Beginning Teachers: Beliefs and Classroom Activities

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Teachers often begin their careers armed with accepted educational philosophies and practices as imparted to them by various teacher preparation programs across the country. This study closely examines the range of beliefs that novice teachers (1st, 2nd, and 3rd year teachers) maintain and employ in science and mathematics classrooms as well as the degree to which these beliefs change as teachers gain experience in their craft.

With support from the U.S. Department of Education and the Office of Educational Research and Improvement, this study employed the expertise of nine university research sites from across the country. Each site took a convenient sample of ten beginning teachers who were graduates of the university and in their first year of teaching. Furthermore, each site took a sample for the next two years as a means of comparison to the first sample cohort. Each cohort of teachers was studied using an interview protocol (TPPI), a classroom environment survey (STAM), and a classroom observation instrument (Constructivist Learning Environment Survey). Additional data was gathered using journal entries, videotapes of lessons, and tapes of student responses (934).

Interview and observational data were categorized into: teacher understanding of content and process, teacher actions, student actions, and philosophy of teaching. Further analysis of data led to the distinction of three individual instructional styles: teacher-centered teaching style, conceptual teaching style, and student-centered teaching style.

Teacher-centered instruction is based on direct instruction methods, focusing primarily on factual content with little real-world application. In lieu of a focus on either teachers or students, the conceptual teaching style is centered on the subject matter, with content that “tends to be explanatory, organized around important ideas (key concepts).” The student-centered teaching style allows teachers to share with the students in the understanding and inquiry of the content, thereby encouraging students to “initiate activities and contribute examples and analysis.” As data was collected, a fourth descriptor, a “wobbling” teaching style, emerged as teachers expressed instructional styles that find 50% of their beliefs consistent with the teaching-centered style and 50% of their beliefs consistent with the student-centered instructional style.

Results showed that with regard to the teacher’s understanding of content, most novice teachers advocated beliefs in conjunction with the teacher-centered instructional style. Additionally, a majority “wobbled” in their beliefs about what types of practices teachers should be employing in the classroom. As teachers progressed from their 1st to 3rd year, they shifted slightly in beliefs from “wobbling” to more teacher-centered in regard to what students should be doing in the classroom. A majority of third-year teachers (approximately 80%) wobbled in their general philosophy of teaching. Finally, while fifty percent of first-year teachers believed themselves to be “student-centered,” their beliefs on understanding content, actions as a teacher, student actions, and general philosophy contradicted this view considerably.

The authors note several worthwhile conclusions in their summation. One, when asked how they learn best and how their students learn best, “a majority of teachers responded that their students learned the same way the teachers themselves learned.” Two, as teachers progressed in their careers, they “tighten their beliefs and actions toward teaching styles in which they were more dominant (teacher-centered).” Additionally, “teachers constructed their philosophies to justify their actions in the classroom” in contrast to the construction of a teaching philosophy first. Concluding remarks center on the idea that “changing the actions of teachers, especially toward the use of more inquiry-oriented teaching approaches is more complex than originally thought.”

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