

The Importance of Examining Cross-Cultural Issues Experienced by Foreign Science Teachers in U.S. Science Classrooms

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ABSTRACT: The United States continues to embrace foreign teachers as a means of addressing teacher shortages across the country. For subject areas where shortages may be most acute, such as science, foreign teachers have been actively recruited to teach these subjects in U.S. schools. While the active recruitment and eventual migration of foreign science teachers to the United States has helped to mediate shortages in school districts across the country, foreign teachers can experience cross-cultural issues when they teach in U.S. classrooms. These cross-cultural issues can include cultural clashes and differences in expectations tied to communication, instruction, behavior, curricula, and the overall structure of schools. This paper expounds on the importance of examining cross-cultural issues experienced by foreign science teachers who work in U.S. science classrooms.

KEYWORDS: foreign teachers, international teachers, cross-cultural issues, science teachers

Introduction

The trend of foreign teachers migrating to the United States to teach in P-12 schools has been documented in the literature and popular press (Hutchinson, 2006; American Federation of Teachers, 2009; Sterling & Joffe-Block, 2018; Yan, Chiamonte, & Lagamayo 2019). According to the American Federation of Teachers (2009), by 2007 the number of foreign teachers working in the United States had grown to over 19,000 teachers. As noted by the organization, the number of foreign teachers working in the United States continues to steadily grow (American Federation of Teachers 2009).

The demand for foreign educators has been fueled by a shortage of teachers in specialized areas such as science (Hutchison 2006). As noted by Troen and Boles (2003), the U.S. educational system has been facing a “supply-versus-demand” (p. 39) problem, and there are not enough teachers to meet the growing demands of the current system. In recent years, states such as New York, Arizona, California, and Maryland have been actively recruiting and hiring foreign educators to teach science in both urban and rural school districts (Hutchinson 2006; American Federation of Teachers 2009; Sterling & Joffe-Block 2018; Yan, Chiamonte, & Lagamayo 2019). The shortage of teachers in the United States has created opportunities for foreign teachers to enter and work in U.S. public school systems.

Foreign science teachers immigrate to the U.S. for different reasons. Some teachers come to the U.S. in search of upward mobility, which includes better living and working conditions, as well as economic, political, or social stability (American Federation of Teachers, 2009). Other teachers are actively recruited by international recruiter firms (American Federation of Teachers 2009; Nganga 2011). Whether foreign teachers come to the U.S. through active recruitment or simply to find a better way of life, they typically face a number of challenges in their classrooms. Some of these challenges reflect the cross-cultural issues that they encounter when they begin teaching in U.S. schools. These cross-cultural challenges can include language and communication barriers, instructional expectations, curricula differences, and cultural differences between teachers and students (Dunn 2011; Huang 2009; Hutchison 2006; Spooner-Lane, Tangen, & Campbell 2009).

Understanding how foreign teachers experience and deal with cross-cultural challenges in their classrooms is important for improving how academic subjects such as science are taught. Since many of the foreign educators working in U.S. public schools are science teachers, noting how these

international educators adjust to teaching in culturally different environments is also important for addressing their transitional needs.

The Teacher Shortage Problem

In Troen and Boles' (2003) analysis of the teacher shortage issue, the authors critically analyzed the far-reaching effects of teacher shortages on the U.S. education system. In addition, the scholars provided reasons why they believe the teacher shortage problem continues to persist. According to Troen and Boles, the "chronic shortage of good teachers" (p. 10) in U.S. schools is a function of the country's inability to supply classrooms with individuals who are qualified to teach the next generation of citizens. The scholars indicated that the nation's inability to deliver highly qualified educators to classrooms is fueled by the fact that not enough individuals are pursuing the teaching profession. Furthermore, new teachers are not always adequately prepared to deal with the realities of the P-12 classrooms (Troen & Boles 2003).

