The Role of Problem Based Learning in Engaging and Empowering Omani EAP Learners: An Exploratory Study

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Abstract
Problem Based Learning (PBL) is used in various fields of study. However, there is a dearth of use of PBL and its relevance in English Language Teaching (ELT). Thus, this exploratory study focusses on the use, relevance and implementation of PBL in ELT. It describes how PBL empowers English for Academic Purposes (EAP) learners by engaging them in real-world issues. The insights gained from self- classroom observations of the teacher-researcher were integrated with insights obtained through extensive literature review. This study was done over eight semesters with around 300 students in each semester. The study showed that in English for Business 1(an EAP course), PBL fosters self-directed learning as the students make choices and take decisions about current economic problems in accomplishing the various milestones of the process throughout the semester. It also showed that EAP learners can take charge of their learning and make their connections with authentic business material. The study further showed that the use of PBL approach in English for Business 1 course helped learners reflect on the way they had learnt, improved their research skills, gave the confidence to do teamwork, helped them identify relevant research tools and inculcated self-management and time management skills in them. The study, thus, showed that the use of PBL encourages active learning and makes EAP learners become responsible for their learning as they indulge in reflective critical thinking about what is being learned, which in turn makes them life-long learners. The study makes several recommendations for an effective PBL class, including allowing students to choose their groups, providing feedback at the right time, encouraging the use of reflective journals, etc.

Keywords: Active learning, collaborative decision making, life-long learners, problem-based learning, reflective critical thinking, self-directed learning

Introduction

Problem Based Learning is a teaching model that emphasises the use of task-based problems to engage students in active and multidisciplinary learning. According to Barrows and Tamblyn (1980); Boud and Feletti (1991), the PBL model emerged in the 1950s in medical schools of Case Western Reserve University in the United States of America in the late 1960s and in McMaster University, Canada. The underlying philosophy of the PBL was to help physicians solve real-world problems through the use of critical thinking skills in class and beyond. PBL is frequently used in engineering schools, educational leadership programs, business school curricula and secondary, middle and elementary school classrooms. However, there is a dearth of use of PBL in language teaching probably because it is a non-content subject and teachers tend to spend time on the prescriptive aspects of the language (Hayati, 2005). This exploratory study is an attempt to fill this gap and see how PBL engages and empowers Omani EAP learners.

The Purpose of the Study:

In light of extensive use of PBL across different disciplines and levels of study, this study seeks to explore its effectiveness in an English for Academic Purposes (EAP) context. The study derives its data from the implementation of PBL in English for Business 1 an EAP credit course at Centre for Preparatory Studies (CPS) at Sultan Qaboos University (SQU). The study thus employs both primary and secondary research, and has the following aims:

1. How is PBL defined in literature across various disciplines?
2. What are the requirements of PBL?
3. How is PBL approach different from the traditional approach to teaching?
4. How does PBL motivate EAP (English for Business 1) learners?
5. How does PBL (English for Business 1) engages and empowers learners?

Literature Review:

In the field of pedagogy, several PBL definitions have been proposed. According to Watson (2001), in PBL, "students work with classmates to solve complex and authentic problems that help develop content knowledge as well as problem-solving, reasoning, communication and self-assessment skills". PBL is a teaching method in which complex real-world problems are used as a vehicle to promote student learning of concepts and principles as opposed to direct presentation of facts and concepts (Duch, 2001). PBL is a student-centred approach in which students learn about a subject by working in groups to solve an open-ended problem (Nilson, 2010). In a PBL model, students engage in complex, challenging problems and collaboratively work toward their resolution (Woods, 2020). PBL is about students connecting disciplinary knowledge to real-world problems - the motivation to solve a problem becomes the motivation to learn. The problem is what drives motivation and learning.

