



Evaluation of the DTE Energy Freshwater Institute for Teachers

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Contact: Colleen Masterson
 Northwestern Michigan College
cmasterson@nmc.edu

Program Profile	
Program Description:	<p>The DTE Freshwater Institute for Teachers offers a year-long professional development program through which teachers learn to conduct water-related, place-based environmental science lessons and projects with their students. Organized and coordinated by the Great Lakes Water Studies Institute at Northwestern Michigan College and funded primarily by the DTE Foundation, the program is a four-year effort aiming to train cadres of teachers to foster their students' stewardship of the Great Lakes.</p> <p>During the course of each year-long program, the teachers participate in a four-day institute at the Great Lakes Water Studies Institute, develop relationships with field-based educational organizations in their local areas, design and implement place-based education projects with their students and community partners, and attend four "Dinner & Dialogues" to discuss their progress and challenges. Whereas the summer institute aims to provide teachers with background knowledge in watersheds, place-based education, and inquiry learning, the program expects that much of the curriculum design work will occur once teachers have returned to their home districts and developed relationships with local community organizations.</p> <p>During the school year, teachers and students work with organizations in their communities that study and manage natural resources. Teachers, students and community partners work together to design and implement place-based education projects around current water-related issues in their community. In most cases, students take several field trips during which they experience their local water resources, riparian zones, and wildlife first-hand. These excursions may involve guided tours, but more importantly, involve data collection, exploration, and reflection. A service component is included in all place-based education projects. Students' experiences related to the place-based education projects are drawn on for class projects and activities as well as community education efforts. Ultimately, the DTE Freshwater Institute for Teachers hopes to strengthen students' connection to and understanding of their local watersheds. The project managers and funders expect these activities to help students become stewards of the Great Lakes.</p>
Program Goals:	<p>The program's overall goal is to foster stewardship of the Great Lakes and its freshwater ecosystems among teachers, students, and schools. To achieve this goal, the Institute builds the capacities of participating teachers and their students to design and implement inquiry-focused, water-related, place-based projects in their communities. By facilitating school-community partnerships and conversations among educators, the program aims to strengthen relationships between teachers and community organizations as well as among teachers in different schools.</p>
Program Funding:	DTE Energy and Great Lakes Fishery Trust
Program Links:	http://www.nmc.edu/glwsi/dte/

Evaluation Profile	
Evaluation Goals & Questions:	The main goal of the evaluation was to determine the extent to which the program meets its' goals. Evaluation questions included: <ul style="list-style-type: none"> o What did teachers learn during the program? o How strong were the school-community partnerships? o What kinds of projects and curricula did teachers design? o How might the program be improved?
Evaluation Methods:	The evaluation included both formative and summative components. Data collection methods included: <ul style="list-style-type: none"> - Surveys to elicit teachers' content knowledge at the beginning and end of the program through content-related short answer questions. - Teacher surveys about self-perceived content knowledge and the program's strengths and weaknesses at the end of the four-day summer institute and at the end of the program. - Visits to project sites to observe classrooms, review student and teacher work products, and interview teachers and community partners. -
Evaluation Instruments:	A partial set of evaluation instruments is available in the report.
How were results used?	Results were used to make adjustments to subsequent programs. For example, because the evaluation revealed that teachers did not fully comprehend or utilize in-depth science content covered by community partners during the summer workshop, the subsequent program worked with teachers' prior conceptions and focused more on broad watershed concepts and the pedagogical challenges of implementing place-based education.
Evaluation Cost:	The precise evaluation budget was not readily available at the time that this profile was written, but one manager estimated that between eight and ten percent of the total program budget was spent on evaluation.
Evaluation Insights:	<p>What worked well? Partnerships with community organizations usually worked quite well, providing both teachers and students with worthwhile hands-on experiences.</p> <p>What were the important evaluation "lessons learned"? Teachers attended the fourth and final Dinner & Dialogue in April, before some had completed relevant instructional activities with their students, and at the end of this meeting, they completed surveys about the program. Because their comments about the program were given before some of the lessons and field trips, it was impossible for them to fairly assess the program as a whole. In future evaluations, teachers should complete surveys after all relevant instructional activities have been completed.</p> <p>What could have been done differently? As suggested above, the last Dinner & Dialogue could have been held in May or June after teachers had completed relevant instruction, or evaluation tools could be completed independently of the Dinner & Dialogue.</p>
Profile information provided by:	Colleen Masterson Northwestern Michigan College
Profile prepared by:	Brett Levy, Graduate Student University of Michigan
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