Abstract

The purpose of this study was to explore how, if at all, the attitudes of science teachers toward teaching culturally diverse students were influenced by a 4-week-long induction course which focused on equitable science teaching.

Findings suggest that engaging teachers in opportunities to be introduced to, think about, and reflect upon ideas related to culturally relevant teaching positively impact their attitudes and beliefs about teaching culturally diverse students and the students themselves.

Introduction

Though an expansive research base has shown that teacher beliefs and attitudes play an important role in student performance, little is known about science teachers’ attitudes about cultural diversity or about teaching culturally diverse students. This, such an examination is critical (Wong, 2016).

In order to cultivate teachers’ attitudinal change towards cultural diversity, existing attitudes need to be determined. Teachers with deficit attitudes towards students are more prone to make negative judgements about their students’ potential. These teachers are more likely to form low academic expectations of students and ultimately to treat them in ways that stifle their learning (Villegas & Lucas, 2002).

Research Questions

The research questions guiding this work were: 1) How, if at all, do in-service science teachers’ attitudes about teaching culturally diverse learners change over the course of a 4-week-long course? and 2) How do these changes manifest themselves in the way the teachers talk about culturally diverse learners?

Context of the Study

In the summer of 2016, 18 in-service science teachers participated in a 4-week induction course.

Teachers read, reflected and discussed on cultural diversity in education, small group assignments, critically examined their instructional practices.

Participants: 4 male and 4 female teachers were part of this project.

Research Design

• A single embedded case study was employed (Yin, 2014).
• The study was contextualized within the induction course.
• Case - teachers (n=8) attitudes toward culturally diverse students.

Data Collection

Two data sources were used to address the research questions: (1) teacher responses to an attitude-eliciting card-sort activity during the first and last week of the course. (2) semi-structured interviews immediately following each card-sort activity.

Data Analysis

• Pre- and post-interviews were analyzed using classical grounded theory techniques (Glaser and Strauss, 1967).
• They were openly coded to identify initial codes.
• 165 initial codes: 35 codes from pre-interviews, 86 from post-interviews and 44 common to both pre- and post-interviews.
• Codes were discussed using constant comparative methods (Corbin & Strauss, 2008).
• Themes were developed (Miles & Huberman, 1994).
• These themes were compared between the pre-interviews and post-interviews in addition to the common codes that were examined.

Findings

Pre-Interview Themes:
• Teachers’ unpreparedness to interact with and teach culturally diverse students.
• Teachers’ sense of power in the classroom.
• Teachers’ sense of conflict between their desire for color-blindness and their sense of richness that diversity adds to their classrooms.

Post-Interview Themes:
• Teachers felt more prepared to work with their culturally diverse students.
• Teachers seemed to start understanding the power shift is beneficial in the classroom.
• Teachers seemed to start to reconcile the tension between color-blindness and the richness that diversity can provide to a classroom.

Common Code Themes:
• Teachers’ desire to engage with their culturally diverse students.
• Teachers run into obstacles when trying to interact with their culturally diverse students.
• Relationship is important in teacher-student interactions.

Conclusion

Engaging teachers in opportunities to be introduced to, think about, and reflect upon ideas related to culturally relevant teaching, positively impact their attitudes toward teaching culturally diverse students.

Implications and Future Studies

• Ways in which opportunities can be provided to the teachers to increase their effectiveness in reaching these culturally diverse students must be explored.
• How do the teachers modify their curriculum to suit the needs of their culturally diverse students?
• How do teacher attitudes affect teacher-student interaction in their classroom?