Laura’s story: Using Problem Based Learning in early childhood and primary teacher education

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Abstract

Increasingly, graduates across a range of professions are required to possess the ability to critically evaluate information, solve problems and participate in collaborative group work. Problem Based Learning (PBL) is a pedagogical approach to learning that emphasises student centred engagement with real problems or situations, involving learners in active decision making processes and in using theory to inform practice. This paper reports the perceptions a group of pre-service educators had to their participation in a unit of study conducted using a PBL scenario. The paper examines issues associated with teacher education, such as skills acquisition and the notion of the ‘gap’ between theory and practice. The findings reported here indicate that PBL offers the opportunity for pre-service educators to participate in a learning experience that supports them in developing skills appropriate to their profession and in understanding how theory may be related to practice.

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1. Introduction

The use of Problem Based Learning (PBL) in Higher Education settings across a range of industrialised nations has increased during the last 10–15 years in response to changes in the global economy and work patterns (Margetson, 1994). Increasingly, graduates are required to demonstrate abilities such as the capacity to critically evaluate and/or consider information, solve problems and interact with others regardless of the nature of their professions. PBL with its emphasis on student centred learning and the application of thinking and problem solving abilities to students’ learning experiences has been seen as a pedagogical tool aimed at assisting graduates in obtaining the skills now considered necessary for a successful professional post-degree experience (Dean, 1999, p. 6).

Whilst PBL itself has been used in Australian based universities and degrees, to date its use has been largely limited to the more scientifically based disciplines, including most predominately, the study of medicine (Cook & Moyle, 2002, p. 331; Margetson, 1994, p. 5). The application of PBL to the professional development of students engaged in the more humanities-based occupations; particularly teacher education is yet to receive the same degree of attention, with the literature in the field described by some authors as “scarce” (Murray-
This paper reports on pre-service educators’ responses to a unit of study conducted using PBL as a pedagogical approach to teacher education.

2. Theoretical background

As a pedagogical technique PBL evolved from the work conducted by Barrows and Tamblyn in the early 1980s in response to their concerns regarding the superficial nature of medical students’ learning that was seen to occur in more traditional, lecture based and didactic teaching methodologies (Savin-Baden, 2001, p. 4.) Here, their concern was to assist students in acquiring knowledge that could be utilised in the immediate diagnosis (or problem solving process) associated with identifying illness in patients. Barrows and Tamblyn believed that medical students could be better served by an education that allowed them to actively participate in the identification and solving of medical problems than they could by an education in which they learned the separate systems of the body without initial reference to illness (Barrows & Tamblyn, 1980).

The concept of PBL was therefore one that centred on the nature of learning as an experience necessarily contextualised by the particular issues or ‘problems’ that were likely to face the trainee practitioner in his or her profession upon graduation (Edens, 2000). In this respect the philosophical underpinnings of PBL hold at its core those principles of learning articulated by the constructivist and social-constructivist views of learning and cognitive development (Charlin, Mann, & Hansen, 1998, p. 324; McPhee, 2002, p. 62). Here the belief that learning is actively constructed by learners as they interact and engage with other learners (and/or more competent peers) is manifest. In addition, the exploratory nature of PBL is likewise consonant with the constructivist belief that learning occurs most readily when it is supported by opportunities for learners to engage with ideas and materials. Therefore, as a pedagogical tool, PBL may be more readily described as an approach to learning than an actual teaching technique. Engel (1997) defines PBL as “an approach to structuring the curriculum which involves confronting students with problems from practice which provide a stimulus for learning” (p. 15). According to Engel this means that the emphasis in PBL “is on learning processes of enquiry which proceed by asking what needs to be known to address and improve a particular situation” (Engel, 1997, p. 16).

