EDUCATIONAL PLANNING

Vol. 26 No. 4

International Society
for Educational Planning

Editorial Review Board
(Updated August 2019)

International Society for Educational Planning

EDUCATIONAL PLANNING
A JOURNAL DEDICATED TO PLANNING, CHANGE, REFORM, AND THE IMPROVEMENT OF EDUCATION

VOLUME 26   2019   NUMBER 4

FROM THE EDITORS

This issue of Educational Planning covers from planning for continuous improvement to planning for high school size, effective refugee school management, and planning for better staff engagement. We will lead our readers to travel from the U.S. to Turkey and Nigeria.

First, Kaufman and his colleagues provided a framework of the necessary components in planning for and implementing continuous improvement, based on current literature in the field of education. The framework is used to outline efforts of the Department of Defense Education Activity (DoDEA) in becoming a continuous improvement organization.

Second, Brown and Earthman examined large and small high schools in Virginia to understand if the high school student population size influenced the student achievement. From the data derived in this study, students in large high schools academically performed better than those in small high schools in Virginia when selected variables are controlled.

Third, Ozen evaluated the effectivity of school management according to the perceptions of Turkish school principals of Syrian refugee students. It was found that school principals did make ceaseless efforts to meet the educational and humanitarian needs of Syrian refugees despite challenges they were confronting.

Last, Oladejo, Kareem and Ghanni investigated job concern factors (namely workload, job hazard, and interpersonal discrimination) and academic staff engagement in public universities in Lagos State, Nigeria. Findings showed that employee engagement was significantly related to job hazard and interpersonal discrimination.

Articles selected for publication in this issue carry a common planning theme of continuous improvement. The management of refugee schools needs to be continuously improved to be effective. Variables affecting the optimal school size need to be continuously examined for justifications. In planning for positive staff engagement, the concerned factors need to be investigated continuously to maintain eligibility.

Editor: Tak Cheung Chan
Associate Editors: Walt Polka and Peter Litchka
Assistant Editor: Holly Catalfamo

November, 2019

ABOUT THE AUTHORS

James C. Anderson, II, is an assistant professor in the University of Georgia's Department of Agricultural, Leadership, Education and Communication. His prior experience includes roles at Virginia Tech, the University of Illinois, the Chicago High School for Agricultural Sciences, and the University of Missouri College of Education. At the University of Georgia, Dr. Anderson serves as a Leadership Education Extension Specialist and uLEAD Certificate of Leadership and Service Coordinator.

Michael J. Brown is currently Principal of McHarg Elementary School in the Radford City Public Schools of Virginia. He has been a public school administrator for 12 years. Dr. Brown has a total of 20 years of public school experience both at the secondary and elementary levels.

Carol S. Cash is a clinical professor and Program Leader for Educational Leadership in Virginia Tech's School of Education and continues to pursue research on educational facilities topics. Dr. Cash is a life-long educator who has served at all levels of public education, both within the United States and internationally. She has been recognized as Virginia's Secondary Principal of the Year and Zama's Teacher of the Year in Japan.

Jama S. Coartney is a graduate research assistant in Virginia Tech's Department of Agricultural, Leadership, and Community Education, where she studies leadership. Jama's research interests include value supply chains and the leadership necessary for sustained programs.

Glen I. Earthman possesses fifty years' experience in the field of education. He has taught extensively on the subject of educational facilities for over forty years at Virginia Tech and consulted on many school systems. He has authored six books on the subject of planning educational facilities, several book chapters, and published extensively in professional journals on this subject. He continues a schedule of research in the field of school facilities and advising students.

William J. Glenn is an Associate Professor in the School of Education at Virginia Tech in Falls Church, Virginia. He graduated with a Ph.D. from the University of Southern California and a J.D. from the University of California, Berkeley. Dr. Glenn's primary research interest is how the equity of student inputs and outputs relate to legal, financial, and other policy factors.

Mulikat Omolade Ghanni is a former postgraduate student in the Department of Educational Management, University of Lagos, Akoka, Nigeria. She currently teaches at the secondary level of Nigerian education.

