

**ALABAMA COMMISSION ON HIGHER EDUCATION
EVALUATION OF THE “IMPROVING TEACHER
QUALITY: MASTERY OF CONTENT” PROJECTS
FY 2005-2006**

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EXECUTIVE SUMMARY

The Center for Educational Accountability at the University of Alabama at Birmingham conducted external evaluations of the activities of ten projects statewide during 2006-2007 that were funded in part by a FY 2005 appropriation from the U. S. Department of Education and administered by the Alabama Commission on Higher Education (ACHE) to provide professional development for K-12 teachers. A separate evaluation report contains an overview of each site's partners, objectives, and activities. Evaluations focused primarily on participants' content growth and perceptions of the summer professional development sessions. This report summarizes results of the evaluation activities for nine of the ten projects. One independent study project is sufficiently different from the other nine projects so that evaluation data could not be easily aggregated with the other data.

Overview of the Evaluation

As part of the external evaluations, the Alabama Commission on Higher Education tasked the Center for Educational Accountability with addressing four core questions relating to each project:

1. To what extent is the professional development delivered in a manner consistent with state and national standards of professional development?
2. To what extent do teachers who participate in the program make gains in subject matter knowledge that is tied to the content of the program?
3. What are the concerns expressed by teachers regarding implementation of the knowledge and strategies learned during the workshops?
4. What are the changes in the attitudes and pedagogical behaviors of teachers who participate in the program?

To what extent is the professional development delivered in a manner consistent with state and national standards of professional development?

The nine projects conducted a total of 47 workshops involving 1,035 participants. Analysis of results of the professional development delivered by the projects revealed a number of consistent trends across the four key questions. Relative to the Standards for Professional Development, there is compelling evidence (ratings of *agree* or *strongly agree* by 75% or more of respondents) that the projects delivered professional development in a manner that most teachers believed was consistent with the research base and effective in improving their knowledge and classroom practices. Although there are limitations inherent in self-reporting, the consistently positive feedback supports the finding regarding the nature of the evidence. Across the projects, teachers also tended to be satisfied with the programs and reported that they would encourage colleagues to participate in the program if available next summer.

To what extent do teachers who participate in the program make gains in subject matter knowledge that is tied to the content of the program?

To measure deep subject matter learning of participants, seven sites administered content pretests and posttests to some or all of their workshop participants. The pretest and posttest instruments were developed by project staff to reflect the subject matter focus of the workshops. The effect sizes for the sites reveal improvements of .40 to 9.98 standard deviations. Effect sizes of greater than .33 standard deviations are typically considered to be practically meaningful. Gains in excess of one standard deviation indicate a substantial shift in content knowledge. The rigor of

the content assessed by these tests is apparent in the low scores on the pretests and the evidence that the average posttest scores for eight posttests were below 70%, and another seven were below 80%. These results indicate that teachers who participated in workshops within these sites made learning gains that were both statistically significant and practically meaningful. The large standard deviations of the posttest scores and difference scores in each project indicate that the amount of learning within projects was not consistent between teachers.

Due to the structure of some workshops, choices available to workshop participants, and the broad spectrum of subject matter content that teachers were exposed to, it was determined that a pretest/posttest measure of content learning could not be generated for these workshops. Instead, teachers were asked to complete “Learning Reflections”. These Learning Reflections asked teachers to identify the most important subject matter learning that they experienced, and to explain why the learning was so important. Qualitative analyses of the Learning Reflections established that participants, even in sites that did not conduct pretest/posttest subject matter testing, identified learning gains in teacher content knowledge and improved instructional strategies. These were two priority areas targeted by ACHE for these projects. A focus on enhancing student learning was the most pervasive learning gain reported by participants. While self-reports of learning are not as valid or reliable as quantitative evidence from objective or performance tests of teacher knowledge, these reports highlight the beliefs of teachers that the professional development that was funded by the U.S. Department of Education and administered by ACHE was perceived as influential in promoting subject matter learning and instructional improvements that should support student motivation and learning.