PBL engages students in intriguing, real and relevant intellectual inquiry and allows them to learn from these life situations (Barell, 2007). Boud and Feletti (1997) state that the problem is the most important element of PBL, and it is the focus of the whole approach. Therefore, the problem comes first followed by the introduction of content in the context of complex problems that represent real-life situations. In other words, through problem-based learning, students learn how to solve problems that are ill-structured, open-ended or ambiguous. PBL, thus, exposes students to real-world challenges, higher-order thinking skills, interdisciplinary learning,

independent learning, information mining skills, teamwork and communication skills. The following steps broadly cover the approach: problems are carefully constructed by the teacher according to the course syllabus, the teacher facilitates the process by facilitating group formation, scheduling research work, classroom discussions, write-ups, presentations, journal writing, etc. Thus, real learning takes place in a 'process' focused problem-based learning classroom. It is in this learning environment that learners learn how to work cooperatively, collaboratively and think critically with others (White, 1996). Once these skills are nurtured, learners apply them across disciplines in the long term. Because of the huge developments and advancement in the field of technology, the internet provides a plethora of reading material for the students to read and thereby take control of their learning (Evensen& Hmelo, 2000).

Problem Based Learning is an educational approach where the problem is the starting point of the learning process (Graff & Kolmos, 2003). Problem-based learning classrooms do not occur in a vacuum. Some of the requirements for PBL to happen are as follows:

- The problem acts as a stimulus for learning.
- Students bring prior knowledge, assumptions and experiences which help them to find meaningful entry points into the problem.
- The collaborative team setting provides a platform where learning takes place through the negotiation of meaning and decision making.
- Students handle team dynamics, consciously applying strategies to deal with.
- Learner centeredness, learner autonomy, self-directed discovery and questioning remain in focus throughout.
- Critical thinking and reflection are ongoing throughout the learning process.

The rapidly changing world with economic competitiveness, transitioning economic and financial scenes, globalisation, industrial and workplace demands, employers' expectations and excessive use of Information and Computer Technology (ICT) show that our learners live in a millennium which has unprecedented development in knowledge and technology. These advancements demand an educational paradigm that can equip the learners to meet the current challenges. They need an entirely new set of skills to function in this world. The traditional approach to education which sees learners as receivers with a focus on teacher-directed content learning seems inadequate to address the needs of the 21st century. Eubanks (2006) calls the present learners as Generation Y learners and raises serious concerns about teaching them through traditional approaches.

Similarly, Barnes, Marateo and Ferris (2007) talk about adopting an approach where digital literacy, interactivity, collaboration, and connectivity can be infused. Skiba & Barton (2006) advocate a fundamental shift from a teacher-centred approach to a learner-centred movement, which is away from disseminating knowledge through lectures. They further view that students learn by doing as they enjoy working in groups through collaborative learning. As they are engaged in activities, they look for guidance and mentoring (McCrindle, 2006). Brown (2005) promotes an instructional strategy where the teacher is a mentor in the process of understanding, constructing, discovering knowledge through active engagement of learners. Problem-based learning is an instructional approach that incorporates all these elements with a greater scope for flexibility in teachers' and learners' roles. Norman and Schmidt (1992) provide evidence that PBL

enhances learning skills, integration of concepts, transfer of concepts to new problems, intrinsic motivation and self-directed learning. Adendorff (2006) and Kgaphola (1999) show that PBL makes students independent and self-directed.

In contrast to all these elements of PBL, the traditional approach according to Engelbrecht, (2001) leads to a superficial understanding with no scope for reflection or self-direction, making the learner dependent on the teacher in the process. The traditional approach views teaching as 'transmission' of knowledge and learning as 'acquiring' that knowledge. The assesments focus on 'recall' rather than 'application' or 'creation'. These differences between PBL and traditional approach have been summarised in Table one.

