Job Embeddedness May Hold the Key to the Retention of Novice Talent in Schools

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Abstract

Teacher retention has been studied for decades, yet it has recently assumed renewed significance due to current teacher shortages. This study was designed to determine whether teachers' job embeddedness (JE) is related to turnover. JE is found in organizational literature (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001) and has been a robust predictor of retention across diverse groups of employees (Mallol, Holtom, & Lee, 2007) as well as among various countries and cultures (Lee, Burch, & Mitchell, 2014).

For this study, we surveyed over 143 teachers with less than five years of experience in three school districts in Central California, and we identified a correlation between retention and embeddedness through the use of multivariate analysis of variance. The results indicate that JE is indeed related to novice teacher retention.

Large numbers of novice teachers leave education or their original school site at alarming rates. The highest rate of teacher attrition occurs in the first three years of teaching in the United States (Boe, Cook, & Sunderland, 2008). The National Center for Educational Statistics (NCES, 2010) reports that nationwide, 12% of new teachers (with one to three years of experience) left the profession within two years, and 23% left the profession within five years (NCES, 2015). Of the teachers surveyed in 2007 in the United States, another 10% changed schools the following school year. The National Center for Educational Statistics also found that certain subject areas—such as math, science, and special education—are more difficult to staff (Esch et al., 2005). Furthermore, this study noted that low-performing schools have higher proportions of underprepared and/or novice teachers than their higher-performing counterparts.

The negative outcomes caused by the high turnover rate among novice teachers in the United States (e.g., transition and recruitment costs) seem grave when coupled with the large number of retiring veteran teachers (U.S. Department of Labor, 2010) and the anticipated increase of K-12 students (NCES, 2014). The Bureau of Labor Statistics (2010) reports that an estimated 12% additional teachers will be needed in the K-12 school setting through 2022 across the country,[2] especially in the southern and western regions. Thus, the retention of novice teachers has become an issue of great importance.

Prior educational research has found that teachers leave education for a variety of reasons, including changes in their personal circumstances (Grissmer & Kirby, 1987), dissatisfaction with the workplace conditions (Berry, 2008; Billingsly, 1993; Kukla-Acevedo, 2009; Thibodeaux, Labat, Lee, & Labat, 2015), and dissatisfaction with the students' behaviors (Rochkind, Ott, Immerwahr, Doble, & Johnson, 2007). Other studies help to explain why some stay in education. These factors appear to play a key role: site leadership (e.g. Bogler, 2008; Brown & Wynn, 2009; Pogodzinksi, Youngs, Frank, & Belman, 2012), effective mentoring (Alliance for Excellent Education, 2014; Brill & McCartney, 2008; Dingus, 2008; Kapadia & Coca, 2007), helpful professional development (e.g. Eberhard, Reinhardt, & Stottlemeyer, 2000), and valued collegial relationships (e.g. Certo & Fox, 2002; Flores & Day, 2006; Warshauer & Appleman, 2009).

Despite the amount of attention given to the problem of teacher retention, understanding why novice teachers leave or stay continues to present a vexing challenge that affects any efforts to improve retention at the level of the school site, the school district, and the profession itself. The present study complements the research cited so far by suggesting another possible strategy to understand this issue: examining employee retention outside the field of education. Therefore, this study integrates the broader human resource management literature to scrutinize the utility of the concept of job embeddedness (JE). This construct focuses on organizational attachment factors that may keep employees in their position.

We first discuss below existing literature on the loss of human capital in education as well as the reasons some teachers leave or stay. Next, we review the JE construct and its use to study teacher turnover.

[2] See http://www.bls.gov/ooh/education-training-and-library/kindergarten-and-elementary-school-teachers.htm#tab-6.

Teacher Turnover and the Loss of Human Capital

Compelling evidence shows that teacher turnover depletes fiscal and human resources. The expenses accrued from teacher attrition are substantial, although with some variation among districts and states. Estimates of turnover costs per teacher range from $10,000 to $18,300. In 2007 The National Commission on Teaching and America's Future (NCTAF) estimated the total annual costs of district turnover costs to be $7.2 billion (National Commission on Teaching and America's Future, 2007), whereas a more recent study in 2014 found the annual costs to be $2.2 billion.[3]

The school site costs associated with the voluntary turnover and migration of teachers certainly pose numerous problems in education (Barnes, Crowe, & Schaefer, 2007; NCTAF, 2010; Shockley, Guglielmino, & Watlington, 2006). It is known that turnover costs reduce human and fiscal resources for site- and district-level administrators, further taxing an already overburdened system (Texas Center for Educational Research, 2000). Sites disburse fiscal and human resources each time a new teacher is added on staff, which is particularly problematic for urban public schools that each year lose 20% of their teachers.

Teacher turnover is further exacerbated by the emphasis on narrowing student learning gaps by ensuring the retention of high-performing teachers. Researchers such as Darling-Hammond (2000) have stated that well-prepared teachers can be a stronger influence on student achievement than a student's background. However, the achievement gaps between the highest and lowest performing students persist (Haycock, 2001), and one factor may indeed be a teaching quality gap (Useem, Offenberg, & Farley, 2007) aggravated by a yearly influx of novice teachers. As Haycock (1998) notes, turnover in some schools, particularly urban schools, contributes to such inequity.

Based on the negative effects of turnover, heightened concerns about employee retention, and the loss of human capital due in part to the retirement of baby boomers, in the next section we discuss additional reasons for which some employees stay and others leave (Van Dyk, 2012).

