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## The Effects of Long-Term Systematic Educational Development on the Beliefs and Attitudes of University Teachers

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## Executive Summary

### Context

Teaching is a critical and extensive part of academic life, yet pedagogical training for academics is still rare (Britnell et al., 2010; Evers et al., 2009). Inadequate pedagogical education for academics has multiple negative effects: for the university, it can necessitate expensive remedial action; for individual academics, it negatively affects job satisfaction and, in rare cases, achievement of tenure; and for students, most importantly, it impedes their learning (Nyquist, Abbott, Wulff & Sprague, 1991). Nevertheless, although formal educational development programs for faculty members and graduate students have multiplied in the last 40 years across the English-speaking world, they are still not the norm in North America. When surveyed, more than half of faculty members report a desire for help with teaching and learning issues from their local teaching and learning centres (Britnell et al., 2010; Evers et al., 2009). Well-planned, intensive, long-term education and training programs are most beneficial, though even a small amount of training can make a difference by improving student perceptions of teaching quality (Dimitrov et al., 2013; Dalgaard, 1982; Bray & Howard, 1980).

### The University Teaching Certificate Program

The University Teaching Certificate (UTC) Program grew out of a plan to provide systematic and extended pedagogical training for academics at the University of Windsor. The present study focuses on *Fundamentals of University Teaching*, the first certificate level of the UTC Program, which provides participants with opportunities to learn the essentials of scholarly teaching. The primary goals of *Fundamentals of University Teaching* for individual participants are: a) greater awareness regarding the ideas, issues, values and practices of scholarly teaching in postsecondary education; and b) increased confidence in and coherence of their identities as scholarly teachers of their disciplines. Institutionally, each level of the UTC program is intended to contribute toward the long-term goal of helping the University of Windsor develop a learning-centred teaching culture.

The UTC was designed based on consultations with other educational developers, contemporary teaching certificate programs and relevant literature to include: teaching practice with feedback; a constructively aligned structure with a learning-centred approach; confidence-building and self-efficacy; enhanced conceptualization and articulation; empathy and perspective-taking; community-building; self-direction; theory and reasoning; mentoring; consistent role-modelling; a focus on scholarly and excellent teaching practices; and appeal to the zeitgeist.

The first level of the UTC takes one year to complete, though some participants choose to extend the program over two years. To receive the *Fundamentals of University Teaching* certificate, participants complete two 36-contact-hour graduate-level credit courses – *Learning-Centred Teaching in Higher Education: Principles and Practice* and *Course Design for Constructive Alignment*. They also choose one 18-

to 24-contact-hour half-course from a list of options (e.g., Lecturing, Leading Effective Discussions, Online Education, and the Instructional Skills Workshop). Participants are paired with a mentor and demonstrate achievement of the program-level learning outcomes through submission of a program portfolio.

## Research Questions

We sought evidence of the UTC Program's effects in response to the following questions:

1. How does involvement with the UTC Program impact participant beliefs and attitudes about teaching and learning?
2. How does involvement with the UTC Program impact participant teaching practices?
3. How does involvement with the UTC Program influence participants' engagement with and impact on teaching and learning practice and decision making in their departments and institution?
4. What do participants identify as the benefits, areas of improvement and barriers to participation for the UTC?

## Research Methods

This study used a multi-method approach involving program documents and self-reported measures completed as part of the UTC Program process. The study involved comparing pre- and post-program learning plan documents, including: the Teaching Perspectives Inventory (TPI); the Zinn Philosophies of Adult Education Inventory (PAEI); the Approaches to Teaching Inventory (ATI); the Teaching Goals Inventory (TGI); as well as changes in the pre- and post-program teaching philosophies. In addition to these program documents, post-graduation exit surveys were analyzed and participants were invited to participate in focus groups.

## Results

### *1. How does involvement with the UTC Program impact participant beliefs and attitudes about teaching and learning?*

The inventories, teaching philosophies, exit surveys and focus groups demonstrated a clear change in participant beliefs and attitudes about teaching and learning. Following completion of the UTC program, there was a statistically significant increase in the student-focused approach to teaching (ATI); an increase in developmental and social reform perspectives (TPI); an increase in philosophies associated with actively engaging students in the learning process and focusing on student learning needs (PAEI); and an increased focus on discipline-specific knowledge and skills (TGI). The teaching philosophies demonstrated the development of more complex conceptualizations of teaching, and greater integrity and consistency in participants' beliefs about teaching. Focus group and exit survey results showed a decrease in anxiety and an increase in confidence and in participants' perceptions of their own influence, leadership ability and

change agency. Participants' perceptions of their students also changed in ways consistent with the evolutions described above.

*2. How does involvement with the UTC Program impact participant teaching practices?*

Along with the change in beliefs and attitudes, there were reported changes in teaching practice. Focus group and survey results indicate that participants worked more to develop a positive teaching and learning environment, to actively engage students and use learning-centred approaches to deep learning. They reported taking a scholarly and intentional approach to their design of teaching and choice of assessments, and intentionally communicated the reasons behind pedagogical choices to students through course syllabi and other methods.

*3. How does involvement with the UTC Program influence participants' engagement with and impact on teaching and learning practice and decision making in their departments and institution?*

Participants not only changed their perceptions of their influence and their ability to effect change, but all study participants also reported sharing what they learned in the UTC with colleagues outside of the program. The UTC Program had an impact on practices and decision making at the departmental and institutional levels as participants reported contributing to departmental councils, institutional committees, policies, and departmental or faculty-level practices.

*4. What do participants identify as the benefits, areas of improvement and barriers to participation for the UTC?*

Finally, participants identified changes that could be made to enhance the program. Barriers to participation included the need for teaching development to be recognized at an institutional level, and departmental cultures that did not support investment in teaching. Changing the culture of an institution is a long-term goal, essential for the benefits of such intentional programs to be sustained and enhanced.

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# 1 Introduction

Inadequate pedagogical training for academics, whatever their institutional category, “results in the need for very expensive remedial actions later such as reduced loads to improve teaching competence, hours of mentoring by members of the departments, or failure to achieve tenure and thus loss of potential members of the next generation of professors” (Nyquist, Abbott, Wulff & Sprague, 1991, p. 1). Incompetent teaching also has serious negative effects on student learning. The University Teaching Certificate (UTC) Program grew out of a plan initiated by Alan Wright, Vice Provost, Teaching and Learning, to provide adequate pedagogical training for academics at the University of Windsor, a comprehensive university in the province of Ontario, Canada.

The present study focuses on *Fundamentals of University Teaching*, the first certificate level of the UTC Program, which provides participants with opportunities to learn the essentials of scholarly teaching. Those who complete this level receive a UTC certificate in the *Fundamentals of University Teaching*, as well as a certificate in *Supporting Learning* from the Staff and Educational Development Association (SEDA), a United Kingdom-based organization that has been at the forefront of accrediting tertiary teaching programs for more than 20 years. The primary goals of the *Fundamentals of University Teaching* for individual participants are to develop greater awareness regarding the ideas, issues, values and practices of scholarly teaching in postsecondary education, and to increase confidence in and coherence of their identities as scholarly teachers of their disciplines. This new knowledge is also expected to bring with it behavioural changes, which are facilitated by the program’s inclusion of micro-teaching cycles, reflective practice and formative feedback for participants. Institutionally, each level of the UTC Program is intended to contribute toward the long-term goal of helping the University of Windsor develop a learning-centred teaching culture.

## 1.1 Context

Although formal educational development programs for faculty members and graduate students have proliferated since the 1970s, they are still not the norm in North America. Instead, dedicated faculty members try to infer from their student evaluation of teaching (SET) scores how to improve. Some use informal student feedback for clues. Very few use peer evaluations of teaching. Most do not – perhaps will not – read scholarship of teaching and learning (SoTL) literature on their own, and unless doing so would help them improve, this practice is nothing to lament. Given how little support emerging scholars receive to develop as competent teachers, the situation is unsurprising. Evers et al. (2009) and Britnell et al. (2010) found that more than two-thirds of faculty members in their studies had learned about teaching on the job, by being forced to adapt quickly when they worked as teaching assistants. Fewer than half reported having informal discussions with peers about teaching. Less than one-fifth had taken even one graduate course on teaching and learning. Informally, some faculty members found support in the early stages of their teaching development as graduate students, in the form of conversations with peers, advice from faculty members in their departments, and sometimes workshops. Again, this support is typically *ad hoc* and many faculty members report wishing that they had access to mentorship regarding their teaching roles and more

opportunities for conversations about teaching (Britnell et al., 2010; Evers et al., 2009; Theall & Centra, 2001; Brookfield, 1995). More than half of faculty members surveyed wanted some help with pedagogical issues from their local teaching and learning centres, most often in matters related to assessment of student learning (Britnell et al., 2010; Evers et al., 2009 ).

While they differ on some details, systematic literature reviews and meta-analyses on educational development in the last 30 years conducted in several countries and focused on both general and discipline-specific interventions converge on two important conclusions relevant to the creation and continuing evolution of the UTC Program (Stes, Min-Leliveld, Gijbels & Van Petegem, 2010; Prebble et al., 2004; Levinson-Rose & Menges, 1981). First, one-off workshops, short-term courses and disconnected interventions are ineffective *if the intent is to make long-term changes in teaching behaviours or to improve the effects of teaching on student learning*. Second, the most effective educational development interventions are carefully structured and extended over time. While some studies have shown that even a small amount of training can improve student perceptions of teaching quality (Bingman, 1983; Dalgaard, 1982; Bray & Howard, 1980) and self-ratings of teaching ability (Bray & Howard, 1980) over a shorter period of time, there is also ample evidence to support the claim that a well-planned, long-term educational development program (of at least one year) can significantly change the way academics conceptualize teaching, the way they actually teach and the way their students learn (Butcher & Stoncel, 2012; Cilliers & Herman, 2010; Stes, Coertjens & Van Petegem, 2010; Light, Calkins, Luna & Drane, 2009; Ginns, Kitay & Prosser, 2008; Hanbury, Prosser & Rickinson, 2008; Postareff, Lindblom-Ylance & Nevgi, 2007; Hubball, Collins & Pratt, 2005; Gibbs & Coffey, 2004; Ho, Watkins & Kelly, 2001).<sup>1</sup>

These conclusions seem to hold true across classes of university educators: teaching assistants, sessional instructors and full-time faculty members. For instance, Dawson, Dimitrov, Meadows and Olsen (2012) found positive changes in self-efficacy, confidence and teaching behaviours resulting from their program for international teaching assistants. Although the authors caution that this program is not particularly long-term (30 hours), it is still longer than most, and although the number of hours involved matters, what participants do with those hours is more crucial. A long-term program that involves little time on task is less likely to be educationally valuable than a shorter program in which time is used wisely. With respect to faculty members, Gibbs and Coffey (2004) and Postareff et al. (2007) found that a well-structured training program for university faculty resulted in self-reports of more student-centred approaches and fewer teacher-centred approaches, as assessed using the Approaches to Teaching Inventory (ATI), and that faculty members who completed a well-structured training program were perceived by their students to be more effective.

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<sup>1</sup> Rodgers, Christie and Wideman (2014) note that many such studies have been criticized for relying on self-report without observation or independent confirmation of effects. Some studies also provide insufficient detail about the educational development programs under study. Nevertheless, Gibbs and Coffey (2004), Ho et al. (2001) and Hanbury et al. (2008) did study the effects of educational development on student learning, which were varied and positive, notwithstanding the obvious difficulties involved in determining and controlling for the influence of myriad intangible variables.

Based on our consultations with other educational developers, the information gathered about contemporary teaching certificate programs in Canada, our interpretations of the relevant SoTL and educational development literature, and our own reasoning, we determined that the following features should be present in our certificate program:

- **Teaching practice with feedback.** If the program was to result in practical and positive changes in teaching ability, participants needed opportunities to put ideas into practice and receive feedback regarding the results of their experiments. We decided that it would be best if that feedback involved or were followed by consultation and strategic refinement, to prepare participants for greater success in future experiments. We also decided that rather than rely on feedback from one point of view (the instructor's), it would be best if participants received feedback from multiple parties, especially other participants.
- **A constructively aligned structure.** Constructive alignment (Biggs & Tang, 2009) is the most logical and defensible model for program and course design, providing an intelligible focus on ends (learning outcomes), simple steps to ensure meaningful coherence and consistency of program elements, and allowing for flexibility of teaching and learning means. Constructive alignment would enable the program to require participants to meet high standards while permitting them to choose from a variety of means and timelines to reach those standards.
- **Confidence-building and self-efficacy.** Higher levels of confidence and self-efficacy are associated with better teaching. Using constructive feedback that recognized strengths and provided strategies that could swiftly be put into use, we would seek to build the confidence and self-efficacy of all participants.
- **Enhanced conceptualization and articulation.** Participants should learn new ways of reasoning, understanding, speaking and writing about teaching and learning, which will broaden their conceptions of what is possible, build conceptual networks to aid and deepen understanding, empower them to find connections and defend their practices, prevent them from falling prey to popular fads and allow them to communicate in new ways.
- **Empathy and perspective-taking.** Learning-centredness requires teachers to make decisions with student learning in mind, a requirement that is hindered when they are unable to see situations from points of view other than their own. Our participants should learn how to interpret and use feedback from colleagues diverse in socioeconomic status, cultural and religious background, sex and gender, race, employment category and academic discipline. They should also regularly practice reasoning and perceiving from their students' points of view and imagining how others will be affected by their decisions.
- **Community-building.** To provide opportunities for participants to build the ideas they are learning into their ways of thinking and speaking about education and academia, they should be encouraged

to develop with each other as a bonded community of learners, which could persist long after they graduate. As Palmer (1998, p. 144) writes, “The growth of any craft depends on shared practice and honest dialogue among the people who do it. We grow by trial and error, to be sure – but our willingness to try, and fail, as individuals is severely limited when we are not supported by a community that encourages such risks.” Such a community may also help break down artificial hierarchies and social barriers at our institution and counteract the isolation and alienation common among faculty members, sessional instructors and graduate students.

- **Self-direction.** To keep people motivated and ensure that they care about what they learn, they should have some choice regarding topics and projects. The farther along they are, the more choice they ought to have.
- **Theory and reasoning.** To the extent that certificate programs used educational development and SoTL literature, much of it seemed empirically based. While empirical data are valuable, they are limited and necessarily pertain to situations that no longer exist. For such literature to be useful and meaningful, it must be theorized, and that theory should be well reasoned. Participants should develop their ability to make well-informed, well-reasoned teaching and learning decisions. Thus, theory and reasoning should be part of the entire program – some of which ought to be critically self-reflective theory about one’s own thinking, behaviours and values.
- **Mentoring.** A mentoring component could ensure that each participant received personal, one-on-one attention, support and challenge. Mentoring could also tie the program together to help participants see the connections between courses and other program components.
- **Consistent role-modelling.** Given the goals and content of the program and our own commitment to the value of integrity, we needed to ensure that we constantly “practiced what we preached.”
- **Aiming for scholarly and excellent teachers.** Although scholarly teaching and excellent teaching are distinct (see Potter & Kustra, 2011), they are related and both struck us as worthy goals. The focus of our program would be on helping academics develop as scholarly teachers, on the assumption that scholarly teaching was more likely than unscholarly teaching to lead to excellence and that it was affected by fewer confounding variables. Indeed, there is evidence that scholarly teaching can result in excellent teaching, insofar as one understands teaching excellence as a quality tied to student learning gains (see, e.g., Crouch & Mazur, 2001; Mentkowski & Associates, 1999; Springer, Stanne & Donovan, 1997).
- **Appeal to the zeitgeist.** Finally, we decided that it would be wise to ensure that the program was designed to address and align with the Council of Ontario Universities’ (COU) Degree-Level Expectations and the Canadian Association of Graduate Studies’ key professional skills so that it would be more appealing to graduate students and administrators who are concerned with such things – and because they seemed at best useful and at worst innocuous.

