharing the load, which is an integral part of group work: '*It takes some pressure off, since we're working in groups*'.

On the other hand, and not surprisingly, group work was the main element that some students did not like about PBL. This is often related to a sense of injustice where it is felt that some students are 'free loading' or do not pull their weight. Some elaborate on why they don't like group work: '*I don't like working in groups because we're all at different levels and find it somewhat difficult to make these different ends meet*', or '*The group chosen may not be suitable for everyone*'. Others simply answer '*working in groups*' to the question about what they do not like about PBL. This is one of the most challenging parts of PBL for teacher as well, as it is often difficult to find a balance between the importance of groups work as an employability skill, and individual student achievement. Our response to students who complain about their group is that in the 'world of work' they will ultimately need to be able to work in groups and negotiate very similar problems, so it is a good idea to start developing these skills early on. Interestingly, the sense of injustice is often directly linked to amount of work that students do, rather than the quality of the outcome. While there is obviously some correlation between the two, they do not necessarily go hand in hand. Overall though, not all students are negative about group work, and most groups work well together. Interestingly, the paradox in the Bahraini context is that working and engaging in groups is very much part of Bahraini culture, which is highly community and family focused; on the other hand, the education system is traditionally all about individual achievement.

Finally, and most importantly for our purposes, there appears to be a good understanding amongst the students about why we are using a PBL approach, and many of them are very aware of the links between PBL, employability skills and work-readiness. '*It helps us modify our way of learning, because it presents the tasks like the real world would in a future job*', or '*It makes us work-ready, due to the fact that we practice many roles*'. One student put it like this: '*At first we did not really understand how the topic was going to be related to our studies, or as a*

citizenship subject. We now have a clear idea of what are the challenges facing the industry and how we also can contribute to the region. I think we can understand from this subject that we can contribute to our nation by doing what we can excel at, which for my case, is the ICT industry'. It is precisely this kind of thinking beyond the narrow confines of a discipline, and finding a ready-made job in that industry, that PBL is good at developing. The PBL approach has helped this student think about the future in a different way, which is precisely what we want to achieve in our graduates, as the job they will ultimately do may not yet exist.

CONCLUSION

In this paper we have discussed a preliminary evaluation of a PBL approach in a course called *Bahraini Perspectives* at Bahrain Polytechnic, which suggests that we are on the right track. The objective is to develop a set of employability skills in our graduates, and PBL appears to be a good teaching approach to achieve that, even if there are some doubts from the teachers' point of view about the depth of engagement with the course content. Interestingly, the students do not appear to share these doubts, and generally feel that this approach allows them to engage on a deeper level with the content.

Overall, this evaluation suggests that the PBL approach in Bahraini Perspectives has overcome the main critiques levelled at it, which were that the content was not relevant to the degrees that students had chosen to do, and that it was not pitched at the right level, both of which were related to the didactic manner in which that content had been delivered previously. By contrast, the PBL approach allows students to start from 'where they are at', and thus draw on their prior knowledge. Moreover, it allows them to share each others' knowledge and co-construct their knowledge with their tutors and peers. In this way, it mirrors the workplace they will encounter upon graduation, and it allows them to think about a potential alternative workplace they could develop and shape themselves; now that is work-readiness in the 21st century!

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