

THE INTRODUCTION OF PROBLEM BASED LEARNING IN HOSPITALITY MANAGEMENT AT THE CENTRAL UNIVERSITY OF TECHNOLOGY, FREE STATE, SOUTH AFRICA

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ABSTRACT

Problem – based learning (PBL) is a learner-centred strategy that can be used to achieve the objectives of Outcomes Based Education (OBE). The Hospitality management program has no evidence of a fixed learner-centred didactic approach such as PBL, E-learning or Resource-based learning (RBL). In considering PBL, we raised questions: Why PBL? To what extent are staff and learners prepared for PBL? What are the characteristics of the curriculum when implementing PBL etc? This paper highlights these and other questions. The outcome shows that principles of PBL are extremely applicable to Hospitality but that timetabling within the program is a concern.

Keywords: PBL; Hospitality Management; Learner-centred; Curriculum Development

1. INTRODUCTION

In light of the re-curriculation process at the Central University of Technology, (CUT) Free State, my completion of a Master in Problem Based Learning (MPBL) and a colleague that had experience in applying PBL in her previous teaching career, it was thought a good idea to start with the implementation of PBL in Hospitality management. PBL, was chosen because it is a learner-centred teaching and learning strategy which our school lacked evidence of. Many questions were raised, with this initiative: Why PBL? Is PBL an appropriate for the Hospitality Management Program and is it subject specific? To what extent are staff and learners prepared for PBL? What are the curriculum characteristics for PBL in the Hospitality Management program? When and how will we implement PBL? We decided on hosting a workshop for all academic staff at the Hotel School after which a planning session was held to strategise PBL's implementation. An experimental phase for the first semester of 2008 seemed to be the most appropriate first approach. In this article, I intend to answer the questions by using and exploring the theory written by four Central University of Technology, Free State lecturers in module 3 of our studies in the Master in Problem Based Learning program (Bouwer, W.A.J., de Wet, M.A., Mokhele, N.E.I. and Veldman, F.J. 2007), and documenting our planning and progress from our workshop, planning session and experimental phase.

2. METHODOLOGY

Over the timetabled six month (1st semester) period, every second Friday was used (a two week cycle is used on the timetable) per half the class. The entire class of 54 first year learners were divided into two groups. Each of these halves was then divided into 5 groups of 4 - 6 members. 12 Lecturers took part in the introduction workshop of which 10 acted as facilitators in the PBL sessions (one facilitator per group). Two generic problems were posed and each group had two sessions per problem (four sessions per group over the two terms / semester). The seven step Maastricht model was chosen, due to the fact that Ms Minnaar, my co-presenter and colleague assisting me with this study, had two years experience in using the Maastricht model at Educational Institute for Service Studies (EISS) in Port Alfred, South Africa where she had previously worked. The very first session was an introductory 'workshop' so as to acquaint learners with the concept of PBL. Thereafter, the second session was a start up at which the first generic problem was posed.

Problem one was called "Understanding Presentations" in which students had to use the seven steps to reach the outcome of understanding presentations, so as to be able to conduct presentations successfully. In a start up session, the groups have to follow the first five steps of the Maastricht model in the classroom, step six is done individually outside the PBL group and step seven again in the rounding off session in the classroom. [De Boer, 2007: p 4 ,5] The second generic problem posed to the learners was called "Motivation" in which the outcome required of learners to find ways of motivating students of their own age. After the two problems and 4 sessions, a double period was used in which a questionnaire was handed out to learners to answer. The questionnaire was based on 5 sections requiring answers in 5 categories, namely: "The PBL course; The facilitators role, My skills development, Group work and General PBL" The questionnaire was adapted from a PBL questionnaire used at Victoria University, Melbourne, Australia (<http://PBL.vu.edu.au/PBLQuestionnaire.html>) The questionnaire was filled in by 40 respondents only. At that time, one student cancelled her studies and the rest (13) were absent on the day the questionnaires were filled in.

3. WHY PBL?

The South African Higher Education Act 101 of 1997 calls for Critical Cross-Field Outcomes to be achieved for all curricula at any educational institution. PBL has been identified as one of the possible methods of teaching and learning and is therefore so recognized at our Institution. In the Higher Education Act 101 of 1997, the first Critical Cross-Field Outcome (CO) to be reached is that learners be able to "identify and solve problems and make decisions using critical and creative thinking" (South African Higher Education Act, 1997 (Act no. 101).