Such considerations led us to develop *a long-term, developmentally structured program that emphasized achievement of high standards through ample time on task*, which we called the University Teaching Certificate Program (or UTC Program). There need not be a certificate of any sort attached for such a program to succeed, though we eventually decided that a certificate might motivate some individuals and provide the program with a recognizable brand.

## 1.2 Structure of the UTC Program

The UTC Program is open to all academics at the University of Windsor – traditional faculty members, learning specialists, sessional instructors, graduate students and staff who play academic roles – as well as academics from other institutions who are able to devote the necessary time to systematically develop their teaching abilities, build a scholarly knowledge base about teaching, reflect on how the various elements of their teaching practices fit together, or actively cultivate a critically informed, personal, teaching identity. The concept of scholarly teaching (Potter & Kustra, 2011) is central to the design of the UTC Program. Some unscholarly educational development programs focus on the content to be taught and often rely on the assumption that conducting research or reading literature about teaching and learning will improve teaching (Trigwell, Martin, Benjamin & Prosser, 2000). Such assumptions are not only unhelpful influences on the design and administration of such programs, they may also reinforce the more unhelpful assumptions of their participants, as most faculty members still rely on teacher-focused and/or context-focused models of practice (Britnell et al., 2010; Evers et al., 2009). In addition to the concept of scholarly teaching, the design of the UTC Program is heavily influenced by John Tagg's *The Learning Paradigm College* (2003) and, especially, John Biggs' 2001 article, "The Reflective Institution: Assuring and Enhancing the Quality of Teaching and Learning."

The UTC Program is intended to enhance two kinds of 'quality' at the University of Windsor, as distinguished by Harvey and Green (1993) and Biggs (2001). The first, *teleological quality*, is the value of the institution's work relative to its purpose, the purpose in this case being scholarly teaching that results in deep, transformational and rigorously assessed learning. The second, *transformational quality*, is the conversion of how academics conceptualize the scope of appropriate higher education pedagogy, assessment and curricula, along with a revolution in how they view themselves and their academic cultures. Thus the UTC aims to contribute to a transformation of individual academics and academic cultures on our campus. Included among the cultural goals is the gradual development of a culture of prospective quality assurance, "concerned with assuring that teaching and learning does now, and in the future will continue, to fit the purpose of the institution" – in our case, scholarly teaching – and "encourages continuing upgrading and improvement of teaching through quality enhancements" (Biggs, 2001, p. 222). Ultimately, the UTC Program team hopes that those who have experienced and completed one or more levels of the UTC program will be empowered and inspired to use what they have learned to cultivate cultures of prospective quality assurance in their departments, faculties and, gradually, the entire institution.

In service of its individual and cultural missions, the UTC program was designed to address all three components of prospective quality assurance. In terms of providing a *quality model*, the UTC Program is intended to exemplify and spread the ideas behind learning-centred curricula, pedagogy and assessment throughout the institution, empowering academics with conceptual understanding and confidence in their identities as scholarly teachers so they can inform conversations about teaching and learning in multiple departments among multiple member-categories (i.e., traditional faculty, learning specialists, sessional instructors, graduate students, support staff and administrators). To counteract the common misconception that teaching and learning knowledge and skills are discipline-specific rather than generic (Biggs, 2001), which inhibits academics' ability to learn from peers outside of their disciplines and member categories, the UTC Program encourages participants to focus on their identities as teachers of particular disciplines and professions, adapting general knowledge to the needs of their personal, disciplinary and departmental contexts.

The UTC Program addresses *quality enhancement* by: a) helping individual academics develop as scholarly and effective teachers, eschewing the old 'tricks and tips' model and the still-popular techno-centric model in favour of that provided by the philosophical and identity-driven quality model explained above; b) encouraging participants to participate in cultural change initiatives on campus and model such participation among the UTC program team; and c) developing formal relationships with departments.

The cultural goals of the UTC Program are unachievable without the focused development it provides for individual academics. Thus the locus of activity in the UTC program, as far as any participant is likely to notice, is strategic, systematic support for academics who wish to develop as scholarly teachers of their disciplines – that is, critically informed and reflective teachers able to maximize student learning (Potter & Kustra, 2011). As advocated by many educational developers and scholars of teaching and learning (including Biggs & Tang, 2009; Brookfield, 1995; Schon, 1983), UTC participants are encouraged to develop as *reflective practitioners*, a model for individuals that can be abstracted and generalized to the cultural level. As with a reflective and scholarly teacher, "A quality institution is one that has high level aims that it intends to meet, that teaches accordingly, and that continually upgrades its practice in order to adapt to changing conditions, within resource limitations" (Biggs, 2001, p. 223). An element of scholarly teaching that receives special attention in the UTC Program is *learning-centredness*, which frames both the design and teaching of the program as well as functioning as a key topic within the program. The UTC Program frames learning-centredness as the goal of intentional teaching – that is, a scholarly teacher ought to make rational choices to help students experience deep, meaningful, transferable and long-lasting learning.

Participant diversity is a necessary and integral part of the UTC Program, which is unique in that enrolment is not restricted to a particular class of academics. Participants include graduate students, traditional and teaching-focused full-time faculty members, sessional instructors, librarians and staff involved in teaching roles, and in some cases final-year undergraduate students. Within this diversity is further diversity: different levels of competence, different levels of experience, different levels of interest, different degrees of willingness to experiment with their teaching, different levels of knowledge about themselves, different levels of knowledge about teaching and learning, different disciplinary backgrounds and research interests, different life experiences, different cultures, different levels of entrenchment of different beliefs, skills,

values and attitudes. Much of the educational value of the UTC Program may come from negotiating meaning with people unlike oneself.

The UTC Program does not focus on the number of credit hours or contact hours required to obtain a certificate, as this information does not in itself provide useful information. Rather, as a constructively aligned program, it focuses on what participants have achieved, and time-on-task is emphasized as a means of facilitating their achievement. Courses in the UTC Program take a mastery learning approach – that is, participants are held to high educational standards, graded on a pass-fail basis (either formally, or in the sense that they can progress through the program only by achieving a grade of A- or higher), and permitted to revise their final projects in each course at least once. Failure in the UTC Program is treated as a welcome, typically necessary part of the learning process – a temporary state of affairs that persists only until one succeeds. The program is designed to help every participant who takes responsibility for his or her learning succeed.

Standard completion time for each certificate level of the UTC Program is approximately one calendar year (September to August), part-time. Most participants complete their coursework between September and April, then submit their program portfolio in May or June. Completion of a UTC Program certificate is intended to be neither the first nor the last step in any academic's pedagogical development. By the time they enter the program, each participant has learned a great deal about teaching and learning through their own experiences – a knowledge base that can be recognized, challenged, developed and harnessed for further growth.

### **Learning Plans and Mentoring**

The UTC Program is premised on the assumption that all teachers can improve, always. And this involves taking seriously Weimar's (1990) premise that we must begin by becoming aware of how we teach. Many UTC participants are already recognized as good teachers. They care about teaching, they invest time and energy into becoming better teachers, and that is why they enrol in the UTC Program in the first place. Thus, we deal less with people who are avoiding taking a cold hard look at their teaching and more with people who want to improve abilities that are already better than average.

All participants in each level are assigned a UTC mentor who serves as their primary contact, coach, interlocutor, advocate and guide from their first day in the program to their last. All mentors are teachers in the UTC program, and vice versa. Participants meet regularly with their mentor to assess their progress, identify areas of concern, reflect on what they have learned and revise strategies as necessary.

The first mentoring meeting is typically held at the end of August or beginning of September, at which time the mentor and participant learn about each other and set expectations. At the end of this initial meeting, the mentor introduces the participant to the learning plan, which is completed twice: at the beginning of the program (pre-program learning plan) and at the end (post-program learning plan).

There are two sets of documents in the learning plan. *Baseline documents* are intended to provide information about a participant's beliefs, values, attitudes and practices so they can become explicit topics of reflection and discussion with the mentor. These include a teaching philosophy, the Scholarly Teaching Questionnaire (a series of open-ended questions about matters of scholarly teaching, developed in-house), the Teaching Goals Inventory (Angelo & Cross, 1993), the Philosophies of Adult Education Inventory (Zinn, 1983), the Teaching Perspectives Inventory (Pratt & Associates, 1998) and the Approaches to Teaching Inventory (Trigwell & Prosser, 2004, added to the learning plan inventories in 2010). In addition to the baseline documents are *strategic documents*, which articulate the participants' goals in the program (what, specifically, he or she would like to achieve), the obstacles and difficulties the participant expects to encounter and tentative strategies for avoiding or overcoming such obstacles.

All of the learning plan documents become material for reflective conversation between participant and mentor, who use them explicitly in the first couple of months to structure conversation then return to them as needed. Mentors also use them to identify interests and potential topics for guided conversation and, in some cases, self-directed study. Mentors and participants are both expected to retain copies of the learning plan until the participant has completed the UTC Program.

As participants near the end of each level of the program, mentors help them assemble evidence that they have met the program-level learning outcomes (which are aligned with the appropriate SEDA PDF standards and values) and reflect on what they have learned for their program portfolios, which must be submitted and passed by two assessors (other members of the UTC team who have not been involved in mentoring the participant) to complete a certificate. This process involves ample formative feedback, questioning and often reassurance. In the program portfolio, participants not only present and reflect on evidence of their achievements from their UTC courses, they also complete and reflect on their post-program learning plans, comparing and contrasting them with their pre-program learning plans in order to provide material for further reflection and discussion.

The UTC Program serves the diverse interests of all academics, their students, administrators, staff and the community at large – all of whom benefit from having scholarly teachers at the helm of university education. A key aim of the UTC Program, underpinning its design, is the development of a community of scholarly educational leaders able to work autonomously when necessary, but also able and willing to collaborate and cooperate to foster positive educational change. This community of practice exists – and should exist – independently of the UTC Program, invigorated by new members and led by those with the skills, knowledge and motivation required of effective educational leaders.

### **Completing *Fundamentals of University Teaching***

To be admitted into *Fundamentals of University Teaching*, potential participants submit a letter of application – outlining their reasons for applying, their teaching experience, prior professional development relevant to teaching and learning – and a CV. Graduate students also submit a letter of support from their supervisors to avoid conflicts that may interfere with the supervisor-graduate student relationship. Since

each *Fundamentals* cohort is capped at 16 participants, in all but one year to date there has been a waiting list. Priority is given, in descending order, to traditional faculty members and learning specialists, followed by sessional instructors, then graduate students, then other members of the University of Windsor community whose work involves teaching. External participants from other institutions (such as St. Clair College) may enrol if there is space for them.

To receive the *Fundamentals of University Teaching* certificate, participants must successfully complete two 36-contact-hour graduate-level credit courses – *Learning-Centred Teaching in Higher Education: Principles and Practice* and *Course Design for Constructive Alignment* – and one 18- to 24-contact-hour half-course of their choosing. The list of half-courses includes (as of 2013) *Lecturing, Leading Effective Discussions, Online Education* and the *Instructional Skills Workshop*.<sup>2</sup> Many participants choose to complete more than one half-course, in which case they may apply it toward credit in a higher-level UTC certificate.

Finally, participants demonstrate achievement of the program-level learning outcomes and SEDA PDF standards and values through submission of a program portfolio (discussed in the previous section). Achievement of course-level learning outcomes is assumed to have been demonstrated by successful completion of the courses.

Together, the courses, mentoring and program portfolio development help participants learn and demonstrate achievement of the program-level learning outcomes:

1. Draw on multiple teaching strategies, background knowledge and reflective insight to adapt practice
2. Identify the presuppositions inherent in his or her teaching practices, change them as needed, justify and use them to explicitly inform practice
3. Evaluate the effectiveness of his or her own teaching and assessment practices, and courses in a variety of ways, taking into account contextual variables, and adapt accordingly
4. Respond constructively to common issues in postsecondary teaching and learning
5. Critically reflect, discuss, analyze and evaluate educational concepts, beliefs, values, practices, issues, orientations, philosophies, strategies and outcomes to guide practice
6. Find and evaluate scholarly information on teaching and learning and use it to guide practice
7. Design and use curricula, assignments and lessons that inspire and support deep learning
8. Design effective learning outcomes, aligned with learning experiences and assessment
9. Support student learning by building rapport with students, attending to multiple styles or modes of learning, proactively minimizing non-pedagogical conflict, and otherwise creating learning-centred classroom atmosphere

The specific content of outcomes 4 and 5 is determined by the issues and ideas addressed in the two credit courses, which may vary from year to year.

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<sup>2</sup> Details regarding each course can be found in Appendix C.

A certificate in the *Fundamentals of University Teaching* is accompanied by a certificate in *Supporting Learning*, from the Staff and Educational Development Association (SEDA). The *Supporting Learning* certificate is awarded to those who complete a program relevant to academics playing a multitude of teaching roles, from graduate assistants with marking duties, to lab instructors and tutorial leaders, to sessional instructors, all the way up to tenured faculty members. A certificate in *Supporting Learning* is a sign that one has invested time and energy to learn a variety of approaches for creating conditions conducive to learning.

The SEDA outcomes for a *Supporting Learning* certificate are aligned with the *Fundamentals of University Teaching* outcomes, so that by achieving the *Fundamentals* outcomes, the SEDA outcomes are necessarily achieved as well. With that in mind, successful participants must be able to:

- **Core Development Outcomes**
  - Identify their own professional development goals, directions or priorities
  - Plan for their initial and/or continuing professional development
  - Undertake appropriate development activities
  - Review their development and practice, and the relations between them
  
- **Specialist Outcomes**
  - Use a variety of appropriate approaches to enable learning
  - Use a variety of methods for evaluating their role in supporting learning
  - Inform their professional role with relevant strategy, policy and quality considerations

SEDA also requires that participants' work in achieving these outcomes be influenced by what they call "SEDA-PDF Values." These include:

- An understanding of how people learn
- Scholarship, professionalism and ethical practice
- Working in and developing learning communities
- Working effectively with diversity and promoting inclusivity
- Continuing reflection on professional practice
- Developing people and processes

### 1.3 Research Questions

This exploratory study intended to assess the effects of the education participants experienced in the *Fundamentals of University Teaching* certificate, level one of the University Teaching Certificate Program. Based on the work of Kirkpatrick (1994), Guskey (1999), and Stes, Clement and Petegem (2007), we sought evidence of the program's impact on participant beliefs, attitudes and practices consistent with the overall

aim of developing scholarly teachers, as well as perceptions of such changes by participants and their students. Questions addressed included:

1. How does involvement with the UTC Program impact participant beliefs and attitudes about teaching and learning?
2. How does involvement with the UTC Program impact participant teaching practices?
3. How does involvement with the UTC Program influence participants' engagement with and impact on teaching and learning practice and decision making in their departments and institution?
4. What do participants identify as the benefits, areas of improvement and barriers to participation for the UTC?

#### 1.4 Research Methods and Methodology

This study used a multi-method approach. Ethics approval was received from the University of Windsor's Research Ethics Board and participants were recruited through letters emailed from the Centre for Teaching and Learning's (CTL's) administrative assistant, as a removed third-party, rather than through solicitation by UTC mentors and teachers, in order to minimize contact from those involved in the study. The consent form reinforced that participants had the right to withdraw at any point during the study and could request their documents to be withdrawn from the study. Participants were offered a copy of a teaching and learning book in exchange for their participation.