Table 1: *The differences in PBL and traditional approaches to teaching.*

Problem Based Learning	Traditional Approach
Focus on learning	Focus on teaching
Flexibility in teacher's and learners' roles; the role of the teacher is that of a facilitator, guiding and mentoring learners	Limited or no flexibility in teacher's and learners' roles; the teacher plays the role of a content expert.
Change in power dynamics: the teacher becomes one of the participants like the other students. Perhaps sometimes, the learners bring in new perspectives that that may not have occurred to the teacher.	Power dynamics remain the same: the teacher knows all and the students do not contribute to the body of knowledge.
Divergent way of thinking, leading to multiple right answers.	Convergent way of thinking limiting to one right answer
Learning by doing: understanding, constructing, discovering knowledge; leads to self-directed learning; so learners are intrinsically motivated	Learning by transferrence: receiving and acquiring knowledge; learning is teacher-directed, so the learners are extrinsically motivated.
Process and performance-oriented learners; learners work individually and collaboratively	Mastery oriented learners; learners work individually.
Encourages critical and reflective thinking	Very limited or no scope for critical or reflective thinking
Assessments are focussed on 'application' and 'creation': learners answer questions through an exploration	Assessment is focussed on 'recall': learners answer questions based on knowledge learnt.
Alternative forms of assessment: both product and process are assessed via reports, (poster) presentations, journals, reflections, performances, elevator pitches, self/peer evaluations, etc	Traditional forms of assessment methods where only the product is assessed

The discussion in the above table illustrates that PBL is a learner-friendly teaching and learning methodology that equips them with the demands of the 21st century. PBL appears to enhance engagement, motivation, reflection and critical thinking by participating in discussions and collaborations (Donnison, 2007).

Methodology:
This is an exploratory study that derives data from both primary (researcher's observations as teacher-researcher) and secondary research (literature review and online research). The course, in this study, is first of the three credit courses offered to the students of the College of Economics and Political Sciences (CEPS) at SQU. The PBL component constitutes 30 hours of a total of 90 hours English for Business 1 EAP course. There are about 300 students each semester, which lasts for 15 weeks.

The primary data is obtained through close observation of the researcher while teaching PBL component over eight semesters in an EAP course. The data so obtained is compared to the available literature on PBL in the field and conclusions drawn about the aims of the study.

Discussion:
This section describes the use of PBL in English for Business 1, provides relevant insights from research done in the field of PBL and relates it to the rationale of using PBL in the given course. It also shows how different elements of PBL (collaborative learning, intrinsic motivation, self-directed learning and critical thinking) are carefully incorporated in English for Business. Moreover, the effectiveness of these elements of PBL is discussed in relevant sections.

PBL in English for Business 1
Teaching English for Business 1 through the traditional teacher-centred approach would produce an environment where the teacher disseminates information (Peyton, More and Young, 2010) and the students are passive receptors of knowledge (Freiberg, 1999). Biggs (2003) notes that PBL encourages deep learning as students learn for understanding and seek meaning, whereas the traditional teacher-centred approach promotes surface learning with little understanding.

At the Centre for Preparatory Studies (CPS), Sultan Qaboos University, English for Business I, a credit course, uses a problem-based learning approach to engage and empower learners.

This course is offered to the first-year business students of the College of Economics and Political Science. The general objective of this course is to introduce students to the fundamentals of business English, strengthen their understanding of a variety of business issues, while at the same time, consolidate their reading and writing skills. The specific objectives of the course are to provide the students with the vocabulary and the language to cope with the academic material related to their new field of study. This, it is hoped, will help them understand and familiarise themselves with complex business and economic concepts in the business world. It will further support students to speak and write accurately about this new field of knowledge to make progress with their college courses. It is a semester-based course over 15 weeks. The text for the course is an in house material: English for Business 1. The contents of the textbook include topics such as

globalisation, motivation at work, taxes, monopoly, job seekers in Oman, critical skills for employability, social media and the impact of the fourth industrial revolution.

Procedure

In English for Business 1, PBL has a weighting of 25% of the total grade, and the students and the teacher meet up for this component once a week of the three contact classes. The students are presented with a number of problem scenarios about business, management and economy of Oman to choose the one they can identify with (sometimes the problem is generated by the students); they work in groups, which forms the platform for the students' learning (Moesby, 2002). The students collaborate and provide three to four solutions to the problem depending upon the number of students in each group. One such problem, given by the teacher is in Table 2, and the possible solutions generated by the students are given in Figure 1.

