

Breakout Session II

Session: 2C

Title: Preparing K-6 Teachers Using Two Paradigms in Teaching Content Methods Courses

Date/Time: Monday, 1:45-2:30

Strand: 2

Preparing K-6 Teachers Using Two Paradigms in Teaching Content Methods Courses

The search for best practices in teacher preparation has been ongoing while state and national standards are being revised to strengthen the preparation of teachers in the U.S. Teaching content areas in an integrated manner has been a topic of interest since the early 1900's. For example, McBride and Silverman (1991) explored justifications for integrating mathematics and science in the elementary curriculum. Since then more arguments were made for the integration of other content areas in mathematics and sciences courses while stressing the interrelatedness of the disciplines (Lonning & DeFranco, 1994). In a 5-year study (Wright, Sorrels, & Grandy, 1996) findings indicated students in the integrated courses during their methods semester felt more prepared for student teaching. Meanwhile, other researchers (e.g., Superfine, Li, & Martinez, 2013) opposed the integrated approach as they believed that effective teachers need a kind of knowledge (e.g., mathematical) that is very specific to the work of teaching the specific content. One weakness of past research is that no uniform operational definition of "integrated" methods is described, especially in the educator preparation program.

Content methods semester in EC-6 Teacher Preparation Program

The preparation of EC-6 pre-service teachers (PSTs) at our institution has been implementing two different approaches in teaching the content methods courses in a block which typically has yearly enrollment of 150 future elementary teachers. The more pragmatic reason for this decision was more about ease of scheduling classes rather than a theoretical one. The first approach, which is more common among educator preparation programs, is the non-integrated model (NI) in which PSTs have different professors teaching the required content methods courses (mathematics, science, social studies). Each of these instructors is an "expert" in the content area hence, the content methods courses is focused heavily on understanding the methodology as well as the pedagogical content knowledge. The NI approach incorporates

common assessments including a service learning project, the Teacher Work Sample, as well as an integrated unit. Additionally, the PSTs spend four-to-five full weeks in the real classroom for field experience. Individual instructors design their syllabus according to their area of expertise (math, science, social studies) and specialty area standards.

The alternative approach adapts the integrated model (IM) in which only one instructor teaches all three content areas (math, science, social studies) including the classroom management course that is part of the block. The single-instructor model covers methodology and content while also regularly demonstrating ways to integrate across content areas. The IM incorporates similar assessments as the content-specific model described above with four-to-five week field experience. The distinct difference is that IM utilizes one instructor teaching one section of content method students for one semester and is assumed to be a “specialist” for all content areas.

In the content-focused model, there is lesser emphasis on integrating between the content and more focus on the specific content at hand. There are at least 3 professors who are content specialists to guide the students as they familiarize themselves with the Texas curriculum along with current methodology. In the IM there is more emphasis on integrating content areas so that the different methods courses do not seem segmented or fragmented.

Both models for preparing preservice teachers are similar on other levels, primarily because of programmatic requirements. Both groups are required to write lesson plans and unit plans, and teach math, science, and social studies lessons. Additionally, both groups participated in a service-learning project in their partner schools. Both groups of PSTs also participated in project-based learning, teacher reflections, peer-evaluation, and demonstration of dispositions and diversity proficiencies as well as a capstone project, the Teacher Work Sample.

Research Question and Data Collection

What are the benefits and pitfalls of each of these models? We will present results of an action research conducted to find out about the benefits and pitfalls of each of these models from both the instructors’ and PSTs’ perspectives. We wanted to find out whether PSTs develop good teaching practices in both type of learning and teaching environment. When it comes to teaching content methods course for elementary teachers it is still not clear whether the ways that course design potentially supports the development of knowledge for teaching.

Data from 1,084 PSTs starting Fall 2011 to Spring 2015 were collected through TK20.

The following measures were used to compare the two subgroups:

- TExES EC-6 Generalist- Texas Teacher Certification Exam;
- TExES Pedagogy and Professional Responsibilities (PPR) –Texas Teacher Certification Exam;
- TWS –Teacher Work Sample (Capstone for student teachers);
- Evaluations by University Supervisors of student teachers;
- Evaluations by the mentors during student teaching.

Results

The massive data set (n=1,084) have been analyzed using statistical designs. Descriptive data (preliminary analyses) revealed no significant difference in the two subgroups based on the measures identified above.

References

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- Lonning, R., & DeFranco, T. (1994). Development and implementation of an integrated mathematics/science preservice elementary methods course. *School Science and Mathematics*, 94(1), 18-25.
- Superfine, A. C., Li, W., & Martinez, M. (2013). Developing preservice teachers' mathematics knowledge for teaching: Making explicit design considerations for a content course. *Mathematics Teacher Educator*, 2 (1), 42-54.
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