The study involved reviewing documents that were generated by participants as part of the normal UTC Program:

- Collating and analyzing pre- and post-program learning plan documents submitted by each willing participant:
  - Teaching Perspectives Inventory (TPI) – changes in perspectives about teaching, and alignment between beliefs, intent and action
  - Zinn Philosophies of Adult Education Inventory (PAEI) – changes in philosophy of teaching
  - Approaches to Teaching Inventory (ATI) – changes in participants' teacher-focused and student-focused approaches to teaching
  - Teaching Goals Inventory (TGI) – changes in teaching goals for a specific course
  - Teaching philosophy – changes in beliefs and values for teaching in a descriptive narrative

The primary instrument used in the UTC learning plans is the Teaching Perspectives Inventory (TPI), which consists of questions pertaining to beliefs, intentions and actions regarding teaching (Pratt & Associates, 1998). Responses are scored and categorized into five categories representing different perspectives on teaching and learning: transmission, apprenticeship, developmental, nurturing and social reform. For each perspective, participants receive three sub-scores (for beliefs, intentions and actions), which add up to a maximum of 45 points. Perspectives with scores one standard deviation above the individual's own mean score are designated dominant and scores one standard deviation below the mean are designated recessive (<http://www.teachingperspectives.com/tpi/>).

According to Pratt and Collins, the TPI is a useful tool for helping academics reflect on the alignment between what they believe about teaching, what they intend to happen as a result of their teaching and what they say about their teaching practices. The UTC Program uses it to fuel conversation and reflection about internal alignment, consistency between espoused theory and theory-in-use (Tagg, 2007), and self-identity.

The Philosophies of Adult Education Inventory (PAEI, Zinn, 1983, <http://www.labr.net/apps/paei/>) is intended to help academics situate themselves relative to some popular theoretical categories in the philosophy of education. Participants respond to 15 statements by rating each statement on a seven-point Likert scale. The PAEI instrument consists of five subscales, which correspond to five major categories in the philosophy of education: liberal, behaviourist, progressive, humanist and radical. Total scores of 95 to 100 indicate strong agreement with the identified philosophy, while scores of 15 to 25 indicate strong disagreement with the indicated philosophy.

The Approaches to Teaching inventory (ATI, see Trigwell & Prosser, 2004) provides respondents with scores in two categories, intended to be independent of one another: Information Transmission/Teaching Focused (ITTF) and Conceptual Change/Student Focused (CCSF). The CCSF score represents teaching that focuses on helping students create meaning, which is associated with more productive student learning behaviours; the higher the score, the likelier it is that one is teaching in a way that leads students to take deep approaches to their learning. The ITTF score represents traditional approaches to teaching – the transmission of information to be absorbed by students – which is associated with more superficial student learning behaviours. The ATI has been used several times in test/re-test studies (for example, Rodgers, Christie & Wideman, 2014; Stes, Coertjens & Van Petegem, 2010; Stes, Min-Leliveld & Van Petegem, 2010; Stes, Clement & Van Petegem, 2007; Dimitrova et al., 2013) and is considered valid.

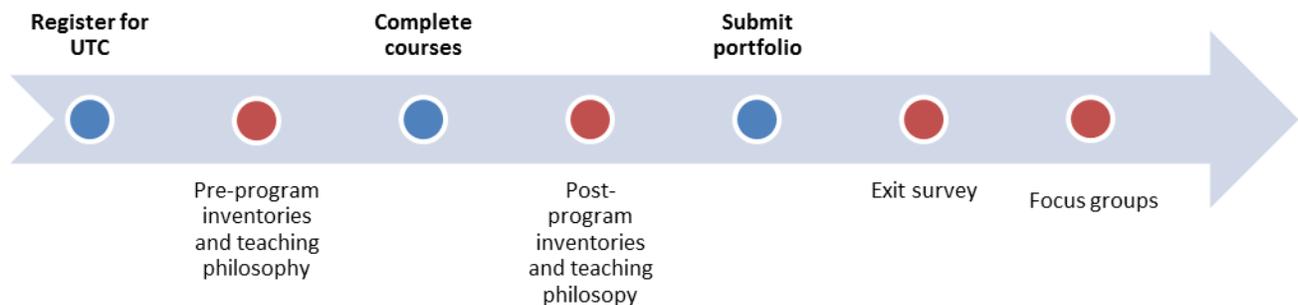
The Teaching Goals Inventory (TGI; Angelo & Cross, 1993) asks teachers questions about what they intend to focus on in their courses. Responses are categorized into sets of priorities: higher-order thinking skills (HOTS), basic academic success skills (BASS), discipline-specific knowledge and skills (DSKS), liberal arts and academic values (LAAV), work and career preparation (WCP) and personal development (PD). In addition, post-graduation exit surveys were analyzed and participants were invited to participate in focus groups (see Appendix B for focus group questions). Details about each of the inventories and the questions from the exit survey are included in the next section.

The sources of data were used to address the four research questions:

Research Question	Source of Data
1. How does involvement with the UTC Program impact participant beliefs and attitudes about teaching and learning?	<ul style="list-style-type: none"> <li>• Comparison of pre and post-inventories: TPI, PAEI, ATI, TGI</li> <li>• Comparison of pre and post teaching philosophies</li> <li>• Focus groups</li> </ul>
2. How does involvement with the UTC Program impact participant teaching practices?	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Exit survey</li> </ul>
3. How does involvement with the UTC Program influence participants' engagement with and impact on teaching and learning practice and decision making in their departments and institution?	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Exit survey</li> </ul>
4. What do participants identify as the benefits, areas of improvement and barriers to participation for the UTC?	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Exit survey</li> </ul>

As part of the program, participants were invited to complete the pre-program learning plan documents (inventories and teaching philosophy) by their mentor when they first began the UTC Program. They were asked to complete the post-program learning plan when they completed their UTC courses, to include in their UTC program portfolio for graduation. Following graduation from the UTC Program, participants were e-mailed a post-graduate exit survey. Those who agreed to be part of the study were invited to participate in a focus group (Figure 1). Because the program start and end dates differed from participant to participant, learning plan materials were gathered at different points in the year, though always at roughly the same time in a given participant's progress in the program.

**Figure 1: Timeline for Data Collection during the UTC Program**



Quantitative learning plan inventories (TPI, PAEI, TGI and ATI) were analyzed statistically using conventional statistical assumptions.

Teaching philosophies were assessed using a rubric based on the Structure of Observed Learning Outcomes (SOLO) taxonomy (Appendix A), to determine whether and how the pedagogical attitudes and beliefs of participants changed during their time in the UTC Program. Teaching philosophies provide a means to assess the way academics think about teaching and learning – their conceptualizations, models, metaphors, comparisons and associations. The first draft of the rubric was developed by the principal investigator, who led the research team through a moderation exercise using sample teaching philosophies, after which the rubric was refined with input from the team before being applied to teaching philosophies from study participants. Each teaching philosophy was anonymized and assigned in three batches to two or three assessors, who included the authors of this report and two additional UTC teachers/mentors. Care was taken to ensure that participants’ teaching philosophies were not assigned to assessors who had been their mentors. Each batch was assessed individually using the rubric, then all scores were compiled and discussed by all involved in assessing that batch until consensus could be reached, again guided by the rubric.

The SOLO taxonomy (Biggs & Collis, 1982), originally developed to assess the quality of questions, has been used for more than three decades in multiple educational contexts and disciplines to guide and assess the complexity of learning that results from lessons and courses. In the UTC Program, participants use it to guide their design of learning outcomes, assessment tasks, lessons and courses. It consists of two dimensions: quantitative and qualitative. At the lower, quantitative dimensions (unistructural and multistructural), learning is a matter of adding to the stock of ‘things’ one knows, without necessarily understanding them. Understanding comes at the higher, qualitative, levels of the taxonomy (relational and extended abstract), as it is, Biggs and Collis argued, a matter of making connections through increasingly complex abstraction and generalization using that quantitative stock of ‘things’ one has learned, eventually being able to project meaningfully into the future, to apply knowledge and adapt to new contexts, and to use what one has

learned to critique and create. The relational and extended abstract levels of SOLO represent the sort of learning that most educators would like their students to achieve, though the details of how to help students reach the higher levels are complicated.

Focus groups were run with participants who had completed the program in order to gain deeper insight into all four research questions. The research team received focus group training from Suzanne McMurphy from the School of Social Work, University of Windsor, to ensure a consistent and competent approach to facilitation. Two focus groups of six participants each were held, facilitated by two members of the research team (neither of them the PI). Focus groups were run following a predetermined script to ensure maximum consistency between the two groups (see Appendix B for script). The focus group data were audio recorded and transcribed by a research assistant. Results were interpreted using elementary content and thematic analyses to identify and classify common themes (Creswell, 2003). The transcriptions were themed by three members of the research team (the two facilitators and the PI), then themes were refined and categorized into thematic clusters.

The exit survey was circulated by email in order to gather information anonymously in writing. All UTC graduates were sent an exit survey and only those who agreed to participate in the study were included in the research data analysis. The exit survey was used to gather information about changes to participants' self-reported teaching practices, perceived impacts at the departmental and institutional levels, and feedback about the program benefits, areas for development and barriers to participation. Like the focus groups, exit survey results were interpreted using elementary content and thematic analyses to identify and classify common themes (Creswell, 2003). The responses were reviewed by three members of the research team (the two facilitators and the PI), then themes were refined and categorized into thematic clusters.

### 1.5 Limitations of the Data

There are limitations to the data collected and the conclusions that can be drawn. The sample size of participants was small, in part because the participant pool was small, the method of contact was through a third party and some potential participants feared repercussions in their departments. Some of the pre and post data were missing, as the participants who had participated in the program a while ago had not kept all of the necessary data. There was no control group in the design, so it is not possible to compare the participants with others who were not enrolled in the program. The study is of a specific program within one university, so the results may not be generalizable beyond the institution. Finally, as noted earlier, the sample is biased: UTC participants tend to be individuals who care deeply about the quality of their teaching and are motivated to devote significant effort and time toward their own development as teachers.

## 2 Data Presentation and Analysis

### 2.1 Participant Demographics

A total of 23 UTC participants agreed to take part in the study – 8 from the 2009-10 cohort, 5 from the 2010-11 cohort, 9 from the 2011-12 cohort, and 1 from the 2012-13 cohort. For each learning plan document analyzed, we had fewer than 23 sources because some had to be excluded due to missing data (either the documents were not retained or the participant had not yet completed the program when data were being gathered; in the latter case, post-program data could not be obtained).

Although we did not gather or use detailed demographic information in the study to maintain more confidentiality in a small program, the general demographic breakdown is as follows. Of the 23 participants, 18 were female and 5 were male. This ratio is consistent with the full program.

In terms of academic affiliation, 5 participants were from engineering, 4 participants were from social sciences, 3 were from the humanities, 3 were from education, 3 were from science, 2 were from nursing, 2 were from business and 1 was from law.

In terms of academic role, 11 participants were sessional instructors, 6 were full-time faculty members (traditional and teaching-focused), 5 were graduate students and 1 was staff. Note that 11 participants could be classified as having more than one academic role. For the purposes of this study, multi-class participants were categorized according to *the most teaching-relevant role* they played – in descending order: full-time faculty member, sessional instructor, graduate student and staff.

Of the 23 participants, 12 participated in the focus groups and 9 completed the exit survey. Most graduate student and some sessional participants had left the university when focus groups were conducted, and participants appear to be less likely to complete the exit survey if they do not intend to stay or have already left.

### 2.2 Learning Plan Inventories<sup>3</sup>

#### 2.2.1 Teaching Perspectives Inventory

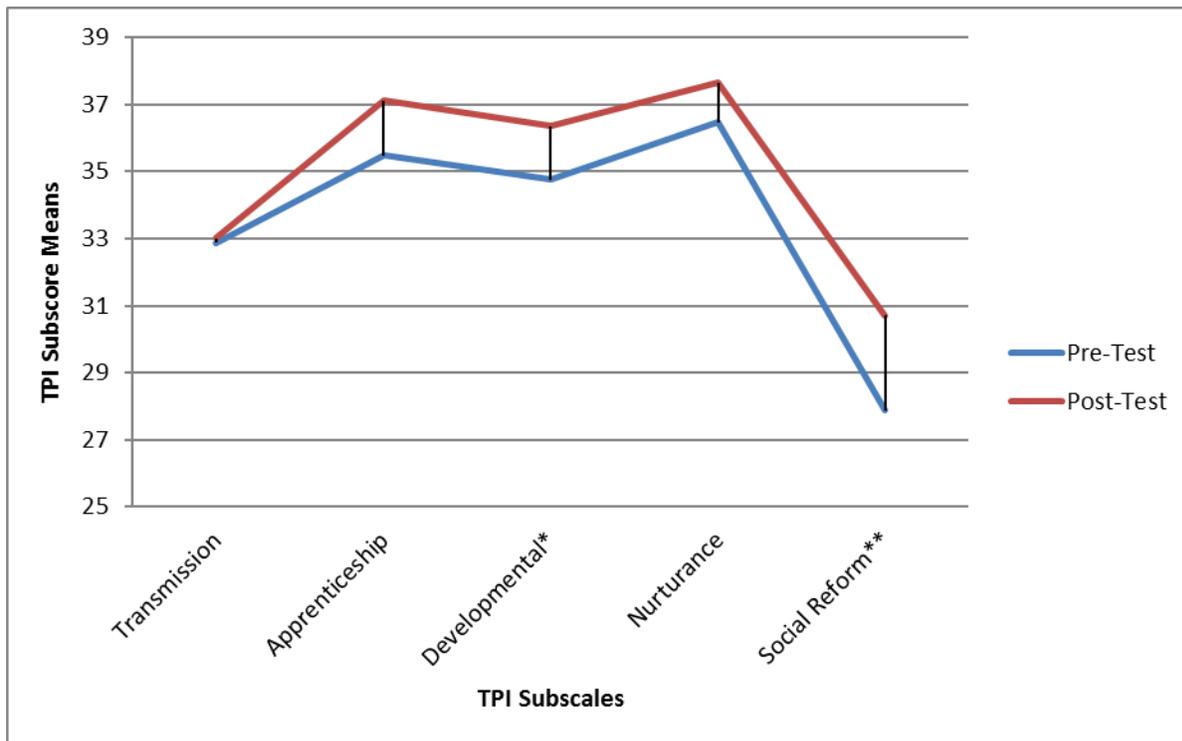
We had 17 matched (pre-program and post-program) pairs in the TPI results. Mean scores increased in all five perspectives from pre-program to post-program, although the results in the transmission (32.88 to 33), apprenticeship (35.47 to 37.12) and nurturing (36.47 to 37.65) perspectives were not statistically significant.

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<sup>3</sup> T-tests were used for all of the quantitative data.

However, increases to the mean scores for the developmental (34.76 to 36.35,  $p = .048$ ) and social reform (27.88 to 30.71,  $p = .002$ ) perspectives were statistically significant, especially the latter.

