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## Design and Facilitation of Problem-Based Learning in Graduate Teacher Education: An MA TESOL Case

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# THE INTERDISCIPLINARY JOURNAL OF PROBLEM-BASED LEARNING

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## VOICES FROM THE FIELD

### Design and Facilitation of Problem-Based Learning in Graduate Teacher Education: An MA TESOL Case

Cynthia Ann Caswell (Aston University)

#### Abstract

This exploratory, evaluative case study introduces a new context for problem-based learning (PBL) involving an iterative, modular approach to curriculum-wide delivery of PBL in an MA TESOL program. The introduction to the curriculum context provides an overview of the design and delivery features particular to the situation. The delivery approach has established multiple roles that contribute to the design and facilitation of the learning environment: lead instructors, collaborating instructors, and students as peer teachers. These roles also identify milestones on a collaborative instructional skills trajectory for professional development. In this mixed methods study, qualitative data were collected from collaborating instructors (the majority of whom were alumni) in order to illuminate the nature of successful PBL cycles and quality peer teaching, as experienced in the program. Their perspectives were also elicited on their position in the trajectory, highlighting current professional development benefits and future needs. Quantitative data on student demographics and mean GPA for coursework triangulate the qualitative results. Implications and recommendations for further research are explained.

*Keywords:* teacher education, TESOL, problem-based learning (PBL), knowledge creation, collaboration, diversity

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Problem-based learning (PBL) places great emphasis on a facilitative style of teaching and on students demonstrating and cultivating both self-directed and collaborative learning styles. However, the manifestation of facilitation, as well as self-directed and collaborative learning, is situated in the disciplinary and local cultures of the programs that adopt the methodology. Teacher education in teaching English to speakers of other languages (TESOL)<sup>1</sup> is a comparatively new context for PBL. The MA TESOL program, which serves as the case for this study, offers an integrated PBL approach, where the curriculum employs PBL in a recursive, comprehensive manner (Poikela & Moore, 2011). Only a few studies exist that consider PBL implementation in graduate teacher education contexts. This evaluative study examines the unique way in which teacher and student role assignments in an MA TESOL program support intended professional teacher-learning experiences in relationship to the integrated PBL design. These role assignments are also key milestones on a trajectory for the development of potential TESOL teacher educators.

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1. When referring to the professional organization the first letter of the acronym represents the word *teachers* rather than *teaching*.

#### Institutional Overview of the Case Context

The MA TESOL program under consideration was initiated at Trinity Western University (TWU), a private university in British Columbia, Canada, as a cohort-based, full 42-semester hour program in the summer of 2003. It is an applied linguistics program, but the faculty have qualifications in both applied linguistics and language teaching. The program is the first online MA TESOL to offer delivery in Canada and completed its 10th year of intake for the online track in the summer of 2012. With students admitted from Canada and the United States in North America, several nations from the Asia Pacific region, as well as from Europe, North Africa, and the Middle East, the reach of the program is global. During 2008 the program credit load was reduced to 36 semester hours in anticipation of the introduction of a parallel, intensive 12- (to 16-) month resident track for the fall of 2009. The program distinguishes itself as practitioner-oriented rather than thesis-oriented, although a thesis track is available. Over the first decade of delivery, 14 cohorts totaling 154 students were served through the program.

## Literature Review

### The Classic PBL Methodology

PBL as a methodology was first introduced by Barrows in professional education for physicians, in Canada, in 1969 (Barrows & Tamblyn, 1980). Savery (2015, pp. 8, 9) outlines criteria (originally identified by Barrows) that generically define PBL methodology independent of discipline. The characteristics are summarized as follows: (a) Problem simulations and triggers used must be ill-structured, allowing for free inquiry. (b) Learning should be integrated, as it is in real-world problem solving, from a wide range of disciplines and subjects. (c) Similarly, activities designed for PBL should be those used in real-world situations. (d) Students must be responsible for their own learning, articulating what they do and do not know about a problem in order to establish goals for the self-directed stage of their learning. (e) Collaboration and information sharing is vital; and self-directed study by individual students must be integrated into a holistic solution to the problem through reanalysis and resolution. (f) A closing analysis and discussion of the final outcomes from the learning cycle is necessary. (g) Self and peer assessment should be carried out at the end of each PBL scenario and at the end of curricular units. (h) Student summative assessments or examinations must measure student progress toward the goals of PBL; that is, both curricular content mastery and process goals. In Barrow's view, PBL must be the pedagogical base of a curriculum and not just part of the teaching approach.

Many applications of PBL address the pedagogical base for course-level curriculum; however, fewer examples exist of program-wide implementation of the model (e.g., Finucane, McCrorie, & Prideaux, 2011). The MA TESOL case presented in this study may be categorized with departments that deliver a program-wide implementation of PBL.

### Teacher Education in TESOL

In this age of globalization, English ranks first on the list of international languages that dominate economic, academic, and political activity (McKay, 2012). There is currently a great demand for well-prepared English teachers; however, demand surpasses supply in many areas of the world (Burns & Richards, 2009). Teacher education programs in TESOL must prepare teachers for a wide range of second language learning contexts, both national and international, as well as differing institutional and instructional settings:

From English as a second language (ESL) to English as a foreign language (EFL) to foreign language education, bilingual education, language immersion education,

and from Pre-K-12 settings, to community colleges and four year institutions, to adult language instructional settings, second language education and teacher education takes place in numerous contexts around the globe. (Tedick, 2005, p. xvii)

English language teaching (ELT) is truly an international field that functions within great diversity of contexts and of learners. The TESOL professional community is the dominant contributor to the research and literature on second language teacher education (SLTE) (Burns & Richards, 2009, 2012). It was established in the 1960s along with its flagship journal, *TESOL Quarterly* (Canagarajah, 2016; Freeman, 2016).

During the field's formative period, ELT was viewed primarily as the application of research results from second language acquisition studies and applied linguistics. This research focused on issues related to the language learner and language learning. For the first three decades, the field had an emphasis on methods and operated from an assumption that a best method for language teaching could be established. Over time, more than 13 language teaching methods emerged. These methods function at the level of an approach and most have been disparaged as bandwagons (Grittner, 1990; Kumaradaveliu, 2003). Belief in the importance of the top-down, prescriptive implementation of methods came to be perceived as relegating teachers to the status of technicians rather than professionals (Kumaradaveliu, 1994, 2003). Particularly in the 1990s, both teachers and teacher educators began expressing an overwhelming dissatisfaction with the dominance of methods. Teacher learning (i.e., teachers learning about teaching and their own teaching practice) was acknowledged as central to effective language teacher education. The paradigm shift stimulated strenuous debate (e.g., Freeman & Johnson 1998; Tedick, 2005; Yates & Muchisky, 2003), some of which was consolidated in the *TESOL Quarterly Special Issue* for 1998. Out of the debate, a reconceptualization of the knowledge base of the field emerged (Burns & Richards, 2009; Freeman, 2016).

The new conceptualization of the SLTE knowledge base established emphasis on developing language teachers as reflective, collaborative practitioners (Farrell, 2013, 2015; Johnston, 2009), who engage in community in order to *problematize* practice (Burns, 2010), and who have potential to become change agents in their local contexts. This new conceptualization of the knowledge base expanded the scope of outcomes expected from SLTE programs to include professional dispositions (i.e., attitudes, values, and membership) and professional skills such as critical thinking, as well as reflective and collaborative abilities (James & Brown, 2005). These broad developments in the field have been recognized as the "socio-cultural turn" of SLTE (Johnson, 2006, p. 235). As a result, a new stream

of research has emerged, which documents teacher cognition (i.e., beliefs, knowledge, thinking processes, etc.), and the creative and professional capacities of teachers in their own language teaching practices (Borg, 2003; Canagarajah, 2016). Nevertheless, research in SLTE program evaluation must retain a context-sensitive focus on methods, delivery issues, and the sustainability of teaching team effectiveness.

### Tichy's Model and the TWU MA TESOL Case

The foundational influence on the TWU MA TESOL program was Noel Tichy and Nancy Cardwell's (2002) book *The Cycle of Leadership: How Great Leaders Teach Their Companies to Win*. Tichy's model of leadership is case-based research, established with 35 leadership interviews. Tichy identifies his model as the *teaching organization* and focuses on cycles of daily professional problem solving and professional development for leaders. The foundation for his construct, the Teachable Point of View (TPOV), is his position that every leader must have a point of view and must be able to teach it or articulate it to others. Leaders with a *teachable* point of view also accept teaching from those they lead. They communicate with the intent to distribute leadership rather than impose it. In his model, the TPOV is also the basis for executive-level organizational leaders to prepare others to carry on the institution's values and vision. For the MA TESOL program, the influence of Tichy's contribution has been both philosophical and theoretical.