Predictors of Turnover

A strong predictor of student performance is teacher quality (Darling-Hammond, 2000; Rockoff, 2004). Schools with students with the highest need appear to endure the greatest teacher attrition (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2008). This problem has become more pronounced since 1994 (NCTAF, 2010), particularly for novice teachers. Researchers have primarily focused on the demographic characteristics of teachers who exit the field as well as on relevant predictive characteristics of the schools they work in and the students they work with.

Billingsly (1993) found that one of the most common problems is an inaccurate view of teacher responsibilities, that is, a disconnection between perceived and actual teacher duties. Additional research has found that teachers who are the least experienced (Boe et al., 2008; Guarino, Santibañez, & Daley, 2006) as well as the most academically able (based on college entrance scores) leave the profession at higher rates (Billingsley, 1993; Feng, 2005; Murnane et al., 1991). Murnane et al. (1991) and Borman and Dowling (2008) list the following

[3] See https://all4ed.org/wp-content/uploads/2014/07/PathToEquity.pdf.

demographic characteristics of novice teachers who leave education: They are predominately young, female, and Caucasian secondary teachers without graduate degrees who teach in specialized areas such as special education, math, or science. Men over 35 years of age who work in secondary schools and previously worked in another industry also leave education at relatively higher rates (Eberhard et al., 2000).

School site conditions in urban schools, private schools, and schools with high rates of disciplinary problems and large numbers of English language learners have also been identified as factors that facilitate novice teacher turnover (Feng, 2005; Ingersoll, 2001; Loeb, Darling-Hammond, & Luczak, 2005; Rochkind et al., 2007). Schools with fewer resources, lower teacher salaries (Kelly, 2004), or lower spending on instructional materials also have higher attrition rates (Borman & Dowling, 2008). Lack of professional development opportunities, as well as high-stakes accountability systems were also found to increase turnover (Sims, 2016). Rochkind et al. (2007) reported that teachers complained of insufficient training to work with students with diverse needs and behavioral problems. In California, large class sizes and diverse student needs are related to turnover (Loeb et al., 2005). Ingersoll (2001) identified excessive demands on new teachers as contributors to attrition, as are unstable organizational conditions. Salary complaints are rarely cited as the only reason for leaving (Certo & Fox, 2002).

A recent study by Redman (2015) on self-efficacy and retention examined the desire of novice teachers to make an impact in the profession. Some novice teachers, the author notes, outlined concerns such as: inconsistent mentoring experiences, inadequate professional development, and overwhelming feelings of inadequacy in relationship to teaching standards and expectations. Although these novice teachers denied that any of these issues led to their exit from the field, environmental factors creating anxiety and stress may be found as reasons.

Studies have looked at the influence of school administrators (Boyd et al., 2008), school characteristics (Boyd, Lankford, Loeb, and Wyckoff, 2005), student achievement (Boyd et al., 2008), and a combination of factors such as characteristics of the students, classrooms, school sites, and school administrations (Borman & Dowling, 2008; Feng, 2005; Ingersoll, 2001; Loeb et al., 2005). Students' race, economic status, language, and ethnic make-up have additionally been found to influence novice teachers' turnover (Loeb et al., 2005). Although some of these factors are outside the control of the school districts, other findings suggest how novice teacher turnover could be curbed. Turnover may be slowed by providing: increased professional development (Rochkind et al., 2007), expanding resources and personalized support (Glennie, Mason, & Edmunds, 2016), and higher salaries for teachers (Hughes, 2012; Ingersoll, 2001; Kelly, 2004). However, economic and budget restraints limit the viability of some of these solutions.

Despite these important insights, the education literature has not fully examined the relevant literature on retention from the human resource management field. Next, we will discuss the JE construct, which has demonstrated validity in the broader management literature.

A Theoretical Framework: Why Some Stay

The literature on voluntary turnover is grounded in the work of March and Simon (1958), which posits that turnover is related to the availability of other jobs. Mobley (1977) studied job satisfaction in relation to employee retention. In 2001, Mitchell and colleagues introduced JE as a concept describing a combination of attachment factors that offer an alternative explanation of

employee retention (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001). JE consists of the degree to which employees are integrated into the organization and the community where they work. Research suggests that turnover is lower when JE is relatively high (Mitchell, Holtom, & Lee, 2001; Yao, Lee, Mitchell, Burton, & Sablynski, 2003). JE has been named also "the theory of staying" (Holtom & Inderrieden, 2006).

JE is a collection of six dimensions related to one's integration in an organization to be found in and out of the organization itself (Figure 1). They are referred to as links, fit, and sacrifice, related to the organization or the community, respectively (Mitchell et al., 2001b). JE is the product of these elements.

Figure 1. Elements of Job Embeddedness

The JE elements of fit, links, and sacrifice explain the attachments to work (Mitchell et al., 2001a, 2001b). Fit is described as the perception of shared values and goals within the organization. An employee who experiences a greater fit with an organization also experiences a stronger bond (Mitchell et al., 2001a). If the employees' goals, values, and future plans are aligned with the organization's, the employees' intention to remain is very high.

The links dimension of the model differs from fit in that associations are related to the employee and the organization and may be formal or informal. Linked employees experience connections through formal or informal means. Work links are work-related teams or co-worker relationships; out-of-work links include hobbies and church or community organizations the employee is involved with (Mitchell et al., 2001a, 2001b).