The shortage of educators who are qualified to teach science is not a new problem. In her analysis of the teacher shortage issue, Darling-Hammond (1999) notes how the need for qualified teachers in specialized fields, such as physical sciences, has been consistent. According to the scholar, to fill subject-area needs school districts have also resorted to placing unqualified individuals in classroom as teachers. This "hidden shortage" (p. 18) of teachers has created problems in education (Straker 1991). Straker (1991) defined the "hidden shortage" as "a measure of the proportion of tuition undertaken by teachers who do not possess specialist qualifications in the subject which they are required to teach" (p. 18). Unskilled and unqualified individuals teaching science does not only devalue the quality of education students receive but can also impede students' knowledge and skill development in science.

A report published by the U.S. Department of Education in 2017 indicates that teacher shortages in science disciplines continue across the country. The dearth of qualified science educators has compelled state officials and administrators to find solutions to the teacher shortage problem.

Foreign Teachers and Cross-Cultural Teaching Issues

The recruitment of foreign teachers to U.S. schools has served as one solution to meeting the teaching demands of school districts. However, cultural differences between foreign teachers, the schools where they work, and the students who they teach can often result in these educators experiencing culture shock as well as other problems in the classroom (Dunn, 2011; Huang, 2009; Hutchison, 2006; Kumek, 2009; Rios, Montecinos, & Olphen, 2007; Spooner et al., 2009). Some of these cross-cultural issues have been documented in the literature. For example, Spooner-Lane et al.'s (2009) study on Asian international pre-service teachers revealed that these teachers experienced language barriers during their internships in Australian schools. In addition, the participants in Spooner-Lane et al.'s (2009) study shared that distinct cultural differences between themselves and their students impeded the teaching process.

Huang (2009) also conducted a study on Asian educators. Huang's (2009) study on four international teaching assistants (ITA) working in the U.S. revealed that the ITAs grappled with a number of cross-cultural issues including their perceptions of students' attitudes towards schoolwork as well as their identities as teachers. In Huang's (2009) discussion of the cross-cultural issues affecting the ITAs, Huang (2009) noted that the study's participants felt that they had to spend a considerable amount of time negotiating with their students in order to get them to perform in class.

Another study conducted on foreign educators was done by Dunn (2011). In Dunn's (2011) study on four international high school teachers from India, Dunn (2011) noted that her participants experienced communication barriers while working in urban schools. In addition, Dunn (2011) indicated that the Indian teachers cited student behavior, culture shock, instructional practices, and their understanding of the curriculum as being problematic issues that impacted how they teach.

Only a few studies have been conducted on the cross-cultural issues that foreign science educators encounter in their classrooms. For example, in Kumek's (2009) study on foreign mathematics and science teachers, Kumek (2009) noted that the foreign science teachers in his study had difficulties with classroom management as well as developing proper student-teacher relationships. Kumek (2009) also discussed a number of educational differences that the foreign teachers identified as being distinct from the educational practices used in their respective countries. According to the scholar, these dissimilarities included "motivational differences [in students], differences in values, differences in special education programs, instructional differences, differences in grading, differences in the academic level of students, and differences in student-teacher relations" (Kumek 2012, 5). Unfortunately, Kumek's (2009) study did not exclusively focus on science teachers as math teachers were also included in his analysis.

One study that explicitly focused on foreign science educators was conducted by Hutchison (2006). Hutchinson's (2006) discussion of cross-cultural issues experienced by four foreign science teachers working in U.S. high schools revealed that foreign science educators deal with a number of unique challenges in their classrooms. These challenges include foreign science educators' understanding of the organizational structure of American schools as it relates to scheduling, assessment, and curriculum practices. The participants in Hutchinson's (2006) study also identified culture shock and communication barriers as examples of cross-cultural issues that they experienced in their respective science classrooms.