The TWU MA TESOL adopted and adapted two key concepts from Tichy's model: (1) the Virtuous Cycle of Knowledge Creation (VCKC); and (2) the Teachable Point of View (TPOV). In the VCKC, the instructor and students are involved in a mutual learning process, where "everyone is a teacher and everyone is a learner, making reciprocal teaching and learning" the norm for interaction (Tichy & Cardwell, 2002, p. 7). This is what causes the cycle to be virtuous. The VCKC contrasts with a "vicious non-teaching cycle" where control is solely in the hands of the instructor (Tichy & Cardwell, 2002, p. 57). Emphasis is on shared power in the learning process and on students taking responsibility for learning and problem-solving within the knowledge creation process. A TPOV in the MA TESOL context may be seen as a type of *perspective articulation* problem solving. Ill-structured problem solving by definition includes a consideration of diverse views. Students in higher academic programs, such as an MA TESOL, also engage with various published philosophical and theoretical viewpoints, which they must learn to articulate accurately. They then identify their own professional views in comparison or contrast to accepted positions in their professional fields. An example of this for language teacher education would be the articulation of an individual professional philosophy of language education.

The TPOV approach clearly shares many features of the classic PBL approach. There is, however, no direct connection in Tichy and Cardwell's (2002) reference list to medical PBL sources or any of Howard Barrow's publications. The TWU MA TESOL director, who enjoys analogical learning and draws upon other disciplines for new perspectives in leadership, was able to extrapolate key concepts from the TPOV framework to establish the MA TESOL program delivery process. In his workshops, Tichy used a variety of templates to help leaders develop their TPOVs, and these were the impetus for the design of a TPOV template specific to the MA TESOL. The founding faculty set up the template, which continues to be used by all the instructors. Nevertheless, much of the detail of the program design has been emergent. From the program's inception, experientially based, disciplinary knowledge from the field of TESOL has guided instructor choices in selecting problem types and undertaking PBL course design.

## The Curriculum Context for the Study

### Introduction to the Curriculum Context

The TWU MA TESOL curriculum employs PBL cycles recursively across all modules within eight of the core courses. The same collaborative approach to knowledge generation is used in both program tracks. The default design is to deliver in course-pairs that feature a theoretical course and a practical course. Both the online and resident tracks use a CourseForum™ wiki platform for course organization, document drafting, and collaborative interaction. The TPOV draft page is like a digital whiteboard upon which the students synthesize their ideas, integrating and constructing new knowledge from resources supplied for or located during the PBL cycle:

The use of this software in the MA TESOL program makes it possible for emerging assignments to be accessible to all online stakeholders at the same time. The specific platform . . . also enables students to create asynchronous discussion pages linked directly to the assignment at hand. The proximity of these conversations to the task facilitates seamless assignment development. (Goertzen & Kristjánsson, 2007, p. 214)

The general goal of the TWU MA TESOL is to increase the professional level of each student through in-depth engagement with the knowledge base of the field. During student participation in recursive TPOV cycles, the development of content knowledge, higher order learning skills, and professional dispositions becomes apparent. A set of recursive assessments are employed throughout the curriculum (cf. Figure 1, next page). The exit assessments include

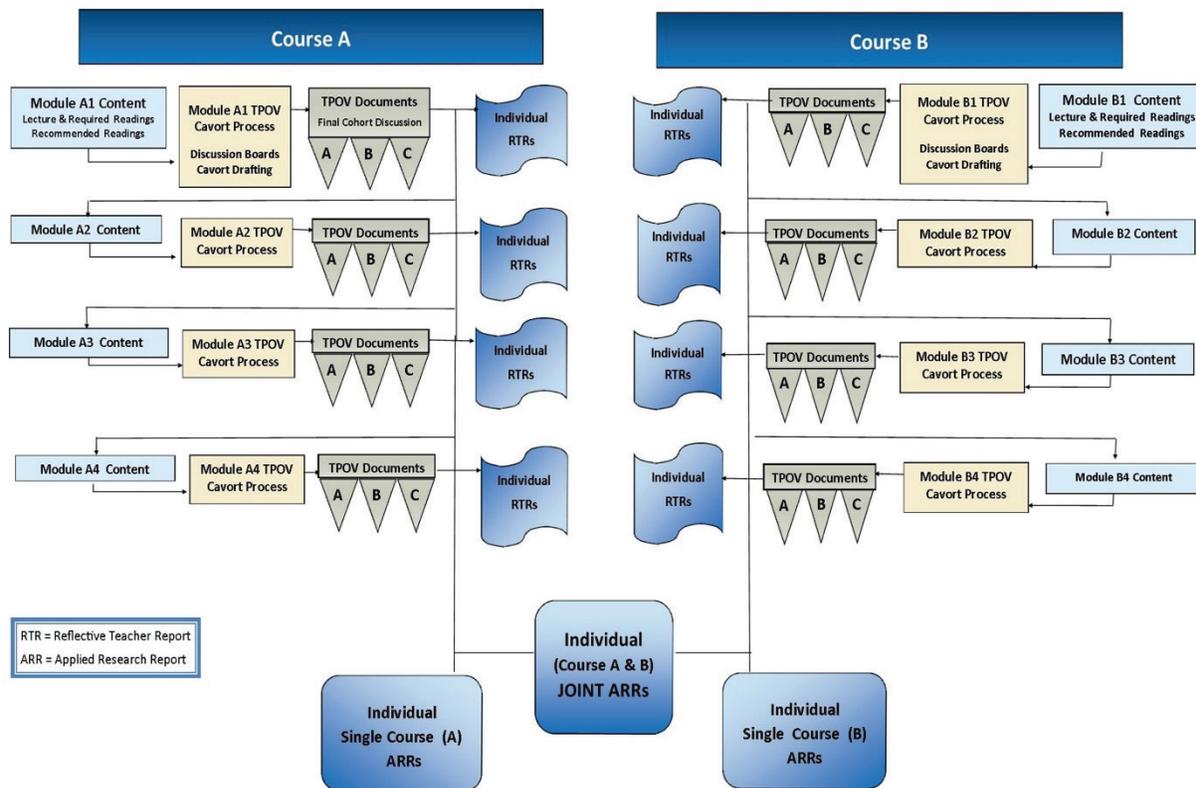


Figure 1. MA TESOL course design with modular TPOV cycle.

an extensive internship (i.e., practicum) course<sup>2</sup> and the capstone, E-Portfolio. These final courses focus on cultivating individual strategic performance in teaching practice and documenting individual teacher competencies.

### Course Design and Problem Types

TWU MA TESOL course design emphasizes collaboration in small groups, called *cavorts*. (The term was nominalized by the director from the verb *cavort* which means *to joyfully dance*, resulting in the contextualized meaning of *small groups of students engaging in a joyous dance of learning together*.) For each module in a course, the lead instructor defines the boundaries of the learning space (Hmelo-Silver, 2015) by providing each cavort with a clear, workable, yet negotiable position on what is to be researched and learned, namely, the TPOV. An average module is comprised of three conceptually related TPOVs (assuming that the cohort is either large or small enough to form three cavorts). Cavort size ranges from three to five students. The default timeline

for a module is three weeks, one week per stage (particularly for the online track); however, versions of the cycle that are compressed in terms of time and content are utilized, particularly during program orientation and the summer semester.

According to Jonassen's (2011) classification scheme, problems in TESOL teacher education are predominantly ill-structured. Cultural differences in local language teaching contexts often contribute to dilemmas in policy and practice in this global field; in the MA curriculum, such issues often serve as the module or problem focus. Moderately complex design problems are commonly distributed in stages over four modules in at least a third of the courses. Furthermore, linguistic analysis may be viewed as a discipline-specific type of rule-induction problem solving, and language teachers and teacher educators use it in materials design. Language teachers also solve diagnosis-solution problems: they conduct student needs analyses or analyze language proficiency errors in student performance, and then devise teaching plans to cultivate student abilities. Teachers also engage in strategic performance when delivering lessons, courses, and curricula. In fact, curriculum-wide PBL delivery for an MA TESOL program engages with most of the problem types.

2. Teachers in the MA program who already have substantial experience in the ELT field may take the research or teacher training options or apply to waive the practicum and substitute elective courses.