The dimension of sacrifice is the perception of psychological or financial stress that one would experience from leaving the institution. When an employee leaves an organization, bonds are broken. The employees may be forced to leave friends, uproot their families, or change their children's schools. These on- and off-the-job connections create a perceived sacrifice for the employee, thus a difficult psychological break from the organization.

JE reflects the "totality of embedding forces that keep a person on a job rather than on the negative attitudes that prompt the person to leave the job" (Mitchell et al., 2001, p. 1109). Studies have found that the more connected employee are at work and in the immediate community, the more difficult it is for them to depart (Hom, Mitchell, Lee, & Griffeth, 2012).

Further studies discovered that employees with higher levels of embeddedness found other job options less desirable (Swider, Boswell, & Zimmerman, 2011).

JE is shown to be a robust predictor of retention among a multitude of professions and diverse groups of employees, such as law enforcement and military officers; informational technology workers; hospital, retail, and bank employees; and collegiate coaches (Mallol, Holtom, & Lee, 2007; Ramesh & Gelfand, 2010). Results from a meta-analytic review of job embeddedness in 65 studies on JE uncovered that the link between JE and turnover is stronger in females (Jiang, Liu, McKay, Lee, & Mitchell, 2012).

If applied to the education field, the JE construct may provide an innovative approach to explaining why novice teachers leave, and it may also suggest the changes necessary to bolster the intention to stay. This study examines the question: How does JE predict novice teacher retention?

Method

The purpose of this study was to evaluate the effectiveness of JE as a predictor of novice teacher retention in the K-12 public school setting. This study examined the relationship between teacher attrition and JE by building on prior research in organizational management. We sent surveys to two groups of potential respondents: current and former novice K-12 teachers in three Central California school districts. Two of the districts surveyed are located in rural, agricultural areas, and one in a suburban region in Central California. We identified teachers with fewer than five years of teaching experience who were hired between 2006 and 2010 and sent surveys to 500 currently employed K-12 teachers who had been working for their district for less than 5 years. A total of 128 usable surveys were returned (26% return rate). Surveys were also sent to an additional 100 novice teachers who had voluntarily left one of these three districts during that same period. Of these, 15 usable surveys were returned, resulting in a 15% return rate.

Instrumentation

JE is "a broad constellation of influences on employee retention" (Mitchell et al., 2001b, p. 1104). Mitchell et al. (2001a) developed a 42-item survey in Likert-type, fill-in-the-blank, and yes/no format to measure the different facets of JE. Survey items focus on the respondents' fit into the organization's culture, their linkages to coworkers and members of the community, and the sacrifices they would make if they left. Total scores indicate the degree of JE, which is calculated by computing the mean of the six aspects of the overall construct (Mitchell et al., 2001a).

Each district's Human Resources provided two lists of novice teachers (Stayers and Leavers). Each of the novice teachers was sent a copy of the embeddedness survey (see Appendix A) with items adjusted to the past tense to accommodate the Leavers. Each of the teachers in both groups was contacted multiple times with the incentive of a gift card provided by lottery to one of the participants in each group.

In order to answer the research question regarding job embeddedness and novice teacher retention, we developed composite variables by clustering Likert responses (Walkey, 1997), as shown in Figure 2. The four composite variables shown in Figure 3 were: Organizational Fit (OrgFit), Community Fit (ComFit), Organizational Sacrifice (OrgSac), and Community Sacrifice

(ComSac). Although the original research by Mitchell et al. (2001a) focused on all six dimensions that were used to develop the initial instrument, subsequent research has focused on two of the major dimensions, organizational and community embeddedness (Lee, Burch, & Mitchell, 2014).

We conducted a multivariate analysis of variance (MANOVA) to determine whether JE sub-scores would distinguish between Stayers and Leavers, and we calculated descriptive statistics and frequency distributions for the responses obtained. The internal consistency of the data was determined by Cronbach's alpha. Moreover, we evaluated embeddedness differences between those who remained and those who left and added three items regarding the respondents' intention to leave their schools within a year.

We added several demographic variables, including the respondent's grade level assignment, whether the classroom teacher was in general or special education, and whether the school was a Title 1 institution or not. A general schoolwide descriptor of academic performance was also included.