Although some of the aforementioned challenges that foreign teachers encounter may be experienced by new teachers in general, there are a number of cross-cultural issues that can arise in the classroom as a result of the distinct cultural differences that exists between foreign educators and the students who they teach. Foreign teachers' challenges with communication, the curriculum, assessment practices, and student behavior may be a function of the cultural and academic expectations that these teachers bring to their classrooms. Scholars such as Dunn (2011), Huang (2009), Rios et al. (2007), and Spooner et al. (2009) believe that foreign educators bring a number of cultural practices, values, and expectations that are more closely aligned with their own culture than that of the culture of their students or the schools where they work. For example, Spooner et al.'s (2009) analysis of Asian pre-service teachers' experiences in Australian schools led them to draw the following conclusions:

A major hurdle for Asian international pre-service teachers may also include overcoming a mismatch between expectations of what teaching is going to be like and the realities of what they find in day-to-day classrooms...They enter practicum with a set of beliefs and assumptions about how children learn, about what curriculum should contain, and about how teaching is approached...However, this style of teaching may not be well suited to the style of teaching implemented in Western countries, where more learner-centered teaching/learning approaches (e.g., peer tutoring, cooperative learning) are adopted (p. 81).

Spooner et al.'s (2009) assertions are important because they provide insight into why some foreign teachers may find it difficult to adjust to teaching in the United States. As a result of differing expectations and practices, foreign educators may encounter a number of cross-cultural issues that can become hurdles to the teaching and learning process. Knowing how these educators deal with the challenges that they face while teaching can also help school districts, administrators, and recruiting firms develop specific strategies that can assist foreign science teachers with successfully assimilating to U.S. schools.

The Significance of Examining Cross-Cultural Issues in Science Classrooms

One understudied area in education is how foreign science teachers experience and acclimate to culturally different teaching environments. While several scholars have explicated on the cross-cultural issues of foreign educators, in general, not much research has been done on foreign

science teachers and how they transition to working in U.S. schools. Examining how foreign science teachers experience U.S. science classrooms can help school districts, administrators, and recruiting agencies focus on the transitional needs of these teachers. In addition, highlighting the voices of these educators in research will also bring their personal experiences, their fears, their struggles, and their triumphs to the forefront of research.

Understanding how foreign science educators perceive and deal with cross-cultural challenges in the science classroom has implications for practice. In order to effectively do their jobs, foreign science teachers must not only be knowledgeable of scientific content, but they must also successfully adjust to teaching in U.S. schools. If these teachers are finding it difficult to rise above the cross-cultural challenges that they encounter in science classrooms, then the teaching and learning process may be at risk.

According to the American Federation of Teachers (2009), there are dozens of firms that work with U.S. school districts in order to recruit teachers from different countries. Although these recruiting firms are performing an invaluable service by providing schools with trained and qualified teachers in specialized disciplines such as science, the practices of many of the recruitment firms are not tightly regulated (American Federation of Teachers 2009). Furthermore, all of the recruitment firms have their own standards and policies that delineate how foreign educators should be recruited, and how they may be supported.

The policies that are used to guide the recruitment of international teachers must be revisited to ensure that recruitment firms and other stakeholders are doing their best to inform foreign teachers of the cross-cultural issues that they may experience in U.S. classroom. Policies must also be put in place to ensure that recruitment agencies and school districts are providing teachers with the support they need to overcome some of the cross-cultural challenges that they may encounter when teaching. Without proper support, some foreign science educators may experience immense levels of culture shock which can negatively impact teaching and learning.

Conclusion

Although there are thousands of foreign science teachers working in the United States today, little research has been done to determine how these teachers perceive and deal with cross-cultural challenges that may arise in their classrooms. Knowing and understanding the experiences of foreign science educators, as it relates to cross-cultural issues, can have implications for the teaching and learning process. In addition, identifying the cross-cultural issues that foreign science teachers grapple with on a daily basis can provide school districts, administrators, and recruitment agencies with the information needed to help these educators successfully adjust and acclimate to U.S. schools.

Without a doubt, foreign science educators possess a unique set of transitional needs that can impact how these educators teach as well as how their students learn. These teachers walk into U.S. classrooms with a number of academic and social expectations that are closely tied to their cultural beliefs and practices, as well as to their past experiences as educators in their home countries. When the cultural and academic expectations of foreign science educators are challenged, cross-cultural issues can develop in the classroom. These issues warrant the attention of researchers, policy makers, and educational leaders.

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