



Influence of teacher collaboration on job satisfaction and student achievement



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HIGHLIGHTS

- Teachers collaborate in many different ways.
- Different types of collaborative activities are associated with unique outcomes.
- In the USA, collaboration during lesson planning predicts student achievement.

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ABSTRACT

Teacher collaboration consists of many types of activities and interactions. This quantitative study examines how the effects of collaboration differ according to both the type and frequency of collaborative activity. TIMSS data was analyzed to determine whether five indicators of collaboration predicted student achievement, teacher job satisfaction, and teacher confidence in Japan and the United States. Collaboration during lesson planning was a significant predictor of student achievement in the United States. Time spent visiting other classrooms corresponded to higher job satisfaction ratings in the United States. The results provide insight into the effectiveness of different collaborative activities in each nation.

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1. Introduction

The turnover rate for teachers in the United States in the first three years of teaching is estimated to be 46% percent (Parker, Martin, Colmar, & Liem, 2012). A major contributing factor to teacher burnout is low job satisfaction due to feelings of isolation (Tatar & Horenczyk, 2003). Because teachers in the United States spend a majority of their working day in a classroom with students, there may be little opportunity for them to interact with other professionals in the school (Huberman, 1989). Collaboration may reduce feelings of isolation, and thereby reduce burnout, by increasing teacher job satisfaction, teacher confidence, and student achievement in their classes (e.g. Brownell, Yeager, Rennells, & Riley, 1997; Cooper & Alvarado, 2006; Johnson, Kraft, & Papay, 2012; Wimberley, 2011).

Research describing the exact benefits of teacher collaboration

in the United States has produced mixed results, largely due to the utilization of inconsistent definitions of collaboration in different studies (Kelchtermans, 2006; Lavié, 2006). Exploring the potential benefits of multiple forms of teacher collaboration in different educational systems would yield more specific recommendations that could be adopted in multiple contexts. In the current study, data from the Trends in International Mathematics and Science Study (TIMSS) is examined to determine the unique influence that several different collaborative activities have on student achievement, teacher's job satisfaction, and teacher confidence in both the United States and Japan.

Despite having different cultures and educational systems, Japan was used as a comparison because of its low rate of teacher turnover and the emphasis placed on collaboration with the practice of lesson study, which is growing in prominence in the United States and other education systems across the world (Blum, Yocom, Trent, & McLaughlin, 2005; Lewis & Tsuchida, 1997; Stigler & Hiebert, 1997). Given the various definitions of collaboration that exist and the many ways that collaborative activities can be structured, a strong argument could be made to increase the use of any forms of collaboration that positively impacts student achievement,

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teacher confidence, and job satisfaction in both countries. Any collaborative activity that only influences one or two variables in a single country should be further researched to determine its viability in a different culture or context.

2. Literature review

Educators and policy makers in the United States have recently advocated for increasing the amount of time that teachers collaborate when planning, administering, and evaluating their instruction (Huffman & Kalnin, 2003; Jorgenson, MacDougall, & Llewellyn, 2003; Klentschy, 2005). Numerous studies have found advantages to engaging in teacher collaboration. While there is no comprehensive theory that explains the effects of teacher collaboration (e.g. Kelchtermans, 2006; Lavié, 2006), there is evidence to suggest that teachers who are satisfied with the organizational structure of the school perform better (Jackson, 2013). Additionally, social isolation is one of the leading causes of teacher dissatisfaction (Cooper & Alvarado, 2006; Brownell et al., 1997; Huberman, 1989; Tatar & Horenczyk, 2003). Therefore, incorporating collaboration has the potential to reduce feelings of isolation, which in combination with other organization changes that are needed to support effective collaboration, could contribute to interdependent increases in student achievement, teacher job satisfaction, and teacher confidence.

In some studies, teacher collaboration has been found to have a positive effect on student achievement (Goddard, Goddard, & Tschannen-Moran, 2007; Main & Bryer, 2005; Westheimer, 2008). For instance, Wimberley (2011) found that schools in Missouri that allowed teachers to work together in workshops or when planning lessons performed better on the state's standardized tests than schools that did not encourage such collaboration. The positive relationship that exists between student achievement and collaboration may be mediated by a combination of several other factors. For instance, collaboration often improves organizational communication and allows for more student-centered instruction, which results in more consistency across instructors in regards to performance expectations (Shipley, 2009). Additionally, collaboration allows teachers to learn instructional techniques from each other and receive feedback which could result in improved teaching and student performance (Carroll & Foster, 2008; Johnson, 2003).