Table 2: *A problem for the students to discuss*

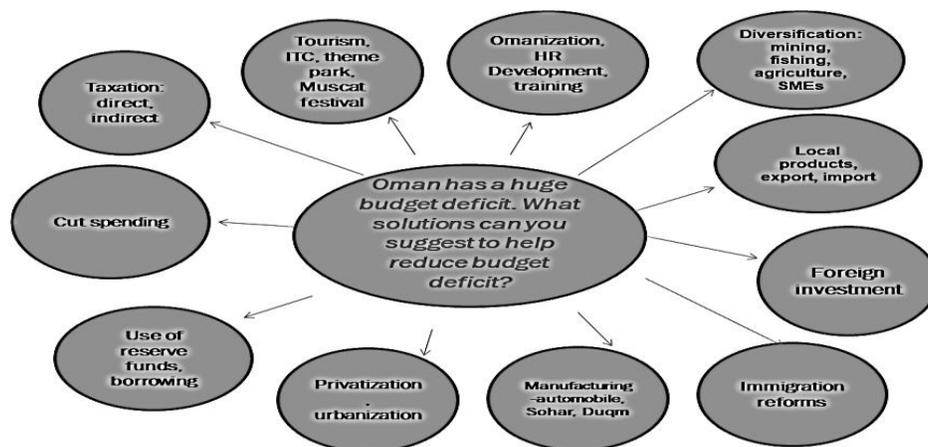| The Problem: You are a group of economists. You have been approached by the Ministry of Finance as Oman has a huge budget deficit. You have been asked to solve the current problem by suggesting solutions. To do this, you need to submit a proposal outlining your suggestions and recommendations in the form of a report |
| --- |

Figure 1: Suggested solutions

The teacher, in the process, acts as a facilitator and does not engage in any direct teaching of content, but acts as a cognitive coach. The teacher facilitates the process by scheduling research work, classroom discussions, providing reflection prompts and leading to group write-ups and presentations. The teacher aids students by guiding them to identify, define and analyse the problem. The teacher also provides scaffolding tasks to generate ideas and strategies to solve the problem. When students in English for Business 1 research and expand their knowledge to propose solutions, they learn to adopt an interdisciplinary approach to problem-solving (Sternberg, 2008).

This mirrors the real working world where solutions to real problems require a range of knowledge and skills, and it is in line with one of the objectives of the course which is, " Evaluating opinions by making judgments about information, the significance of ideas or quality of work based on a set of criteria" (Comprehensive Curriculum Document, 2019).

As the problem is based on contemporary business issues of Oman, the students are required to research relevant readings, discuss the problem in groups, survey or interview people, keep a journal and write reflections. In groups of three or four, students brainstorm and examine the problem, identify gaps in their knowledge about the problem and formulate possible hypotheses and identify issues they intend to investigate. The groups then employ research strategies to collect relevant information, research for potential solutions, design a questionnaire or an interview, administer it through google survey or face to face. When they have solicited the data from the questionnaire or the interview, they discuss their findings and peer-teach what they learn. The group members then develop an outcome for the problem, present their findings to other groups and answer their questions. Students reflect on the various skills such as research, collaborative and organisational skills. Finally, they submit a group report.

Some features of PBL project in English for Business 1:
The PBL project in English for Business 1 is ingrained with features that engage and empower the students to deal with the challenges of the 21st century. Some of these features are discussed here.

Collaborative work
PBL nurtures students to work effectively in teams. According to Barrows (2002), teamwork in PBL involves resolving discrepancies, negotiating group actions, establishing common grounds, and making informed decisions. As students articulate their ideas in groups, it assists in productive collaboration and enhances learning too (Webb & Palincsar, 1996). As students work in teams, they get familiar with each other and experience a sense of belonging. Working in small groups breaks the ice between the teacher and the students as well as amongst the students. The teacher becomes more approachable, leading the learners to express their views more openly and honestly, however unsophisticated they might sound. As a result, the authority of the teacher figure being a "sage on a stage" diminishes, causing them to take the roles of being participants. Thus, team dynamics affect the power relations between the teacher and the learners. According to Leong (2009), PBL approach includes students taking responsibility for their learning, learning how to build on prior knowledge and focusing on the process of knowledge acquisition (rather than on the product), enabling students to engage in collaborative decision-making and team-building skills as they learn to solve the problem through group negotiations.