This means that students studying within a PBL context are required to focus their attention on the issues and constraints that comprise the problem situation and to determine how these might then be addressed. Margetson (1997) argues that “a problem refers to what is problematic about a situation; it is generally shorthand for a cluster, network or set of interrelated problems and related contextual conditions” (Margetson, 1997, p. 39, italics in original). In responding to the particular issues within a given situation students are required to operate in a manner that promotes the need for questioning, critical thinking and the synthesis of information. Hildebrand, Mulcahy, and Wilks (2001) have identified a three phrase process through which students working within a PBL scenario are likely to pass, including, (1) encountering the problem; (2) ‘doing the problem’; and (3) drawing ‘it all together’ (Hildebrand et al., 2001, p. 10).

Teacher education is an area of education and training particularly suited to the pedagogical goals and methods involved in PBL. In this area, the focus of education has leaned increasingly towards the development of graduates who are capable of accessing, evaluating and critically appraising information for use in their own teaching and decision making processes. In addition, there has been an increased need for graduates of teacher education to be capable of interacting with a range of stakeholders involved in the process of educating young children such as, parents, school councils, various committees, other teachers and associated professionals, including educational psychologists and speech therapists. Twenty-first century teacher education therefore represents a process whereby pre-service teachers need to acquire particular skills related to their ability to practice as well as an understanding of theoretical and content knowledge as an informant to their practice (Dean, 1999, pp. 4–5). Traditionally, teacher education has focused on providing pre-service educators with a set of theoretical knowledge that is arguably relevant to the practice of teaching. However, this view has been challenged with more recent socio-cultural and humanist perspectives highlighting the manner in which pre-service educators develop a sense of identity as teachers and work to incorporate theoretical knowledge into their “working” or practical teaching experiences (Korthagen, 2004, p. 6).
The extent to which pre-service educators are able to utilise theory in relation to their practice has formed a core concern in teacher education and in part has largely been characterised by the concept of the ‘gap’ between theory and practice (Korthagen, 2001, p. 5). According to Kessels and Korthagen (2001) the concept of the gap itself arises more so from the manner in which both theoretical and practical knowledge are conceived in relation to each other than it does in the supposed existence of the gap in the first instance. Theoretical knowledge, they argue represents the ‘episteme’, the known scientific and essentially conceptual knowledge that should be of value to teachers in informing their practice. Conversely, practical knowledge, or the ‘phronesis’ represents an awareness of particular situations and is primarily perceptual (and subjective) in nature (Kessels & Korthagen, 2001, p. 22). The aim of teacher education should not be to fill pre-service educators with conceptual knowledge to be applied to practice (and thus when this process is unsuccessful claiming that it is due to a gap between the pre-service educators’ conceptions of theory and practice); in so much as it should enable pre-service educators to engage with particular situations in a manner which enables them to draw on the conceptual to inform their subjective responses to the particular:

Phronesis, practical wisdom, or perceptual knowledge, uses rules only as summaries and guides. An important prerequisite of this type of knowledge is that someone has enough proper experience. For particulars only become familiar with experience, with a long process of perceiving, assessing situations, judging, choosing courses of action and being confronted with their consequences. This generates a sort of insight that is altogether different from scientific knowledge and of course [sic] is precisely what the student lacks (Kessels & Korthagen, 2001, p. 27).

According to this argument, teacher education should arguably offer opportunities for student teachers to participate in learning experiences that require them to “perceive, assess situations, judge, choose courses of action and be confronted with their consequences” (Kessels & Korthagen, 2001, p. 27). Whilst teaching rounds and time spent in educational settings offer these opportunities, PBL with its emphasis on “confronting students with problems from practice” (Engel, 1997, p. 15) may likewise be considered one means of providing pre-service educators with a practical learning experience that requires them to draw on theory rather than acquire and then apply theory to their later practice. According to McPhee, PBL offers the opportunity for theoretical knowledge to be submerged in a series of problems most likely to face professionals in the field and thus made more accessible and relevant to pre-service educators:

Given the perceived advantages of PBL and as practised for some time within health care professions, there would on the face of it, appear to be a good case for the introduction of this methodology within teacher education. This case is considerably strengthened if the approach to teacher education is carried out from a child-centred perspective, and if it is located within a constructivist approach to learning. It would be possible to look at particular instances of child experience and to put in place the learning necessary to enable beginning teachers to understand that child’s experience and then to be able to cope with it (McPhee, 2002, p. 65).