In the TWU MA TESOL, the term *TPOV* is used to refer to both the learning process (i.e., the knowledge creation or problem-solving cycle) and its product (i.e., the outcome, a document-based presentation). The TPOV template and the resulting documents usually contain six sections, which scaffold the knowledge creation cycle: (1) definition, (2) tool usefulness: pedagogical, professional, and political; (3) the problem, (4) reference checks, (5) name checks, and (6) references (TWU MA TESOL Department, 2003–2013). All of the instructors design their PBL learning spaces within this flexible framework.

The TPOV template is much more than the hard scaffold for a specific project. It is the unifying template for the curriculum-wide PBL approach, relevant to both instructor design choices and student process in the core cycles. A completed TPOV in some instances might resemble a small project; but in many cases, a TPOV presentation is closer to the status of a worked example of problem-solving (Jonassen,

2011). Students engage collaboratively to produce many worked examples that apply theoretical or methodological constructs, or stages of design models, over the duration of a course. At course end, they individually complete a new, comprehensive application of their learning in an integrated problem-solving activity, and the project outcome is a summative course assessment, which accounts for 50–60% of their final grade.

Table 1 presents a technical design view of the TPOV template, with further reference to the types of problems addressed in the MA TESOL curriculum. The design template is research-based, drawing from a grounded analysis of TPOV design and outcomes from the first year of the program. This grounded analysis has been recently enhanced. Using a grid, on a course-by-course basis, Jonassen's problem-types, learning issues, and potential threshold concepts were identified in instructor courses from past and current

*Table 1.* TPOV template-technical design version.

Section	Description of Section Function	Appearance in Knowledge Construction
Theory or Definition	Students construct the general background information on a language teaching topic area which will form the theoretical or methodological context for the TPOV development. The instructor typically identifies key terms and concepts, a relevant entity, or a general topic, or skill area, which students must define precisely from the relevant knowledge available in the assigned CORE or TPOV specific readings. They are also encouraged to bring additional research to the assignment.	<ul style="list-style-type: none"> <li>• Statement of a concept definition of key terms in paragraph form.</li> <li>• Description of a learner group, and identification of implications of the description for teaching, testing, or materials development.</li> <li>• Elaboration of the essential characteristics, qualities, factors, features, or format of an educational programme, document, policy, test, code of ethics, etc.</li> <li>• Summarization or overview of a model, or model component, framework, theory, or position on an issue.</li> <li>• Classification of an entity relative to others of its type.</li> </ul>
Tool Usefulness	Using scholarly sources as support, students explain how concepts identified in the definition section and elaborated in the problem section will help them as teachers: <ul style="list-style-type: none"> <li>• Pedagogically,</li> <li>• Professionally, and</li> <li>• Politically.</li> </ul>	<ul style="list-style-type: none"> <li>• Pedagogical usefulness relates directly to application of the information in teaching-learning transactions.</li> <li>• Professional usefulness includes the impact of the concepts on the teacher's general knowledge base, individual teaching philosophy, and awareness of teaching-learning issues.</li> <li>• Political usefulness involves the pertinence of concepts to the justification of decision making in the broader educational context in professional discourse with programme administrators and political officials.</li> </ul>

Table 1., cont'd. TPOV template-technical design version.

Section	Description of Section Function	Appearance in Knowledge Construction
The Problem	<p>Difficulty Level: Problem types in the MA TESOL definitely tend toward the ill-structured end of Jonassen's (2000) structuredness continuum; and they are at least moderately complex due to multiple perspectives involved in situated language teaching and learning contexts.</p> <p>Specific Types: Problem-types used in the MA TESOL are:</p> <ul style="list-style-type: none"> <li>• Situated case analysis.</li> <li>• Design problems (with theory or model application components).</li> <li>• Decision-making (procedural) problems.</li> <li>• Formal perspective articulation problems (with application components).</li> <li>• Policy issues.</li> <li>• Strategic performance.</li> </ul> <p>However, most of these ill-structured problems are broken into subcomponents and distributed over the modules of a course, with respect to several situated cases, at each stage of the problem solving. Completion of the complex problem dimension (i.e., problem-solving or -posing or -prevention) for the problem type occurs over an entire course, encompassing three or four modules. In the project-based summative assessment, students then complete a cumulative problem-solving task on a situated case of their choice.</p>	<p>Problem Components:</p> <ul style="list-style-type: none"> <li>• Situated cases for analysis appear as: <ul style="list-style-type: none"> <li>• Description of a learner group in the definition, choice of a learner for interaction, use of the cohort as a peer-learning group for micro-teaching.</li> <li>• Real-world institution and course contexts (e.g., English for academic purposes at a university language institute; English language learner immersion classes in the Canadian K–12 system).</li> <li>• Published case studies from journals, or case-based book chapters, technical reports, etc.</li> <li>• Examples of existing resources: multimedia, textbooks, workbooks, materials sets, curricula and policy documents, proficiency testing websites, etc.</li> <li>• Integration of benchmark standards as identifiers.</li> </ul> </li> <li>• Perspective articulation problems appear as: <ul style="list-style-type: none"> <li>• Explanation of theoretical concepts and constructs.</li> <li>• Identification, elaboration, reflection on, and critical discussion of relevant issues and trends in theory and practice.</li> <li>• Composition of core value statements or teaching philosophy, policy statements or evaluative reviews.</li> </ul> </li> <li>• Design problem subcomponents appear as: <ul style="list-style-type: none"> <li>• Development of practical applications from theory.</li> <li>• Integration of benchmark standards to delimit the design task, or organize its parameters.</li> <li>• Selection, sequencing items for analysis and adaptation of existing resources, or for creation of new resources.</li> <li>• Evaluation and/or improvement of existing resources.</li> </ul> </li> </ul>

Table 1., cont'd. TPOV template-technical design version.

Section	Description of Section Function	Appearance in Knowledge Construction
The Problem		<ul style="list-style-type: none"> <li>• Strategic performance appears as:               <ul style="list-style-type: none"> <li>• Negotiated, collaborative task cycle completion.</li> <li>• Embedded academic language proficiency.</li> <li>• Micro-teaching episodes; or teaching or research practicum.</li> <li>• Action research proposal and/or project completion.</li> <li>• Self- and peer-assessment in real-time feedback contexts.</li> <li>• Reflective interaction with an e-mentor or school advisor.</li> <li>• Leadership in activities of the professional community.</li> </ul> </li> </ul>
Reference Checks	<p>Reference checks in basic form are one paragraph annotations (i.e., similar to annotative bibliography references) for four or five references (e.g., journal articles, book chapters) pertaining to the particular problem of each cavort. The instructor may assign these articles or provide a range of recommended articles from which students may choose, as TPOV-specific readings, or may request that the cavort search for their own sources.</p> <p>When a website or a large digital document is a source, it is not feasible to write a reference check, and instead, students must read strategically to locate relevant information. Summarizing occurs once such information has been identified.</p>	<ul style="list-style-type: none"> <li>• <i>Basic reference checks</i> are one paragraph of about 100 words. The annotations or summaries should be specific enough to identify how the source contributes to the problem under discussion. The information should also allow other cohort members, who have not yet read the source, to determine if it may be relevant to their ARR.</li> <li>• <i>Summary-Critiques</i> are paragraphs of 300 words which include 100 words of source summary and then 200 words of critical analysis of the contribution.</li> <li>• <i>Writer and Reader-Responder Pair</i> approaches to the task involve two students; each is responsible for writing a 300-word summary-critique of a source, and for reading and responding to their partner's summary-critique.</li> <li>• <i>Complete Course Annotative Bibliography</i></li> <li>• <i>Annotative Bibliography</i> as a research stage in literature review.</li> </ul>

Table 1., cont'd. TPOV template-technical design version.

Section	Description of Section Function	Appearance in Knowledge Construction
Name Checks	Each cavort is responsible for producing a brief, one-paragraph biography on four or five individuals who have contributed significant research to the particular topic area or problems being addressed in the TPOV. The instructor may give these names or may request that the cavort search for their own. Information is obtained from websites (university and faculty pages), acknowledgements in the academic literature, email or phone contact, or discussion with instructors.	<ul style="list-style-type: none"> <li>• Relevant information includes:               <ul style="list-style-type: none"> <li>• Current institutional affiliation and status.</li> <li>• Educational background, field of research specialization.</li> <li>• Organizational affiliations and leadership roles.</li> <li>• Publication record and experience (authorship and editorship).</li> <li>• Teaching, conference and workshop contributions.</li> <li>• Cross-cultural experience and language specializations.</li> <li>• Links to professional and/or institutional websites.</li> </ul> </li> </ul>
References	In text body citations of sources and matching reference list are part of standard TPOV completion.	Based on guidance to an introductory APA format, as introduced in the department e-manual.

syllabi and design samples. The grid was merged with the original results to produce the technical design view of the framework. The types of problems presented in the table are representative but not exhaustive.