The principles of PBL are based on real-life problems and rely on learners' self-directed learning styles to find solutions. With PBL, students master the skills of higher order thinking and process competencies. These skills gained make PBL a suited learning method in curricula throughout South Africa. These skills are transferable to any program and have been proven successful in many higher educational institutions throughout the world.

4. IS PBL AN APPROPRIATE APPROACH FOR THE HOSPITALITY MANAGEMENT PROGRAM?

Problem statements and case studies based on the real life situations can assist lecturers in preparing learners for industry. The educational approach the Educational Institute for Service Studies (EISS) in Port Alfred, South Africa, is characterised by a problem based, modular and thematic structure (<http://www.eiss.co.z>). This serving as an indication that it is a suitable learning method to use in the Hospitality program in South Africa. Research done by Higher Education South Africa (HESA) showed that industry indicated graduates lacked basic job skills. Graduates fell short when having to “find and use information; select appropriate information to solve problems; understanding economic and business realities and lacked openness and flexibility.” (Govender, 2007) The principles of PBL are a perfect match to assist in preparing graduates for industry and its demands.

5. IS PBL SUBJECT SPECIFIC WITHIN THE HOSPITALITY MANAGEMENT PROGRAM?

PBL is not necessarily subject-specific within the Hospitality Management program. It was applied to all subjects at EISS. But the question is, will it work for all subjects in the hotel school? Factors like resources, facilities, number of students and lecturers are of great concern. An 'implementation phase' was structured to give learners and staff the basic knowledge of the process of PBL, gaining the necessary skills so as to implement it properly. Generic problems were used– Problem one was based on 'Understanding presentations' where learners were asked to follow the Maastricht 7 step model to reach a solution of understanding what makes good presentations etc. The second problem was based on 'Motivation', where learners were given a problem within which they had to gain an understanding of motivational methods and theories to motivate students at a Hotel School. Unfortunately, the timetable does not allow for the implementation of PBL within each theoretical subject, as the process of Maastricht PBL model takes time. It was decided that PBL will only be done partly within a theoretical subject, in the form of assignments using case studies based on the Hospitality industry, but not necessarily based solely on the Maastricht model.

6. TO WHAT EXTENT ARE STAFF AND LEARNERS PREPARED FOR PBL?

During the introductory workshop, 10 lecturers were asked to share what they thought the goals of PBL would be. All ten noted (by a show of hands) that PBL can be used to teach learners the skill of problem solving and to work effectively within a group. Although correct, these are not the only goals we hope to achieve. PBL develops self-directed learning skills, which leads to deep learning and increases learners' motivation (Cooper, J. 1990). 30% of the lecturers indicated (by a show of hands) that they have already used steps of the PBL process; did not document it in so much detail and also did not focus so much on self-directed learning. 100% of the lecturers indicated that it will take time and a mind shift to effectively implement this learner-centred approach. 90% of lecturers indicated (by a show of hands) that it is difficult to place the learning responsibility on the learners and are fearful they will not be able to cover all the content or reach the specified outcomes. Lectures and workshops can still be given to learners before tackling a PBL problem. Because this will possibly take up more time than the previous teacher-centred approach, 100% of lecturers (by a show of hands) have many doubts in the success it will have due to timetabling.

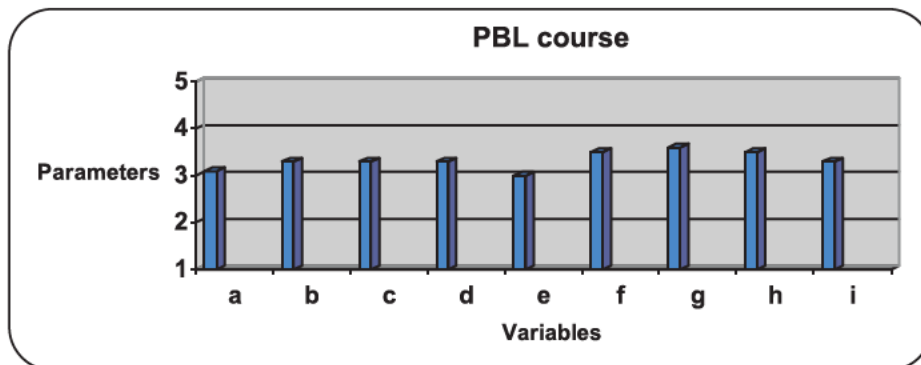


Figure 1: PBL Course

Table 1: Explanation of the variables used in Figure 1

a	There was a lot of pressure on me as a student in this PBL course
b	I had a clear idea of where I was going and what was expected of me in the PBL course
c	The PBL course has sharpened my analytical skills
d	The PBL course has boosted my confidence to solve problems
e	The PBL course has stimulated my enthusiasm for further learning
f	The seven steps will help me solve problems
g	The PBL course is developing my capacity for research and inquiry
h	The PBL course is encouraging my development of relevant, ethical, social and professional perspectives
i	Overall, I was satisfied with the PBL course