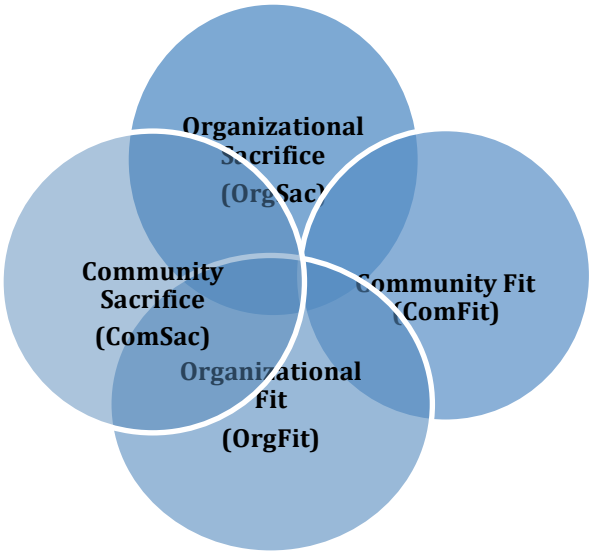

Figure 2. Dimensions of Job Embeddedness for Novice Teachers

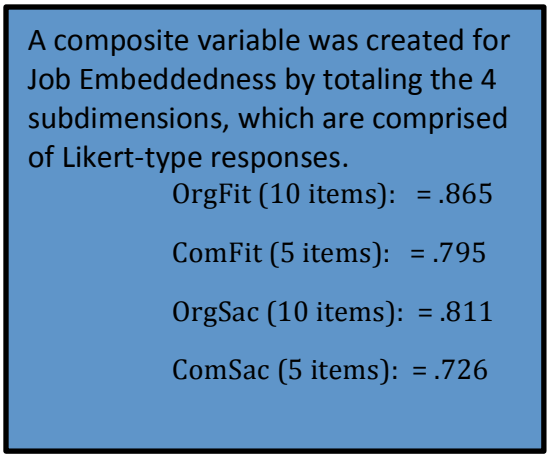

Figure 3. Novice Teacher Job Embeddedness

Results

Based on years of research in organizational management, JE may help explain why some individuals remain in their organization rather than leaving for other positions. Due to the high attrition and mobility rate for novice teachers, this study asked whether JE can help predict novice teacher retention. Our hypothesis was that JE would be significantly higher for Stayers than for Leavers.

Descriptive Statistics

Survey data were collected from 143 participants who had been employed in three different districts for less than five years. Fifteen participants (n = 15; 15% of Leavers) were previously employed novice teachers, and 128 participants (n = 128; 26% of Stayers) were employed at the time of the study. Participants referred to as Stayers were currently employed teachers. Of these, 67% were females under 30 years of age. Of the Stayers, 57% had taught for four years, and 58% taught at the elementary school level. Forty-one percent of the sample worked in a rural district, and 43% of respondents worked in rural Title 1 schools. Similar to the Stayers, 67% of Leavers were females, but 60% of them were between the ages of 31 and 50. Seventy-four percent had taught for four years: 53% as K-6 teachers and 47% as 7th–12th grade teachers. General education teachers made up 73% of the sample and a large number worked in non–Title 1 schools (67%), whereas 60% of Leavers were from rural schools.

Analysis

Alpha reliability values were determined for each of the subcategories in the instrument and for the instrument as a total. Alpha reliability values for the subdimensions of Job Embeddedness are as follows: OrgFit, ⟨ = .865; ComFit, ⟨ = .795; OrgSac, ⟨ = .811; and ComSac, ⟨ = .726. For the instrument as a whole, ⟨ = .697.

We analyzed the relationships among the four sub-tests and ran correlations among all four dimensions. The results are reported in Appendix C. The relationship between Community Fit and Organizational Fit is statistically significant but modest (p = .05), as is the relationship between Community Sacrifice and Community Fit (p = .01). The most robust correlation is between the Organizational Fit and Organizational Sacrifice dimensions (p = .01). The correlation values suggest that the items associated with each subcategory measure different characteristics.

Our hypothesis was that JE would be significantly higher for Stayers than for Leavers. We calculated means and standard deviations by sub-scale for responses by Stayers and Leavers (Appendix D). The differences between the means for members of the two groups confirm the results of the multivariate analysis of variance (MANOVA). The MANOVA, which is a statistical analysis of multiple factors, evaluated the degree to which the four sub-test scores could distinguish between the two groups of novice teachers, Stayers and Leavers.

The multivariate results indicate that, among new or novice teachers, the four category scores were significantly different for Stayers and for Leavers. The four dependent variables were treated singularly, as evidenced by the univariate results (Appendix D). The results indicate that measures of Organizational Fit, Community Fit, and Community Sacrifice were significantly different for Stayers and Leavers, whereas Community Sacrifice results went in the opposite direction. Although measures of Organizational Sacrifice were not significantly different for Stayers and Leavers, our general hypothesis was supported.

Discussion

When taken as an aggregate, the scores based on the educators' fit in the organization and community and their perception of sacrifice to the organization and community if they departed distinguish between those educators who remain and those who leave. Taken individually, all factors except Organizational Sacrifice also distinguish between Stayers and Leavers. The lack of statistical significance when measuring the difference between Stayers and Leavers in relationship to Organizational Sacrifice may be due to the fact that all of the teachers had been employed in the districts for less than five years. Other studies on JE did not focus on employees new in an organization or profession. Univariate analyses indicate that three of the four subdimensions of JE are significantly different for Stayers and Leavers. There is reason to have confidence in these results because measures of internal consistency reliability are high.

Although an analysis of each of the dimensions of the JE model in relationship to novice teacher retention is interesting to contemplate, it is the totality of the dimensions that defines this turnover model. The JE model as applied to this study represents the employees' entanglement within the overall school and/or district.

The results indicate that the degree to which teachers are connected to their schools and communities explain a substantial amount of the difference between teachers who remain in their position and those who leave. The findings indicate that JE is related to novice teacher retention; specifically, JE is negatively related to educators' intentions to leave.

Implications for Practice

In a recent study, teacher attrition and mobility data showed that 7% of novice teachers surveyed left the profession and another 13% moved to another school (Goldring, Taie, & Riddles, 2014). Research points to a higher rate of departure for teachers with fewer than five years of experience (NCES, 2010). The National Commission on Teaching and America's Future claims that teacher turnover may cost more than $7.3 billion per year (NCTAF, 2007).