### The Core Cycle: Workflow Stages

The workflow for a module has three stages: (1) foundations, (2) TPOV creation, and (3) presenting and debriefing (see Figure 2, next page). The core cycle is repeated once per module per course in each course-pair. The presence of a lecture in the *foundations* stage identifies this program as hybrid PBL, whereas the recursive use of the core cycle identifies the curriculum as employing an integrated PBL approach (Barrett & Moore, 2011). In this stage, new theoretical or methodological content knowledge for each course is introduced, knowledge that is foundational to the types of problems encountered in the specific course. During this stage the students attend to core readings and listen to the lead instructor's lecture. Toward the end of the first stage, or early in the second stage, cavort members will write up their reference and name check assignments. The boundaries of the two stages are somewhat permeable in terms of these shorter activities.

The second stage, known as *TPOV creation*, also has a workflow, adapted by the MA TESOL director from the collaborative writing process, that is: brainstorming, drafting, revising, and editing, as exemplified in Murray's (1992) article, "Collaborative Writing as a Literacy Event: Implications

for ESL Instruction." The written outcome of the cycle is a collaborative, prewriting draft. The director's choice in this matter (i.e., identifying the draft as prewriting) allows faculty a space in which to deal with academic writing development, including issues of plagiarism, in a manner that recognizes the learning culture differences (Cortazzi & Jin, 2013) and the language development needs of second language students.

In the final *presentation and debriefing* stage of the cycle, each resulting collaborative TPOV is presented to the other cavorts in the cohort for comments. Using that feedback, together with comments from the lead instructors, the TPOV is finalized, presenting a clear position on what has been learned, and then becomes part of the cohort's archived VCKC. In this debriefing time, students also reflect on their learning experiences, including elements of self and peer assessment in their Reflective Teacher Reports (RTRs). Thus, the TPOVs are works in progress that provide a database (stored in the wiki) for future reference. Students are expected to draw upon relevant knowledge in the VCKC to complete their summative course-level assessments, the Applied Research Reports (i.e., the ARR) (TWU MA TESOL Department, 2003–2013).

### Roles in Graduate PBL

The TWU MA TESOL program identifies roles for both instructors and students. There are typically two types of instructors per course: a lead instructor and a collaborating

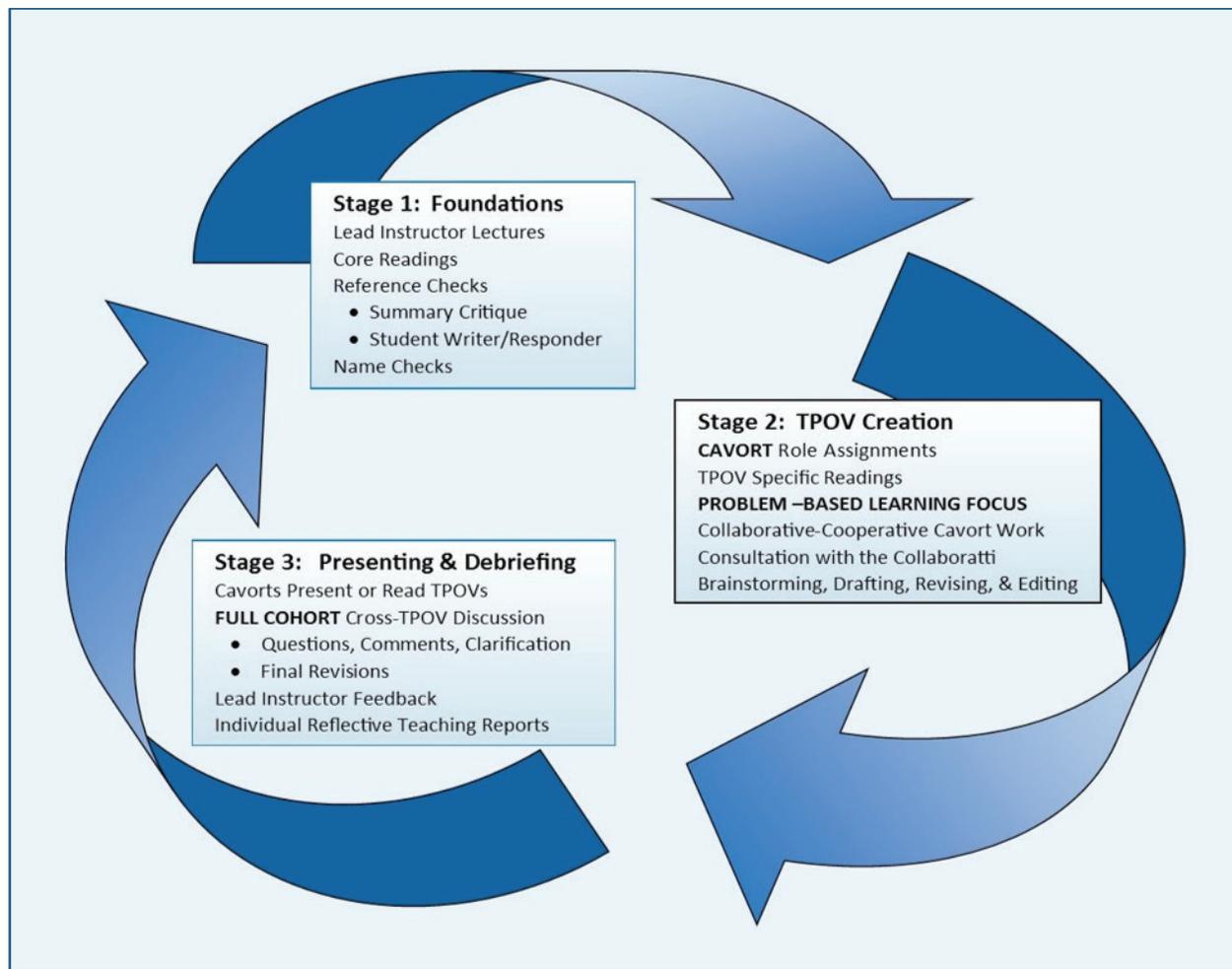


Figure 2. The TWU MA TESOL core PBL cycle.

instructor (also known as a *collaboratti*—cf. Figure 2). Both of these instructors facilitate knowledge creation during the TPOV creation phase. In addition to the facilitative role, the lead instructor holds responsibility for many aspects of the learning environment: creating the learning space, assigning cavort roles, and providing feedback on the final drafts of the TPOVs. Lead instructors interact with student reflections in the RTRs; as well, they design and mark the course summative assessment, the ARRs.

The collaborating instructors have varying responsibilities depending on what kind of assistance their lead instructors require; however, their most common function is to monitor the knowledge-building process during the TPOV creation week and to collaborate with students, as needed. This allows lead instructors to create space for student growth in both self-directed learning and small group collaboration. A collaborating instructor will usually give feedback to each cavort toward the end of the second stage of the cycle,

helping them to identify gaps or areas of the TPOV draft that need improvement or revision, as the students prepare to post final drafts for peer evaluation.

Student roles are typically aligned with the sections of the TPOV guide. With the exception of the *manager* role, the names of the roles change with the course and reflect the types of professional roles that suit the course content or problem triggers. While the manager role is associated with organizational concerns and the workflow, all students are expected to learn and grow in the reciprocal role of peer teaching. By monitoring group progress toward task completion and refining one another's contributions, they develop a collaborative sense of community.