The intersection between what PBL has to offer as a pedagogical approach and the need to address issues associated with the perceived gap between theory and practice offers a fascinating opportunity to explore to what extent PBL assists pre-service educators in learning about their profession and the theoretical content that arguably informs practice. The existing, albeit relatively small, numbers of studies in this area tend to suggest that PBL helps students to focus their learning, increases the motivation to learn and assists students in acquiring the skills they believe they will need to operate effectively in the classroom as teachers themselves (Dean, 1999; McPhee, 2002; Murray-Harvey & Slee, 2000). These emerging findings suggest room for further examination regarding the perceptions pre-service educators’ hold of PBL and the impact they believe it has on their understandings of the relationship between theory and practice. Accordingly, this paper details the responses pre-service educators enrolled in Bachelor Degrees of Education (Early Childhood and Primary) had to their participation in a unit of study based on the use of a PBL scenario.
3. Methodology

The findings reported in this paper emerged from an examination of pre-service educators’ responses to their participation in a PBL scenario designed for use in a unit of study associated with the Bachelor of Early Childhood Education and the Bachelor of Primary Education at Monash University (Victoria, Australia). The unit, EDF 2202 Child Development 2, had a theoretical focus on the influences on children’s development from within and beyond the family. Traditionally, exposure to theories of child development have been considered fundamental to early childhood pre-service educators’ initial understandings of children’s development and their role as educators in supporting and extending children’s learning (Spodek, 1991). In the past, this unit of study operated using a lecture and tutorial format in which pre-service educators were lectured on a range of developmental theories, offered opportunities to discuss these during tutorials and expected to complete a case study and presentation on the relationship between theories of development and education.

The pre-service educators participating in the unit of study were 2nd and 3rd year students enrolled in Bachelor Degrees of Primary and Early Childhood education. Pre-service educators ranged in age from 19 to 40 years and had previous experience in the field from at least 1–3 week teaching practicum. Upon graduation from the 4-year degree pre-service educators would work across a range of settings, including early childhood educational settings and primary schools. For early childhood graduates, their work settings would involve working with a volunteer parent committee of management and the development of child centred curricula. Primary graduates work settings in which children attend schools from approximately 5–12 years of age following attendance at an early childhood setting and follow a state mandated curriculum.

The PBL scenario involved the pre-service educators working in groups of five in order to address the learning and developmental needs of a fictional child called Laura. The development of Laura, her circumstances and the behaviours she was seen to exhibit were drawn from the lecturers’ previous
experiences as educators in early childhood education, and thus whilst she was ostensibly ‘fictional’ reflected problems previously encountered by the lecturers in practice. Each member of the groups of five were randomly assigned a different stakeholder role in Laura’s life including, her mother (Chantelle), her early childhood educator, her case-worker (assigned to Laura as a child ‘at risk’ of neglect), her future primary school teacher and parents of Laura’s peers at the kindergarten in which she was currently enrolled. In the scenario, students were provided with a weekly “chapter” from Laura’s life during the course of the semester which was posted to the unit website (Figs. 1 and 2). Laura was initially described to the students as a child of 4.9 years and tall for her age. Various behavioural patterns exhibited by Laura in the early childhood educational setting were noted in the first chapter. In addition, students were made aware that Laura had recently been removed from her mother’s care after her mother had been arrested for soliciting in Laura’s presence and that she was currently enrolled in kindergarten and would be attending Primary school in the following year.

The pre-service educators’ responses to Laura’s needs were expected to be consistent with their various stakeholder roles, meaning that each needed to investigate or research these roles in more detail in order to engage in the problem situations presented to them via the weekly chapters. As part of the unit assessment the pre-service educators were required to develop a presentation about their understandings of Laura’s development and her learning needs from their particular stakeholder perspective to the other members of the group. During these presentations, the other stakeholders were required to respond to the presentation according to the roles they had been assigned. The final assessed task involved the pre-service educators completing a reflective essay in which they examined their interactions with the other stakeholders and the value or otherwise this experience held for them in relation to their developing philosophical beliefs about teaching and learning.
This essay also involved the students completing a learning plan for Laura in which they outlined goals they held for her learning and development and how these were to be reached.

