Problem-based Language Learning and Teaching
An Innovative Approach to Learn a New Language
Loghman Ansarian · Teoh Mei Lin

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Second, this book draws on a diversity of the literature on problem-based learning in English language education across many countries, as would be expected. Moreover, courtesy of the location of its authors, Loghman Ansarian and teloh Mei Lin, this book also provides an in-depth and interesting comparison and contrast between the adoption of problem-based learning in English language teaching in Iranian and Malaysian contexts, representing EFL and ESL contexts, respectively.

Through this book, a fresh and comprehensive view of multiple factors contributing to successful implementation of problem-based learning is depicted. These include the theoretical underpinnings of problem-based learning, drawing on Dewey’s experiential learning, Vygotsky’s concept of zone of proximal development (ZPD), Kumaravadivelu’s postmethod in language education, while taking into consideration contemporary aspects, such as the role of technology, i.e., blended learning, and the impact of globalization on learning and teaching. Not only being theoretically well-grounded, this book also provides a useful and practical perspective to practitioners and researchers when distinguishing problem-based learning from other related approaches, such as task-based learning and project-based learning, to avoid confusion to novices in the field. Each chapter is structured in a way that concludes with an ‘Exercise’ section providing opportunities for readers to reflect and discuss further the key contents introduced in each chapter and to link to their own practice. With an aim to inform PBL implementation in language education, this book discusses conditions for PBL to work successfully in classroom and provides concrete examples and illustrations of adoption of PBL in language education. In my view, it is a great contribution to the present book to balance both theoretical and practical aspects of problem-based learning approach in language education within its scope.

Finally, co-authored by one researcher and one Ph.D. candidate, this book is the outcome of admirable effort in putting this book nicely together. It is a welcoming volume for practitioners interested in exploring this PBL approach to language teaching to incorporate it into their repertoire of pedagogies and for researchers and postgraduate students in the area of English language education who wish to investigate problem-based learning in depth. In this case, it may generate new questions and conversations regarding problem-based learning, ones for which this book provides an important set of starting points.

Melbourne, Australia
March 2018

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A telescopic view at the past, as suggested by Tan (2003), sheds light on what we can and should do for future in the sphere of education. The traditional three-dimensional educational paradigm which viewed teachers as ‘knowledge providers,’ content as ‘knowledge,’ and students as ‘knowledge recipients’ has posed limitations on learning (Gordon, Gordon, Aber, & Berliner, 2012). This has prompted a paradigm shift centered on procedures for both teaching and learning which is based on well-established psychological, social, emotional, and educational foundations (Kasim, 2014). In line with this change, language learning and teaching approaches and methods were re-examined and amended. The shift from the grammar–translation method (GTM) to the recent task-based and inquiry-based approaches to teaching and learning is evidence of this endeavor.

This then begs the question, following this switch in trends from the traditional and didactic to the constructivist (Banning, 2005), does the teaching approach used in language classes satisfy the needs of the learners? Put simply, are we doing the right thing correctly? Assuming that language educators are doing their best seems to be overly optimistic. A more realistic plan would be to look at education in other disciplines and to borrow innovative and successful approaches to learning from them. One approach which has been observed to be successful across several disciplines is that of problem-based learning. Thus, this book will elaborate on problem-based learning as a viable educational method within the sphere of language teaching and learning.

Research from various parts of the world including Canada, Brazil, Switzerland, and Malaysia has shown that the problem-based learning approach has been successful in the teaching of different fields, among them medicine, chemistry, engineering, geography, etc. However, one area has still remained, to some extent, untouched and that is language education.

The assumption is that problem-based learning enhances students’ social and communicative skills (Abdullah, 1998), and considering that communication is the core of language, it is then not uncommon to think that problem-based learning can be applied in language classes. Thus, focus has been accorded to this issue in the last two decades.
Preface

This book shall elaborate on the implementation of problem-based learning in language classes and will suggest methods and approaches, following prior study of both theory and practice, to conducting problem-based learning within language classes in practicum.

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Chapter 1
Introduction

Abstract In this chapter, we present the history of problem-based learning. In addition, problem-based learning is defined through both explanation of the main features and illustration of examples. Finally, its theoretical frameworks are discussed.

1.1 The History of Problem-Based Learning

To understand problem-based learning (hereafter referred to as PBL), we begin by presenting a synopsis of its history. PBL’s history can roughly be divided into a ‘non-scientific’ and a ‘scientific’ one. As far as the ‘non-scientific’ history is concerned, the roots of PBL can be traced back before the dawn of history (Wee & Kek, 2002), as apprenticeship was a common approach to learning at that time. Apprentices worked at low wages to learn their chosen trade. They were expected to learn both skill and knowledge by doing. Indeed, the passing of knowledge from master to student through experiential learning has been a common teaching/learning approach throughout history and is often a successful way of learning crafts. ‘Gaining experience by doing’ and ‘the tutor’ were sine qua non in learning through an apprenticeship. These two elements are two of the main prerequisites of the PBL process; therefore, it can be claimed that PBL was practiced long before it was recognized as a ‘scientific’ approach.

The ‘scientific’ history of PBL can be traced back to ancient Greece. Socrates is believed to have employed it in his ‘dialogos’ or dialectical approach (Schmidt, 2012). Later, in the 20th century, the main precursors of PBL were Kilpatrick (1918, 1921, as cited in Hmelo-Silver, 2004) and Dewey (1938, as cited in Hmelo-Silver, 2004) who argued in favor of the importance of experiential learning. Dewey believed that there is a need for an approach which can give the students the opportunity to reflect on their experiences. Such ideas initiated the call for a new approach to education which could stand against the information bombardment teaching methods which overwhelmed the students with a wealth of information—information that they did not retain as it turns out. Dewey’s method was based on intrinsic interest, in which the children learned through activities which were meaningful or of interest to them.
The common problem diagnosed with lecture-based instruction was guiding learners through lower-order thinking skills (Tan, 2003) which begins by the presentation of knowledge to the learners through a lecture. However, PBL aimed at the creation of problems as the initial stage of learning.