## The Purpose of the Research

In its local context, the purpose of the study is evaluative in the sense that it supports department internal evaluation capacity. Results are intended to illuminate decision

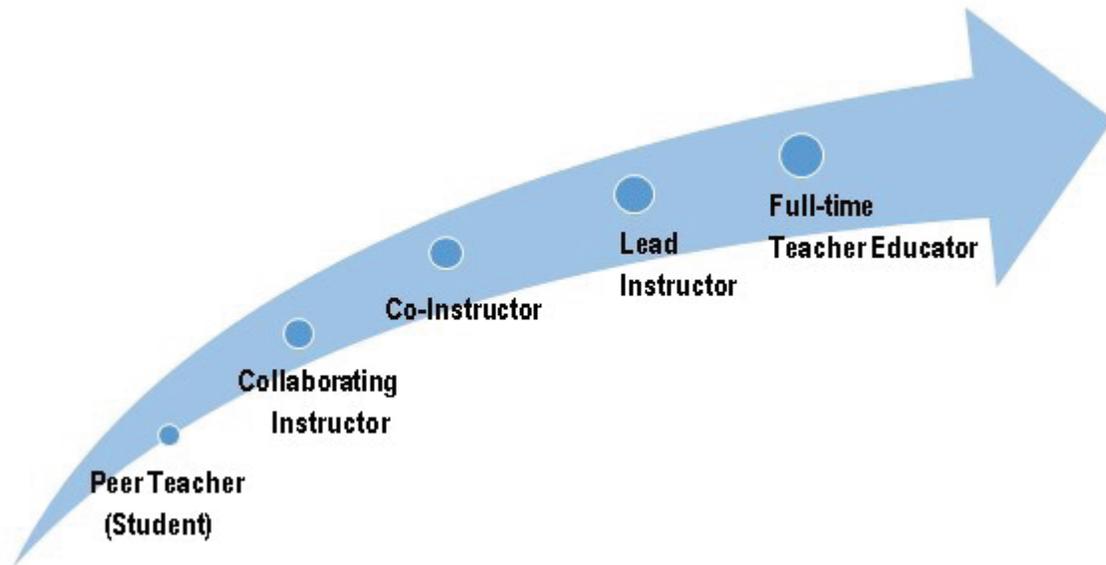


Figure 3. TWU MA TESOL collaborative instructional skills trajectory.

making for program development in the department in which it was conducted, particularly for decisions related to the dynamics of team teaching, which are inherent in the role assignments of the program. The potential to develop TESOL teacher educators who understand the philosophy of PBL delivery is embedded in a trajectory for collaborative instructional skills that moves from student peer teaching, to positions of collaborating instructor, co-instructor, lead instructor, and full-time teacher educator (cf. Figure 3). Thus the significance of the research is twofold. For practice, it offers a clearer understanding of how core cycles may be successful and how excellent peer teaching behaviours emerge in cohorts. This is important because experience with PBL cycles and peer teaching has proved to be foundational to the development of collaborating instructors. For evaluation, the research provides relevant data and analysis to support crucial decisions for long-term program development and justification of planning for the trajectory of the department. In other words, the long-term sustainability of the department will be affected by the ability of the department to move a sufficient volume of students upward on the trajectory.

## The Research Questions

The research questions for the study are:

1. How do the collaborating instructors evaluate the TPOV learning experience?

- a. What are the characteristics of a successful (TPOV) knowledge creation cycle?
  - b. What are the characteristics (attributes, or attitudes) of a good peer teacher?
2. How do the collaborating instructors perceive their role and their professional development with respect to the positions on the collaborative instructional skills trajectory?

The research questions focus on the collaborating instructor perspective because the majority of them are alumni. They are high-achieving graduates of the program. Table 2 (next page) provides evidence for the quality of their content mastery in the form of mean GPA from eight of the core collaborative courses. The performance of the collaborating instructors (i.e., alumni) is contrasted to two panels (i.e., five-year administrative groupings) of student cohorts. The collaborating instructor perspective for the most part includes data that encompasses the student perspective, as well as their own developmental stage of the trajectory. These apprentice teacher educators have already had collaborative PBL experience, which allows peer teaching skills to emerge and lay the foundation for facilitation of PBL cycles (Pourshafie & Murray-Harvey, 2013). Although the collaborating instructor perspective focuses on the core cycle, this group of participants does have a conceptual understanding of lead instructor responsibilities and the trajectory. They have opinions about what would be necessary for a collaborating instructor to move successfully into both the co-instructor and lead instructor roles.

Table 2. Contrastive mean GPA in core collaborative courses—Collaborating instructors versus student panels.

<i>Group</i>		<i>Course A</i>	<i>Course B</i>	<i>Course C</i>	<i>Course D</i>	<i>Course E</i>	<i>Course F</i>	<i>Course G</i>	<i>Course H</i>
Collaborating Instructors (Alumni) (N = 11)	Mean GPA	4.1	4.1	4.2	4.2	4.1	4.2	4.1	4.1
	Mode	4.0	4.3	4.3	4.3	4.3	4.3	4.0	4.0
	Max	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	Min	3.7	3.7	4.0	4.0	3.3	4.0	3.7	4.0
Student Panel 1 (2003—2007) (N = 69)	<i>n of N</i>	65	65	55	54	55	54	56	56
	Mean GPA	3.8	3.8	3.9	3.9	3.8	3.8	3.8	3.8
	Max	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	Min	2.0	2.0	2.3	2.0	2.3	2.0	2.0	2.3
Student Panel 2 (2008—2012) (N = 85)	<i>n of N</i>	81	81	71	71	78	76	68	68
	Mean GPA	3.8	3.8	3.7	3.8	3.8	3.7	3.8	4.0
	Max	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	Min	2.0	2.3	2.0	2.0	2.0	1.3	2.7	3.0

GPA Scale: 4.3 = A+, 4.0 = A, 3.7 = A-; 3.3 = B+, 3.0 = B, 2.7 = B-; 2.3 = C+, 2.0 = C, 1.7 = C-; 1.3 = D

Note: A panel is a five-year administrative period.

## Research Method

The design supporting this report is an exploratory, mixed methods case study. The TWU MA TESOL program has value as a distinctive case due to the discipline-specific PBL method that has emerged in that context. As participatory evaluator, the researcher had served with the department for approximately 10 years, in both collaborating and lead instructor positions, and in administration. Ethics approval was obtained for the study. The qualitative data that were analyzed for this study were gathered through an online focus group and both face-to-face and online interviews with the collaborating instructors of the program. Qualitative data are suitable for emphasizing participants' voices and multiple perspectives. The same questions were used for the focus group and the interviews, making the data collection approach moderately structured. Descriptive summary statistics on student demographics, based on the 2003 to 2012 cohorts, were also used to triangulate some of the themes reported. An overview of general program outcomes in the form of mean GPA data were calculated for two five-year panels and the collaborating instructor group (cf. Table 2).

### Participants

Thirteen collaborating instructors who filled a facilitative role in the TWU MA TESOL program were contacted to participate in the study. Of the 11 collaborating instructors who agreed to participate, eight were female and three were male. (This ratio closely approximates gender distribution in the

program's population, which is 74.3% female and 25.7% male.) These participants had fulfilled the collaborating instructor role for different courses, with different lead instructors, and with multiple student cohorts (online and resident) over 10 years. Nine of these participants were alumni of the program, who shared their views from the basis of their student experiences in peer teaching and collaborative learning, as well as the teacher educator role of collaborating instructor. Two of the participants were nonalumni, having completed their graduate (MA, Ed Doctorate) education in a different style and philosophy of programming. All of these instructors were experienced teachers who served in various global contexts and possess a range of approximately 8 to 20 years of ELT experience. At the time of data collection, the 11 participants' experience in the collaborating instructor position ranged from one full semester course to nine full semesters in two or more different courses. Data collection focused on obtaining representative data with range, rather than counting categories of responses.

### Analysis

Copies of the online focus group discussions were transferred by the researcher to Word documents. Recorded interviews were transcribed, made anonymous, and member-checked. Data were synthesized from the sources and organized according to the open-ended questions. The result was a 39-page single-spaced transcript in size 10 font. The general approach to the analysis was grounded,

searching for emergent categorizations and conceptualization, rather than imposing existing categories and definitions from another field.

The initial stage of analysis involved reading and re-reading the transcript to gain insight into patterns in the data. For question 1a, the data were analyzed and sorted until major thematic categorizations emerged. For question 1b, the data were reduced and organized into a table and elaborated with narrative reporting. For question 2, the data set was reduced to key findings and reported in narrative style. The distinctions between collaborating instructors who were alumni or nonalumni emerged as a secondary, embedded theme in aspects of the narrative reporting. Also, following evaluation protocols, early reporting sessions and administrative-level member checking was conducted with the program director, and key findings were recorded in field notes.

All data excerpts (quoted comments, indicators, key terms, etc.) used in this report are referenced with line numbers in brackets, which indicate their original location in the transcript. The data trail was checked by an external analyst. Demographic data regarding the students were entered into an Excel spreadsheet, then sorted and totalled to provide descriptive summary statistics regarding gender, educational background, teaching experience, and language proficiency. The mean GPA data (also descriptive in nature) provide evidence that strengthens the credibility of the collaborating instructor perspective.

