

1. Applicant Information

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2. Overview

Descriptive Title

Development of Teaching Measures and Web-based Questionnaires for Study of Effectiveness of Teaching Assistants Training Program's Certificate Program

Intended Outcomes

This project is the first step in the preparation of a longitudinal study of the effectiveness of the Teaching Assistants Training Program's (TATP) Certificate Program, which is now seven years old and has never been evaluated. The project involves two steps:

- Develop a set of measures to determine effective teaching by teaching assistants (TAs) at the University of Toronto.
- Pilot test online questionnaires that will be used to evaluate the effectiveness of TA pedagogical training at the University of Toronto.

The project's anticipated outcomes include:

May 2007 to July 2007	<ul style="list-style-type: none">• An extensive literature review to identify the types of measures used to assess the teaching effectiveness of TAs.• Identification of knowledge gaps in measurement of teaching effectiveness for TAs.• Adaptation of existing measures and development of new ones to measure TA teaching effectiveness across divisions and disciplines.
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July 2007 to August 2007	<ul style="list-style-type: none"> • Development of a web-based questionnaire that will allow for fast, easy and inexpensive implementation of the measures.
September 2007; January 2008; April 2008	<ul style="list-style-type: none"> • Dissemination of the questionnaire at three points in the year to 50 students participating in the TATP Certificate Program, specifically the Advanced University Teaching Preparation (AUTP) Certificate Program. The questionnaire will be modified after each iteration to ensure questions are appropriate, clear and meaningful, and students do not find the survey burdensome to answer.
October 2007 to May 2008	<ul style="list-style-type: none"> • Validation of the measures and the web-based distribution method for accuracy, reliability and rate-of-response. We can assess the accuracy of the web-based measurement by comparison with an on-site evaluation, already part of the AUTP Certificate Program. Calculations of sensitivity and specificity of the measure will help us to focus our improvements on later iterations of the measure as well as assess any potential measurement bias. Reliability will be determined by comparing multiple responses to similar measures. The Kappa statistic will be used to quantitatively determine questionnaire reliability.
May 2008	<ul style="list-style-type: none"> • Writing up of results and distribution of validated questionnaire to institutions through teaching conferences and personal contact.

Rationale

Our goal through this pilot project is to identify the key components of pedagogical training that are immediately applicable to a TA's teaching and can be used as markers of effective teaching practice.

Currently, the literature is lacking a precise, validated set of measures to determine the teaching effectiveness of TAs. Therefore, we propose to develop a set of measures that can be used across institutions to evaluate TA teaching effectiveness—a "gold-standard" measure of effective TA teaching—against which the effectiveness of the TATP Certificate Program can be evaluated.

This project is timely for the following reasons:

1. Vicki Kristman, a graduate student trainer with the TATP for the past four years, specializes in developing and analyzing longitudinal trials, and thus has the expertise to launch the longitudinal project.
2. A basic two-hour training workshop for new teaching assistants is now mandatory at the University of Toronto, thus providing a control group for the long-term study involving TATP Certificate Program participants.
3. Through the support of the Office of the Vice-President and Provost, the School for Graduate Studies and the Office of Teaching Advancement, the TATP has the means to develop and administer web-based surveys on the university's own servers.

A grant from the EDC at this preliminary stage would be useful, not only in properly assessing the existing measures and developing survey questions, but also in providing important leverage when applying for a SSHRC Standard Research Grant in October 2007.

The SSHRC grant will hopefully fund the long-term study beginning in September 2008. This pilot project advances the five-year Professional Development Plan for the EDC in three ways:

1. It will develop a system of web-based surveys and set of measures that could be distributed online and modified to suit the needs of any educational development office, thus contributing to the EDC goal of developing and sharing web-based resources.
2. It will generate a series of conference presentations at upcoming EDC/STLHE events (hopefully over the next three years).
3. It will bring the TATP office into the developing field of the Scholarship of Teaching and Learning (SoTL) and it will help draw a TATP graduate student trainer and one graduate student researcher further into the field of educational development and the SoTL.

Scholarship

While there has been significant study of the relationship between pre-service training of teaching assistants and their perceived self-efficacy once in the classroom (Prieto & Altmaier 1994; Prieto & Meyers 1999), most studies have focused on tracing the attitudes and self-confidence of TAs and have relied heavily on the self-reporting of TAs for data collection (Streveler 1993).

This project aims to develop measures and online questionnaires that can be combined with ongoing training workshops and in-class observations (both elements of the current AOTP Certificate Program) to determine if TAs are in fact implementing any of the teaching methods and theories being relayed through the TATP Certificate Program's workshops and practicum components. Further research will be required into other studies of the effectiveness of TA training both in Canada and the United States in order to develop effective measures and survey questions.

The EDC grant would provide the seed money necessary to complete this research. Inspired by the work of EDC members Dieter Schönwetter (University of Manitoba) and Donna Ellis (University of Waterloo), who compared their institutions' certificate programs, and the work of PhD Candidate Jennifer Boman (University of Western Ontario), who is studying the cognitive and behavioural outcomes of TA training at her institution, we hope to add to the growing scholarship in Canada focusing on offering TAs the best pedagogical development possible.

Dissemination

After tabulating the results of the pilot questionnaires and determining the validity of our measures, we hope to have the opportunity to present the results at the STLHE conference in June 2008. We will seek to present at other international conferences in 2008 as well, namely at the POD and the AAC&U annual conferences. The online measures will be shared with the EDC community, and with workshop participants at STLHE 2008. At a minimum, we will aim to publish the results of the pilot project and the long-term study in journals such as the *International Journal of Academic Development* and the *Journal of Graduate and Professional Student Development*.

References Cited

- Prieto, L. R., & Altmaier, E. M. (1994). The relationship of prior training and previous teaching experience to self-efficacy among graduate teaching assistants. *Research in Higher Education*, 35, 481-497.
- Prieto, L. R., & Meyers, S. A. (1999). Effects of training and supervision on the self-efficacy of psychology graduate teaching assistants. *Teaching of Psychology*, 26, 264-266.
- Streveler, R. A. (1993). Investigating differences in TA confidence. In K. G. Lewis (Ed.), *The TA experience: Preparing for multiple roles (Selected readings from the 3rd National Conference on the Training and Employment of Graduate Teaching Assistants at Austin, Texas)* (pp. 37-40). Stillwater, OK: New Forums Press.

3. Budget

Item (including any applicable taxes)	Cost
Graduate student research assistant @ \$20.00/hr x 85 hours	\$1,700.00
Honoraria (50 graduate students enrolled in the AOTP Certificate Program who agree to fill out the online questionnaire will be paid \$10/hr for 2 hours of work per questionnaire; they will also agree to an on-site evaluation and follow-up meeting, an existing component of the AOTP Certificate Program)	\$3,000.00
SAS/PC software for statistical analysis @ \$110.00 + GST, PST	\$125.40
Stat/Transfer software for moving Excel data from web-based data collection into statistical package @ \$76.00 + GST, PST	\$86.64
Estimated photocopying/printing costs	\$500.00
Total Costs	\$5,412.04
Less: matching funding from TATP office	\$2,500.00
Remaining Balance of Costs	\$2,912.04
Less: In-kind contributions (office space, office supplies, telephone/fax costs, labour costs for OTA staff building the web-based surveys, funding to attend international conferences)	\$0.00
Total amount requested from the EDC Grant Program	\$2,500.00