Due to the high costs of attrition and mobility it is imperative to understand how to retain novice teachers at a higher rate. This study has shown that JE is related to novice teacher retention; therefore, efforts to improve embeddedness may pay dividends in higher rates of retention. By applying the JE model to education, leader practitioners can review the links, fit, and sacrifice model to retain more teachers. Beneficial strategies include the use of (a) professional learning teams, (b) mentoring structures, (c) site-based management with collegial interactions, and (d) teacher/administrator collaboration and shared decision making (Bogler, 2008; Brown & Wynn, 2009; Hughes, 2012; Huling, Resta & Yeargain, 2012; Ingersoll & Strong, 2011; Inmann & Marlow, 2004; Kapadia & Coca, 2007; Kraft, Marinell, & Shen-Wei Yee, 2016).

The implementation of the above-stated processes or structures can help develop the webs of connectivity found in the JE model. Relationships at the school or organization and the desire to avoid the sacrifice of departure have been shown to be important facets of JE. Respondents have shown similar results in the area of Community Fit. When individuals are connected to the local community through projects, partnerships, and focused interactions, a sense of belonging is forged that contributes to the decision to stay. School administrators can and should help to develop these associations in a deliberate and thoughtful manner.

The development of processes to address connectivity on campus is one area in which school site administrators can strengthen retention strategies. Another area of focus may be the new generation of employees: the millennials. Millennial teachers flood the market as baby boomers retire at high numbers. Studies on the generational work attitudes of the millennials reveal that when younger employees feel connected or well integrated within their work environment they are more likely to enjoy their work (Westerman & Yamamura, 2007). Harris, Wheeler, and Kacmar (2011) found that the interaction between leadership and employee may predict organizational embeddedness. Other research has concluded that autonomy and participation increased in institutions where new teachers were part of a learning system, where input was sought regarding decisions affecting student achievement, and where teachers were made to feel a part of the school leadership (Weis, 1999). Further research points toward the ability of the new generation of workers to comfortably communicate with supervisors and work well in teams (Myers & Sadaghiana, 2010). School site administrators can encourage the development of such bonds by developing structures that may appeal to the multiple generations currently in the work force. Through (a) work teams, (b) collaborative decision making, (c) the creation of a family atmosphere, and (d) the engagement of staff in extra-curricular activities, leaders can help create the webs of interconnectivity that lead to increased opportunities for embeddedness to develop.

By understanding the factors that lead to the retention of novice teachers, and millennials in particular, administrators can create the conditions that lead to interconnectivity and collaboration, modeling an environment that would be difficult, if not painful, to leave.

Limitations

This study provides empirical support for the use of the JE framework for predicting retention in novice teachers. The limitations of this research point to a low return rate, which suggests that when surveying younger generations, an alternative method of contact might be more fruitful. Web surveys have become common and provide an alternative, or a supplement, to conventional mail (Cook, Heath & Thompson, 2000; Kaplowitz, Hadlock, & Levine, 2004). Failure to receive an adequate number of surveys can limit the usefulness of a study. Providing a greater incentive for participants could help increase the number of respondents (Zúñiga, 2004).

March and Simon (1958) have argued that voluntary turnover is influenced by labor market conditions. The 2007 economic crisis in the United States and its impact on employment opportunities may be an additional limitation that likely had an effect on this study. Turnover rates are likely affected by high rates of unemployment. According to the Job Openings and Labor Turnover Survey, the recent recession ended in June 2009; however, there are still six unemployed persons for every job opening, and fewer employees are quitting their positions due to job scarcity (U.S. Department of Labor, Bureau of Labor Statistics, 2011). The results of this study may not be generalizable for these reasons.

One last limitation to consider is that the specific forces that connect an individual to a job vary and are not always possible to predict: "We do not yet know what the key forces are in a given setting, organization, industry, or profession" (Lee et al., 2014, p. 202). Although quantitative research can provide reliable measurements of the phenomenon under scrutiny, a mixed-methods study may have provided additional data on novice teacher retention decisions in the area of Community Sacrifice, for example. Employers may seek to understand their employees' needs and consider that the ties that bind each employee may not be linear and may differ based on life stage.

Summary

This study began with a question: Can job embeddedness help to predict novice teacher retention? The findings support the use of JE to explain turnover in K-12 education. Although the sample size was limited, the results of this study may help practitioners make thoughtful and strategic decisions to improve retention. This body of research will give insight to scholars and leaders that continue to look for new means to retain the important resource of human capital. As districts continue to hire thousands of new teachers in the years to come, JE with its web of connections can be fostered to increase novice teacher retention rates.

References

Alliance for Excellent Education. (2014). *On the path to equity: Improving the effectiveness of beginning teachers.* Retrieved from https://all4ed.org/wp-content/uploads/2014/07/PathToEquity.pdf

Barnes, G., Crowe, E., & Schaefer, B. (2007). *The cost of teacher turnover in five school districts: A pilot study.* Paper presented at the International Congress for School Effectiveness and Improvement. Retrieved from http://nctaf.org/wp-content/uploads/2012/01/NCTAF-Cost-of-Teacher-Turnover-2007-fullreport.pdf

Berry, B. (2008). Staffing high-need schools: Insights from the nation's best teachers. *Phi Delta Kappan*, *89*(10), 766–771.

Billingsly, B. S. (1993). Teacher retention and attrition in special and general education: A critical review of the literature. *The Journal of Special Education*, *27*(2), 137–174.

Boe, E., Cook, L., & Sunderland, R. (2008). Teacher turnover: Examining exit attrition, teaching area transfer, and school migration. *Council for Exceptional Children, 75*(1), 7–31.