## Results

### The Collaborating Instructor Perspective on Core Cycles

What are the characteristics of a successful TPOV cycle? To answer that question, two broad themes related to professional dispositions have been chosen from the collaborating instructor data analysis because of their predominance in the data and their importance to the facilitative style of instruction involved. These overarching themes are *ownership* and *acceptance of diversity*. The broad theme of ownership encompasses the subthemes of autonomy, cooperation, and collaboration, features that together contribute to cycle completion with high-quality written outcomes. The broad theme of diversity includes the subthemes of individual expectations and fears, individual identity (gender, age, personality, learning style), diverse learning cultures, varying positions on skill trajectories (including English language proficiency and academic language skill improvement), and different educational backgrounds.

*Theme 1: Ownership.* In small group learning, there is a sophisticated interrelationship between manifestations of autonomy, cooperation, and collaboration (Transcript

#1—903–906). The term *autonomy*, frequently used in the language learning literature, is synonymous with the PBL term *self-directed learning*. Benson (2001) emphasizes that English language teachers who have never had the opportunity to develop autonomy in their own learning may be expected to have difficulty facilitating self-directed learning for their students, however much they may wish to do so. The TWU MA TESOL program provides an opportunity for teacher-learners to experience autonomy in a learner role. The collaborating instructors speak candidly about how individual and collective ownership of the process by teacher-learners influences the outcomes of the TPOV cycles:

To be successful, students need to have the research skills to dig deep enough into the subject matter to find their own answers. They can't successfully work collaboratively unless they are able to bring something to the table. (Transcript #1—Collaborating Instructor AA 48–50)

But I think for a successful one [cycle], . . . [there needs to be] the sense of the ownership that each person takes regarding their role as manager, seeker—or whatever the TPOV roles are. (Transcript #1—Collaborating Instructor NN 334–337 Edited)

I would say this as someone who has been on both sides of the course: as a student, [if] I was worried that I had missed something . . . I would rather talk to my cohort about it on Skype or email and try to work things out that way. Also, by doing that, I could find out if I had missed something or if this was a common question. If it was common, we could take it to the instructor together. As a collaborating instructor, I want the students to ask instead of waiting until the last minute. I don't want them sitting there not doing anything, paralyzed by worry about the impression they will make. (Transcript #1—Collaborating Instructor KK 261–271 Abridged)

Drafting openly or posting frequently in the wiki, so that cavort members can view one another's progress, as well as requesting and accepting feedback, are activities important to the collaborative process (Transcript #1—405–410). It is the sense of owning the knowledge creation process that encourages peer dialogue and extended negotiation over the meaning and relevance of the available resources (Wertsch 2002). Responding to peer evaluation is key to a successful debriefing stage:

The interaction part after the TPOVs are done, where each cavort comments on the other one's [TPOV document] is also a crucial step. . . . This is where we observe a deeper level of critical thinking. . . . Can they grapple

with the findings and the relevance to their own identity as teachers/administrators, and in their educational setting? (Transcript #1—Collaborating Instructor WW 163–167 Abridged)

Cultivating a sense of student ownership has been intentional on the part of the MA TESOL director and the faculty who have served as lead instructors. The ability to collaborate is recognized as an important learning outcome for teacher-learners (Johnston, 2009). Collaborating instructors who are alumni also share this view of program outcomes:

The expected . . . learning outcomes would be, in most cases, the ones that are stated on the syllabus itself . . . . But what happens as a student, you learn in many ways a lot more than that; and some of the bigger things that you learn actually may not be related to the specific, typical knowledge-based learning outcomes that are content ones. . . . You learn a lot about yourself and your ability to be a leader, to be a collaborator, to work well or not, with others. (Transcript #1—Collaborating Instructor SS 1021–1034 Abridged)

It has been a matter of philosophical choice to pursue this distributed approach to facilitation, as the TWU MA TESOL program has global reach and has hosted a highly diverse group of learners over its history. The learning curve for individual students and for the fluctuating cohort configurations can be substantially different over time, requiring instructors and student peers to adjust the degree of facilitation they offer.

*Theme 2: Acceptance of Diversity.* TWU MA TESOL students are accepted into the program from a variety of undergraduate backgrounds, all of which have relevance to the wide range of teaching contexts in the global ELT field. The breakdown of undergraduate education for the MA TESOL population is 18.2% education degrees; 24% degrees in English, languages, or the humanities; 16.2% linguistics or social sciences; 11% theological studies; 5.2% communications-related degrees; 3.9% sciences and health; and 21.4% with a BA equivalent or other degree. Approximately 45.4% of the population had also achieved a certificate-level qualification in TESL, in addition to their BA degrees. In addition, cohort members enter the program with considerable differentiation in the scope of their English language teaching experience. The distribution of teaching experience in the population is as follows: 19.7% had less than 2 years of experience, 42.2% had 2 to 5 years of experience, 19.7% had 6 to 10 years, 9.5% had 11 to 15 years, and 8.8% had 16 to 35 years of experience. The mixture of student educational background and teaching experience affects group formation within and between the cohorts.

Each program intake of a new cohort brings a unique group of students, occupying different positions on the relevant skill trajectories and manifesting different levels of readiness to engage in problem solving and collaborative knowledge creation. These students bring with them a variety of individual expectations and fears; and they come from an assortment of learning cultures (Cortazzi & Jin, 2013). Growth in collaborative abilities emerges to some degree in relationship to a cohort's acceptance of its own unique manifestation of diversity.

And doing a Master's is really scary, honestly, from a student's perspective. They are in the Master's program; some of them haven't taken any course work in sometimes a couple decades. Some are just blown away by the fact "Oh my word, I am doing a Master's and they expect all this!" [There is] new technology, and you have to work with people; you can't do it by yourself. That's really hard for people to adjust to; and it takes more than one semester to really come to grips with that. . . . That first semester is quite something to handle for anybody. (Transcript #1—Collaborating Instructor SS 620–626 Abridged)

Students need to be able to process information at a high level (i.e., from Bloom's Taxonomy, the analysis, synthesis, and evaluation levels). These skills all converge in the ability to collaborate and research well. It takes time to develop these skills if students have come from educational backgrounds that have never taught them how (even here in Canada). (Transcript #1—Collaborating Instructor RR 78–81)

The challenge is in training students who are at different stages of "readiness." But that is the POWER of the TPOV format of training students to develop these collaborative and research skills. It totally fits into Vygotsky's [1978] vision of the ZPD. That was what got me so excited about this program and why I believe in it so much I'm willing to be a collaborator in this process. It's an exciting transformational process and it works. (Transcript #1—Collaborating Instructor WW 142–149 Abridged)

MA TESOL programs offer professional development for a global field where the English language proficiency of teachers varies considerably. The breakdown of the TWU MA TESOL population for English language proficiency<sup>3</sup>

3. With respect to English language proficiency and the proficiency categories listed, the normative language proficiency range for the MA TESOL program is identified at Canadian Language Benchmarks (Citizenship and Immigration Canada, 2012) levels 10 and 11. Although some student profile scores may be lower in one of the skills (reading, listening, speaking, or writing), CLB 10 is (*cont'd. next page*)

is distributed across five categories, with 61% being Native Speakers, 16% Non-Native Speakers, 12% Bilingual, 5% Multilingual, and 6% being Developing Academic Writers. Language proficiency issues are observable and often a predominant concern at the start of a program cycle. The emphasis on language ability usually recedes as a cohort begins to recognize and to appreciate the various individual strengths and the range of cultural perspectives that exist within the group, enriching peer teaching abilities and the knowledge creation process (Transcript #1—318–854).

With year after year of diverse cohort intake, successful collaborative PBL in the TWU MA TESOL context requires constant modelling and prompting from lead and collaborating instructors, regarding the need for an attitude or disposition that values diversity. Effective collaborative learners and peer teachers within the cohorts come to recognize the importance of this value.

### **Student Facilitation through Peer Teaching and Cavort Management**

Collaborative learning and peer teaching are interwoven events, and the two concepts are not easily separated in practice. Research question 1b seeks the characteristics of a good peer teacher. Table 3 (next page) provides the collaborative instructors' responses to that question. The individual characteristics that promote collaborative learning align closely with those that contribute to success of the TPOV cycle, as indicated in the reporting of the previous two themes. The description of peer teaching characteristics were provided by collaborating instructors who were alumni. All the characteristics are not expected to be evident in one student or every student in a cohort; rather, they reflect the cumulative experience of the participants with effective peer teaching attitudes and behaviours. The description in Table 3 is also useful for orienting students who have no experience with either PBL or collaborative learning to the comportment that contributes to successful knowledge creation cycles.