It is clear that most learners had a clear idea of what was expected from them during the course – this is due to the introductory workshop held for them before the sessions started. This is a vital part of planning and preparation of learners especially if PBL has not been implemented in a course. A good sign is that a moderate number of learners indicated that the PBL course stimulated their enthusiasm for further learning. The seven steps also proved to be quite useful to learners in assisting them to solve the generic problems posed to them in the sessions.

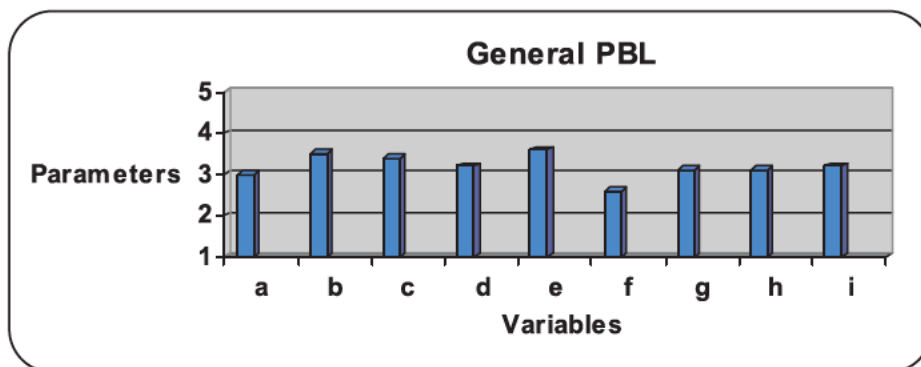


Figure 2: General PBL

Table 2: Explanation of the variables used in Figure 2

a	I found the problems intellectually stimulating
b	The workload was sufficient
c	The PBL documentation is effective in supporting my learning
d	I was satisfied with the methods of assessment
e	I was generally given enough time to understand the things I had to learn
f	I prefer the PBL method of learning rather than traditional teaching
g	I feel part of a group of students that are committed to learning
h	I used the resources at CUT to support my learning
i	During the introduction to PBL I gathered sufficient knowledge to help me understand PBL

What is sad though is that it is that only 52% of the respondents preferred the PBL method above the traditional teacher centred teaching. This could possibly be because it was a new method and students were not as comfortable to it yet.

7. WHAT ARE THE CURRICULUM CHARACTERISTICS FOR PBL IN THE HOSPITALITY MANAGEMENT PROGRAM?

The syllabi should be “reflective of the outcomes of the subject / course” [Bouwer et. al]. All lecturers at the CUT, are requested to re-curriculate their subject material, (constructively) aligning it with a learner centred approach of teaching – which means that a teaching method (PBL) be chosen which will complement the content (curriculum) and ensure that the Critical Cross-Field and Developmental Outcomes are achieved. Constructive alignment ensures that teaching activities, tasks or assignments and all assessment methods are aligned with the exit level outcomes.

7.1 Implementation of group work as means of learning

In South Africa, various reasons lead to inappropriate group sizes, but it is mostly because of the teacher: learner ratio. At the Hotel school, the first years were divided into groups of four or five. For the third year integrated assignment, group sizes varied according to each subject. The ideal is to have 4 – 5 [Cooper, J 1990, p 1,2; Johnson, D.W., Johnson, R.T and Smith, K.A. 1991; Smith, K.A. 1986] group members, but this is not always possible. Problems arise with the practical implementation of an event or a function because only so many students can work in a bar, kitchen or on the floor as waiters, Maitre D's etc with a function. Groups have to be bigger to accommodate the timetable and function dates but groups will however not be greater than 8 members per group.