**Figure 2: Teaching Perspective Inventory Results (n=17 matched pairs)**



\*  $p < .05$ ; \*\*  $p < .01$

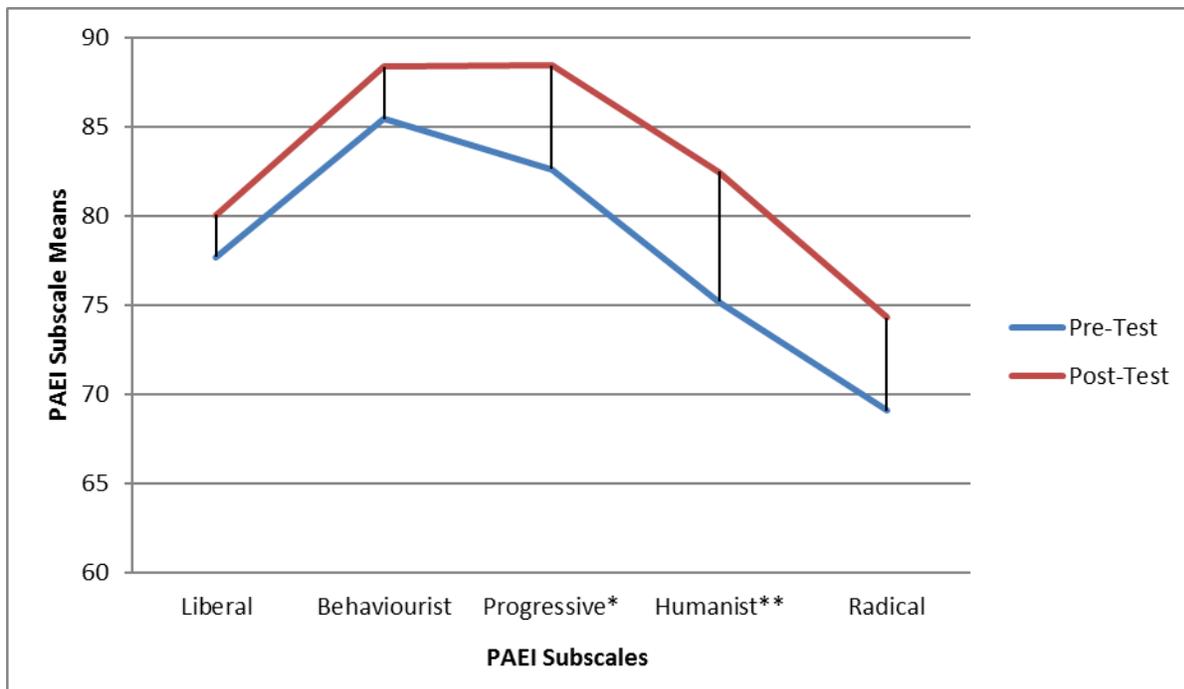
### 2.2.2 Philosophies of Adult Education Inventory

The categories of the PAEI share similarities with the categories of the TPI. These similarities are predictable, due to the philosophical positions that influence the TPI categories, but imperfect, resembling heavily overlapping Venn diagrams. Thus behaviourist philosophy tends to correspond with the developmental perspective, humanist philosophy tends to correspond with the nurturing perspective, progressive philosophy tends to correspond with the apprenticeship perspective, liberal philosophy tends to correspond with the transmission perspective and radical philosophy tends to correspond with the social reform perspective.

Due to these common correspondences (which the UTC mentors and assessors had noted in learning plans), we had expected to see similar results across the 16 matched pairs of pre- and post-program TPI and PAEI results. However, while scores in the PAEI increased in each category – 77.69 to 80.06 in liberal, 85.44 to

88.38 in behaviourist, 82.63 to 88.44 in progressive, 75.19 to 82.50 in humanist and 69.06 to 74.41 in radical – and thus did not contradict the results of the TPI, the only significant differences in the *t*-test were in progressive ( $p = .022$ ) and humanist ( $p = .004$ ). This is an obvious contrast to the significant differences found in the TPI results.

**Figure 3: Philosophies of Adult Education Inventory Results (n=16 matched pairs)**



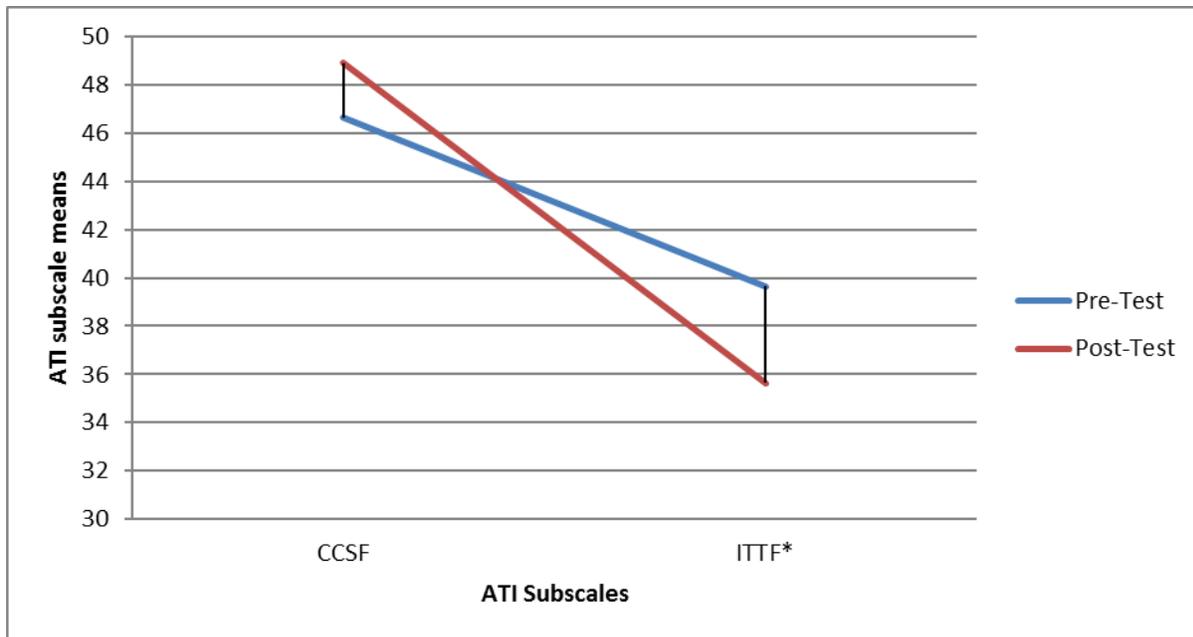
\*  $p < .05$ ; \*\*  $p < .01$

### 2.2.3 Approaches to Teaching Inventory

There were only 11 matched pairs for the ATI, which is partially explained by the fact that it was not a required inventory in the UTC learning plans until the second cohort (and has been removed again since the completion of this study).

From pre-program to post-program, the CCSF score rose from 46.64 to 48.91 ( $p = .292$ ), not a significant increase but trending in the desired direction. The ITTF score dropped from 39.64 to 35.64 ( $p = .036$ ), a significant difference and also heading in the desired direction.

Figure 4: Approaches to Teaching Inventory Results (n=11 matched pairs)



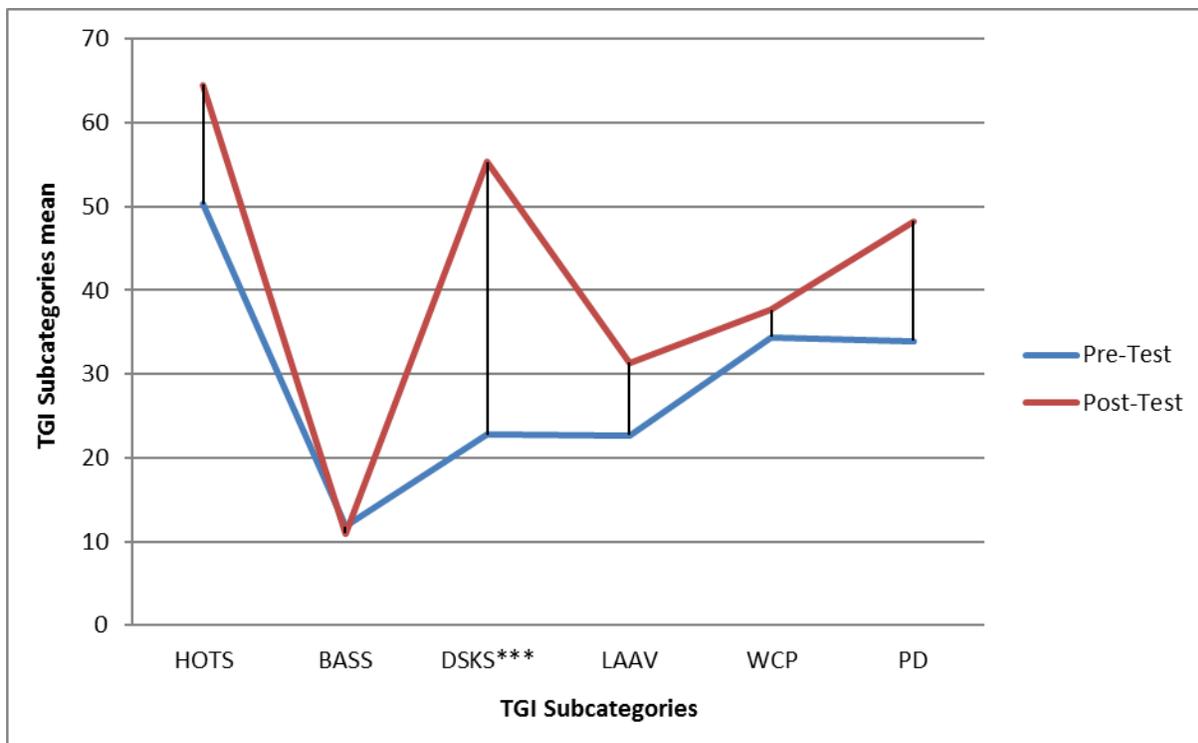
\* P<.05

### 2.2.4 Teaching Goals Inventory

With the exception of basic academic success skills, the mean scores in every category of the TGI increased from pre-program to post-program in the 15 matched pairs – HOTS from 50.27 to 64.47, BAAS from 11.80 to 11.00, DSKS from 22.73 to 55.27, LAAV from 22.67 to 31.33, WCP from 34.40 to 37.67 and PD from 33.93 to 48.20.

The only significant difference in these results is in the DSKS score (p is less than .001), which nearly doubled from pre-program to post-program, implying that as they progressed through the program, participants increasingly prioritized the discipline-specific aspects of their courses.

Figure 5: Teaching Goals Inventory Results (n=15 matched pairs)



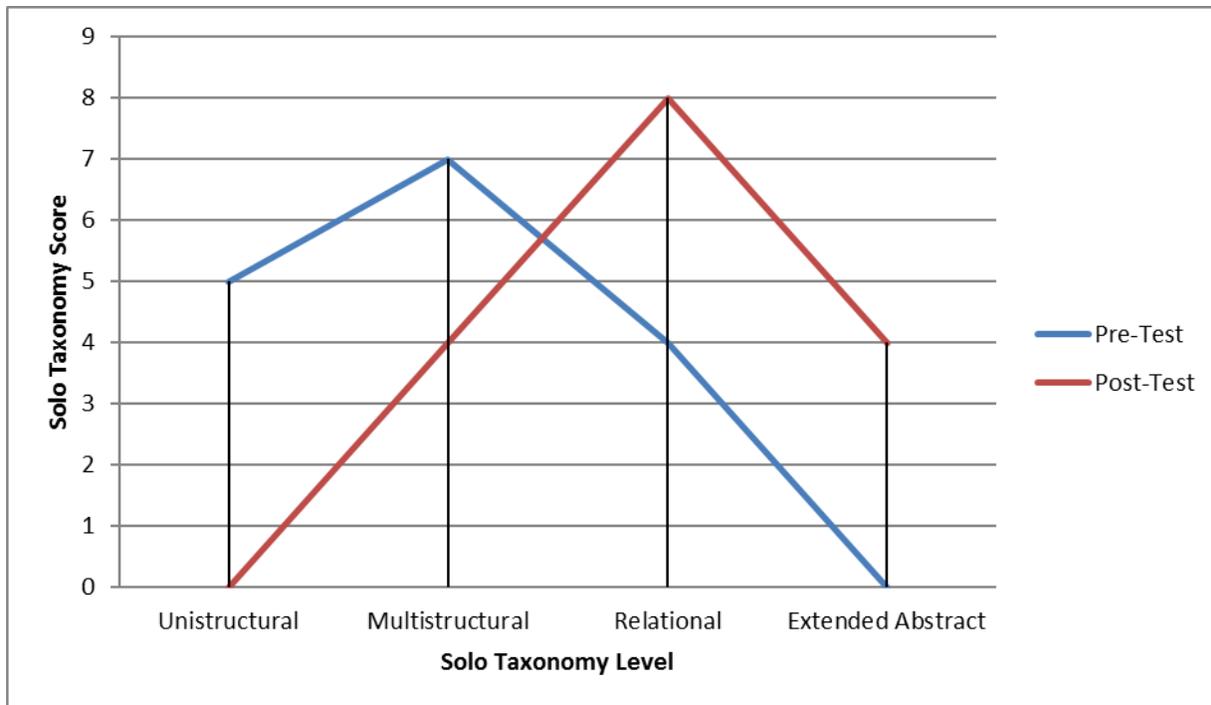
\*\*\* p<.001

### 2.3 Teaching Philosophies

Academics develop conceptions of themselves as teachers based on their own experiences as students and teachers (Prosser, Trigwell & Taylor, 1994; Pratt, 1992; Samuelowicz & Bain, 1992; Dall’Alba, 1991; Martin & Balla, 1991) – experiences that include not only their perceptions and reflections on their own speech and behaviour, but observations of others, reading, and what students and colleagues tell them about themselves.

Assuming that most participants would have at best a passing familiarity with teaching philosophies at the onset of the program, we expected that pre-program teaching philosophies would cluster at the multistructural level. Since a good teaching philosophy should tell a coherent story – or, if one prefers, paint a coherent portrait – of its author’s teaching identity, we hoped that post-program learning philosophies would cluster at the relational level. We expected very few post-program teaching philosophies at the extended abstract level at graduation from level one of the UTC program, though we expect at least half would reach that level upon graduation from level two.

Figure 6: Teaching Philosophy SOLO Results (n=16 matched pairs)



The aggregate mean score for pre-program teaching philosophies was 6.2, placing it firmly in the multistructural range. The aggregate mean score for post-program teaching philosophies was 8.6, an increase of 2.4 points, placing it at the lower level of the relational range. Both aggregates matched expectations. A clear shift in the curve can be seen, skewing to the right, with higher levels of taxonomy following the UTC program.

Turning to the 16 matched pairs, the change in score from pre-program to post-program ranged from 2 to 10, an unexpected degree of variation. The mean difference between pre-program and post-program scores was 2.68 (median 2). But since the rubric is categorical, more meaningful information can be gleaned by examining differences from that perspective.

Among the matched pairs, 5 pre-program teaching philosophies were at the unistructural level, 6 were at the multistructural level, 4 were at the relational level and none were at the extended abstract level. In contrast, none of the post-program teaching philosophies were at the unistructural level, 4 were at the multistructural level, 8 were at the relational level and 4 were at the extended abstract level. The differences are fairly dramatic. Two participants improved their teaching philosophies from unistructural to extended abstract (rising by 7 points and 10 points).

Only one participant's score dropped (by two points) from pre-program to post-program. Every participant whose pre-program score was at the unistructural ended the program at the multistructural level or higher. No one ended the program lower than the multi-structural level.

To illustrate the differences we saw between the pre and post-program teaching philosophies, let us consider some matched pairs.