In English for Business, measures are taken to ensure that students participate meaningfully and appropriately. Both individual and collaborative contributions are planned and suitably assessed. Individually, they identify an issue, write inquiry questions, find answers to their questions and take notes in their journals. Having researched and explored the issue, the students go around the class looking for teammates who are passionately interested in similar topics. They interact with several peers to negotiate and decide on the topic and team. The purpose of this exercise is to ensure there are no free riders and all of the team members are equally passionate

and involved in the issue. The students are guided through weekly milestones of the process which indicate individual and collaborative tasks throughout the semester. They collaboratively work on google docs towards group reports and presentations, but individually keep their journals and write reflections. There is an ongoing peer reviewing and peer assessments.

Self-directed learning

Problem-based learning fosters self-directed learning as the learners work their way through various tasks and activities spread across the semester. In the beginning, it might be challenging and sometimes frustrating too to some students as they are not used to self-directed learning materials, but gradually all students experience some proud moments on their achievements. They have had opportunities to develop self-directed learning and working collaboratively. They develop the strategies of self-directed learning, in various stages, as they make choices and take decisions concerning current economic problems by selecting appropriate learning resources, keeping individual journals (to document process), taking notes from their research, bringing their notes to group discussions, administering questionnaires/interviewing to field experts, writing reflections and planning throughout the semester. Moreover, because of the huge developments and advancement in the field of technology, the internet provides a plethora of reading material for the students to read and thereby take control of their learning (Evensen & Hmelo, 2000). During this self-directed learning, students work together, discussing, comparing, reviewing and debating what they have learnt (Wilkerson, 1996). Learners are offered choices at every stage. It is not the teachers, but the learners decide on the problem they would like to research and provide potential solutions. Similarly, the sources are selected by the learners, although some essential readings with scaffolding tasks are posted on Moodle to get the students to start.

Intrinsic Motivation

Douglass and Morris (2014); Radovan and Makovec (2015) showed that learners' intrinsic motivation is directly proportional to the extent of control students have over their learning process. Since PBL inculcates self-directed learning in learners, they get inherently motivated in the learning process. Hung 2011; Savin-Baden, 2003 suggested that students must be intrinsically motivated to engage in self-directed learning successfully. Similarly, Sungur, Tekkaya and Geban, 2006 explored that intrinsic motivation leads to self-regulation. PBL aids learners to self-regulation as they identify goals, adopt appropriate strategies and monitor progress. Murray & Summerlee, 2007; Prosser & Sze, 2014 show that student motivation and engagement in PBL course material is much higher than in the traditional mode of teaching as they acquire transferable skills such as critical thinking, collaboration, and problem-solving (Klegeris & Hurren, 2011). PBL allows students to control their learning process in small group collaborations, where they work on scenarios. According to Douglass & Morris, 2014; Masek et al., 2011, intrinsic motivation emanates from an environment which encourages autonomy, competence, and relatedness. PBL, according to Radovan & Makovec (2015), provides a perfect combination of these elements as learners take responsibility for collaborative learning to investigate a relatable problem.

PBL in English for Business 1 provides learners with a conducive environment where they learn by doing, i.e. they adopt active learning approach in addressing real problems that are related to their college studies as well as to their daily life (as exemplified in other section here). Throughout the process, the learners are provided with an open and supportive climate where they

articulate their opinion freely; however, unsophisticated they might be as there is no one correct answer. The students are engaged and inherently motivated as they work on local issues and challenges of their interest and level. Ferrari and Mahalingham (1998) and Leontiev (1978) believed that PBL motivates students as it involves them in personally meaningful tasks; as a result, they value what they are learning.

Critical thinking

Ennis et al. (2005) view critical thinking as rational and reflective thinking that focuses on deciding what to believe or do. According to Facione (1990), thinking critically is one of the higher-order thinking skills apart from problem-solving and decision making. Critical thinking aids effective thinking and problem solving (Treffinger et al., 2006). Since research shows, critical thinking skills can be systematically taught (Jianzeng et al., 1997), teaching critical thinking has always been the ultimate goal of education (Spendlove, 2008). Sendaq and Odabas (2009) have highlighted the effectiveness of PBL in enhancing critical thinking ability. PBL is often speculated to promote students' higher-order thinking skills, especially reasoning skills (Savery, 2006).