Examination of the extent and nature of Learning Reflections responses raises two concerns about the data. First, in some sites, the participation rate in completing the Learning Reflections was low. The low numbers of responses to the Learning Reflections in some sites limits the generalizability of results for those sites. Given the importance of teacher subject matter learning as a core priority for these projects, the relatively small number of responses limits our ability to talk meaningfully about the nature of learning in some sites. In some cases the low response rate may be due to scheduling and communication challenges between the external evaluators and the project leadership. It is also possible that the length of the survey contributed to the low response rate. A second concern of the evaluation team was that in several projects increased content knowledge was reported by a minority rather than a majority of respondents in their answer to the open-ended question asking teachers how their teaching would change. On the surface this result seems inconsistent with other findings as well as with the clearly articulated expectations of the funding agent that content knowledge would increase. However, further examination of the themes for this question revealed that most teachers reported anticipated changes in their instructional strategies and inclusion of more inquiry focused learning activities, both of which are positive outcomes.

What are the concerns expressed by teachers regarding implementation of the knowledge and strategies learned during the workshops?

Although teachers were, in general, enthusiastic about the innovations that they were exposed to, they were less confident immediately following the summer professional development workshops that (a) leaders in their schools and districts would be able to facilitate instructional improvement regarding the program, and (b) that they would have time during the regular school week to work with colleagues on the pedagogy of the program. This suggests that although teachers felt positive about the professional development, they were less confident in the support they would receive to implement the practices within their schools. Teachers felt that large numbers of students, inadequate access to requisite materials for the pedagogy, and/or insufficient joint planning time

with other teachers were likely to inhibit use of professional development. (Subsequent site visits by ACHE suggest instead that project follow-up activities provided evidence of long-term, sustained professional development.)

What are the changes in the attitudes and pedagogical behaviors of teachers who participate in the program?

Data indicate that participants believed their participation in the workshops promoted their understanding, confidence as learners, confidence as users of the subject content, their motivation to learn more about the content, and their likelihood of applying problem-centered and inquiry-based approaches to teaching rather than didactic instruction. Additional findings regarding the professional development are consistent with the literature regarding the translation of professional development into the classroom. Teachers reported that professional development that presents pedagogical practices that are consistent with required curriculum, facilitative of classroom management, and actively supported by school leaders are more likely to be implemented in the schools.

Responses to five open-ended items corroborate results from ratings of the professional development standards, effects of the professional development on teaching, and factors influencing implementation. Comments are also similar to responses to the Learning Reflections. Teachers found the hands-on activities and instructional strategies to be the most outstanding aspects of the workshops. They believed that as a result of the professional development, their teaching strategies would be more inquiry focused and their students' knowledge and motivation would increase.

To better understand the factors that may influence teacher implementation of the professional development, evaluators surveyed participants at the end of training about their concerns regarding translating the professional development into their schools. Results were consistent with qualitative and quantitative data reported earlier about the perceived value of the professional development and obstacles to implementation. Many teachers reported that they were excited about the pedagogy they learned, were interested in motivating students about the pedagogy, were interested in finding supplemental resources about the professional development, and were interested in collaborating with other teachers about the pedagogy. Few teachers reported having limited knowledge about the pedagogy at the end of the professional development.

Efforts to track participants into the spring of school and observe and question them about the nature of implementation of the pedagogy met with limited success. To judge the extent of changes occurring with the classrooms, evaluators need to compare baseline data (behavior of respondents before participating in project professional development sessions) with observed teacher behavior of the same participants after attending the sessions. Because observation data were not planned or collected prior to the professional development, it was not possible to assess change occurring within the classrooms following professional development. It should be noted that there was no a priori expectation that follow-up interviews and visits would occur, so participation could not be expected of the teachers. However, teachers still reported that their confidence in their subject matter knowledge, pedagogy, and engaging students as collaborative learners has increased since the workshop. The data indicate that teachers reported using a variety of instructional methods. Results of the interviews, observations, and follow-up surveys are summarized in the full aggregate report and individual project summaries.

Aggregate analysis for the first year has suggested that many of the projects are able to conduct high-quality sustained professional development (across a week or more) and that such projects produce subject matter gains in the teachers. The evaluation team received considerable support and cooperation from projects, although some project staff were more cooperative and supportive than others. Because professional development is the focus of the projects and implementation is an implied outcome, evaluation efforts for the second year will focus substantially more on documenting the participants' perceptions of the value of both the initial and follow-up professional development sessions. In order for the evaluators of subsequent projects to learn more about the success of follow-up sessions, the evaluation team will need to work to enhance relationships with project directors early in the fall and sustain those relationships throughout the year. Project directors and ACHE staff can support follow-up data collection efforts by promoting the importance of the evaluation data.