Participant 1A's pre-program teaching philosophy was solidly unistructural. "When I teach," he/she wrote, "I need to know where we're going with a reasonable idea how the students will get there. Over the years, I have become more comfortable with taking the necessary detours and confident that the end goal is attainable through various paths. Teaching is a joy and privilege. In teaching, I learn from my students as they learn from me and from each other." This is oversimplified and entirely focused on one aspect of teaching: Participant 1A's needs. His/her post-program teaching philosophy shows some growth. Here, Participant 1A writes, "I am particularly adept at figuring out what students need to learn, deconstructing problems into meaningful chunks, considering how different students will learn the material best, and designing instruction to meet those objectives or desired outcomes. This has allowed me to teach in various fields (listed) and various settings (listed)... Regardless of the subject, I believe it is vital that students learn what will help them succeed in the next course or step of the program, in their future careers, or in their everyday lives." Much of the focus is still on the teacher's own needs but there are now considerations of students mentioned, some information about means and some awareness of matching means to ends.

Participant 3A, on the other hand, turned in a multistructural teaching philosophy pre-program. This teaching philosophy was a two-page list of quotations and teaching methods used by the participant. A typical passage: "Stationary would not describe my classroom. Typically, my students... sit in a horseshoe position so that they can see one another and myself. But if the desks are fixed, then I ask the students to physically move. Moving students is necessary when conducting think/pair/share discussion groups or when they are in dyads and editing one another's work. Yet, if the students do not like to move or cannot move easily, then I move. I move to the podium when I need to clarify a concept or when I need the students to take notes. I move to sit in a desk alongside them when I am involved in the discussion group or when they are asking make questions." There is promise here, but page after page of disconnected quotations and list give little idea of how well Participant 3A understands his/herself as a teacher, how his/her beliefs and values tie the practices together, and what it all means.

Yet, post-program, Participant 3A had moved away from lists of practices to contextualization, rooting practices in past experiences, connecting them to deep beliefs and ideals, and extending them forward into the future. For example, after explaining the experiences that led to the choice of a teaching career, Participant 3A encapsulated his/her approach: "As a teacher, the main philosophy I try to practice is to help students realize that the responsibility of learning lies with them. I as a teacher am only the enabler not the absolute source. A source that is well informed in the topic but realizing the importance of allowing students to participate, filter through, and infer relevant details that contribute to their individual progress in the field." From that point, Participant 3A explores the meaning of this approach by making reference to well-

contextualized teaching approaches, abstracting and detailing implications that readers may not expect. Participant 3A's post-program teaching philosophy was scored at the extended abstract level.

Participant 1J began his/her pre-program teaching philosophy with "If I were to describe my teaching philosophy in one extended sentence it would be: from a raindrop to a downpour. Rain formation starts from a solid particle around which water accumulates to form one raindrop and then another and then another until millions of drops together pour down into land and ocean." This metaphor, rooted in the participant's discipline, is used to explain the nature and relationships of his/her teaching practices.

Finally, Participant 3G rose from a unistructural teaching philosophy pre-program to an extended abstract teaching philosophy post-program. In his/her pre-program philosophy, Participant 3G wrote, "For me, pedagogy is more about values than it is about academics. In fact, one's definition of *academic* is a matter of perspective & value," then launches into a list of requirements for a learning community that is not connected to the preceding sentences. Post-program, however, Participant 3G presents a conceptual framework for his/her teaching philosophy, based on context, meaningful learning, interaction and social justice, all connected to life experiences, teaching experiences and long-term goals.

## 2.4 Focus Groups<sup>4</sup>

Focus group responses were themed by three members of the research team (the two facilitators and the PI), then themes were refined and categorized into four thematic clusters: pedagogical outcomes (39% of the responses), professional needs (24% of the responses), program elements (27% of the responses), and obstacles and recommendations (10% of the responses).

### 2.4.1 Professional Needs

Of the responses identified in the professional needs cluster, 33% were themed as development, 29% as confidence/anxiety, 12% as reflective practice/identity, 11% as influence/leadership/change agency, and 15% as positive or satisfactory outcome.

#### Development

Many participants spoke of a desire to improve or develop as a teacher as motivation for joining the program and as an outcome of their involvement. As one participant explained, "I feel like you can keep developing even after it is over; they give you the tools for that as well."

As highlights of their involvement in the program, participants identified the freedom to experiment with unfamiliar teaching methods (such as inquiry-based learning and problem-based learning), explore new

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<sup>4</sup> See Appendix B for focus group questions.

ideas and take advantage of new learning opportunities as highlights of their involvement in the program. For some participants, a sense of self-efficacy developed out of the opportunity to build confidence, knowledge and skills through experimentation. Whereas “you may be hesitant to go ask somebody on your appointments committee how you can improve your teaching, or whether they think something would work, (you) would feel more comfortable trying out some things here and then approaching people in your department afterwards.”

Integration of professional identities, entwining both teaching identity and research identity, emerged as well, perhaps in part due to the transferability of what participants learned. One participant highlighted lecturing skills: “I think about that now when I present to my committee, for instance, and not in a teaching capacity but in a research capacity.” In addition, “the process of inquiry that I learned from the UTC program completely redefined what research is to me.” Another participant agreed that the lecturing course taught skills easily transferred to other areas of life and called attention to the “the inclusivity component” of the Online Education course “because it’s very easy going through life thinking about your own perspective, not being so aware about other people who have different experiences and who have different ways to (look) at the world.” One participant had already left academia to work with a manufacturing company, where she was expected to teach colleagues about training employees. She found that “I was able to translate it into something that they can understand, so they understood that it was worthwhile but at the same time I was like ‘Wow ... I have learned all this stuff and now I feel comfortable with it’. ... I guess I was really surprised at how much I knew, being able to ... teach somebody else how to do it.”

Some participants seemed surprised at how much they had changed since enrolling in the program: “I have moved from standing in front of class and just talking to now engaging the students and actually taking a break and not thinking ‘Oh, I am not doing my job because I am not talking all the time.’” Other participants echoed this perception, speaking of effects that their UTC experience had already had on their teaching, and thus on their students. As one said, “I have had fourth year students who comment that ‘This is the first class I have had when I actually met anyone from the department (and) really started to get to know anyone’, because they are used to just having to take notes and do exams.”

### **Influence, Leadership and Change Agency**

Participants expressed to a greater extent than anticipated a satisfaction with their growth as change agents as a result of their UTC education. Some participants spoke of this in terms of the initiative they found themselves taking. As one graduate student said:

I went back to the X department as a sessional and was working with my former professor, and so it was a little intimidating at first. But they invited me to join their departmental council meetings, and I found myself speaking up in a way that I wouldn’t have before about policy and curriculum and things like that. I was shocked at myself. You know, had I thought of myself as a graduate student there I wouldn’t have said any of those things but I had the confidence that I knew what I was talking about and they listened to me.

Many participants reported being called upon to contribute to educational changes in their department even before they had graduated from the first level of the UTC Program. For instance, participants said, “I was instrumental in (a) policy change that’s coming” and “People ask me questions about teaching, which they didn’t do before.” In some cases, participants made a direct link between their growing influence and the confidence they gained in the program, feeling that they were now “able to start conversations with people about pedagogy that I would have been afraid to approach before.”

A graduate student who alternates between working as a graduate assistant and a sessional instructor reported being hired by her department to create a “syllabus template... then I went to a department meeting and shared (it) with people and that became something that belong to the department” and is now required. The same graduate student was also invited to join a committee tasked with creating a new interdisciplinary program as a research assistant as a result of her developing expertise.

In general, participants seemed surprised by the roles they now found themselves taking in their departmental homes. As one said, “I am looked upon to... lead conversations and talk about curriculum design. ... Being a junior faculty member, that is rather unusual that I would be the one creating conversations with senior faculty about how the curriculum should be designed, and how our courses could fit into that framework.”

### **Positive or Satisfactory Outcome**

In terms of their developing professionalism, participants spoke of the positive effects their participation in the program seemed to have on their professional lives, especially in regard to perceived impact on students, who found themselves enjoying and learning from the learning experiences created by UTC participants, who they found “different from some of the other professors.”

Although the program discourages participants from relying on Student Evaluations of Teaching (SET) scores as reliable single sources of information, one participant said, “In my case if I was to compare the SET scores, I found a tremendous increase from teaching before the UTC and then after.” The same participant saw another sort of impact as well: “Actually, I had an observation done and the person observing me stayed after class and asked the students what was their opinion on my teaching. And all of them said that “We appreciate that she is taking the time to learn about teaching.”

Another participant shared feedback from a student who was frustrated with her efforts to try to reach all students. This “good student” told her to “stop caring about the students so much,” but the participant interpreted this as positive feedback triggered by changes she had made to her teaching due to the UTC program, a consequence of “learning that you can have a diverse group of students and you should be considerate of all their learning needs, that you need to pay attention to all groups that you have in class” – not just the “good students.”

### **Reduced Anxiety and Increased Confidence**

Comments about reduced anxiety and increased confidence were common in both focus groups. Participants spoke of increased confidence regarding their teaching, course design and assessment planning – and “In myself, in my ability.” They also felt “less pressure to have all the answers for everything (so I could rely on) the students a lot more in terms of their expertise, and what they know, and what they bring to the class.” The new confidence expressed by participants influenced the way they saw their futures as well. As one participant noted, “A lot of the skills are transferable. If we don’t get jobs in academia, we can do other things.”

Participants spoke of being less afraid to try new kinds of teaching experiences: “I’ve never taught a large class,” said one participant, “but I am not afraid of it now and I would try it.” Their UTC experiences provided opportunities to confront and overcome their fears: “I took that Lecturing half course and lecturing really scares me... and it really did help me to feel more comfortable because it gave me more experience in it and more knowledge about it.”

They also spoke of being less afraid to speak out and pursue their goals proactively. “It has helped me be more confident in my position (in my department) and in talking to other departments,” one participant explained, “where I would have been really self-conscious and like a little mouse, not talking. But it’s made me reach out more and go after what I want rather than just waiting for it.”

### **Reflective Practice and Identity**

An increase in confidence appeared to be accompanied, unsurprisingly, by an enhanced sense of self-identity, developed through critically reflective practice – “really reflecting on what am I doing and why am I doing it.” Participants appreciated that the program “gives us an opportunity to reflect on our teaching. Writing the (program portfolio) and doing those surveys and kind of sitting back and looking at the results was something that honestly I would not have done if I was not part of the UTC.”

Another participant contrasted the reflective approach of the UTC Program with his/her expectations upon registration: “I think sometimes you expect to get quick tips and tricks, quick fixes and so on. You don’t expect to question yourself deeply and to do something and then do something, practice it, and re-do it. I think it was a lot deeper than I expected.”

Critical reflection seemed important to many participants. As one participant explained, “Coming in, I had experience so I was successful as a teacher, but I did definitely change in the way I see students and view the classroom, having gone through the program.”

### 2.4.2 Program Elements

Of the responses identified in the program elements cluster, 32% were themed as experimentation, 26% were themed as workload and difficulty, 16% were themed as learning community/networking, 16% were themed as mentoring/modelling, 5% were themed as diversity and 5% were themed as feedback.

#### **Mentorship and Modelling**

Participants appreciated the ‘practice what you preach’ ethos of the UTC program. “For each of the courses they were... trying to make form and content match, and modelling what they were talking about,” said one participant. Another found that much of the program’s value “was a modelling thing. I think it was because our mentors and teachers were doing what they told us that we should do.”

In addition to the modelling emphasized in the course design, pedagogy and assessment, participants highlighted the importance of the relationships they developed with their mentors. Said one, “being able to go and have someone to help you... to talk to, who is outside of my department, was also something that I valued more when I’d gone through the program.” Participants emphasized their mentors’ role in identifying and overcoming challenges, providing feedback, answering questions and helping them stay focused on their goals as critical to their success.

Emphasizing the mentors’ role in providing a common thread and encouraging reflection, a participant said:

I think for me the mentoring part was so critical, because it... expanded through the entire length of the program, so it tied together all the different courses and your experiences going through those courses. (For) your personal development and the development of (the program portfolio)... it helped me to collect this evidence of what I was doing, reflect on my teaching philosophy, really ask myself, are those things aligned? And what changes would I like to make?

#### **Workload and Difficulty**

Several participants spoke of the workload involved in the program – “a tremendous amount of work.” Although the workload was raised by several participants, it was also recognized as valuable. One participant said, “Even though there were many times when I thought, ‘I do not want to go this week, I’ve got too much going on’... I was afraid of what I would miss if I didn’t go because you gained so much in every class that missing it just wasn’t an option.” Other participants believed that the time investment during the program was compensated by the expectation that it would save them time later.

Indeed, participants repeatedly tied the acceptability of the workload to the quality of the program: “if it had been any less quality than it was, I would have stopped.” Several participants recognized the necessity of intrinsic motivation in the program – a strong internal desire to develop as a scholarly and effective

teacher. “It’s a lot of work, so you really have to want to be there.” One participant “almost didn’t finish it because it was so much work while I was busy doing other things. But, for all of us who do finish that speaks to how good it was. It was worth it”. Agreeing, another participant said, “And we wouldn’t have come back for the second (certificate).”

In addition to workload, participants also reported on the difficulty of the coursework in the UTC Program. Participants found it “challenging”, especially the program portfolio. Yet, as with the workload, participants found value in the difficulty of the program and did not want it to change. As one participant said (to the agreement of others in the room):

In order for the courses to have legitimacy, they should... ensure that people get through the course and pass. But if there are individuals who are not completing the work or (submitting) low quality work, I would feel bad if they were passing because if you are in a department and everyone has the certificate, and you know that teachers who did very poorly have the certificate *and* teachers who did very (well) had the certificate, it devalues the certificate in and of itself. So I would hope that they would keep standards as they are and that they don’t allow people to complete the course just because they are here. There has to be a certain rigor so the (program) has value and is legitimate.

### **Feedback**

Participants found value in the amount of feedback they received in the UTC Program, an emphasis they brought back with them to their own teaching in terms of providing feedback to their students and asking for feedback in return. “One of the things that I learned from the UTC Program was to ask for feedback from students, so I did ask at multiple times and did the stop, start, continue exercise,” reported one participant.

### **Diversity**

Several participants mentioned the value of either learning about best practices in teaching and learning in the Canadian context or learning from colleagues from many different nations and cultures. For several participants, the value of diversity was most obvious in their interactions with those from other disciplines and departments (whatever their cultural background). As one participant explained, the UTC Program brought home the importance of “understanding that different disciplines see the world differently, but also that students learn very differently. So having the feedback from a variety of perspectives really brought that idea home for me.”

Many participants entered the program feeling skeptical of what they could learn from multidisciplinary colleagues. But, as one participant said, “I found with the classes, having a bunch of people from very different disciplines, that you often had communalities that you wouldn’t necessarily expect. Somebody in humanities might have a good overlap with somebody in nursing or engineering in some of the issues that they were facing, and the methods that were used were similar – or there are differences.”

## **Experimentation**

Participants found that “you do form some bonds with other people in the (program) and you find that it is a safe (program) to bounce ideas around without having a repercussion on any future hiring in your own department, so you can kind of work things through.” Other participants agreed that “we were really encouraged to experiment, and I really loved that (we could) take risks and it was okay.... I felt safe to be able to take risks and experiment and learn through that.”

Through experimentation, participants found that “you open your eyes to more possibilities.” They also found practical and immediate value in it. For example, one participant explained that “In the (Learning-Centred Teaching in Higher Education) class, during the group project, my group did Inquiry.... That was something that I had not done in a classroom before, so not only did I get to learn about it but I got to organize a workshop for the class, and then practice some of that.”