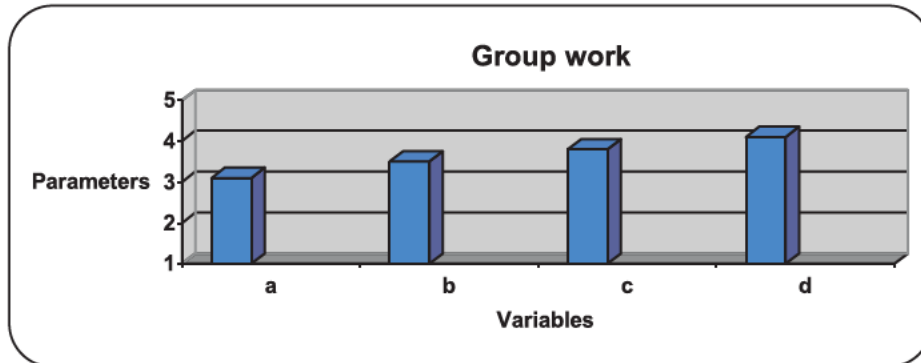


Figure 3: Group work

Table 3: Explanation of the variables used in Figure 3

a	My OBE experience from school assisted me in the PBL course
b	I feel I benefit from working on problems in groups
c	If there was conflict in my group - I handled it quite well
d	I understood my role within the group

So how does group work differ when applied in a PBL system compared to the OBE system? The difference it seems is that in the OBE system, interestingly enough, 62% of respondents indicated that the OBE group work they experienced at school was not sufficient in preparing them for group work. This could be linked to a possible unstructured method of group work in the OBE system. Very little is done to facilitate group dynamics, conflict handling and group roles.

In a PBL environment, group work is more 'organised'- emphasis is placed on allocating group roles (chairperson, secretary, board secretary and group members); setting up an agenda; taking minutes at group meetings and clear delegation of tasks and responsibilities. The first years took some time to get used to all the responsibilities of each group role but quickly realised how this improved their group work. Learners became aware of each person's value within the group and how, if one member does not fulfil his duties, the whole group suffers. It is clear from Figure 3 that 81% of the respondents understood their roles within their groups which is beneficial to group work.

Groups will also be mixed with regard to gender and culture to enhance the group dynamics. In a PBL environment certain group behavioural rules apply.

According to the EISS PBL KIT [De Boer, 2007: p 2], group members should observe and follow the “rules of courtesy and guidelines for PBL behaviour when interacting with the tutor, chairperson, secretaries and other group members”. The question is, whether these will be the same for all learning environments? I think it is possible for each PBL model to have their own, based on the necessary principles of PBL behaviour. South Africa is made up of diverse cultures and care should be taken when implementing such rules. This is why intercultural learning is so important to the South African student. Like our constitution, it supports the consideration and respect for one another's backgrounds, ways of reasoning and opinions.

By consulting learners, facilitators will find that some rules might offend some cultures. Ways should be found for learners to get involved within the classroom. Also, when group roles are rotated, each learner will have the opportunity to be chairperson, secretary etc. so that shy learners will become comfortable in communicating and delegating. In a PBL environment, the learning process should lead to developing the competencies for learners to be able to solve problems and ensure deep learning. Process competencies are “not analytical, technical, or scientific abilities but rather expressions of the individual's personal approach to learning and managing of the subject competencies along with a variety of other abilities, such as working co-operatively, communicating effectively, working independently, behavioural changes, planning and directing and self-evaluation.”[Kofoed, L.B., Hansen, S and Kolmos, A. 2004. p331, 332]

7.2 An active learner-centred approach leads to self-directed learning

PBL ensures that not only content-based lectures giving learners increased opportunities to find the resources themselves and find a conclusion (self-directed learning). PBL is about more than curriculum; it enhances the learning experience through deep learning and focuses more on the entire process of learning. Previously, learners did not have the opportunity to find the problem and the solution in this way. Tasks and assignments usually contained a lot of information and were not necessarily posed as a problem. Learners were then just asked to research the answer. PBL adds more responsibility and gives learners the opportunity to gain life skills on their journey to find the solution. This might be familiar to teachers who believe in the theory of constructivism; PBL is in line with constructivism and allows for minimal teaching and more learning.