The Unit was conducted in the traditional Lecture/Tutorial format where lecture material addressed a specific topic of influence on child development. The tutorials were used as an opportunity for students to work in their groups of 5 stakeholders and to give their presentations. Issues arising from the weekly lecture content were embedded into the chapters about Laura’s life that were posted to the website (Figs. 2 and 3). Further opportunities for discussion between the students were available through the Unit website which facilitated synchronous and asynchronous discussions between like stakeholders across the working groups in addition to access to a range of electronic resources. Although the unit was run over the course of a 13 week semester, only five chapters were written and presented on the website. Table 1 outlines how the five chapters were fitted into the semester and the pre-service educators’ actions for each week in relation to the three phases of PBL identified by Hildebrand et al. (2001).

Data regarding the students’ perceptions of the PBL scenario and its effectiveness in supporting their understanding of the relationship between theory and practice were collected using an anonymous questionnaire administered at the conclusion of semester \( (n = 85) \). The questionnaire contained 10 statements linked to a five point Likert scale (strongly disagree [1] to strongly agree [5]) as well as the use of three qualitatively orientated statements aimed at determining the pre-service educators’ perceptions of their participation in the scenario. The questionnaire was not piloted before it was implemented and thus offers primarily descriptive data of use in establishing this particular example of PBL in teacher education as a case study rather than data comprising generalisability to other settings. Data arising from the responses to the Likert scale were calculated as mean scores and the standard deviation for each determined. Data from the

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**Fig. 3.** Clicking on the relevant chapter link enabled students to read that week’s chapter content which embedded key theoretical content for that week.
qualitative responses were coded in NVIVO (a qualitative data analysis software package) and analysed thematically. This paper reports the findings from the first three quantitative questions and the first qualitative question from the questionnaire used to examine the pre-service educators perceptions of their participation in the PBL scenario. The quantitative questions were concerned with the extent to which participating in the scenario had supported the students in understanding the relationship between theory and practice; identifying issues they would face in practice; and

Table 1
Breakdown of the 13 week semester indicating the posting of the chapters, the actions completed by students in relation to the three phases of PBL.

<table>
<thead>
<tr>
<th>Week</th>
<th>Action</th>
<th>PBL phase (Hildebrand et al., 2001)</th>
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<tbody>
<tr>
<td>1</td>
<td>Pre-service students presented with chapter one&lt;br&gt;Students form groups and assigned stakeholder roles</td>
<td>Entering the problem:&lt;br&gt;Locating the situation and defining the problem&lt;br&gt;Refining the problem situation</td>
</tr>
<tr>
<td>2</td>
<td>Pre-service students explore the problem, identify issues and ask questions</td>
<td>Doing the problem:&lt;br&gt;Identifying known information&lt;br&gt;Constructing questions for exploration&lt;br&gt;Identifying additional learning required&lt;br&gt;Determining group processes for accountability in the learning&lt;br&gt;Conducting the inquiry</td>
</tr>
<tr>
<td>3</td>
<td>Pre-service students presented with chapter two&lt;br&gt;First stakeholder (Preschool teacher) presents to her group of five using information from chapter one</td>
<td>Doing the problem, continued:&lt;br&gt;Identifying known information&lt;br&gt;Constructing questions for exploration&lt;br&gt;Identifying additional learning required&lt;br&gt;Determining group processes for accountability in the learning&lt;br&gt;Conducting the inquiry</td>
</tr>
<tr>
<td>4</td>
<td>Pre-service students presented with chapter three&lt;br&gt;Second stakeholder (Mother) presents to her group of five using information from chapters one and two and from the presentation by stakeholder one</td>
<td>Doing the problem, continued:&lt;br&gt;Identifying known information&lt;br&gt;Constructing questions for exploration&lt;br&gt;Identifying additional learning required&lt;br&gt;Determining group processes for accountability in the learning&lt;br&gt;Conducting the inquiry</td>
</tr>
<tr>
<td>5</td>
<td>Students presented with chapter four&lt;br&gt;Third stakeholder (Primary school teacher) presents to group using information from chapters one, two and three and from the presentations by stakeholders one and two</td>
<td>Drawing it all together:&lt;br&gt;Sorting, synthesising, suggesting&lt;br&gt;Reflection&lt;br&gt;Action/performance&lt;br&gt;Presenting the outcome&lt;br&gt;Where to from here?</td>
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Table 1: Breakdown of the 13 week semester indicating the posting of the chapters, the actions completed by students in relation to the three phases of PBL.
developing a sense of their professional responsibilities. The qualitative question asked the pre-service educators to describe “what knowledge or skills do you think you acquired by participating in the Problem Based Learning scenario?” In this paper, the findings from the quantitative questions operate as a springboard for discussion of the results obtained from the qualitative question in relation to theoretical discussion regarding the nature of the ‘gap’ between theory and practice and the use of PBL in teacher education (Table 2).

