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Tyler Fowler

Kansas State University, tylerfowlermail@gmail.com

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A Content Analysis of Peer-Reviewed Journal Articles Over the Last 20 Years: To What Extent Does Contemporary Research Focus on the Effects of Frequent Relocation on the Academic Performance of Military-Connected Students?

Tyler J. Fowler

Introduction

Recently, the federal government put an emphasis on the education of military children as part of the Joining Forces initiative (The White House, n.d.). The mission of Joining Forces is “to support those who also serve: military and veteran families, caregivers, and survivors” (The White House, n.d.). According to the Joining Forces website, the intent is to “advance programming to support military-connected children in their classrooms, and help ease the burdens created by the highly mobile military lifestyle” (The White House, n.d.). The United States Department of Education also has a mission statement of note: “Our mission is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access” (U.S. Department of Education, n.d.). Considering these two mission statements, an analysis of recent peer-reviewed articles was deemed necessary to determine the breadth of the existing research on the academic performance of highly mobile, military-connected students. The content analysis herein addresses this question: “Since 2001, to what extent have relevant research journals published articles regarding the effects, if any, on the academic performance levels of elementary-aged students in the first through fifth grades who experience high-frequency mobility from being military-connected?”

Background

Change is a constant in the life of military-connected students. Change typically comes for a military-connected family due to either the service member’s permanent change of station (PCS)—where the service member is assigned to a new location—or due to the deployment of the service member. A PCS will bring about a school transition for any school-aged children in the family. According to a 2021 report released by the U. S. Government Accountability Office (GAO), there are approximately 650,000 K-12 military-connected students that attend schools within the United States, and 80% of these students attend public schools (National Academies of Science, Engineering, and Medicine, 2019). Due to national security needs, these students’ parents will move every few years causing the students to experience a school change up to nine times before they graduate from high school (U.S. GAO, 2021).

Due to the military member’s PCS, military families experience residential and school relocation approximately every two to three years, roughly 2.9 times as often as non-military families (De Pedro et al., 2018; Esqueda et al., 2012). Service members give input into where they would prefer to move; however, the ultimate decision as to where the military-connected parent is assigned is determined by the needs of the military (Farmer et al., 2014). Therefore, there is a higher likelihood that military-connected students will move longer distances between states, and to other countries (Clever & Segal, 2013) when compared to their non-military peers who

experience school transitions. Deployment is also a source of change within the military family. Due to military combat operations resulting from the terrorist attacks of September 11, 2001, deployment impacted over 2 million service members and their families (NASEM, 2019).

Methodology

The research on the connection between academic performance and residential and school relocations experienced by non-military-connected, school-aged students is extensive (Choi & Oishi, 2020; Gruman et al., 2008; Kerbow, 1996). There seems to be a growing trend in educational research to investigate the possible effects of residential and school relocation on academic performance as it relates to military-connected students (Muller et al., 2017; NASEM, 2019; Sheffield, 2017). A content analysis was conducted in order to identify the extent to which published peer-reviewed literature has focused on the effects of frequent relocation on the academic performance of the large, yet unrepresented, population of military-connected students.

According to Schreier (2012), qualitative content analysis is a systematic, yet flexible method that reduces data. The systematic nature of qualitative content analysis was followed to select peer-reviewed journal articles related to the research question, “Since 2001, to what extent have relevant research journals published articles regarding the effects, if any, on the academic performance levels of elementary-aged students in the first through fifth grades who experience high-frequency mobility from being military-connected?” A coding frame was developed to deductively identify sources—peer-reviewed articles with military-connected students as the unit of analysis—that were aligned with the study’s purpose. Qualitative content analysis also reduces data. In this study, data was reduced by only focusing on specific search terms and an initial coding frame, mentioned later in this paper, in order to ensure the sources were aligned to the research question.