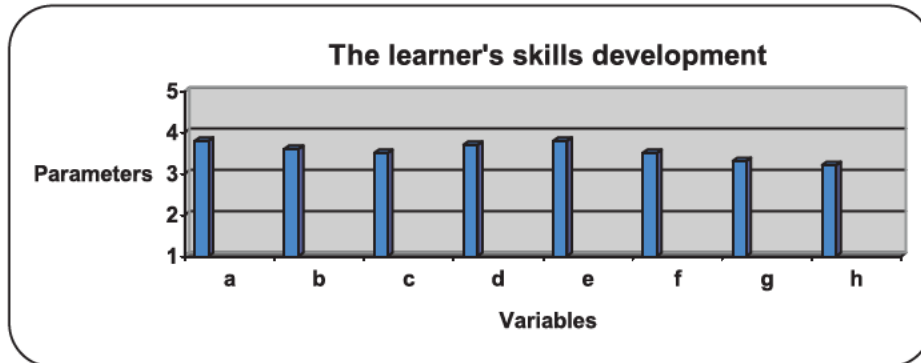


Figure 4: The learner's skills development

Table 4: Explanation of the variables used in Figure 4

a	The PBL course has helped me develop my skills as a team member
b	The PBL course has improved my skills in written communication, e.g. writing minutes etc
c	The PBL course has helped me to develop the ability to plan my own work
d	I have learnt to explore and share ideas confidently with group members
e	My PBL course is developing my ability to use oral communication for example: when putting forward an argument
f	The PBL course developed my ability to use information effectively
g	I have come across ideas in my PBL course that have helped me understand how I learn
h	The PBL course is fostering my personal and intellectual independence

Because learners are active in their learning within a PBL environment, it is important for them to be able to feel confident about their views and communicate these effectively. It is evident from Figure 4, that the respondents gained this from the PBL method, as 73 % and 77% respectively indicated that they became confident in exploring and sharing their ideas confidently with their peers, and that the course developed their ability to communicate orally.

7.3 Using problem formulation in achieving learning outcomes

Part of establishing the course of action using PBL, is to decide on the type of problem to pose to the students. At our school it was decided that we will use the following types of problems: [Biggs, J. 2003. p 234]

- A Tightly structured problem: a case study is given in detail- all information needed to solve it is given to the student;
- BIG (Beyond the Information Given): some facts are provided, but students have to find the rest;
- WIG (Without the Information Given): 'ill-defined' problems present no data and it is entirely up to student to research the case and find the needed resource and information.

In OBE, the emphasis is on the outcome. In PBL, the emphasis is on the learning process and the problem which drives it. Yet, PBL is a method of learning that can be used to reach the desired outcome within the OBE system.

Lecturers have noted that it is a skill to write a case study in such a way, that you don't give away the problem or the route to take to solve it. The type of problem will determine how much information is given. We had decided that we will start the first years off with tightly structured problems so that they first get the hang of it and give them BIG problem types later in the year. This allows facilitators to become familiar with the concept first.

7.4 Facilitating interdisciplinary learning

PBL allows learners to find knowledge from various fields. This integration is a desired outcome for PBL. Because the third years did not go through the PBL 'experimental phase', it was decided to give them an integrated assignment, based on principles of PBL. What makes the assignment so exciting is that it combined the 'content' of five subjects namely: Events Management, Financial Management, Hospitality Management, Culinary Studies and Food and Beverage Studies. This gave learners the opportunity to bring all the departments together, giving them a holistic understanding of the industry. The assignment is based on the planning, organizing, leading, controlling, quality management and evaluating of a theme evening in a hospitality environment. Integration broadens the mind of the learner. This is confirmed by Christensen & Hendriksen: "The meaning of data, theory and method in the Problem-Based method enters into a complex mix of iterative processes of conceptualizations that entail reformulations of research problems and new connections between different fields of study, even cross-disciplinary connections."

[Christensen, O.R. & Hendriksen, L. 2007] The lecturers simply took their assignments (as used previously within the teacher-centred environment) and combined it to incorporate PBL principles. They changed it so that it had a problem statement, a project format and aligned their rubrics for assessment.

7.5 Defining the supervisors role

At our school the role of supervisor / facilitator is still rather new to most lecturers. It is a skill to become a facilitator and takes practice. The role of the facilitator is to assist learners to “realize their capacity to learn”, and to make sure that they are “moving education from a delivery of static knowledge to a didactical relationship where knowledge is co-created.” [Light, G. and Cox, R. 2001] It entails the writing of problem statements or case studies, assessing, guiding individuals and assisting with group management. Facilitators can vary their facilitative styles towards a group depending on the group dynamics and the challenges it faces; three possible modes are: [Herron, J. 1989]

TABLE 6. Facilitative modes

Hierarchical mode	Co-operative mode	Autonomous mode
The facilitator directs the learning	The facilitator shares power over learning with the team	The facilitator respects total autonomy of the team