4. Findings

The response rate for the quantitative findings presented was 62% (52 out of a possible 85) and 49% (42 out of a possible 85) for the qualitative findings.

The high mean scores (a score of 5 indicating that pre-service educators’ strongly agreed with the statement) findings suggest that participation in the scenario was perceived by the pre-service educators as helping them to relate theory to practice. In addition, the findings indicated that participation in the PBL scenario supported them in their developing ability to identify possible issues they might face as teachers and to acquire an understanding of the responsibilities they held to other people within the context of their work. Responses to the qualitative data collected in response to the question “what knowledge or skills do you think you acquired by participating in the Problem Based Learning scenario” further illuminates these findings, with thematic analysis revealing three main corresponding categories; including an increased awareness of the potential issues that might confront the pre-service educators in their work as teachers, and the strategies they would use to address these (45%); an increased awareness of the manner in which theory could be used to inform their practice (38%); and finally, increased communication and group work skills associated with an understanding of the different stakeholder perspectives involved in early childhood education (17%). Each of these findings is now discussed in greater detail with reference to the literature regarding the use of PBL in teacher education the ‘gap’ between theory and practice and the development of graduate attributes.

5. Discussion

5.1. Awareness of potential issues and strategies

This theme was concerned with the pre-service educators’ sense that participation in the scenario had alerted them to the nature of the issues they were likely to face as practicing teachers and possible strategies they might use to address these issues. Here the pre-service educators tended to indicate that they had a greater sense of the likely issues (such as responding to children’s behaviour and/or parents’ concerns), and the strategies they might use to address these as a result of participating in the PBL scenario. For example, one pre-service educator noted that participating in the scenario had supported her in acquiring “knowledge of the issues that can arise in a real school setting and the implications of these issues”. Another pre-service educator indicated that participation in the scenario had enabled a “knowledge” of the “different issues that may arise within the school context” to develop and that this was paired with the “development of strategies to help deal with some of the problems that we may encounter during our teaching careers”. An important part of this seeming awareness of potential issues and consequent strategies was that the scenario provided a sense of ‘reality’ to the issues the educators were likely to face. As one pre-service educator described, participation in the scenario “was a good way of viewing real issues faced in early childhood settings”. This reference to the ‘realistic’ nature of the experience, and its value in alerting pre-service teachers to the issues they would face in practice, was likewise identified by another student, who
suggested that participation in the scenario “helps to put you in a realistic situation, and enables you to understand some of the issues you will face when practicing as an educator”. This reference to understanding the nature of potential issues was identified by another pre-service educator, who described her participation in the scenario as having provided an opportunity to gain “insight into children’s life contexts and their impact on education”. This understanding was one explained more clearly by a student whose participation in the scenario and group work was detailed by the articulation of a particular issue that arose for many of the pre-service educators during the course of the semester. Here, the student illustrated his understanding of parents’ concerns with respect to their own children, following a chapter in Laura’s story in which Laura had been described as hitting another child as well as having disturbed the play and learning experiences of other children enrolled in the pre-school. An awareness of how this situation might likewise be dealt with by the educator was also expressed:

I now know more about how parents react when children are hurt by others. Some parents may not understand as to why some children misbehave. This helped to find ways to explain and to find relevant information to the issues and development of the children. It helped me to know about places that I can find information to assist parents.