## **Learning Community and Networking**

Many participants found themselves surprised, even gratified, at the learning community they developed with colleagues in the UTC program and at the value of networking with like-minded colleagues from departments with whom they would otherwise have no contact.

The learning community aspect of the program seemed to hold the most value for early career faculty and sessional instructors, who frequently feel isolated. This social aspect of the UTC Program was recognized as an effective means to learn – “a real opportunity to put your heads together with other people and learn from them.”

Participants also recognized that the social aspect of the UTC adds value when the program is over. Some participants reported feeling that the relationships they built with colleagues helped them persist in the program when they were feeling overwhelmed. As one participant put it, “I myself didn’t come here for the social aspect, to meet people, but I think that once you are in, you do start to form those relationships and those friendships and that can be a factor that help people continue along with the program.” Another agreed, saying, “those other aspects of it keep you coming back, or make you persist through to the end.”

A sessional instructor predicted that, as the number of sessional instructors across campus who have completed the first level of the UTC Program grows, they should be increasingly able to act as supportive resources for each other – “so I think there are maybe bridges outside the department level, but maybe multidisciplinary and across departments as well, that began through this program.”

### 2.4.3 Pedagogical Outcomes

Of the responses identified in the pedagogical outcomes cluster, 77% were themed as scholarly teaching/intentional teaching/learning-centredness, 19% as constructive alignment and 4% as awareness/terminology/articulation.

#### **Awareness/Terminology/Articulation**

Appreciation for the benefits of learning the jargon and key concepts of scholarly teaching was expressed in relation to several themes, including program elements – “you got the language and the tools to actually implement what the department’s curriculum needs.” One participant singled out “concepts like [universal instructional design that were embedded in some of the courses]” such as *Course Design for Constructive Alignment* and *Online Education*.

#### **Constructive Alignment**

Unsurprisingly given the role it plays in the UTC Program, constructive alignment emerged as a major theme, one that shaped how participants now understood course and program design. “Personally,” one participant explained, “I now take that more seriously than just having a list of objectives on the course outline... now I seriously think... What is my time frame, what is the assessment? What are the techniques that I’ll use for teaching?... (I am) more intentional in even creating the course outline and putting together the content.” Others agreed, contrasting their current point of view with their past: “courses used to be improvised rather than designed. I had never heard of course design. I didn’t even get to think that far ahead.”

Consistent with what participants said about modelling in the UTC Program more generally, some noted how consistently constructive alignment was demonstrated in the UTC curriculum itself, which demonstrated the concept’s value. “There are these different half courses and the core courses that you can take,” said one participant, “but they’re all kind of coherent and consistent with each other... I find that opportunities to make... links between the focus of particular courses and being able to link that back to the next one you do or the one you are going to take down the road is really helpful.”

Transitioning into the next theme, participants also noted the effect that the concept of constructive alignment had already exerted on their work. In the words of a new sessional instructor (who completed the UTC Program as a graduate student), “I didn’t have much guidance in my department for how to teach this particular course, so I used a ton of things from the UTC program... trying to create a constructive alignment between everything from defining learning outcomes to creating the assessments, and then aligning the learning methods.” Another participant spoke of the effect the concept had on conversations with colleagues: now “I would be the one creating conversations with senior faculty about how the curriculum should be designed, and how our courses could fit into that framework. I think historically in our department the way in which we build the curriculum is based on what you want to teach.”

### **Scholarly Teaching/Intentional Teaching/Learning-Centredness**

The concepts of scholarly teaching, intentional teaching and learning-centredness are closely tied in the UTC Program, as becomes clear in the comments provided by our focus group participants. These concepts are imbued with attitudinal changes in addition to the more obvious cognitive and performative changes. One participant noted that “I probably never paid much attention to what my students thought or knew before they got it. They were just blank to me and I would just tell them what I knew” – an approach to teaching to which, he said, he would never return.

In general, thinking seriously about the roles students can play in their own learning was a revelatory experience for many participants. As one participant said, “This whole program is very much designed to be learning-centred teaching, so rather than worrying about covering all the topics and imparting knowledge you start thinking of the student as an active participant and ways to... get them more involved in their own learning.” Now participants think in terms of “finding out what (students) know,” providing signposts to help students make connections between classes, and providing students with rationales for what they are learning and why they are learning it in a particular way. One participant who tried the latter approach reported that students “appreciated me putting things in perspective and in context, telling them why I taught things in certain ways.” Participants spoke of seeing students more positively, less as sources of frustration: “I go into my classroom with a much different attitude and I am trying to help everyone develop, from... the student who is struggling to the student who is more advanced. I think my attitude has probably been one of the biggest changes for me.” Another said that, as a result of the UTC Program, “you are more likely to interpret problems correctly rather than making assumptions about the students being this or that... you are actually more realistic and pragmatic in determining what really is going on and coming up with the solution before things get too problematic.”

Benefits aside, participants recognized that they face an uphill battle. As one explained, “At least in my context (students) have pretty much been habituated into a teacher-centred focus where they get two midterms and a final. And so when I give them assignments that require them to write, or be experiential, and where they are expected to talk in class and to contribute, that can be quite intimidating for them.”

That comment relates to another aspect of scholarly and intentional teaching that participants highlighted: ensuring that they have good reasons for the teaching decisions they make. Participants connected their perception of the value of such reasoning to how it was modelled in the program through reasoning and theory: “You could have, and I am sure there (are) other universities that offer teaching training and they just give them tools, and they don’t explain the rationale behind those tools. ... having that theory helped.” Another participant connected rational theory to reflective practice, saying that the theory helped “you have a better understanding of what you doing and why you are doing it, and if things don’t work out you can kind of develop a monitoring program to see how things are going, so it give you the tools also to research yourself, and make adjustments as needed.”

Another participant connected the emphasis on creating a positive learning environment to the emphasis on having a solid rationale for teaching decisions:

I think with this program you become more aware of how important (it is to communicate) what you are doing and why you are trying to do it, and making sure that they understand the rationale and, buy into it. (It) becomes more and more apparent as you go along that it should end up in that everybody in the classroom is part of a team you know, rather than somebody standing there talking and they are all just absorbing like a bunch of sponges. You start thinking (of teaching) as more of a collaboration.

The importance of attending to the teaching and learning environment emerged in relation to classroom contact with students, but also to course materials. For instance:

A good example is my syllabus.... I went to a seminar in my first university and was told to write it like a legal document. So it was all punitive – ‘you do this; you get that’ – and so it was all very dry and intimidating. And now it’s a complete 180, it’s much more positive, it’s much more conducive to promoting a positive learning environment, so I think that’s a good illustration of how my attitude has shifted.

As participants internalized a learning-centred paradigm, they recognized that their identities as teachers were also undergoing some change. As one participant said, “I think that for me getting beyond just standing up there and just delivering information, (to) actually analyzing it more to (determine) how do I get this student to actually understand it... was going further than just being a lecturer. Now you are actually focusing on how to get the students to learn the information not just delivering.” Another was quick to point out the value of this change: “I think becoming a more intentional teacher is probably one of the greatest benefits for me. Really reflecting on what am I doing and why am I doing it.”

#### ***2.4.4 Obstacles and Recommendations***

Of the responses identified in the obstacles and recommendations cluster, 69% were themed as recognition, 14% were themed as promotion/tenure/renewal, 10% were themed as mandate and 7% were themed as entitlement.

##### **Promotion/Tenure/Renewal**

In the academic world, one would expect something like the UTC Program to become entangled with hopes and anxieties regarding renewal, promotion and tenure. Certainly, these concerns were raised as part of the motivation for many faculty members who enrolled in the UTC Program. They enrolled hoping that they would be able to “improve their (Student Evaluation of Teaching) scores” and thus improve their chances of advancement, as SET scores are still the primary ‘measure’ of teaching effectiveness at the University of Windsor.

Similarly, sessional instructors were motivated by reappointment and hopes of advancement. Sessionals, said one, “have already invested a lot of time and effort into their education and the way things are going... the only way to get any stability down the road, to have some stable employment, is probably going to be through teaching rather than research,” so they have an incentive to become better teachers.

## Recognition

Related yet distinct from such concerns were desires for recognition. Indeed, the theme of recognition emerged in three distinct forms: as a motivation for enrolling in the UTC Program, as an apparent consequence of the UTC Program, and as a desirable but not-yet-realized consequence of the UTC program. In regard to the first of these, SEDA accreditation was raised as an important consideration: “Having the UTC, which is recognized worldwide, is something extra for your career.” Even those who did not enrol in the UTC Program for this reason believed that many others did “because they want to get some sort of accreditation, some sort of legitimization,” that it may be helpful to “have a piece of paper that will kind of indicate that so if there are teaching oriented positions that open up, you are in a good position to apply for them and be considered.”

Other participants spoke of recognition they were already receiving, either for having completed a UTC certificate or for what they had learned in the UTC program. This sort of recognition could be mixed, however, due to the reconstitutive effects of changing one’s educational paradigm and the changes in thought, behaviour and speech that are part of that. One participant said:

It is almost as if you learned a different language, and so now I speak in a different language to what (my colleagues) are used to. And so that creates a little bit of an issue when it comes to being on the same page. I have some colleagues that have been interested in some of the things that I do in my classroom, but otherwise I think it may intimidate other colleagues; they don’t want to interact.

Then we have recognition as a desirable but not-yet-realized consequence of the UTC Program. One sessional instructor said, “At an institutional level this program needs to be recognized ... as a way of gauging teaching effectiveness and professional development.” Some were hopeful that recognition would come eventually, as the number of graduates grows and influences the teaching and learning cultures of their departments, faculties and institutions. To wit: “I would expect, given that the CTL offers this program, that as time goes on..., that kind of professional development would get incorporated into thinking about who you hire to teach rather than just what their expertise is or seniority, that sort of thing. They may start looking at what skills they have to offer, and (whether) they can even work with other people in the department.... As more and more people complete this program perhaps there would be a bigger network that would bring all these ideas into undergraduate teaching here.”

Participants spoke of hope that decision-makers would eventually see the rational value of recognizing the benefits of UTC completion for their own programs. Said one, “I could see down the road ... they being quite

keen on using the UTC program, or the ideas within the UTC program, to sort of inform some of the staffing of undergraduate courses to make sure that they still have a cohesive program.”

Given that UTC participants learn about the cultural ubiquity of the instructional paradigm and have already experienced the difficulties of bringing the ideas and practice of learning-centred teaching into their work, it is sensible for them to speak of the issues they face in terms of cultural change. As one participant said, “We have our awards ceremony and (the deans) stand out and shake their hands and clap, but I don’t know to what extent they really understand what it is that we are doing here, and what we are going through, and the impact it’s having.” Another participant, a graduate student, referred to the culture she faced in her department: “In my PhD committee I have had people who are very supportive that I have spent time doing the UTC program and other people who were very critical and said, you know, ‘You spent all this time doing the UTC program; maybe you should spend that time more on your research’.... I think is part of the culture.”

### **Mandate**

Given the other themes in this cluster, one might predict that some participants believed that completion of a program like the UTC should be required for all (or new) faculty members: “I almost feel like this should be a prerequisite for any new hires, teachers.” Participants recognized some of the difficulties that this would entail, such as resource limitations. In the case of the UTC program, one participant explained, “They would not have the capacity. I mean the mentoring is a huge part and that takes a lot of time from their schedules. If suddenly they were to double or triple the size of the program they would not be able to maintain the quality.”

## **2.5 Exit Surveys**

Exit surveys were conducted with participants in the UTC program and the questions focused on program elements. We were concerned that the overwhelming positivity of the focus group data may have been the result of biases resulting from face-to-face communication or self-selection (12 of 23 participants). Thus, triangulation of data with the exit surveys, which were anonymous to all but the principal investigator, helped us decide whether the focus group data were trustworthy. In fact, once the exit survey responses were analyzed and clustered into themes, the results were consistent with the focus group data. In particular, the themes of professional needs, program elements, and obstacles and recommendations in the exit survey responses paralleled those found in the focus groups.

Exit survey responses to each question were themed by two members of the research team, using the same themes that were used for the focus group data.

**Question 1: Do you think this certificate will contribute to your professional growth? If so, in what ways?**

Of the responses to this question, 30% were themed as development/new opportunities, 22% were themed as scholarly teaching/intentional teaching/learning-centredness, 18% were themed as reflective practice/identity, 7% were themed as awareness/terminology/articulation, 7% were themed as confidence/anxiety, and 4% were themed as each of recognition, influence/leadership/change agency, diversity and feedback.

Participants spoke highly of the development and new opportunities for which they believed their experience in the UTC program had prepared them. “This program has opened many avenues for development,” wrote one, who “imagined that it would help me with my teaching skills and it did much more than that. It helped me develop an informed scholarly approach to try out different ideas for improvement of curriculum, teaching methods, and assessments.” Another participant wrote that the UTC Program “has greatly contributed to my professional growth. Through the certificate program, I have honed my skills in critical reading, critical thinking, writing, articulating thoughts and ideas, and giving and receiving feedback.”

Some participants spoke more concretely about the opportunities available to them, such as employment “in corporate training, which would never have happened before” and a drive to “continue to challenge myself by enrolling in courses and workshops that would help me to improve on my pedagogical skills.”

Several participants reported gains in confidence and reductions in anxiety, both “personally and professionally.” In some cases, they wrote of a renewed belief in themselves, such as with one graduate student, who wrote, “I believe that these skills, beliefs and knowledge make me a better teacher and scholar in my Ph.D. studies and beyond.”

An awareness of terminology and concepts related to scholarly teaching was mentioned, in terms of an “understanding of pedagogy/teaching jargon.” In some cases this was connected to a change of paradigm toward scholarly teaching, intentional teaching and learning-centred teaching. “I feel that my own self view as a teacher has moved much more towards a facilitator of learning than before attaining the UTC,” wrote one participant. Another wrote that “my attitudes towards teaching; my ability to use and learn from various teaching techniques and styles” had all improved. These changes in thinking and feeling were connected to their self-identities and to their status as reflective practitioners: “I have also learned a lot about myself through the UTC program, such as understanding and developing my beliefs and values around education, teaching, and learning.”

The themes of recognition – “This knowledge of effective teaching helped me to obtain sessional teaching positions for a few terms” – and change agency, influence and leadership also re-emerged in response to this question.

## Question 2: What are the strengths of the program for you?

Of the responses to this question, 29% were themed as instructors/program team, 17% were themed as learning community/networking, 10% were themed as feedback, 10% were themed as mentoring/modelling, 10% were themed as awareness/terminology, 7% apiece were themed as diversity, reflective practice/identity and constructive alignment/course design, and 3% were themed as readings/resources.

Surprisingly, the UTC instructors (program team) were recognized as a major strength of the program. As one participant wrote, “the whole CTL team work in unison, they are almost seamless in the flow from the office to the courses and one course to another” and “The enthusiasm of the faculty and staff are infectious.” The issue of integrity was also raised: “What I appreciated the most is that they are consistently practising the very concept they are teaching, they are open to feedback. They act on the feedback and make appropriate modifications, if not they let us know the justification behind it.”

Related to that theme, participants also called attention to the modelling and mentoring in the program as “very supportive and helpful.” One participant wrote about this at length, saying, “I have really enjoyed the process of getting to know my mentor and my mentor getting to know me. This has supported a depth of feedback from my mentor that is seldom found in a classroom, and I really appreciate the trust that has been built, the guidance, thoughtful questions, etc.”