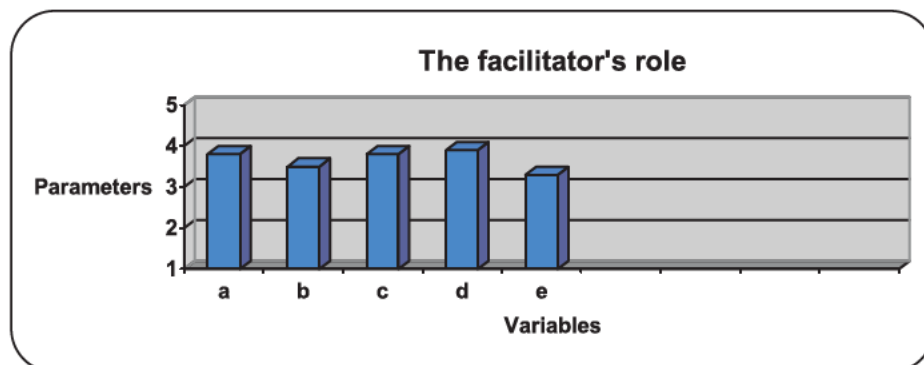


Figure 5: The facilitator's role

Table 5: Explanation of the variables used in Figure 5

a	Feedback from my PBL facilitator was helpful
b	The facilitators of this PBL course motivated me to do my best work
c	My facilitators were helpful at explaining things
d	The facilitators made it clear right from the start what they expected from students
e	The facilitators put a lot of time in commenting on my work

In this study, the facilitators were transparent in their expectations for the learners. Figure 5 shows that 77% of the respondents felt that their facilitators made it clear what their expectations were from the learners.

7.6 Assessment guidelines based on PBL principles

Formative and summative assessment strategies are in place for all the levels of the hospitality course. The practical subjects are continuously evaluated throughout the year, where most of the theoretical subjects are assessed summatively. Problems identified during the planning of the integrated case study was that some of the subjects' marks have to be in earlier than others, due to them carrying out summative assessment. A solution to this would be to ensure that all subjects follow a formative assessment strategy. This will eliminate the issues of work to be completed before the exam dates, etc.

Some lecturers were confused as to how one will now assess the learning process. In PBL, you assess the process of learning, the students' group skills, the presentation of their findings, time management, personal skills and the content. In the teacher centred approach, little effort was made to assess or even consider group skills, time management and most importantly the process of learning. Lecturers were surprised to learn that formative assessment can still be done – most thought that this would fall away. Assessment is now also not the sole responsibility of the facilitator but also in the hands of the learners, their peers and the group.

8. CONCLUSION

To implement a new teaching and learning method, teamwork is required. Support from institutional departments like Curriculum Development, faculty and school management means that important decisions and implementation requirements do not go without insightful consideration. Staffs positive attitude and years of educational experiences will all add to the successful implementation of PBL.

I have found that: PBL is a very appropriate method for teaching and learning at our school and institution in light of the skills development needs of our country; that it is not subject specific; that staff and learners should be prepared for the implementation of PBL and that there are various characteristics that need to be focused on when implementing PBL. Lecturers had also been implementing PBL principles without knowing it! They noticed that problem solving can be dealt with in an organized manner and by doing so, much better results can be achieved. We identified that our biggest challenge is insufficient time for the full implementation of PBL. Our classrooms are still set up in a typical classroom style and the tables and benches are fused to the ground and cannot be moved around. Learners need to be able to form groups and use break away rooms for their planning and discussions. Also, technological improvements will ensure that learners have better access to information.

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Recommendations

This paper opens up possible further research of:

- Whether or not PBL is more successful when used with work integrated learning?

To me, the obvious is that it will be. Biggs writes that “If the aim is to be a doctor, then the best way of doing so is being a doctor – under the appropriate guidance and safeguards.” [Biggs, J. 2003. p232]

- Whether PBL enhances emotional intelligence?
- Another area of study could be to evaluate whether Hospitality Management learners who have had training in a PBL environment perform better than those without?

Little research and implementation of PBL has been done in South Africa. It is my hope that through our efforts to implement PBL at our institution, that we will pave the way towards a significant improvement in the skills development of the learners we send out into industry. The future leaders of South Africa will be borne from our educational system. Dahms, Du & Stentoft state that “education is aimed at both the individual personal development and the development of the society.” [Dahms, M. Du, X-Y. & Stentoft, D. 2007. p2] It is our duty as educators to constantly reflect and improve our efforts, to ensure sustainable growth for a brighter future.