Bogler, R. (2008). The influence of leadership style on teacher job satisfaction. *Educational Administration Quarterly*, *(37)*5, 662–683. doi:10.117/00131610121969460

Borman, G., & Dowling, N. M. (2008). Teacher attrition and retention: A meta-analytic and narrative review of the research. *Review of Educational Research, 78*(3), 367–409. doi:10.3102/0034654308321455

Boyd, D., Grossman, P., Lankford, H., Loeb, S. & Wyckoff J. (2008). *Who leaves? Teacher attrition and student achievement.* Working paper No. 14022 for Analysis of Longitudinal Data in Education Research, National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w14022

Boyd, D., Lankford, H., Loeb, S. & Wyckoff J. (2005). Explaining the short careers of high-achieving teachers in schools with low-performing students. *American Economic Review*, *95*(2), 166–171.

Brill, S., & McCartney, A. (2008). Stopping the revolving door: Increasing teacher retention. *Politics & Policy*, *36*(5), 750–774.

Brown, K. M., & Wynn, S. (2009). Finding, supporting, and keeping: The role of the principal in teacher retention issues. *Leadership and Policy in Schools, 8*, 37–63.

Certo, J. L., & Fox, J. E. (2002). Retaining quality teachers. *The High School Journal, 86*(1), 55–75.

Cook, C., Heath, F., & Thompson, R. L. (2000). A meta-analysis of response rates in web- or internet-based surveys. *Educational and Psychological Measurement, 60*, 821–836.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives, 8*(1). Retrieved from http://epaa.asu.edu/epaa/v8n1

Dingus, J. (2008). "I'm learning the trade": Mentoring networks of Black women teachers. *Urban Education, 43*(3)*,* 361–377. doi:10.177/0042085907311794

Eberhard, J., Reinhardt, M., & Stottlemeyer, B., (2000). *Strategies for new teacher retention: Creating a climate of authentic professional development for teachers with three years or less years experience*. The South Texas Research and Development Center. Retrieved from http://eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED450116&ERICExtSearch_SearchType_0=no&accno=ED450116

Esch, C. E., Chang-Ross, C. M., Guha, R., Humphrey, D. C., Shields, P. M., Tiffany-Morales, J. D., …Woodworth, K. R. (2005). *The status of the teaching profession 2005*. Santa Cruz, CA: The Center for the Future of Teaching and Learning. Retrieved from http://eric.ed.gov/PDFS/ED491141.pdf

Feng, L. (2005). *Hire today, gone tomorrow: The determinants of attrition among public school teachers* (Doctoral dissertation). Retrieved from Munich Personal RePEc Archive (No. 589). http://mpra.ub.uni-muenchen.de/589/

Flores, M. A., & Day C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education, 22*, 219–232.

Glennie, E. J., Mason, M., & Edmunds, J.A. (2016). Retention and satisfaction of novice teachers: Lessons from a school reform model. *Journal of Education and Training Studies*, *4*(4). Retrieved from http://dx.doi.org/10.11114/jets.v4i4.1458

Goldring, R., Taie, S., & Riddles, M. (2014). *Teacher attrition and mobility: Results from the 2012–13 Teacher Follow-up Survey* (NCES 2014-077). Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch

Grissmer, D. W., & Kirby, S. N. (1987). *Teacher attrition: The uphill climb to staff the nation's schools* (R-3512-ICJ). Retrieved from RAND website: http://www.rand.org/pubs/reports/R3512/

Guarino, C. M., Santibañez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research*, *76*, 173–208.

Harris, K. J., Wheeler, A. R., & Kacmar, K. M. (2011). The mediating role of organizational job embeddedness in the LMX-outcomes relationships. *The Leadership Quarterly, 22*(2), 271–281. doi:10.1016/j.leaqua.2011.02.003

Haycock, K. (1998). *Good teaching matters: How well-qualified teachers can close the gap.* Retrieved from www.edtrust.org/sites/edtrust.org/files/publications/files/k16_summer98.pdf

Haycock, K. (2001). Helping all students achieve: Closing the achievement gap. *Educational Leadership*, *58*(6), 1–15.

Holtom, B. C., & Inderieden, E. J. (2006). Integrating the unfolding model and job embeddedness model to better understand voluntary turnover. *Journal of Managerial Issues*, *18*(4), 435–452.

Hom, P. W., Mitchell, T. R., Lee, T. W., & Griffeth, R. W. (2012). Reviewing employee turnover: Focusing on proximal withdrawal states and an expanded criterion. *Psychological Bulletin, 138*, 831–858.

Hughes, G. (2012). Teacher retention: Teacher characteristics, school characteristics, organizational characteristics, and teacher efficacy. *The Journal of Educational Research, 105*, 245–255.

Huling, L., Resta, V. & Yeargain, P. (2012). Supporting and retaining novice teachers. *Kappa Delta Pi Record, 48*, 140–143.

Ingersoll, R. (2001). Teacher turnover and teacher shortages: An organizational analysis. *Educational Research Journal*, *38*(3), 499–534.

Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers a critical review of the research. *Review of Educational Research*, *81*(2), 201–233.

Inman, D., & Marlow, L. (2004). Teacher retention: Why do beginning teachers remain in the profession? *Education, 124*(4), 605–614.

Jiang, K., Liu, D., McKay, P., Lee, T. W., & Mitchell, T.R. (2012). When and how is job embeddedness predictive of turnover? A meta-analytic investigation. *American Psychological Association, 97*(5)*,* 1077–1096.