The collection of resources for this study began with a search in Google Scholar for the terms “mobility,” “military,” “elementary school,” and “military-connected” from the year 2001 to the present. The initial search resulted in 249 sources. These sources were sorted into the categories of articles, dissertations, books and other research, which included master’s theses, whitepapers, reports, and briefs not published in peer-reviewed journals. The initial sort resulted in 47 articles from peer-reviewed journals. Next, the Kansas State University Library site was used to examine available education databases. The searched databases included, ERIC, the psychology and behavioral collection, the military and government collection, and the APAPsychInfo database. Within these databases, the search term “military-connected children” was used. This secondary search resulted in an additional 51 articles from peer-reviewed journals. Therefore, combining the 47 articles from the initial search and the 51 articles from the secondary search produced a total of 98 peer-reviewed articles which were examined further.

Initial coding was conducted with each journal article to determine the article’s unit of analysis. As diagrammed in Figure 1, each article was examined to determine if students, families, or schools within the U.S. military were the unit of analysis. The articles with students as the main focus would be the subjects of further coding. Initially, some articles were excluded from coding if K-12 military-connected students were not the unit of analysis of the article or if the article was not a research study. For example, the initial search included published articles for

informational or editorial purposes. The initial coding resulted in a total of 28 articles with students as the unit of analysis and were subjected to further coding. These 28 articles were deductively coded for alignment to the research question. The deductive coding was done by rating the articles on a 5-point scale with four categories. The four categories were the broad concepts of students, military, mobility, and academic performance. Articles were given one point for each category if these (or equivalent terms) were used in the title of the article, the abstract, keywords, body, and findings, as pictured in Figure 2.

Figure 1

Initial Coding Frame

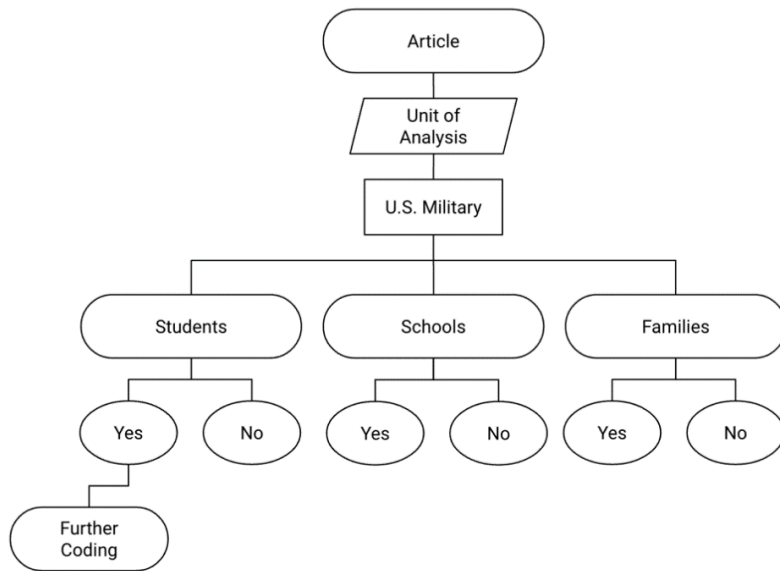
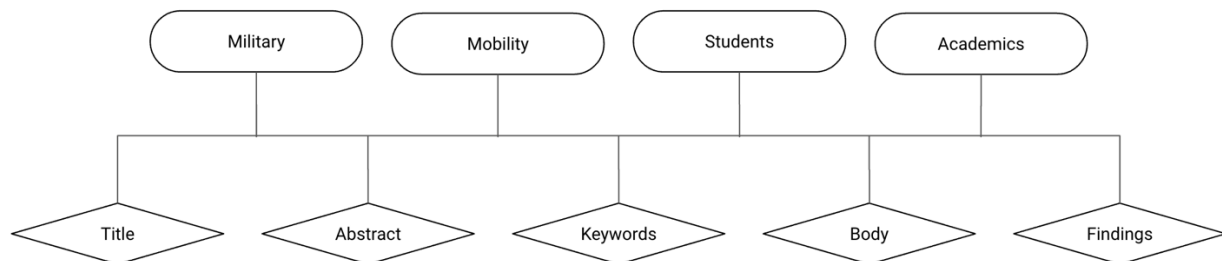


Figure 2

Deductive Coding



Findings

The findings of this content analysis uncover a gap in the existing research as it pertains to high-frequency mobility, caused by being military-connected, and the possible effects on the academic performance of elementary-aged students. An initial search of the Google Scholar database

confirms a myriad of research concerning the terms “mobility and elementary school students” with a return of 892,000 possible results. However, a search of the same database using “mobility and military-connected elementary school students” resulted in a return of 853 potential results. In the existing research, the focus on mobility and military-connected elementary school students is a fraction of less than one percent compared to the research on mobility and elementary school students. The findings of this content analysis align with the gap in research between civilian mobility and military-connected mobility as a small number of articles met the research criteria for further analysis.