In addition, Table 3 juxtaposes the role of a peer teacher with the role of a cavort manager. Facilitation is distributed among the MA TESOL students in a manner that requires that they take responsibility for both teaching-learning interactions and organizational aspects of the task process.

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considered the threshold. Developing Academic Writers (DAW) are identified as being at CLB 9 or lower in their academic writing skills. Non-Native Speakers function at CLB 9 or lower in two or more of their language skills but have made sufficient progress in pre-master's language programming to be allowed to pursue the MA TESOL with language support (sometimes officially on probationary status). This is a judgment that depends on the student's overall academic profile.

Collaborating instructors who were nonalumni, who learned about the program philosophy from observation rather than experience, reported more detail with respect to the manager role. They were more aware of the importance of the manager's role in setting goals for the small groups and in moderating discussions so all members participated equitably. These management strategies were particularly important to MA students in the resident track. In contrast, alumni who had experienced the manager's role in online situations expressed concern that the role had proper boundaries, so that the manager was not expected to complete another student's role responsibilities if someone was suddenly absent.

The collaborating instructor perspective is emphasized in this study because those in the role mediate between the design of the problem and its learning space, as set out in the wiki, and the student learning experiences and outcomes achieved during the collaborative PBL cycle. Collaborating instructor responses to these research questions provide considerable insight into the extent to which they grasp the program philosophy. Familiarity and comfort with the program philosophy and experience with PBL cycles translates into effectiveness in the role.

### **The Trajectory: Professional Development Perspectives and Opportunity**

In response to the second research question, collaborating instructors discussed professional development benefits and prospects with respect to the collaborating instructional skills trajectory introduced in Figure 3. There is a contrast in the data between collaborating instructors who are alumni versus those who were not. For instructors who have not experienced learning by a cyclical PBL approach, philosophical understanding of the program was a substantial issue:

This program is very different from traditional programs. I think it takes a year or even more than a year to understand it. I grew up in programs that were everyone for themselves. You sink or swim on your own. In large part this program is very different from that; so to understand how it works, it takes time. (Transcript #1—Participant DD 1517–1520)

The director estimated that it takes about three cycles within the first course for a new collaborating instructor who is an alumnus to begin to intervene in the cycle with confidence; whereas, for nonalumni, it tends to take at least a year in the position with exposure to more than one course before a new instructor can really begin to grasp the program philosophy (Field Notes: Fall 2014, Transcript #1—1495–1520). Consequently, incorporating instructors who are nonalumni into the curriculum-wide PBL approach is a serious

Table 3. Peer teaching contrasted with cavort management.

Peer Teacher Characteristics & Role	Transcript Line(s)	Cavort Manager Characteristics & Role	Transcript Line(s)
<ul style="list-style-type: none"> <li>shows humility, models servant leadership</li> <li>is approachable</li> <li>is nonprescriptive</li> <li>listens, considers others' opinions</li> <li>enables or empowers others rather than overpowering them</li> <li>accepts and incorporates others' ideas in own draft section</li> <li>models skills and process at an acceptable standard</li> <li>shows appropriate sensitivity to peer cohort diversity               <ul style="list-style-type: none"> <li>is able to communicate cross-culturally</li> <li>accepts digital natives and digital migrants</li> <li>accepts leadership cross-generationally</li> <li>accepts leadership from opposite gender</li> <li>acknowledges and accepts different personalities and learning styles</li> </ul> </li> <li>focuses on process not just product</li> <li>uses time wisely and establishes boundaries</li> <li>communicates considerately</li> <li>invests in the social presence of the cohort</li> <li>appreciates others' strengths</li> <li>has relational capital with peers (i.e., trust, respect)</li> <li>provides credible feedback</li> <li>is engaged, prompt, teachable</li> <li>chooses to MAKE the collaborative process work</li> </ul>	735–743 639 654–658 665–666 679 685, 689 694–707 723–732 852 744–745 749–751 757–763 768–777 845–854 1001–1003 1003 1004 1033–1035	<ul style="list-style-type: none"> <li>demonstrates (or develops) managerial skills</li> <li>interpersonal skills, patient in the early stages</li> <li>sets up TPOV draft and discussion pages</li> <li>helps the cavort determine time spent in cooperative or collaborative work versus amount of time for individual work</li> <li>attends to the social presence of his/her cavort</li> <li>makes sure everyone is allowed input</li> <li>at the creation cycle onset, makes sure cavort members are clear on what to do; regular follow-up on progress of the workflow according to the timeline or pace</li> <li>a logistical role, comments on posting adequacy</li> <li>responsible for the definition section, but not required to fill all gaps; other cavort members are responsible for their own roles and sections</li> </ul>	820–825 804–805 363–366 907–910 929–934 993–994 862–867 1010–1011 587–606

investment in time and energy for department faculty. It is a necessary investment undertaken with the hope that these instructors will embrace the paradigm shift from teacher-as-expert to teacher as a co-learner who expects more autonomy from the students.

Among the alumni, two of the collaborating instructors noted that they never considered themselves to be peer teachers. This resonates with the previous mention that collaborative learning and peer teaching are closely related and should be difficult to distinguish. Manifestation of peer teaching ability within a

cohort often shifts to different members of a cohort or cavort from cycle to cycle, depending on the skills required of students in different modules. Lead instructors will be cognizant of peer teaching in progress but are more likely to openly praise general collaborative learning activity. The belief that a good peer teacher presents as a co-learner emerged in the alumni focus group session. One collaborating instructor remarked concisely:

Letting students or peers know that I'm learning with them is enriching, be it in a second language learning

context or a teacher training context. (Transcript #1—Participant TT 666–667)

Nevertheless, another collaborating instructor identified clearly the relationship between peer teaching and becoming a collaborating instructor, and the major professional benefit of a recognized position:

As the trajectory confirms, it is quite natural for someone who is a good peer teacher to move into the role of collaborating instructor. I believe that, for myself, being a good peer teacher within the program meant that faculty sometimes put me in more demanding roles, working with more difficult/challenging or weaker students in my cohort. As a relatively new teacher at the time, this was good preparation for working with difficult people in the workplace and for mentoring other teachers or practicum students in the workplace. However, the kind of professional development that happens by peer teaching is not a formal set of skills that you could put on your CV. Being in the role of collaborating instructor allows people to more readily see your professional development and for you to talk about it. (Transcript #1—Moderator 1214–1221)

When describing positions on the trajectory beyond the collaborating instructor role, the differences in responsibility were also identified clearly:

I think that the main difference between being a collaborating instructor and co-instructor is how much you contribute to setting up the course, how much more of a role you have in guiding the students in their collaboration and research, and in marking the Applied Research Report. But I think the difference between being a co-instructor and the lead instructor is great. I think it is much, much more demanding to be a lead instructor. . . . Also the lead instructor has a wider set of experience and perspectives. (Transcript #1—Participant WW 1239–1244)

For collaborating instructors who were alumni, the main issue related to further progression along the trajectory was the opportunity to take up responsibilities for designing the learning space for a module. These collaborating instructors did not agree about how much their position prepared them to progress to either the co-instructor or lead instructor position (Transcript #1—1244–1251). It was also recognized that opportunities to progress along the trajectory were related to further developments in the TWU MA TESOL program trajectory itself (Transcript #1—1196–1205).

Professional development benefits associated with the role were (Transcript #1—11 participants: 1187–1639):

1. Staying current with literature in the field.
2. The mentoring relationship with a lead instructor.
3. Developing more confidence in oneself as a professional.
4. Feeling that one's work experience was relevant to teaching (as a teacher educator).
5. The experience of sharing in the learning community.
6. Recognition of one's skills in a teacher educator position.
7. Recognition of new responsibilities in the workplace.
8. Developing ideas for the next formal stage of professional development (i.e., research proposal for a PhD program).

Some alumni do note that repeated experience with the same lead instructor is very helpful for professional development in the collaborating instructor position. It allows for communication to improve and for negotiation of the flexible, part-time role in relation to other employment expectations. Repeated experience as a collaborating instructor with the same lead instructor also allows a mentoring relationship to emerge (Transcript #1—1187–1639).

## Discussion and Recommendations

The results of the study have implications for the TWU MA TESOL program, as well as the fields of PBL and SLTE. This report concludes with recommendations for practice and further research in the TWU MA TESOL context.