Thus, for this pre-service educator, a potential issue was identified and a strategy for dealing with the issue outlined in terms of accessing information that could be used to both support the child and assist parents in responding to the children. In this sense, this particular pre-service educator articulated his understanding of potential issues and the use of consequent strategies in dealing with these in more detail than those pre-service educators describing their awareness of the issues and strategies in more generic terms. This particular response tends to indicate that participation in the PBL scenario was a useful means of supporting the pre-service educator in developing a sense of the issues and strategies related to the practice, not necessarily just the theory of teaching. It is here that PBL’s potential for bridging the ‘gap’ between theory and practice may be examined using Kessels and Korthagen’s (2001) description of the need pre-service educators have for access to the more practical-based forms of knowledge in order to become familiar with the processes common to teaching that involve “perceiving, assessing situations, judging, choosing courses of action and being confronted with their consequences” (p. 27). According to the responses of the pre-service educators reported in this paper, participation in the PBL scenario offered an experiential and yet ‘realistic’ framework that allowed them to perceive, assess situations, judge and choose a course action, with this course of action likewise comprising a set of consequences in terms of the reactions the other stakeholders had to their intended plans.

Structuring the unit of study around the needs of a young child that occurred in ‘real time’ enabled the pre-service educators to continuously engage with a situation of evolving complexity. A key aspect of this engagement was the development of personal responses to the different issues and concerns that arose throughout the semester, in which the pre-service educators necessarily assessed the situation and developed a response to this assessment. The scenario itself arguably provided a “practical” context for decision making that provided the pre-service educators with an opportunity to develop an awareness of the issues they would be likely to face as practising educators. It is possible that the scenario established a learning situation for the pre-service educators in which they were able to begin with an understanding of the practical issues they faced, as opposed to a set of theoretical content they were required to relate to practice (Kessels & Korthagen, 2001, p. 29). This idea was noted in the second theme arising from the pre-service educators’ responses to the qualitative question in which they were asked to detail the knowledge or skills they believed they acquired by participating in the PBL scenario. Here, the pre-service educators indicated that participation in the scenario had enabled them to more easily establish the nature of the relationship between theory and practice.

5.2. Theory and practice

This theme was concerned with the manner in which the pre-service educators described their participation in the PBL scenario as supporting their understanding of the relationship between theory and practice. This particular theme is of interest given the historical perception of the ‘gap’ between theory and practice and the responsibility teacher educators have in bridging this supposed
space for the benefit of pre-service educators. Findings from this theme saw participants in the PBL scenario describing their experience of the situation as linking theory to practice, with once again, mention of the realistic nature of the task emphasised as an important contribution to the establishment of this link:

The knowledge from readings became much more meaningful when you could link into a real life situation. I will never forget Laura’s story and what I have learned.

It puts theory into real life contexts.

It will help you as a teacher because it puts theory into practice and it makes you aware of issues and programs you might not have considered.