The results of the deductive coding process are depicted in Table 1. The first column contains the broad concepts of students, military, mobility, and academic performance. The second column contains sample terms that were used when coding the broader terms. Each of the 28 articles was given one point in each of the categories of broad terms if it was determined that the broad term was contained within the title, abstract, keywords, body, and findings of the article, resulting in a total score of 5 points. There were a few articles that did not contain keywords. Therefore, some articles were only able to score four points, instead of five, in each broad topic. The top percentage in the right column of Table 1 shares the percentage of articles that could have scored a total of five points in each category ($n=22$). The bottom percentage displays the percentage of articles that could have scored a total of four points in each category ($n=6$). Nine of the 28 articles did not have a full four or five points in the “students” category. Due to one of the articles not containing keywords, eight of the nine articles could have scored a total of five points and one of the articles could have scored a total of four points in the “students” category. These results also show that most of the analyzed articles written about military-connected students do not place an emphasis on frequent mobility or student academic achievement.

Of the initial search, it is worth noting that approximately 115 of the 249 found sources were dissertations, which is approximately 46% of the total found sources. The number of dissertations demonstrates that there is an interest in studying military-connected students; however, this research is not moving beyond dissertation work and being published in peer-reviewed journals to reach wider audiences. While the published research since 2001 on the social and academic effects of frequent mobility on K-12 military-connected students is relatively small, the number of dissertations in this area appears to be growing. Of the 115 found dissertations, 48 were focused on the social or academic impacts related to the frequent mobility of K-12 military-connected students. These 48 dissertations were completed between 2007 and 2021. Furthermore, approximately 65% (31 of the 48 dissertations) were completed between 2017 and 2021, suggesting an expanding research base, which could be utilized by military installations, school districts, school staff, military-connected families, and teacher preparation programs to more deeply understand the experience of transient, military-connected K-12 students (Clever & Segal, 2013).

Table 1*Deductive Coding Results*

Code	Sample Coding Terms	Percentage of Articles
Students	students	64%
	children school-aged children military children military-connected children school-aged youth	83%
Military	military	91%
	military-connected military-based military-family-life U.S. armed forces service members	83%
Mobility	mobility	5%
	multiple school transitions moves school transitions transitions frequent moves relocation	50%
Academic Performance	academics	5%
	grades school failure school performance	17%

Discussion and Implications

There has been lack of focus on military-connected student mobility and the possible effects on academic performance in the extant research published in peer-reviewed journal publications over the last 20 years. Studies have shown that frequent transitions, especially those that are combined with a deployment, cause stress and other negative effects in military-connected students in the areas of social-emotional struggles, social connections, behavioral issues, and decreased academic performance (CPRL, 2017). According to the NASEM (2019), the timing of transitions is important as early transitions may affect school performance later in life. The effects of the transition also depend on the time of year in which the transition occurs. No matter the time of the school year in which students transition, they must be quickly assessed for potential gaps in content knowledge or skills (CPRL, 2017). Using the State of Texas Assessments of Academic Readiness (STAAR), Muller and colleagues (2016), found that accounting for socioeconomic status, economically disadvantaged military-connected students

outperformed their non-military economically disadvantaged peers. However, the study found that when looking at students who are not economically disadvantaged, non-military students outperformed their military-connected peers (Muller et al., 2017). O'Brien (2007) found, when studying third-grade through eighth-grade students in New York, that military-connected students, who were more transient than their non-military peers, scored at a statistically significant higher level on the New York state math assessment. Williamson and colleagues (2018), suggested that non-military-connected and military-connected children who experience frequent mobility have unparalleled childhood experiences with civilian children having more negative experiences. One of the differences comes in the form of financial stability. A military-connected student's family typically experiences a stable income provided by the service member(s) in the family as they relocate, which is atypical of civilian families.