### Emergent Outcomes from PBL Cycles

In the TWU MA TESOL context, on average, three TPOV cycles contribute to the success of a modular cycle. The dynamic interaction of a complex set of factors contributes to the degree of cycle success. The amount of knowledge creation and the quality of integration achieved by any one small group TPOV cycle before the debriefing stage is supplemented in debriefing by that of other group contributions, peer and instructor feedback, as well as individual reflection on the entire module. In the debriefing, lead instructors carry the responsibility of addressing misconceptions and determining which gaps in knowledge should be filled immediately, and which may be deferred to further cycles. Over time, students do expect reciprocity in collaborative support, and effective peer teachers will learn to draw boundaries that allow an individual peer's learning curve to become apparent. However, individuals also have the opportunity, through degrees of success in recursive cycles from module to module, to identify further self-directed learning goals in order to perform well on assessment of content mastery in the course's final assessments. That is: successful outcomes are emergent, expanding phenomena in PBL programs.

The collaborating instructor perspective may be viewed as observational evidence of *immediate outcomes* in the program. The mean GPA data in Table 2 triangulates and expands the documentation of success to *intermediate outcomes*. The mean scores indicate high-quality outcomes for the students in general, whereas the GPA score range indicates variation in student performance with content mastery.<sup>4</sup> Movement of some graduates along the collaborative instructional skill trajectory is one example of *long-term outcomes* from the program. In view of the emergent, expanding nature of PBL outcomes in the MA TESOL program, the implications of the themes of ownership and diversity, and of activity along the trajectory, will now be discussed with respect to other research findings.

### Ownership and Diversity

In the TWU MA TESOL context, collaborative knowledge creation prompts recognition of “the collectively constructed zone of proximal development” (Kennedy & Kennedy, 2013, p. 14), where potentially “the group’s zone of actual development is always higher than each member’s, and the collective dialogue provides a scaffold for each individual who needs it” (p. 15). The collective ZPD is where ownership and diversity interact. In the MA TESOL, the collective ZPD manifests itself in the dynamics of each cohort within the program context. Within any given MA TESOL cohort, there is a learning curve in the development of academic language proficiency for individuals regardless of whether or not English is their first language. Growth in the ability to engage in the professional discourse of the field is an expected area of competency development in any MA (Garton & Richards, 2008; Hedgecock, 2009). The tensions around differences in language proficiency, in cultures of learning, and in readiness to engage in collaborative learning also identify the collective ZPD as a zone of cultural synergy.

In an educational context where instructors and students from diverse “cultures of learning” interact, it is very likely that they will experience “discernable discomfort” and the “stress of culture gaps” (Cortazzi & Jin, 2013, p. 1). Expectations of teacher and student roles may be different from the PBL philosophy. Misunderstanding and misinterpretations must be processed meta-cognitively. In the MA TESOL context, both students and instructors have the opportunity to gain first-hand experience in “cultural synergy, a reciprocal learning through reflection” (Cortazzi & Jin, 2013, p. 2). A key emphasis of the cultural synergy model is to avoid reductionism and stereotypes when discussing cultural differences in learning. Instead, instructors and peers are encouraged to recognize the positive features of students’ cultures of learning, and to use

4. One caveat: in terms of the lower end of the range, this type of analysis does not permit identification of student performance that has been affected by extenuating circumstances.

meta-cognitive discussion of each student’s current expectations as a stepping stone into other or additional ways of learning (Gram, Jaeger, Liu, Quing, & Wu, 2013). Such reflection is important in the TWU MA TESOL context because the students, functioning as peer teachers, are a valuable resource for the program. They are the potential anchor-point for the collaborative teaching skills trajectory and the development of TESOL teacher educators with skills in PBL delivery.

### The Trajectory

Distribution of teaching responsibilities in the MA TESOL program can be related to positions on a trajectory of collaborative instructional skills. In this context, peer teaching activity in PBL cycles is recognized as foundational to development of facilitation skills. Presence or absence of this foundation becomes apparent even in the collaborating instructor position. A clear distinction exists when a collaborating instructor is an alumnus. Alumni who are chosen to be collaborating instructors already have extensive experience with the program philosophy, the PBL focus, and curriculum-wide knowledge creation efforts. There is a definite transition in moving from a peer teaching role to the collaborating instructor role, but most alumni are already cognizant of facilitation concepts such as functioning as a co-learner with the students, monitoring to create space for student autonomy, and prompting rather than providing direct answers (Pourshafie & Murray-Harvey, 2013). These findings are similar to those in other PBL research-based studies, which indicate that experience with PBL cycles is important for successful training of facilitators (Donnelly, 2010, 2013; McConnell, 2002; Salinitri, Wilhelm, & Crabtree, 2015).

In the first decade of delivery for the TWU MA TESOL program, a mentoring approach has been used to transition and prepare most of the collaborating instructors. However, it is unlikely that this approach will be sufficient for the staffing needs of the program in the future (Field Notes, Fall 2014). Best practices for facilitator training in PBL have not been fully established (Leary, Walker, Shelton, & Fitt, 2013), nor would specific practices established in one discipline or local context necessarily be workable in others. However, sustained training that includes experience with PBL cycles is recommended (Salinitri et al., 2015). Furthermore, the use of graduate students as facilitators, and not necessarily instructors with PhD level of expertise, has proven to be productive in terms of student outcomes from PBL cycles in other disciplines (Leary et al., 2013). So, the team teaching approach used within the TWU MA TESOL program is similar to approaches in other PBL settings.

The TWU MA TESOL program shares with many other PBL programs the difficulty of locating instructors who are PBL-experienced to expand the teaching team and, in

particular, to cover for sabbaticals. It has also been challenging to bring external instructors (i.e., nonalumni) into the program and have them function effectively in the program-wide PBL approach. This research focus on the distribution of the roles was motivated by the program's need to enlarge its pool of prospective instructors to provide for sustainability and enhancement of the program. The potential to develop TESOL teacher educators who understand the philosophy of PBL delivery is embedded in a trajectory for collaborative instructional skills. Teacher educator development for the department is already anchored in the peer teaching process.

Thus, the TWU MA TESOL case serves as an example of innovative, sustainable practice in PBL for teacher education in TESOL (cf. Hyland & Wong, 2013 for other examples of innovative cases in ELT and SLTE). In the SLTE field, there is much potential for adoption of a PBL curriculum approach, particularly at the MA level. Although not implemented on a global scale, an understanding of concepts such as autonomy in teacher learning, the teacher educator as facilitator, collaboration in community, and experiential learning are already encouraged in SLTE in many local contexts. MA TESOL administrators may consider the collaborative instructional skills trajectory as a long-term strategy for developing teacher educators capable of delivering a PBL approach.

### Recommendations

Several recommendations for practice were identified by the internal evaluator and discussed with the MA TESOL department head. Factors in the program context (not all of which are reported in this study) indicate a need for the further development and documentation of a more consistent approach to training for PBL delivery. In view of the long-term trajectory for the program, there is also a need to promote some collaborating instructors to co-instructor positions to develop their design skills and to prepare them to be able to take on the full range of lead instructor responsibilities. Since the long-term sustainability of the department is implicated, every effort should be made for the department to create space and adopt strategies for orientation and training, which includes the design of PBL cycles. In consideration of such recommendations, the director hired for the co-instructor position when establishing the part-time instructor support for the 2015–2016 year; that is, the part-time instructor role was moved upward to the next milestone on the collaborating instructor skills trajectory.

It is encouraging to implementers of PBL in the MA TESOL context to find that the issues faced are similar to those in other disciplines. Both the interdisciplinary breadth of current applications of the PBL method and the status of integrated PBL curricula already established in the medical sciences (Barrett & Moore, 2011) demonstrate that

implementations of PBL curricula can be successful and sustained over the long term.

Recommendations for further research for the MA TESOL program were also identified in relation to course design and implementation. Although lead instructors in the TWU MA TESOL program design from the same TPOV guide, it can be expected that they have different design preferences. Furthermore, they have additional perspectives on the success of the core cycle that relate to the potential inherent in their design of learning spaces. Because collaborating instructors team-teach with lead instructors, facilitating cycles for assignments that they themselves have not designed, it would be valuable to have more data that highlight the team-teaching dynamics. Such a study might reveal more about expectations and understandings that exist in team interactions. It may also illuminate areas of harmony or tension with respect to views of design, scaffolding, and intervention in the cycle. Information on team-teaching dynamics would provide further support for established practices or recognition of change that might be necessary in view of the long-term trajectory of the department.

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