Kapadia, K., & Coca, V. (2007). *Keeping new teachers: A first look at the influences of induction in the Chicago Public Schools.* Consortium on Chicago School Research at the University of Chicago. Retrieved from http://ccsr.uchicago.edu/publications/keeping_new_teachers012407.pdf

Kaplowitz, M. D., Hadlock, T. D., & Levine, R. (2004). A comparison of web and mail survey response rates. *Public Opinions Quarterly, 68*(1), 94–101.

Kelly, S. (2004). An event history analysis of teacher attrition: Salary, teacher tracking, and socially disadvantaged schools*. Journal of Experimental Education*, *72*(3), 195–220.

Kraft, M. A., Marinell W. H., & Shen-Wei Yee D. (2016). School organizational contexts, teacher turnover, and student achievement: Evidence from panel data. *American Educational Research Journal*, *53*(5), 1411–1449. doi:10.3102/0002831216667478

Kukla-Acevedo, S. (2009). Leavers, movers and stayers: The role of workplace conditions in teacher mobility decisions. *The Journal of Educational Research*, *102*(6), 443–452.

Lee, T., Burch, T., & Mitchell, T. (2014). The story of why we stay: A review of job embeddedness. *Annual Review of Organizational Psychology and Organizational Behavior, 1*, 199–216.

Loeb, S., Darling-Hammond, L., & Luczak, J. (2005). How teaching conditions predict teacher turnover in California schools. *Peabody Journal of Education, 80*(3), 44–70.

Mallol, C. M., Holtom, B. C., & Lee, T. L. (2007). Job embeddedness in a culturally diverse environment. *Journal of Business Psychology, 22*(1), 35–44.

March, J. G., & Simon, H. A. (1958). *Organizations*. New York, NY: Wiley.

Mitchell, T. R., Holtom, B. C., & Lee, T. W. (2001a). How to keep your best employees: Developing an effective retention policy. *Academy of Management Executives*, *15*(4), 96–108.

Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablynski, C. J., & Erez, M. (2001b). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal, 44*(6), 1102–1121.

Mobley, William H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, *62*(2), 237–240.

Murnane, R. J., Singer, J. D., Willett, J. B., Kemple, J. J., & Olsen, R. J. (1991). *Who will teach? Policies that matter*. Cambridge, MA: Harvard University Press.

Myers, K. K., & Sadaghiana, K. (2010). Millenials in the workplace: A communication perspective on millenial's organizational relationships and performance. *Journal of Business Psychology, 25*, 225–238. doi:10.1007/s10869-010-9172-7

National Center for Educational Statistics. (2010). *Teacher attrition and mobility: Results from the 2008-2009 teacher follow-up survey* (NCES-353). Retrieved from http://nces.ed.gov/pubsearch

National Center for Education Statistics. (2014). *Projections of education statistics to 2022* (NCES2014-051). Retrieved from http://nces.ed.gov/pubsearch

National Center for Education Statistics. (2015). *Career paths of beginning public school teachers: Results from the first through fifth waves of the beginning teacher longitudinal study* (NCES2015-196). Retrieved from http://nces.ed.gov/pubsearch

National Commission on Teaching and America's Future. (2007). *The cost of teacher turnover in five school districts: A pilot study.* Washington, DC: NCTAF. Retrieved from www.nctaf.org

National Commission on Teaching and America's Future. (2010). *Who will teach? Experience matters*. Washington, DC: NCTAF. Retrieved from www.nctaf.org

Pogodzinksi, B., Youngs, P., Frank, K. A., & Belman, D. (2012). Administrative climate and novices' intent to remain teaching. *The Elementary School Journal*, *113*(2), 252–275.

Ramesh, A., & Gelfand, M. (2010). Will they stay or will they go? The role of job embeddedness in predicting turnover in individualistic and collectivist cultures. *Journal of Applied Psychology*, *95*, 807–823.

Redman, S. F. (2015). *Self-efficacy, and teacher retention: Perception of novice teachers on job preparation, job support and job satisfaction*. Electronic thesis and Dissertations. Paper 2611. http://dc.etsu.edu/etd/2611

Rochkind, J., Ott, A., Immerwahr, J., Doble, J., & Johnson, J. (2007). *Lessons learned: New teachers talk about their jobs, challenges and long-range plans*, *Issue No. 1*. Retrieved from National Comprehensive Center for Teacher Quality and Public Agenda website: http://publicagenda.org

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *The American Economic Review*, *94*(2), 247–252.

Shockley, R., Guglielmino, P., & Watlington, E. (2006). *The costs of teacher attrition*. Paper presented at the International Congress for School Effectiveness and Improvement, Fort Lauderdale, Florida. Retrieved from http://www.pearsonassessments.com/hai/images/NES_Publications/2006_11ShockleyGuglielminoWatlington_558_1.pdf

Sims, S. (2016). *High-stakes accountability and teacher turnover: How do different school inspection judgements affect teachers' decisions to leave their school?* Unpublished manuscript, Department of Social Science, University College of London, England.

Swider B.W., Boswell W.R., & Zimmerman R.D., (2011). Examining the job search–turnover relationship: The role of embeddedness, job satisfaction, and available alternatives. *Journal of Applied Psychology, 96*(2), 432–441.