In the context of PBL in English for Business 1, where collaboration, reflective thinking and questioning are of paramount importance, critical thinking is a skill that is bound to develop as Bailin et al., (1999); Facione (2006) define it as an analytical process of arriving at judgments based on logical, rational, and reasonable problem solution. In this course, learners discuss, negotiate and explore the solution to the economic problems on hand which is how Paul and Elder, (2003) see critical thinking as the process of where is an individual is taught to reason in improving the solution. Students develop their critical thinking as they go through the several stages of problem-based learning over the semester. As they research various potential solutions to combat the economic, business or management issues at hand, they need to decide which international strategy might be suitable in the Omani context. They evaluate and recommend the fittest solutions with evidence from their data. They weigh feasibility and practicality concerning the demographic, geographic, political, economic, social, technological and legal aspects of Oman. Furthermore, the learners provide justifications of their decisions.

Facione (2006) proposed a framework of critical thinking skills which has six elements, namely analysis (identifying and examining ideas and arguments), inference (drawing conclusions), interpretation (clarifying meaning through categorisation and translation), self-regulation (self-assessment and reflection), explanation (justifying results, arguments or procedures) and evaluation(assessing arguments). The PBL in English for Business 1 course at SQU nurtures critical thinking skills through researching, brainstorming, discussions, debating, expressing opinions freely through group presentations, feedback, sharing, evaluating proposed peer solutions, arriving at informed decisions, teaching others and doing reflective writing (Grady & Alwis, 2002). During the 15 weeks long PBL semester, the teacher acts as a mediator probing the learners' meta-cognitive thinking to make decisions and arrive at one best possible solution for the problem at hand (Wee, 2004). As learners, in English for Business 1, are involved in exploring knowledge through researching, discussing, debating and proposing a solution, they learn thinking strategies by solving a problem (Hmelo-Silver, 2004). The course reinforces the fact that there is no one right answer and in the process encourages them to use analysing skills, think out of the

box, arrive at a consensus, formulate solutions, give justifications and become reflective/ critical thinkers.

Conclusion

In English for Business 1, the PBL curriculum is designed to expose learners to a broad range of skills that prepare them to engage in activities that facilitate ongoing learning and problem solving thereby empowering them to cope with the needs of today's world. The learners are truly empowered throughout the process. Firstly, it is they who decide or identify a local Omani problem to research. Having researched and pondered about the issue, they choose two to three teammates to work with after negotiations. The decisions at all of the milestones are taken by the students themselves, making them more involved and empowered. The paper shows that the specific processes of PBL in English for Business 1 theoretically support students' critical thinking development. The implications of adopting PBL approach in this course is that the PBL curriculum must be carefully designed to ensure its effectiveness. The other factors that need special consideration are the role of the facilitator in mediating students' learning, ways of triggering students' meta-cognitive thinking, ways of engaging students and ways of making them independent learners. If all these are carefully considered, PBL may be successful as what has been reported in the literature.

The paper showed that it is possible to engage and empower students provided appropriate problems of interest to the learners are selected and integrated into the curriculum, learner roles and responsibilities in the collaborative groups are clearly defined and emphasised, and teachers' role is changed from knowledge dispensers to facilitators of knowledge construction and transformation as shown in this study.

Recommendations for an effective PBL class

It is imperative that PBL is implemented in the curriculum in a way that enhances learner engagement and empowers them to cope with the demands of today's world. The experience from English for Business I helps in providing the following recommendations for effectively implementing PBL in the classroom:

- Allow students to choose their groups.
- Allow a good time for students to do research and discuss ideas.
- Provide feedback when required (making use of office hours)
- Encourage use of reflective journals (make it part of the assessment)
- Invite other teachers and other students during student presentations
- Clarify that 'free-riders' do not get marks
- Ensure students monitor their progress

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