First-Year Teachers' Preparedness in Using Student Assessment Data

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ABSTRACT

In an attempt to better understand if teachers are trained and prepared to use student assessment data, this study used a nationally representative data set. The public data source for this exploratory study was gathered from Schools and Staff Survey (SASS), specifically, the Public Teachers: 2011–12 database. The multiple linear regression findings revealed that teachers feel they influence the content of in-service professional development programs at their school. Also, school leaders should consider gender and race when creating training because results show that professional development experiences of gender and race/ethnicity are different. The article presents several recommendations for school leaders in public institutions.

KEYWORDS

Data Literacy Skills, Data Preparedness, First-Year Teachers, Professional Development, Schools and Staff Survey

INTRODUCTION

According the Institute of Education Sciences (IES) (2014), school districts will hire approximately 283,000 new public school teachers in 2018; yet, there is little research about new teachers' preparedness to use student assessment or work product data. Since 2001, data-driven decision making or data inquiry has been an integral part of educators' practice (Coburn & Turner, 2012; Farrell, 2015; Gummer & Mandinach, 2015; Little, 2012; Spillane, 2015; Wayman & Stringfield, 2006; Young, 2006). In fact, K-12 district and school leaders expect teachers to implement data to inform their teaching; however, teachers need data literacy skills and time to use the data inquiry process.

Institute of Education Sciences defines a new teacher as a new hire that has not taught in a school in the previous year or has moved from a private to a public school. New teachers add value to schools' progress because teachers with one to three years of experience have a tendency to remain with the same school (IES, 2012). For example, Johnson and Birkeland (2003) had similar findings in their three-year study of 50 first and second-year teachers' career decision-making; in their second year, 37 teachers remained at the same school, and year three, 28 teachers remained. They concluded districts can bolster new teachers by scaffolding their development and enhancing their experiences at schools.

This consideration for new teachers is especially helpful for school districts and charter schools with high teacher turnover rates looking to minimize disruptions and stabilize school environments (Smith & Ingersoll, 2004, p. 687).

Equally significant, 51 percent of teachers leave the profession because of work conditions and lack of manageability of their workload (IES, 2012; Klassen & Chiu, 2010). K-12 teachers' workload includes but is not limited to, lesson planning, analyzing and interpreting data, sourcing materials, evaluating student work, and managing student behavior. In addition to the aforementioned tasks, new teachers grapple with other aspects of the job like learning the curriculum or developing interpersonal relationships with colleagues, parents, and students (Dinham & Scott, 1998; Rieg, Paquette, & Chen, 2007). In any case, neither example considers the workload of teachers in turnaround schools nor schools set to close due to low student achievement. For instance, Anderson and Olsen (2006) found in addition to learning about the curriculum and building interpersonal relationships, early career urban school teachers contend with professional development in the context of where they worked. Furthermore, some urban teachers had too little professional development to support their work while others had ample. The practice of data use is continuous and a critical part of teachers' work. Therefore, school leaders need to know the data literacy needs of new teachers in order to customize professional development to address their skills' deficit; thereby, helping new teachers manage their workload (White, 2013).

With this need in mind, we sought to study the relationship between first-year teachers' professional development experiences and their preparedness to use data through the teachers' experiences organized by race/ethnicity. Because 76 percent of the teaching workforce is female and 24 percent is male, we wanted to determine equity in experiences by gender. Moreover, we chose race/ethnicity as a dimension given the diversity of the teaching population. For example, according to the federal government, the racial composition of teachers in public education in 2012 comprised: White, 82 percent; African American, 7 percent; and, Hispanic, 8 percent (U.S. Department of Education, 2016, p. 4).

Literature Review

In this study we rely on Mandinach and Gummer's (2016) definition of data literacy when we refer to first-year teachers' data use preparedness. In other words, we want to know if first-year teachers can "individually and collectively examine outcomes, trends, performance, and other indicators based on students' work products, and other forms of data … to develop strategies for improvement based on these data" (Mandinach & Gummer, 2016, p. 11).

First-year teachers' training in data use starts when they are preservice teachers in undergraduate school and continue when they commence their first teaching position in public schools. They garner experience in the practice of data use through various sources such as undergraduate coursework or practicum experience, collaboration with other colleagues, and professional development (Bogala & Boudett, 2015; Dunn, Airola, & Garrison, 2013; Ezzani, 2015; Farley-Ripple & Buttram, 2015; Jimerson & Wayman, 2015; Mandinach & Gummer, 2016). Bogala and Boudett (2015) espoused that it is essential for educators from higher education institutions, professional development organization, and K-12 districts to support educators to become data literate (p. 16). In Mandinach and Gummer's (2016) study of four schools of education, they reported that those schools exposed preservice teachers to the practice through stand-alone courses or practical experiences. Though they found preservice teachers' exposure varied with preservice teachers receiving exposure to data-driven decision making; yet, the variation was the emphasis on student assessment versus data (Mandinach & Gummer, 2016, p. 67).

Scheduling time for first-year teachers to collaborate on data inquiry is essential to new teachers especially since their undergraduate experience using data varies. Current research revealed teacher collaboration and networking are critical to developing educators' skills (Chuckry, 2019; Farley-Ripple & Buttram, 2015; Mandinach & Gummer, 2016; Supovitz & Morrison, 2015) because collaboration

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