Predictors of Teacher Satisfaction with Online Professional Development (OPD): Evidence from the e-Learning for Educators (EeE) Initiative

Todd D. Reeves
Joseph J. Pedulla

Department of Educational Research, Measurement, and Evaluation, Lynch School of Education, Boston College, Chestnut Hill, MA 02467

Abstract
Online professional development (OPD) is proliferating in an effort to eliminate barriers to high-quality in-service teacher training. Using the Internet as a vehicle for autonomous in-service teacher training, however, introduces new concerns largely absent in its face-to-face counterpart. For example, evidence from the e-Learning for Educators initiative (EeE) suggests that some OPD participants do not complete the online courses in which they enroll (Smith et al., 2009), possibly undermining these teacher quality improvement efforts. In response to this evidence, this study (N = 398) investigates factors associated with teacher satisfaction with OPD via secondary analysis of EeE evaluation data. After considering participant variables, factors established in the e-learning and professional development satisfaction literatures, as well as novel predictors, a blockwise ordinary least squares linear multiple regression model explains a considerable large share of the variance in participants' satisfaction with OPD. Implications for both the design of OPD and the training of facilitators to retain participants and study limitations are discussed.

Literature Review & Aims of the Research
In accordance with recommendations made in the work preceding it (i.e., Dede et al., 2009), this study invokes diverse literatures germane to new OPD scholarship. An extensive review of the literatures on the antecedents of teacher satisfaction with traditional face-to-face professional development, as well as satisfaction with OPD in other professions (e.g., nursing) and in e-learning more generally was conducted. This yielded a set of predictors previously investigated vis-à-vis satisfaction with professional development and in e-learning contexts. The present study attempts to both replicate and also extend this previous satisfaction literature.

This study considers participant factors (e.g., Nye, Konstantopoulos, & Hedger, 2004). Notwithstanding the No Child Left Behind Act of 2001 requirement that every classroom be taught by a "highly qualified" teacher by the end of the 2005-06 school year, there remains still need for improvements to teacher quality. Accordingly, many consider high-quality professional development critical in improving teacher quality and ensuring that our nation's students attain the rigorous academic standards spurred on by standards-based education reform policy.

However, there are many barriers to such high-quality in-service teacher training. Some teachers, for example, lack access locally to high-quality professional development or the time in which to participate in traditional programs. Consequently, online professional development (OPD) is proliferating in an effort to eliminate such (and other) barriers to this in-service training. The e-Learning for Educators (EeE) initiative, for example, is a U.S. Department of Education-funded project expressly aimed at removing scheduling and geographic barriers to high-quality professional development across 10 states.

Using the Internet as a vehicle for autonomous, accessible in-service teacher training, however, introduces new concerns largely absent in its face-to-face counterpart. For example, evidence from the e-Learning for Educators initiative (EeE) suggests that some OPD participants do not complete the online courses in which they enroll (Smith et al., 2009), possibly undermining these teacher quality improvement efforts. In response to this evidence, and a paucity of research on the topic, this study investigates factors associated with teacher satisfaction with OPD, an outcome important through its effect on e-learning continuance intention (e.g., Chiu, Sun, Sun, & Ju, 2007).

Method
This study constitutes a secondary analysis of self-reported evaluation data collected from elementary and secondary educators (N = 398) who participated in a single EeE OPD workshop. The criterion variable was a satisfaction composite created on the basis of two posttest evaluation survey items: "Rate the overall quality of this workshop" and "How likely are you to take another online professional development workshop?"? The explanatory variables were all operationally defined as intact evaluation survey items, with the exception of the following composite: computer proficiency (eight items) and quality of learner interaction (two items). Exploratory factor and scale analyses provided internal structure validity evidence (i.e., unidimensionality) for each of the three composite variables. Hierarchical ordinary least squares (OLS) linear multiple regression analysis was used. Participant (control) factors were first entered into the model simultaneously. Established factors were then entered into the model together as a separate block. Forward stepwise entry was then used to investigate novel factors in an exploratory fashion.

Results
The final OLS linear multiple regression model explains a considerably large share of the variance (R² = .57) in EeE participants' satisfaction with OPD. This study unexpectedly fails to find evidence for relations between OPD satisfaction and participants' computer proficiency, access to technology, and prior OPD course experience. Moreover, design features such as the number of contact hours, the facilitator's providing of helpful feedback, the availability of technical assistance and the organization of the workshop were also unrelated independently to OPD satisfaction. This study does, however, find evidence for unique relationships between OPD satisfaction and gender (b = .049; favoring males), the quality of learner interactions (b = .193), and the availability of evaluation materials (b = .127). The automatic forward stepwise entry procedure also provided evidence for unique explanatory relationships between OPD satisfaction and three variables: the ease with which the workshop content could be easily transferred to the classroom (b = 2.12); the adequacy of provided compensation (b = .163); and the facilitator's setting of a welcome tone for the workshop (b = .145).

Implications
Significantly, this study provides new evidence that teacher satisfaction with OPD is not independent of its design features. These findings can be used as input to the design of OPD programs and the training of facilitators in order to retain participants. For example, teacher OPD designed to foster high-quality interactions among learners, with clear expectations for participation, a user-friendly website interface, content that is easily transferred to the classroom, and the availability of compensation and a facilitator who sets a welcoming tone might be more satisfying by participants. It must also be noted, however, that this study's non-significant findings do not necessarily imply that the various re-examined factors do not matter, as data were collected from a particular OPD model, which might not have exhibited the variability required for demonstrating such effects. Finally, the findings of this study must be interpreted in light of its other limitations, which potentially include selection bias, instrumentation-related internal validity threats, and its observational (i.e., non-experimental) nature.

References

Acknowledgements
This research was supported by a grant from the U.S. Department of Education's Ready-to-Teach Grant Program. The first author would like to express gratitude for assistance provided by Dr. Sheraly Dash, Maureen Kavanaugh, Youjini Lee and Lauren Chapman.