That brings us to the third strength: feedback. “They gave us intense and thorough feedback on our submissions,” wrote one participant. “Constructive feedback with repeated opportunities had helped me to improve in many areas,” wrote another.

Continuing the social orientation of the UTC Program’s identified strengths, participants highlighted the learning community that developed over the course of their year in the program and the diversity of colleagues. “During the course,” one participant wrote, “group work is encouraged and the members of the group were usually diverse in disciplines, and in experience,” which contributed to the emergence of “a vibrant learning community.” For some participants this was especially important, as with one who wrote, “Networking with different faculty members brought me out of isolation.”

Constructive alignment – “I loved being in intentionally designed courses, where the learning methods, learning outcomes, assessments, and feedback were aligned” – and the development of awareness of terminology and concepts regarding scholarly teaching were strengths for some. One enjoyed “learning the evidence behind various teaching methods.” Another found that “the program has definitely cleared up a lot of misconceptions I had about teaching prior to enrolling in it” because “the reading material was very high quality and the subsequent required writings helped force me to critically think about them.” Some wrote more explicitly of reflective practice and the readings and resources provided as strengths.

### Question 3: What changes would be helpful?

Of the responses to this question, 37% were themed as positive or satisfactory outcome, 18% were themed as feedback, and 9% apiece were themed as diversity, instructors/program team, simulation/practice, recognition, and learning community/networking.

The most common response was that the experience and/or outcome had been so positive that participants did not want the UTC program to change. One participant wrote:

I came to academia quite naïve, I think. I believed that academia was about learning, and I have now seen a lot of misalignment (in processes, in behaviours, etc.). The UTC program, however, has helped me to be rooted in my beliefs in the power of an education to (bring about) learning and positive change. It has helped me to connect to others who also care about learning and education. Without the UTC program, I would feel pretty alone and confused in academia, to be honest.

Still, among those who did recommend changes, some themes emerged. Nearly all of these suggestions came from participants in the first cohort of the UTC program, as things were still being tested. These suggestions were the same as those made in regularly reviewed course evaluations. Whenever it was possible to address them without causing dramatic differences in the UTC experience from cohort to cohort while study was ongoing, they were addressed.

Regarding feedback, one participant wrote, 'I would not mind having something like your own progress report in stages from instructors,' and another would have liked "A better understanding of what the final project entails to receive the certificate. I think at the end of each class there is time spent discussing how the assignments during that course meet the end competencies for the certificate. Examples would be helpful." Continuous assessment and feedback are now part of each of the full credit courses and regular attention to the final program portfolio has been incorporated into the mentoring guidelines. In addition, participants can now peruse copies of successful program portfolios from past participants, which was not possible in the program's first year.

Another suggestion pertained to diversity: "Perhaps having more different instructors than the same ones for each course. For instance, if it would have been interesting to have someone who came in to present lectures within the course, because it would have provided a different perspective." Part of the long-term plan for the UTC Program is to bring in teachers who have completed all three levels so that the program is continually infused with new ideas and perspectives. At the moment this is not yet possible (and lectures are generally avoided). In the first course, *Learning-Centred Teaching in Higher Education*, guest facilitators such as educational developers and scholars in our Visiting Fellows Program, are invited to lead interactive sessions when relevant and appropriate to the course, facilitating discussions and activities on topics such as inclusive education, Universal Instructional Design, technology, reflection and autonomous learning.

Yet some diversity was not perceived as helpful in at least one case regarding the instructors, as a participant noted, "I think it would have been helpful if teams in team-learning scenarios would have been

planned more efficiently as there were some courses that seemed wherein the teaching styles of the instructors clashed.” In one of the years one teaching pair struggled to collaborate successfully.

One participant wanted more opportunities for simulation and demonstration, writing, “I would recommend to include more opportunities for participants to demonstrate in practice the theories and concepts they are learning. I felt that it would have been more effective for me if I had more chances to do presentations/demonstrations in front of peers and/or random/selected participants.” More opportunities to practice were integrated in the program in successive years based on end of course feedback.

Finally, some suggestions we are powerless to act upon, though we may agree with them wholeheartedly. One of these pertains to recognition: “The only challenge that I have had is that others in my department do not see the value of it. For example, my Ph.D. committee has criticized me for the time that I have devoted to the UTC program. I don’t regret it for a second though. I have tried to convey the value of it to my committee, but unfortunately I work with some pretty close-minded people.”

**Question 4: Have you spoken to any colleagues outside of the UTC program about teaching and learning informed by your experiences or accomplishments in the UTC? (Feel free to briefly describe.)**

Every respondent (100%) answered affirmatively and all reported a positive outcome. Participants reported speaking with colleagues at other universities, in addition to colleagues and superiors on campus. One graduate student wrote:

I like to disseminate various tips and suggestions to my colleagues. I have even presented some teaching techniques and experiences at my [Faculty] research lab (name excised) during weekly meetings. I have volunteered for the last two years with the GATAcademy<sup>5</sup>, and this past year brought a fellow colleague (name excised) to help present to new GAs and TAs (where X was able to present teaching and learning tips he learned from me and his own experiences as well).

**Question 5: Has your development in the UTC contributed to any changes at a course, research, department, faculty, or institutional level? (Feel free to briefly describe.)**

Of the responses to this question, 21% were themed as scholarly teaching/intentional teaching/learning-centredness, 21% as development/new opportunities, 17% as influence/leadership/change agency, 14% as constructive alignment/course design, 10% as learning community/networking, 7% as research and 3% as recognition. In addition, 7% said that they did not know the answer.

As one participant wrote, “Without the UTC program, I imagine that my Sessional Instructor experience would have been far less scholarly and less effective for students – the students and I have the UTC program

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<sup>5</sup> GATAcademy is the University of Windsor’s annual induction and pedagogical orientation event for graduate assistants and teaching assistants (GAs and TAs).

to thank for making our learning experience more meaningful!” Aside from some vague benefits and recognition, participants mentioned a variety of specific changes that resulted from their education in the UTC program. Among those themed as development and new opportunities, one graduate student participant wrote:

At a course and department level, my UTC work has informed the active learning workshops that I have developed for the courses that I have been the Graduate Assistant for. For each of these workshops, I aligned learning outcomes, learning methods, and assessments (often drawing alignment to the Professor’s assignment). I have utilized various skills and knowledge from the UTC program to do so, e.g. creating lesson plans, an alignment table, a pre-assessment survey, etc. For example, I created a workshop on presentation and report writing skills (drawing on the UTC lecture course that I took) and a workshop on how to write a take home exam (identifying performative learning outcomes, as I learned in the CDCA course). I have also developed a workshop on ethics and professionalism that I have taught with a graduate engineering class. I adapted and shared this workshop with several business ethics classes ... broadening the workshop development and facilitation for an interdisciplinary network and audience. These workshops included online pre-assessment surveys with questions that aligned with learning goals based on a brief literature survey. The student responses of the survey further defined the learning outcomes and were integrated into in-class activities.

Many of the changes related to scholarly teaching, intentional teaching and learning-centredness (as well as constructive alignment) and extended to their identities as researchers – “I tend to look at my research efforts differently, and am keener to incorporate pedagogical impacts into my thoughts, notes and publications.” The effects of the UTC program on the integration of research and teaching were especially pronounced for a graduate student participant, who wrote:

At a research level, I participated in the annual Windsor-Oakland conference and presented work that I did as a Sessional Instructor. I introduced active learning field trips into a course that had previously been taught as a lecture-based course. The poster received the international Dr. Wilbert J. McKeachie poster award. Based on the feedback that I received at the conference, I wrote a journal paper that has been accepted (and is in print, 2013) in [international disciplinary journal]. ... The importance of the relationship between theory and experience, a theme explored in this research, is knowledge that I gained and experienced in the UTC program. I utilized constructive alignment theory (from the CDCA course) and Dewey’s ‘Experience and Education.’

The learning community that developed for participants as they moved through the program was mentioned several times in response to this question. It clearly had a powerful effect on many participants, such as one who wrote, “I have had the opportunity to be part of (a) faculty learning community that fosters and promotes teaching-based research and that has been the most exciting avenue for me personally.” Yet others found that their learning communities were being extended and new opportunities arising as a result. In one case, “Based on the project completed in constructive alignment course, I am working with a community partner on how we can offer the course that I developed to meet their orientation needs. The

course they are looking at is the hybrid form that I developed in conjunction with (the Online Education course).” In another case, “Through the UTC network, I have been asked to participate in several committees (e.g. the GATA awards committee and the CLIF research proposal committee).”

Finally, several participants spoke of broader change agency and leadership, attempts to influence teaching and learning beyond the narrow confines of their courses. One participant wrote, “I am trying for some changes to be made especially towards the standard feedback system used (i.e. the policy of having the SET scores as the only quantitative metric for evaluating teaching).” Another used her UTC education to inform community outreach: “At a faculty level, my work with the [disciplinary] outreach program has been greatly influenced by my UTC program learning. I clarified learning outcomes and aligned learning methods for a workshop for high school students to learn about [the discipline].... This semester I am facilitating this workshop with other engineering graduate students in local high schools.”

### 3 Discussion and Implications

We are pleased with the trends emerging, though caution must be taken when generalizing from the results due to the small sample size, missing data (especially from the first cohort of participants) and, in the case of the learning plan results, the small number of matched pairs.

#### 1. How does involvement with the UTC Program impact participant beliefs and attitudes about teaching and learning?

The focus group and exit surveys revealed that people were motivated to enrol in the UTC for a variety of reasons, most commonly for professional development but also to improve their student rating scores, their chances of reappointment, advancement or career stability, as well as the hope for improved recognition, accreditation and legitimization. Despite the fact that most did not enrol specifically to achieve a change in belief or attitude, overall there was a significant increase in learning-centred attitudes and beliefs based on comparisons of pre- and post-program results on four Inventories (TPI, PAEI, ATI, TGI), pre- and post-program teaching philosophies, and comments from the focus groups. The latter were especially helpful in providing insight into the impact of the UTC Program on participant beliefs and attitudes about teaching and learning.

Graduates of the University Teaching Certificate Program showed a significantly increased alignment with the developmental perspective of the Teaching Perspective Inventory, as inferred from comparisons of their pre- and post-program scores. According to the developmental perspective, “*Effective teaching must be planned and conducted ‘from the learner’s point of view’.... The primary goal is to help learners develop increasingly complex and sophisticated cognitive structures for comprehending the content*” (Pratt & Collins, 2001, p. 3). Increase in this perspective was expected, as the structure of the UTC program is largely consistent with the developmental perspective, so it has been modelled for at least eight months by the time participants graduate from the program. However, the much larger increase in the social reform perspective was entirely unexpected. According to the social reform perspective, “*Effective teaching seeks*

*to change society in substantive ways.* From this point of view, the object of teaching is the collective rather than the individual. Good teachers awaken students to the values and ideologies that are embedded in texts and common practices within their discipline” (p. 3). We believe that it may be the result of the greater awareness UTC graduates have regarding the culture clash between the teaching culture of contemporary academia and the culture espoused within the learning paradigm – that is, the culture of scholarly, intentional teaching. Anecdotally, many participants who try to implement changes in their course designs, assessment plans and lessons report frustrations as the result of encountering multiple, seemingly arbitrary bureaucratic obstacles. Though unexpected, this increase in the social reform score does align with the UTC Program’s goal of changing university culture.

The Philosophies of Adult Education Inventory (PAEI, Zinn, 1983, <http://www.labr.net/apps/paei/>) is intended to help academics situate themselves relative to some popular philosophical categories. Because the TPI perspectives and the PAEI philosophies have potential parallels, we expected consistent patterns of change between the two inventories over the course of the program. The unexpected inconsistency between the post-program PAEL results and the post-program TPI results may lie in the fact that the PAEI is a much blunter instrument, one in which scores tend to appear elevated in both pre- and post-program PAEI results, perhaps because participants do not fully understand the meanings and implications of its statements; it may be too easy to ‘agree with everything,’ and meaningful agreement and disagreement with the statements may require a more nuanced understanding of the implications than most participants could be expected to have. Although the PAEI has proven a valuable reflective aide, we have found that when the philosophies are discussed in detail, participants evince surprise at the philosophical implications of their choices. Some participants also object to being classified as behaviourist in the PAEI, as the term has acquired distasteful and misleading connotations in recent decades, so it is possible that they learn to deliberately avoid giving answers that might classify them in that category when they retake the PAEI post-program. The PAEI scores that increased significantly in the post-program results were those for the progressive and humanist philosophies. A progressive philosophy stresses an experiential, problem-solving approach, while a humanist philosophy is based on the assumption that humans possess virtually unlimited potential, with emphasis on personal growth and self-direction (Zinn, 1983). While these philosophies do not parallel the perspectives that showed gains in the post-program PAEI results, they are both associated with actively engaging students in the learning process and focusing on student learning needs.

The Approaches to Teaching inventory showed a significant decrease in the Information Transmission/Teaching Focused (ITTF) approach to teaching over the program. The Conceptual Change/Student Focused (CCSF) approach to teaching increased, though not significantly. This suggests that participants were significantly decreasing in teacher-focused behaviour and showing a trend to increase in student-centred behaviour. The post-program results in the ATI are encouraging, trending in the anticipated direction.

Some scholarship suggests that academics’ conceptions of teaching and learning also influence their students’ conceptions of and approaches to learning (Sheppard & Gilbert, 1991), that student-centred or learning-centred academics influence students to adopt deep learning approaches focused on creating meaning and understanding, whereas teacher-centred academics were likelier to influence students to

adopt surface learning approaches focused on memorization and reproduction (Prosser & Trigwell, 1999; Kember & Gow, 1994). This suggests that the changes in the participants are likely to lead to changes in student learning.

The Teaching Goals Inventory examines the intended focus of a teacher in a course. Responses are categorized into sets of priorities: higher order thinking skills (HOTS), basic academic success skills (BASS), discipline-specific knowledge and skills (DSKS), liberal arts and academic values (LAAV), work and career preparation (WCP) and personal development (PD). The results of the TGI were quite surprising in that we did not anticipate such an extraordinary increase in the DSKS score. Indeed, this result will be surprising to many people, as the suspicion that educational development programs are too generalist and too dismissive of the unique educational needs of academic disciplines and professions to be of use to academics is commonly raised in arguments against programs like the UTC. We believe that the explanation for this result lies in the conception of scholarly teaching used, in which participants are expected to relate everything they learn to their work as teachers of particular disciplines, find models from their disciplines, and focus attention of the disciplinary contexts and implications of threshold concepts and authentic assessment tasks.

The focus group and exit survey data were unexpectedly positive, so much so that we found ourselves unwilling to trust either data set until we saw that they supported each other. Nevertheless, and although the results are quite encouraging, it is possible, for instance, that many of the same participants who returned the exit surveys were in the focus groups, and thus we may have received information from the same participants twice. This would not necessarily imply that the information was misleading or false, and it should be remembered that the exit survey data were provided anonymously, so the anonymous written surveys act well to support the oral focus group results. The findings show a clear impact of the program as perceived by the participants. A major change was in how participants perceived their own influence, leadership and change agency, as they expressed a greater awareness of opportunities to contribute to educational progress in their departments and faculties. This is highly consistent with the other findings regarding embedded and distributed leadership, capacity-building and networking in academia (Wright et al., 2014).