Each of these responses was typical of those recorded under the theory and practice theme. Of note here is the manner in which the theory was considered relevant because of its relationship to a realistic context. Thus, rather than the prescription of theoretical content to practice as had occurred in this unit of study in the past, the PBL scenario offered the pre-service educators the opportunity to acquire and apply theory in relation to an evolving problem situation that involved interactions with a range of other stakeholders. For one pre-service educator, interactions with the other stakeholders were considered an important component of her understanding of the theory. Here, the pre-service educator described the “other perspectives” of the stakeholders as influencing her understanding of how “different theories can be related to a topic”. Thus, for this pre-service educator, the theory was contextualised according to the various stakeholder perspectives of the participants in her group rather than as a discrete body of material to be applied in practice independent of the responses from others. Accordingly, it may be argued that structuring this unit of study around the PBL learning scenario allowed for the ‘Episteme’ to be given meaning in relation to a dynamic context. When given meaning, the theoretical content was perceived as more useful by the pre-service educators and thus the notion of the gap reduced and the learning considered ‘deeper’. Two pre-service educators described this situation as follows:

The learning is more real, I feel I have learned theory on a deeper level. I will remember the experience and am more able to apply my learning to real life.

I now understand the advantages of being proactive rather than reactive in dealing with challenging behaviours. This is more realistic than dumb theory and thus more relevant.

Each of these responses is interesting in that they refer to the learning in ‘real terms’. The second is particularly so, as it demonstrates an articulated understanding of the differences involved in proactive and reactive responses to children’s behaviour that has emerged from participation in the experience rather than a reading of the theory. In addition, the description of ‘dumb’ theory begs the question, is theory described as ‘dumb’ when decontextualised because it is stupidly useless, or because it fails to speak to the pre-service educator as a relevant framework on which to draw when engaged in teaching and learning? Kessels and Korthagen (2001) write that the responsibility of the teacher educator is to offer experiences that help the pre-service educator to understand his or perception of an educational situation:

It is just not one’s task to bridge a gap between theory and practice as it is in the Episteme approach. One’s task is to help the student become aware of the salient features of the experience. One is there to help the student see, not to teach the student a number of concepts. One is there to help the student refine his or her perception, not to provide the student with a set of general rules... one is there not to lecture about educational theory, to instruct general rules, or to extensively discuss instructional principles. For the ‘matter of the practical’ is just not helped very much by such conceptual knowledge. What it needs is the development of perceptual knowledge” (Kessles & Korthagen, 2001, p. 28).

Here the earlier pre-service educator’s description of his understanding of how to approach challenging behaviour in young children and his articulation of this as a more useful experience than ‘dumb theory’ is manifest in Kessels and Korthagen’s argument that the development of perceptual knowledge is initially more useful than the lecturing of educational theory. The PBL scenario may well have operated to provide the student with an opportunity for the perceptual to be experienced within the university setting, thereby, allowing the theoretical to be interpreted in relation to the “matter of the practical”. This idea was likewise
touched upon by the pre-service educator who indicated that she would “remember the experience and [therefore be] more able to apply my learning to real life”.

These findings are not to say that a universal claim regarding the applicability of PBL learning to teacher education may be made, since the extent to which links between theory and practice were established cannot necessarily be separated from the weekly chapter content that drove the experience and contained reference to the key theoretical ideas on which the unit was based. For example, one topic during the semester dealt with children’s understandings of death and grief. The chapter content matching this topic saw the death of Laura’s estranged father and her consequent behaviours following this event mimicking what the literature described as typical grief patterns for young children. Thus, in this particular use of PBL in teacher education, it must be asked whether it was the embedded nature of the theoretical content within the weekly chapters or the pre-service educators’ readings of, and responses to, the chapters that resulted in their perceptions of the experience as supporting their understanding of the link between theory and practice. Further investigation into the use PBL in teacher education is required to determine how the intersection between theory, practice and the PBL experience is played out when utilised as a pedagogical technique aimed at increasing pre-service educators’ understandings of the relationship between theory and practice.

5.3. Communication skills, group work and stakeholder perspectives

This theme referred to the pre-service educators’ sense that participation in the PBL scenario had assisted them in developing their communication skills and ability to work cooperatively with others as an outcome of their interactions with the different stakeholders comprising their group. For some pre-service educators, this theme saw them describing their increased awareness of the roles other people had to play in a child’s education, for example:

I learned how to interact with other stakeholders and to take their feelings into consideration and now see the different support programs that are available to help children.