Lee and Kwan (2014) believe that Canada was one of the pioneers of PBL, where the curriculum was introduced at the Faculty of Health Sciences at McMaster University in Canada in 1969, though planning for this curriculum had begun in 1966. Indeed, medical education comprises both hypothetical-deductive reasoning process and expert knowledge (Barrows, 1994, as cited in Savery, 2006) which breeds the expectation that hands-on experience would constitute a large part of the medical curriculum. By contrast, PBL stood out against the traditional lecture-based courses at the school which consisted of long, exhausting lectures. The rationale was that despite the explosive growth in information in the field of medicine, students could only retain what they could experience within this growth of information. In addition, excessive attention accorded to content was found to have caused negligence toward the teaching thinking strategies, which turned out to be a pitfall in traditional teaching approaches (Collins, Brown, & Newman, 1988). Therefore, PBL was adopted to address the issue of knowledge impartation and retention faced by the medical school.

The McMaster group believed, however, that the problem should be presented first, engaging the students in the hands-on learning process, and that necessary knowledge will be gained through the solving of the problems. The novel curriculum was in line with the educational belief of the time, which advocated intrinsically motivated learning, collaboration, and problem-solving. Thus, in 1969, students enrolled in the first PBL classes which deemphasized lectures and instead learned in small groups through self-directed study guided by problems designed by their teachers. In the 1970s, Howard Barrows, a recent addition to McMaster, tweaked the model by introducing simulated patients in order to foster clinical reasoning skills. Barrows believed that the information and discovery boom of the time would render knowledge obsolete, and thus, the focus should be on the acquisition of deductive and diagnostic skills. The students' positive reaction toward PBL paved the way for this approach to be adopted by other medical schools, although slight alterations were observed in the way PBL was implemented in other schools. Among other educational settings which made use of PBL were Maastricht University in Netherlands, the University of Newcastle in Australia, and the University of New Mexico in the USA (Camp, 1996).

According to Hillen, Scherpier, and Wijnen (2010), Maastricht began looking for an alternative to the traditional medical curriculum as students were not performing well during clinical and were struggling with the transition from theoretical learning to practical application. A visit to McMaster in 1969 left some of Maastricht's delegation impressed with PBL, and they soon offered their PBL medical curriculum in 1974.

Almost three decades after PBL was first implemented in Canada, a renewing process was begun at McMaster University. According to Lohfeld, Neville and Norman (2005) who interviewed 17 graduates of McMaster University years after they had graduated, PBL has been successful compared to those who had gone to non-PBL medical schools.

However, PBL is not without detractors, as Savery (2006) reported. Some studies and analyses gauging its effectiveness as a learning method were said to be flawed and perhaps biased. Furthermore, various parties' eagerness to use PBL have resulted in confusion of what PBL is, as well as poorly executed application of the method itself (Maudsley, 1999). Other pitfalls of the method include the lack of a proper assessment method back when PBL was first implemented in McMaster and Maastricht, the unpreparedness of both faculty and students for the shift, as well as public skepticism toward the quality of education produced through PBL (Hillen et al., 2010).

Despite the doubts and disparagement, PBL is persevering, with the development of various online platforms, like the SCENE Project as well as the PBL Initiative and the PBL Design and Innovation Center (Savery, 2006), which aim to integrate PBL into the classroom. Savery (2006) makes a compelling case for PBL, as self-regulated learning, higher-order thinking skills, and problem-solving skills are all the more crucial in this day and age where the Internet allows easy access to tremendous amounts of information to learners.

It should be mentioned that whether or not the new curriculum was successful was, for some time, unknown. This was due to the difficulty in gauging the effect of the PBL curriculum on the quality of student performance in comparison with previous curriculums (Mapes, 2009), and also because a PBL curriculum required PBL assessment (Walker & Leary, 2009) which was not present at the time of its inception and implementation. However, in 1989, a survey of graduates at the medical school at McMaster University along with their supervisors revealed that students performed satisfactorily in their professional examinations and considered their classes to have been more enjoyable due to the PBL element.

Additionally, Schmidt (2012) acknowledges two other proponents of problem-based education, these being Fraser, who implemented the case method in Harvard Business School, and Bruner, who conducted experiments on 'learning by discovery' on a fifth-grade geography class. In the Harvard case method, cases were introduced in the final year of study, wherein students were to produce hypothesis and make decisions based on prior knowledge. Bruner's experiment however found no evidence that 'learning by discovery' was better than passive learning as knowledge was presented informally during discussions and as students were expected to deduce this new knowledge based on prior knowledge and common sense.

Although PBL initially targeted higher education, it also entered K-12 education. For example, in 2008, it was implemented in a Catholic school in Australia named Parramatta Marist High School. The success of the program with a few number of students in this center resulted in PBL being used in lower grades. Another example is North Peace Secondary School's Energetic Learning Campus (ELC) in Canada. PBL was used in grades 10 and 11 in this center.

The success of PBL in the field of medical education saw other disciplines such as engineering, chemistry, physics, and geography begin using the approach (Larsson, 2001). Following these successes, PBL was used in language education at the beginning of the twenty-first century. Larsson (2001) discussed the role of PBL tutor-