

Faculty Innovator Grant 2013
Center for Learning and Teaching

Final Report Form

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Project Title: (10 words or less)	A Searchable Field Experience Knowledge Base for Pre-service Special Education Teachers

Other faculty:

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1. Describe the specific teaching and learning issues being addressed by the proposal.

Field experiences are considered to be one of the most important and powerful components of teacher education programs. The Department of Communication Disorders and Special Education (CDSE) has made field experiences an integral part of its teaching programs for both undergraduate and graduate students. Pre-service teachers in CDSE are required to participate in field experiences and to teach individuals with disabilities under the direction of an experienced master teacher.

Recently, Dr. Watson (from CDSE) and I have developed a Web-based searchable field experience report tracking system which allows pre-service teachers to report their field experience activities on a daily or weekly basis. The pre-service teachers describe what they learned from each activity and reflect on their effectiveness in addressing students's needs. These reflective activity reports contain both explicit and tacit knowledge pre-service teachers learned from their field experiences teaching K-12 students with disabilities in real classroom settings. In general, these activity reports describe the issues pre-service teachers encountered in teaching students with a specific disability such as emotional disorder, the approaches they used to handle different situations and issues in the classroom, and the effectiveness of using specific approaches when teaching students with different disabilities. The learned field experience knowledge stored in these activity reports can be a very valuable learning resource to other pre-service teachers who may face similar situations or contexts in their field experiences because this searchable web-based was designed to disseminate the knowledge gained by the special education pre-service teachers from their field experiences. This Web-based searchable knowledge-based allows other pre-service teachers, mentoring teachers, and supervisors to find field experience reports that meet certain criteria such as grade level, disability type, etc. This Web-based searchable knowledge-base has been used as a teaching and learning resource in courses in CDSE and has a great potential to help future pre-service teachers to be better prepared for their field experiences teaching students with disabilities in real-world classrooms. In the meantime, we will continue to collect field experience reports from pre-service teachers each semester so that the proposed knowledge-base will continue to grow and make a larger impact over time.

2. Describe the revised specific teaching and learning issues being addressed by the proposal (if applicable):

Prior to the development of the website, special education pre-service teacher described generally parts of their day. The format for the report on the website requires them to focus on specific activities and be more reflective. The website facilitates tracking of the number of reports completed by each pre-service teacher.

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3. Describe the development activities involved addressing the learning or teaching issue.

We conducted detailed system design (interface design, database design, etc.) to come up with a list of modules, functions and features that can support the structures needed by the system. We applied the ADDIE (Analysis, Design, Development, Implement, Evaluate) approach to further guide the implementation process of the system. The final implementation of the web-based system was accomplished using PHP scripting language, HTML language, and MySQL open source database. The system supports both pre-service special education teachers and university administrators/professors to access this system. The system allows pre-service special education teachers to report their daily field experience including daily event logs for classroom activities, time spent on each activity, field experience type (onsite, telecommuting, and case study), grade level, subject, description of students' disabilities, actions to support the students with disabilities during this activity/event, issues or problem encountered, actions to address the issues or problems encountered, learned knowledge, skills and experience, and self-assessment. In addition, the system provides modules for instructor, cooperating teachers, and administrators to track pre-service teachers' self-reported field experience.

4. Describe the learning outcomes attained by the project.

A preliminary survey with seven participating pre-service teachers indicates that the system received good ratings and positive comments from participants. On a scale of 1(low) to 5(high), the ease of use of the system received an average of 4.7, functions and capabilities of the system received an average of 4.3, and user satisfaction received an average of 4.3. In addition, participating pre-service teachers agreed that the system makes the field experience reporting process easier. In particular, this system is a time-saving and convenient tool for pre-service teachers who live far away from the university. Below are two examples:

- *It is very useful. I can see it becoming a good reference and/or research tool for recording the experiences of pre-teachers in the field. Some interesting trends may emerge over time.*
- *It ensures that teachers in preparation get the necessary experience that they may or may not experience once they become a full time teacher.*

5. Describe unexpected outcomes, if any.
Nothing unexpected happened.

6. Describe the impact of the completed project on your colleagues, department, college, or community.

The website can be used by any faculty from any department. The biggest impact has been on the pre-service teachers who used the website to write their reports. Those pre-service teachers were able to reflect on their efficacy as it relates to teaching students

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with disabilities. Other faculty can use the website to have their students reflect on their own efficacy as they work with a patient, a student, an administrator, etc.

7. Describe how the project can be a model, template, or prototype for use by other instructors.

The field experience reports collected by this system can be used as first-hand examples and evidence to support future classroom teaching. Faculty and academic program administrators can use the collected data to inform their program development efforts including instructional strategies, curriculum improvement, and policy-making. In essence, the system can be used as a data-oriented decision-making tool or be considered as a way to capture knowledge of a broad educational knowledge management (KM) system for field experience management. Furthermore, the system and methodology we used in this project has wider applicability and generalizability, and can be applied to the management of other competency and field-based professional training in areas such as nursing, social work and medicine.

8. Describe the technology used to help address the issues described in the proposal.

The final implementation of the web-based system was accomplished using PHP scripting language, HTML language, and MySQL open source database.

9. Describe products, if any, that are a result of the project.

A Web-based searchable field experience report tracking system at <http://odutracking.zxq.net> and an article that will be published at Campus-Wide Information Systems.

10. Describe the future plans for this project, if any.

We plan to involve K-12 school teachers in our next study to further improve the features and the use of the system.

11. Attach a financial report with updated Budget Plan Matrix.

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Final Budget Matrix

Budget Item (equipment, personnel, software, etc.)	Qty	Total Cost	Source of Funds	
			Amount from FIG	Amount from Other Source
A student worker	1	\$1100	Around \$1100	
Ipad mini for system testing, evaluation and classroom use	2	\$600	Around \$600	
A search engine expert as a consultant/guest speaker to evaluate the system and guide the development of the system	1	\$300	Around 300	