I learned more knowledge about the roles different people involved in early childhood education have, for example, case workers.

I have a better understanding of different stakeholders and their responsibilities.

Whilst these responses focused on the pre-service educators’ increased awareness of the different perspectives involved in a child’s education, other pre-service educators articulated how their awareness of the different stakeholder perspectives had assisted them to understand that any given situation could in fact be interpreted differently according to the particular perspective a stakeholder held. For example, one pre-service educator noted that “just being able to see the same situation from the different [stakeholder] views” was important. Another pre-service educator was able to take this awareness even further, describing his understanding of the various roles and the manner in which the different perspectives associated with these needed to be considered in order for a group of people to work together effectively:

I learned about the different professional responsibilities stakeholders have, and that you need to consider all the perspectives which people hold in a situation, it is learning to work with a group of people in a situation like this.

Here, the understanding regarding the different roles was interpreted in terms of according respect to the various perspectives people might hold within a given situation, with this in turn linked to the ability to work effectively in a group situation. The ability to understand the different stakeholder roles and the manner in which these contribute to the group situation was also noted as an outcome of participation in the PBL scenario by other pre-service educators. Here, the process was described as “sharing information as a team, all working together towards the same goal” Or, “working in groups, compromising and sharing ideas” One, pre-service educator took this idea further, noting that participation in the unit had contributed to her ability to express her opinion in the group setting:

It was good to have the opportunity to express my own views and values as an educator and to share them with others. I grew in confidence with justifying my beliefs and attitudes in the scenario.

Here the pre-service educators were seen to describe their participation in the scenario as...
assisting them in the development of key interpersonal and communication skills, which are arguably important to a teaching graduate’s ability to operate effectively in the post-university environment (Dean, 1999, p. 6). The ability to recognise that a stakeholder may hold an entirely justifiable, and yet opposing view, of a situation to that held by oneself represents an important step in being able to work collaboratively in a group situation in order to meet a common goal. Thus, whilst this theme was not concerned with the explicit articulation of the relationship between theory and practice, it nonetheless expressed the development of a set of skills fundamental to the practice of teaching and learning—that of working with and understanding the perspectives held by other people.

6. Conclusion

Whilst PBL has been utilised in the health sciences, its use as a pedagogical approach in fields such as teacher education has not been as evident. To date, little research regarding the effectiveness of the technique in teacher education, and in particular early childhood and primary teacher education within Australia, has been conducted. In this case study, the learning focus for the pre-service educators was on the problematic nature of the situation (Margetson, 1997) in which the educators were required to respond to the evolving educational needs of Laura from their various stakeholder perspectives. According the PBL literature, active participation in a situation such as that presented in this paper allows learners to make decisions, ask questions and synthesise information, and therefore develop a more in-depth understanding of both theoretical and practical concerns (Engel, 1997). The findings reported here indicated that the pre-service educators’ participation in the scenario enabled them to develop; (1) an awareness of the issues they were likely to face upon graduation, (2) an understanding of the relationship between theory and practice, and (3) an increased confidence in their communication and interpersonal skills. As a pedagogical approach PBL offers an opportunity for issues associated with the perceived gap between theory and practice to be approached by allowing pre-service educators the opportunity to participate in a situation that requires them to make judgements, respond to other people and draw on theory to inform their decision making processes. Whilst, PBL may be considered a useful pedagogical tool in teacher education, further investigation is needed in order to determine how PBL works to support pre-service educators in this process. For example, what is the nature of the relationship between the actual PBL situation that prompts the learning and the pre-service educators’ reactions and to, and interpretation of, the task? In addition, how does participation in a PBL scenario influence pre-service educators’ conceptions of learning and therefore their interpretations of how they could best approach teaching as practising educators? These questions require further examination if the use of PBL in teacher education is to inform understandings of how pre-service educators construct understandings of both how, and what it means to teach, particularly in light of recent developments that have begun to emphasise the notion of social-constructivist and humanist approaches to teacher education (Korthagen, 2004).

References