Texas Center for Educational Research. (2000). *The cost of teacher turnover*. Retrieved from http://www.tcer.org/research/index.aspx

Thibodeaux, A. K., Labat M. B., Lee, D. E., & Labat, C. A., (2015). The effects of leadership and high high-stakes testing on teacher retention. *Academy of Educational Leadership*, *19*(1), 227–249.

U.S. Department of Labor, Bureau of Labor Statistics. (2010). *Occupational outlook handbook, 2010-2011 edition*. Retrieved from http://www.bls.gov/oco/ocos318.htm

U.S. Department of Labor, Bureau of Labor Statistics. (2011). *Job openings and labor turnover survey highlights*. Retrieved from http://www.bls.gov/web/jolts/jlt_labstatgraphs.pdf

Useem, E., Offenberg, R., & Farley, E. (2007). *Closing the teacher quality gap in Philadelphia*. Retrieved from Research for Action website: http://eric.ed.gov/PDFS/ED496638.pdf

Van Dyk, J. (2012). *The relationship between organisational commitment, retention factors and job embeddedness* (Unpublished master's thesis). University of South Africa, Pretoria.

Walkey, F. H. (1997). Composite Variable Analysis: A simple and transparent alternative to factor analysis. *Personality and Individual Differences*, *22*(5), 757–767.

Warshauer, S., & Appleman, D. (2009). “In it for the long haul”: How teacher education can contribute to teacher retention in high-poverty, urban schools. *Journal of Teacher Education*, *60*, 323–337. doi:10.1177/0022487109336181

Weiss, E. M. (1999). Perceived workplace conditions and first-year teachers’ morale, career choice commitment, and planned retention: A secondary analysis. *Teaching and Teacher Education, 15*, 861–879.

Westermann, J. W., & Yamamura, J. H. (2007). Generational preferences for work environment fit: Effects on employee outcomes. *Career Development International, 12*(2), 150–161. doi:10.1108/13620430710733631

Yao, X., Lee, T. W., Mitchell, T. R., Burton, J. P., & Sablynski, C. J. (2003). Job embeddedness: Current research and future directions. In R. Griffeth & P. Hom (Eds.), *Innovative theory and empirical research on employee turnover* (pp. 153–187). Greenwich, CT: Information Age.

Zúñiga, R. E. (2004). Increasing Response Rates for Online Surveys – A Report from the Flashlight Program’s BeTA Project. Retrieved 15-03-2006, from http://www.tltgroup.org/resources/F-LIGHT/2004/03-04.html#BeTA (accessed 15 March 2006).

APPENDIX A: DEPENDENT VARIABLE COMPOSITE

Organizational Fit (OrgFit)

1. I like the members of my work group.
2. My coworkers are similar to me.
3. My job utilizes my skills and talents well.
4. I feel like I am a good match for this organization.
5. My values are compatible with the organization's values.
6. I can reach my professional goals working for this organization.
7. I feel good about my professional growth and development.
8. I fit with the organization's culture.
9. I like the authority and responsibility I have at this organization.
10. If I stay with this organization, I will be able to achieve most of my goals.

Community Fit (ComFit)

1. I really love the place where I live.
2. The weather where I live is suitable for me.
3. This community is a good match for me.
4. I think of the community where I live as home.
5. The area where I live offers the leisure activities that I like. (sports, outdoors, cultural, arts)

Organizational Sacrifice (OrgSac)

1. I have a lot of freedom on this job to decide how to pursue my goals.
2. The perks on this job are good (e.g., free checking account).
3. I feel that people at work respect me a great deal.
4. I would sacrifice a lot if I left this job.
5. My promotional opportunities are excellent here.
6. I am well compensated for my level of performance.
7. The benefits are good on this job.
8. The health-care benefits provided by this organization are excellent.
9. The retirement benefits provided by this organization are excellent.
10. I believe the prospects for continuing employment with this organization are excellent.

Community Sacrifice (ComSac)

1. Leaving this community would be very hard.
2. People respect me a lot in my community.
3. My neighborhood is safe.
4. If I were to leave the community, I would miss my non-work friends.
5. If I were to leave the community, I would miss my neighborhood.

APPENDIX B:

Means and Standard Deviations for OrgFit, ComFit, OrgSac, and ComSac for Stayers and Leavers

	Stayers		Leavers		Total	
DV	*M*	*SD*	*M*	*SD*	*M*	*SD*
OrgFit	44	5.1	39	8.0	44	5.6
ComFit	22	3	18	5.6	21	3.5
OrgSac	39	5.6	38	7	39	5.8
ComSac	21	3.2	68	18	26	15.8

APPENDIX C:

Correlation Between 4 Dimensions of Job Embeddedness

Variable	OrgFit	ComFit	OrgSac	ComSac
OrgFit	1			
ComFit	.180*	1		
OrgSac	.669**	.197*	1	
ComSac	-.130	-.221**	.085	1

Note. * Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed).

APPENDIX D:

Summary of Univariate Results for Job Embeddedness in Relationship to Stayers and Leavers

Source	*SS*	*df*	*MS*	*F*	*p*
OrgFit	328.224	1	328.224	11.162	.001
Error	4146.238	141	29.406		
ComFit	148.300	1	148.300	13.083	.000
Error	1598.330	141	11.336		
OrgSac	26.140	1	26.140	.780	.379
Error	4724.517	141	33.507		
ComSac	29877.280	1	29877.280	726.510	.000
Error	5798.538	141	41.124		

Note. SS = sum of squares; MS = mean squares.