Furthermore, student achievement gains may be attributed partially to improved teacher morale (Johnson, 2003; Yisrael, 2008). Several studies have demonstrated that teachers in collaborative environments take fewer days off, engage in more professional dialogue with colleagues, are more productive, and feel less burdened by the workload of being a teacher (e.g. Egodawatte, McDougall, & Stoilescu, 2011; Johnson, 2003; Newman & Wehlage, 1995). Therefore, it should be no surprise that collaboration has been linked with teacher job satisfaction and the development of a professional culture in schools (Forte & Flores, 2014). In fact, opportunities to interact and work with other teachers was listed as one of nine working conditions that lead to high job satisfaction (Johnson et al., 2012).

Collaborative teachers also may have more opportunities for reflection, which allows them to debrief and troubleshoot their lessons to determine what works and what does not work in their classrooms. Consequently, teachers reported that collaborative interactions gave them confidence to try new instructional techniques in their lessons and classrooms (Voelkel, 2011). Even when teachers are not trying to be innovative, collaboration relates to improved confidence and self-efficacy (Moolenaar, Slegers, & Daly, 2012). Collaboration may be particularly beneficial for developing the confidence of novice teachers since they will be able to both

learn from more experienced colleagues and be able to see that they are not the only teachers to encounter a particular challenge (Carroll & Foster, 2008; Westheimer, 2008). In a somewhat cyclical fashion, more confident teachers have been shown to promote higher performing students and gain higher job satisfaction (Graham, 2007; Moolenaar, Slegers, & Daly, 2012).

However, in many of these studies collaboration was structured or defined differently. Across the literature, multiple characterizations of collaboration are common. Four separate studies have reviewed how collaboration has been defined in the literature. Kelchtermans (2006) found that mentoring, induction, workshops, and shared planning periods, among others, are all labeled as forms of collaboration in different studies. Little (1990) also distinguished between four different types of collaborative actions which included: storytelling and scanning for ideas, aid and assistance, sharing, and joint work. Lavié (2006) found multiple existing discourses that described collaboration in the professional literature, which included: cultural collaboration; collaboration for school effectiveness; collaboration to create a school-as-a-community; restructuring discourses; and critical discourses. Vangrieken, Dochy, Raes, & Kyndt (2015) distinguished between collaboration that can occur in professional learning communities, communities of practice, teams, and groups to suggest that collaborative activities likely occur on a continuum that spans from fully independent to fully collaborative. However, it is not clear exactly where specific collaborative activities should fall on the continuum or which collaborative activities may be the most beneficial.

Definitional inconsistencies make it difficult to get a clear understanding of what mechanisms make teacher collaboration effective or ineffective, as there are also many studies that also present negative consequences of incorporating teacher collaboration (Rone, 2009; Smetser, 2007; Smith, 2009; Westheimer, 2008). Unfortunately, an overarching and comprehensive theoretical framework that explains the mechanisms that cause the effects of teacher collaboration does not exist. In order to begin to build a theory, it is important for researchers and administrators to understand which specific collaborative activities and organizational conditions are the most beneficial to both students and teachers.

Currently, research that directly examines or compares multiple forms of collaboration is limited. One such study, conducted by Levine and Marcus (2010), attempted to determine the organizational structure that is the most conducive for producing productive collaborations by coding agendas and topics of discussions that occurred in teacher meetings based on the purpose and structure of the meeting. Overall, protocol guided and strongly structured meetings that intended to discuss instruction produced more discussion about instructional practices than loosely structured meetings. Additionally, within individual meetings, the discussion of means-ends analysis of specific foci (i.e. instruction, pedagogy, etc.) provided much more direction for the collaborative efforts and produced richer discussions than just scheduling time for teachers to meet. The results indicate the organizational structure and support of collaborative activities is important. However, the study did not examine how these forms of collaboration influenced student performance, teacher job satisfaction, or teacher confidence.

Many studies have examined at least one form of collaboration and several advantages for utilizing at least one form of collaboration have been found. However, not much is known about which form of collaboration may be more beneficial. The current study utilizes TIMSS data to determine the unique influence of five collaborative activities in two countries. An examination of the effectiveness of different types of collaboration in two cultures could provide valuable information to teachers, administrators, and policy makers when developing and structuring collaborative interactions.

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