This study points to areas of future research. One area to examine is the combined effects of mobility and deployment. These are both transitional times in the lives of military-connected students and their families. Studies on deployment (CPRL, 2017; Knobloch et al., 2015) present the social and emotional effects of deployment on military-connected students, which in turn, can have an impact on the academic performance of the affected students. Deployments can cause a strain on the relationships military-connected students have with their parents, school staff, and peers. When a student has a deployed parent, the student may worry about the safety of the deployed parent as well as having the home environment change as the student takes on additional chores and responsibilities. Students may also be susceptible to the worry and stress of the parent that remains at home to manage the family (Knobloch et al., 2015). Students experiencing these stresses and worries—combined with learning a new school, making new friends, and experiencing a new curriculum—may also experience changes in their academic performance.

The 650,000 military-connected students in the U. S. experience notably higher transience rates than their non-military peers. Military-connected students will likely experience mobility at a rate of approximately three times as frequently as their non-military peers, with some students experiencing school mobility every year during their Kindergarten through sixth-grade years. Longitudinal research focused on the academic performance of military-connected students and the number of moves experienced during K-12 education is an area of need. The comprehensive study conducted by the National Academies of Sciences, Engineering, and Medicine (2019), notes that when comparing the impact of a single school relocation to multiple school relocations over a military-connected student's K-12 academic career, the evidence is limited. Some future areas of research that could be considered are: 1) comparing the significance of the difference in the academic performance of military-connected students that have experienced more school moves to those that have experienced fewer moves; and, 2) successful interventions to develop characteristics such as resiliency, self-efficacy, hope, and optimism in students to have a positive effect on academics. Studies focused on these topics would provide helpful information to districts and schools that serve military-connected students.

A GAO report on K-12 education released in 2021, notes that many military families cite educational issues for their children as a drawback to military service. Most schools where military-connected students attend are public schools in communities located near the military installation. The same report states, "As of 2018, approximately 150 traditional public schools

were located on military installations operated by local school districts” (U.S. GAO, 2021). Public schools that are not located on a military installation may have staff that are not as aware of the unique life experiences of military-connected students, which may result in military-connected students having a negative perception of their school environment when compared to their non-military peers in the same schools (De Pedro et al., 2014). Having negative feelings toward the school could influence academic performance. Alternatively, some military-connected students attend schools—in the United States or overseas—that are part of the Department of Defense Education Activity (DoDEA). As of 2023, there were 66,416 students attending DoDEA schools (DoDEA, 2023). Students enrolled in DoDEA schools typically perform well above the national average on the NAEP reading, writing, and mathematics assessments (Smrekar & Owens, 2003; DoDEA, 2023). On average, fourth-grade and eighth-grade students scored between 15 and 23 percentage points higher than the national average on these assessments and have maintained high levels of achievement in recent years while national averages have declined (DoDEA, 2023). Future research should explore the practices utilized by the DoDEA system and how these practices could be generalized to both military and non-military connected schools. This research could result in positively impacting the academic success of all students, not just those that are military-connected.

This study reveals a gap in the existing literature since 2001 in the area of the effects of frequent mobility on military-connected students’ academic performance. The existing literature is mainly focused on the social-emotional well-being of this population. A large number of public schools are impacted by the frequent mobility of military-connected students. Future studies on military-connected students’ academic progress would benefit students, their families, and the schools and districts where these students attend during their K-12 educational careers. Identifying specific support systems and interventions that can help mitigate negative effects for military-connected student (who are considered an at-risk population) could benefit all at-risk students, even those not connected to the military. This future research would also support both the missions of Joining Forces and the U. S. Department of Education.

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Tyler Fowler (tylerfowlermail@gmail.com) is an educator that has worked with military-connected students and families since 2001. He is the current principal of Patton Junior High in the Fort Leavenworth School District in Fort Leavenworth, Kansas.