The increase in confidence and decrease in anxiety reported by many participants during the focus groups and in the exit surveys may indicate a change in self-efficacy, that is, a change in the degree to which participants believe they are competent to achieve their teaching and learning goals, called efficacy expectation, and the belief that one's actions will in fact lead to the achievement of such goals, called outcome expectancy (Prieto & Myers, 1999; Bandura, 1977, 1997). Larger increases in self-efficacy are associated with long-term programs such as the UTC (Postareff, Lindblom-Ylänne & Nevgi, 2007), so a result of that sort would not be surprising here. Although there is no logically necessary relationship between self-efficacy and confidence, and people often under- or over-estimate their own competence, there is some indication that high self-efficacy scores may correlate positively with other variables related to teaching competence, such as selection of teaching practices, persistence, risk-taking behaviours, effort, adaptability, the use of diverse methods and openness to collaboration (Akbari et al., 2009; Bumen, 2009; Gordon & Debus, 2002; Ashton & Webb, 1986; Gibson & Dembo, 1984). There may also be a relationship in the other

direction: development of effective teaching behaviours may result in higher self-efficacy scores (Prieto & Meyers, 1999).

Additionally, focus group and exit survey data demonstrated a change in the way participants viewed their students. Some indicated that pre-program they considered students to be blank slates, but post-program they thought more carefully about the identities, knowledge and motivations of their students, considerations that they were using to better engage students in their learning. This change from teaching-focused to student-focused habits of thought is consistent with the trend we found in the ATI results, and also consistent with the changes in philosophies and perspectives represented in the TPI and PAEI results.

The most interesting and suggestive results for us pertained to the teaching philosophies. The fact that the teaching philosophy scores rose overall to the higher levels of SOLO, and that some even reached the extended abstract level, was surprising. Some participants did submit essentially the same teaching philosophy both pre and post-program, without meaningful revision. Only one participant's teaching philosophy score dropped, and that one started high, at the relational level.

The differences between the pre- and post-program teaching philosophies suggest that UTC graduates are leaving with changed conceptualizations of teaching and learning, and more complex, coherent, internally aligned teaching identities. We believe that this may be due to the emphasis on both critical reflection on, and constant application of, the concepts associated with learning-centred and scholarly teaching – using them in conversation, reasoning about them, writing about them and applying them to practice. If this is the case, it is encouraging.

It is also consistent with what we see in the focus groups and exit surveys, in which participants emphasized the effects the program had on their understanding and attitude toward teaching as a scholarly, intentional, learning-centred endeavour. This, plus indications of an increase in self-efficacy, are the most promising signs that the UTC Program may be able to accomplish its aims.

Paying attention to attitudes and beliefs is critical when examining the impact of a program. Several studies indicate that the teaching behaviours and decisions of academics are influenced by the way they conceptualize teaching (Trigwell & Prosser, 2004; Kember & Kwan, 2000; Kember, 1997). Thus an educational development program that focuses exclusively and primarily on surface changes to teaching behaviours and techniques (the old 'tips and tricks' model) without changing the way academics think about teaching and learning is likely to fail in the long term. Using the Approaches to Teaching Inventory (ATI), Kember and Kwan (2000) found that academics who conceptualized teaching as the transmission of information were more likely to use teacher-centred approaches to teaching, while those who conceptualized teaching as facilitation were likelier to use student-centred approaches. Coffey and Gibbs (2002) found that academics who used a teacher-centred approach relied on a narrower, less adaptive set of behaviours and techniques, implying that they were reliant on everything going exactly as planned which, as all teachers know, is a rare occurrence. With such results in mind, the fact that we see significant changes in attitudes and beliefs as an impact of the UTC Program is especially encouraging.

## **2. How does involvement with the UTC Program impact participant teaching practices?**

Focus group and exit survey data indicate a change in self-reported teaching practices. In particular participants reported changes in their course design, moving from random development to intentional development by using the concept of constructive alignment to write learning outcomes, develop relevant learning methods and create aligned assignment tasks. These changes were reflected in new approaches participants reported taking to the design of their course syllabi. This is consistent with the purposes and structure of the UTC Program.

Participants mentioned paying more attention to developing a positive teaching and learning environment, including changing the way the syllabus is written to include a more welcoming tone. Many identified using more active learning methods, including workshops, field trips with reflection, and using lesson plans to organize student learning experiences. Establishing a positive learning environment and actively engaging students in learning are associated with learning-centred approaches to teaching and deeper approaches to learning.

Although not asked, several participants reported increased student ratings of instruction scores. In addition, several participants in both the focus groups and the exit surveys mentioned taking a more scholarly approach to their choice of teaching and assessment methods, as well as integrating their teaching and research. Not only did participants indicate that they were choosing methods intentionally, they have also started explaining the rationales for their choices to students, attempting to motivate and engage students by helping them understand the reasoning behind the design of lessons and assessment tasks. Helping participants adopt a scholarly approach to teaching is one of the main purposes of the UTC Program, and facilitating that is an integral part of its design.

## **3. How does involvement with the UTC Program influence participants' engagement with and impact on teaching and learning practice and decision making in their departments and institution?**

All of the participants indicated that they talked with colleagues outside of the UTC Program about teaching and learning, informed by what they learned in the program. These included peers and colleagues at the University of Windsor, superiors or supervisors at the University of Windsor, and also colleagues at other universities. Some were invited to present to colleagues as a result of these conversations. Significant network conversations are a critical part of impacting culture over time (Roxa, Martensson & Alveteg, 2010), so this is consistent with the UTC Program's goal of creating a more learning-centred culture at the University of Windsor.

A common theme in both the focus groups and exit surveys was that UTC graduates are being invited to sit on departmental councils, faculty-level committees and university-level committees about policy and curriculum as a result of their new knowledge about teaching and learning. One participant was hired to create a syllabus template, which in turn changed the departmental practice. Another became involved with introducing a student feedback initiative and a third with developing a disciplinary outreach program for

high school students. This indicates a trend of having an impact on practice and decision making at the departmental, faculty and institutional levels, critical for changing teaching culture. Several mentioned that they felt this was in part due to their change in confidence as well as their knowledge.

#### 4. What do participants identify as the benefits, areas of improvement and barriers to participation for the UTC?

When asked about the benefits of the UTC Program in the focus groups and the exit surveys, participants identified similar themes to those identified in the previous research questions, indicating that changes in attitude, beliefs, teaching practices and agency were perceived as benefits. Additionally, the benefits identified closely aligned with the intended features, content, and structure of the program. Specifically, participants mentioned as benefits:

- **Teaching practice with feedback:** Opportunities to develop professionally and receive feedback
- **A constructively aligned structure:** The opportunity to experience and see a constructively aligned course and program in action
- **Confidence-building and self-efficacy:** Higher levels of confidence and self-efficacy, with decreased anxiety
- **Enhanced conceptualization and articulation:** Increased awareness of language, terms, major concepts and ideas, and the ability to articulate the reasons for their choices
- **Empathy and perspective-taking:** Enhanced focus on student needs and potential impacts and, as a result, more enjoyment in teaching. In addition, an enhanced understanding of different perspectives because of the diversity of the learning community they experienced within the UTC Program (different roles, different disciplines and different experiences)
- **Community-building:** The networks developed within the courses and the recognition from peers outside of the UTC Program
- **Self-direction:** To keep people motivated and ensure that they care about what they learn, they should have some choice regarding topics and projects. The farther along they are, the more choice they ought to have.
- **Theory and reasoning:** The ability to find theory and literature that is relevant and then use reasoning to make scholarly decisions, and to defend the decisions they make
- **Mentoring:** The mentoring relationship was identified as a benefit for extended discussions, personal connections and feedback.
- **Consistent role-modelling:** The instructors were identified strongly in the exit survey as strengths of the program because of their role-modelling within the courses and in the design of the curriculum.
- **Aiming for scholarly and excellent teachers:** The ability to be scholarly, intentional, critically reflective, and rational teachers who make good decisions about teaching and learning
- **Critical reflection:** The reflective approach was identified as a strength of the program and a skill set that would not have been developed for teaching without an intervention.
- **Appeal to the zeitgeist:** Development of transferable skills useful in academia, industry and service (committee work) such as facilitation skills and the skills to control one's ongoing development. This

aligns with the Council of Ontario Universities' (COU) Degree-Level Expectations and the Canadian Association of Graduate Studies (CAGS) key professional skills.

- **Change agency and self-efficacy:** An increased confidence in their ability to bring about cultural change in academia and an enhanced sense of themselves as change agents
- **Self-identity:** Changes in participants' self-identities as more learning-centred, better able to integrating their research and teaching identities as one professional identity

Finally, we take seriously participants' feedback about obstacles they encounter and changes they may like to see made to the UTC program. In relation to the exit surveys, we mentioned that we had addressed most of the suggestions raised in those surveys during the course of the study. In fact, most of them were addressed several years ago in response to the course and program feedback (such as adding a progress report, making examples of the final projects available, adding more opportunities to practice, and adding opportunities to meet more instructors). In addition to those suggested improvements, several participants have also suggested that they would like a course on curriculum design: "It would be a logical progression because you would have gone through how to teach, how to design a course, you have thought about the philosophy, and then going on to be a leader and of course part of being a leader would be curriculum design." This intrigues us and we are considering integrating it into the third UTC certificate when it is offered, as part of the broader theme of educational leadership.

The one piece of feedback that we cannot satisfy is the frequent call for the UTC Program or something like it to be mandatory for all faculty members or all incoming faculty members. The political problems this would create could be the death of the CTL, and although 80.5% of UK universities require incoming faculty members with less than three years of teaching experience to complete all or part of a post-graduate certificate program in teaching and learning (Gosling, 2010), the situation in Ontario is not comparable. For one, faculty members in Ontario are not given time to complete such a program in the form of teaching or research releases. Given the current funding situation in the postsecondary sector, we do not expect this to change.

Along similar lines, the barriers to participation mentioned included the need for teaching development to be recognized at an institutional level and opposition from departmental cultures that in some cases did not support the investment of time in educational development. Some participants also mentioned that the culture of students had an impact due to the habituation of students to teaching-centred approaches, such as the 'traditional' lecture-plus-two-exams format, which inhibited their ability to meaningfully change their practices in some cases. Finally, a participant mentioned that learning a new language and way of thinking and speaking about teaching and learning may alienate them from their peers. All of these barriers have roots in institutional and departmental cultures. Changing those cultures is a long-term goal of the program that will take considerable time, if it can be achieved at all.

## 4 Conclusions

The UTC program was found to have an impact on values, beliefs and practices. Perhaps most surprisingly, the program was found to change the interaction that participants had with their departments and their institution. Post-program inventory results demonstrated positive changes in participants' pedagogical orientations, such as greater attention to learning processes and student needs, an increased identification with pedagogical philosophies focused on the learning process, and an increased focus on the development of students' disciplinary knowledge and skills. Post-program teaching philosophies demonstrated more complex conceptualizations of teaching, as well as greater integrity and coherence, as compared to pre-program teaching philosophies. Finally, post-program focus group and survey results revealed decreased anxiety, increased confidence and more positive perceptions of respondents' influence, leadership ability and change agency.

Although not emphasized in this study, participants reported changes in their teaching practices consistent with changes in their beliefs and attitudes regarding students. In focus groups and exit surveys, respondents reported a greater focus on developing a positive teaching and learning environment, actively engaging students in the learning process, strategically thinking through course design and assessment choices, intentionally communicating the reasoning behind their pedagogical choices to students, and otherwise using learning-centred techniques associated with positively influencing students' approaches to learning. In addition to changing their attitudes, beliefs and practices, participants reported that they began taking part in decision-making opportunities in their departments by joining committees and councils, and by sharing what they learned in the UTC Program with colleagues. Thus, the UTC Program has the potential to influence practices and decision-making at the departmental and institutional levels.

Despite these positive findings, participants identified the teaching culture of contemporary higher education as not only a barrier to wider academic participation in the UTC Program, but also as an impediment to their ability to implement scholarly teaching practices. Indeed, most of the changes participants wanted were not changes to the program itself, but rather to the broader culture in which it is situated, such as the lack of institutional and departmental recognition and support for educational development. Whether UTC graduates can have any real influence will depend on whether the culture of higher education continues along the path it has been taking in recent years. The UTC Program is intended to contribute to a learning-centred culture of prospective quality assurance, intended to enhance the quality of teaching and learning at an institution by reviewing how well the whole institution works in achieving its mission, and how it could be improved. The presence of thoughtful and informed graduates of the UTC Program on departmental and institutional decision-making bodies seems, therefore, hopeful. However, universities and colleges in North America have committed themselves, instead, to a culture of retrospective quality assurance, which "looks back to what has already been done and makes a summative judgment against external standards" (Biggs, 2001, p. 222) – a managerial and bureaucratic exercise "with accountability as a high priority." This form of quality assurance is concerned with "quantifying some of the

presumed indicators of good teaching and good management, and coming to some kind of cost-benefit decision” (Biggs, 2001, p. 222). It is an approach that the United Kingdom learned too late is deceptively destructive. As Goodlad (1993), Seymour (1993) and Bowden and Marton (1998), among others, have argued, the procedures and priorities of retrospective quality assurance “are frequently counter-productive for quality in the sense of providing rich teaching contexts and enhanced learning outcomes” (Biggs, 2001, p. 222).

The UTC Program is designed to help academics focus on quality enhancement, helping participants learn to create effective curricular structures, design effective lessons, identify effective authentic assessment tasks and grading practices, and otherwise operationalize the findings of scholarly work on teaching and learning. UTC graduates who have attempted to put into practice what they learned in the program have discovered that it is difficult for a learning-centred culture focused on quality enhancement to exist within the paradigm that retrospective quality assurance exemplifies and reinforces. A “quantitative mindset” that reduces “complex issues to units that can be handled independently, rather than as part of a larger interactive system” (Biggs, 2001, p. 232) precludes colleges and universities in Ontario from embracing quality enhancement. We see this mindset at work in the “misapplication of the measurement model of assessment” in Ontario’s postsecondary education system, to further quote Biggs, including not only provincial-level efforts to impose “key performance indicators” and other accoutrements of accountability, but also in local practices of norm-referencing and bell-curve grades.

Thus, academics graduate the UTC Program only to find that Ontario’s postsecondary system works against their efforts to teach, design courses and assess students appropriately, as noted in the focus group and open-ended comments identifying barriers in departmental and institutional culture, which are consistent with other higher educational research on teaching culture (Kustra et al., 2014) and with the characteristics identified by Biggs. These “distorted priorities” are to some extent the consequence of university corporatization “which illustrates misalignment at its starkest” (Biggs, 2001, p. 235).

Participants’ perceptions and Biggs’ warnings are consistent with current research on institutional teaching culture in Ontario (Kustra et al., 2014). In the long term, initiatives like the UTC Program, as well as less systematic attempts to make scholarly teaching a norm in Ontario, are probably unsustainable unless supported by its institutional and provincial postsecondary culture. Quality enhancement “cannot be left to the sense of responsibility or the priorities of individual teachers. Institutions must provide the incentives and support structures for teachers to enhance their teaching, and most importantly, to involve individuals through their normal departmental teaching in (quality enhancement) processes” (Biggs, 2001, p. 229). Although they may be emerging change agents, most UTC participants belong to vulnerable populations within the academy – untenured early career faculty, part-time sessional instructors, and graduate students – which makes the need for cultural support at the departmental and institutional levels more critical.

Despite the small sample size and our qualms about excessive positivity, the results indicate that the UTC program may be achieving its aims in the short term. Future research with a longer-term study that delved more deeply into the details of the TPI sub-scores and the connections between the different data sources, checked against a control group and examining in-class performance would be ideal. It would also be

instructive to research the long-term impacts of programs like the UTC on departmental and institutional cultures.

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