Tim Guy holds a Ph.D. in education leadership and policy studies from Virginia Tech where he is now an adjunct professor. Dr. Guy's research and writing interests include research methods, school leadership and improvement, and ethics. A lifelong learner and educator, Dr. Guy has served as a high school assistant principal, a math teacher, and has assisted in the design and delivery of a leadership development program.

Azeezat Temitope Kareem is currently a research student and Lecturer in the Department of Educational Management, University of Lagos, Akoka, Nigeria. Her research

interest is in Economics of Education. She belongs to some academic learned associations, notably the Nigerian Association for Educational Planning and Administration (NAEAP).

Eric K. Kaufman is a professor and Extension specialist with Virginia Tech's Department of Agricultural, Leadership, and Community Education. He has served as the project director for Virginia Tech's cooperative agreement with the Department of Defense Education Activity. Dr. Kaufman's research interests include shared leadership, as well as leader development across the lifespan.

Shreya Mitra is a project associate at Virginia Tech, within the Department of Agricultural, Leadership, and Community Education. Dr. Mitra is working towards developing organizational capacity building strategies and crafting frameworks for clients in order to support their approach towards continuous improvement. She is heavily involved in designing assessment tools and evaluating clients' performance.

Akinwale Oladejo, Ph.D., is a Senior Lecturer in the Department of Educational Management, University of Lagos, Akoka, Nigeria. He specializes in Educational Planning, Policy, and Economics of Education. His research interests also cover disability studies and open-distance learning pedagogy. He was a 2013 Visiting Research Fellow at the IRMM, University of Malaya, Malaysia. He has presented papers at international conferences across the world. He is an Elected Member of Senate of the University of Lagos.

Hamit Ozen is an assistant professor in the Education Faculty at Eskisehir Osmangazi University (ESOGU), Turkey. Prior to coming to ESOGU, Hamit was in Turkish Air Force Language Academy as an English Instructor. He is a co-author in the book "Searching the Globe for Answers-Preparing and Supporting School Leaders" edited by Peter Litchka. In addition, Dr. Ozen has authored numerous scholarly articles, and has presented in the United States, England, and Turkey. He also lectured at Vilnius University and Goethe Universitat. His research interests include multiple areas of educational leadership.

Dana Ripley is currently an assistant professor of Counselor Education at Northern Kentucky University. Dr. Ripley's research interests include addiction treatment and prevention education in school and community settings.

PLANNING TO CREATE A CULTURE OF CONTINUOUS IMPROVEMENT WITH THE DEPARTMENT OF DEFENSE EDUCATION ACTIVITY

ERIC K. KAUFMAN
Virginia Tech

CAROL S. CASH
Virginia Tech

JAMA S. COARTNEY
Virginia Tech

DANA RIPLEY
Northern Kentucky University

TIMOTHY M. GUY
Virginia Tech

WILLIAM J. GLENN
Virginia Tech

SHREYA MITRA
Virginia Tech

JAMES C. ANDERSON II
University of Georgia

ABSTRACT

While continuous improvement is not new to education, implementing it with fidelity in various educational contexts remains difficult. This article provides a framework of the necessary components in planning for and implementing continuous improvement, based on current literature in the field of education. Key characteristics for consideration include: (a) purpose-driven; (b) change as a complex process; (c) data-based practices, structures, and systems; (d) relationships for professional collaboration; and, (e) capacity building. Utilizing a qualitative case-study design and aspects of action research, the framework is used to outline efforts of the Department of Defense Education Activity (DoDEA) in becoming a continuous improvement organization. Although implementation of continuous improvement is still in early stages, many lessons have been learned. As education researchers and policy makers continue to wrestle with best practices and strategies for continuous improvement, we encourage further investigation of successful case studies, including the potential of research-practice partnerships.

INTRODUCTION

With the advent of the new millennium, education's new age of accountability was ushered in through reauthorization of the Elementary and Secondary Education Act of 1965 (ESEA) with the No Child Left Behind Act (NCLB) (2001). This act brought about a renewed interest in leadership practices to address important aspects of leading for change and improvement in schools. The

emphasis on school leadership, as an agent for change, continued with a 2015 reauthorization of ESEA, named Every Student Succeeds Act (ESSA), which clarified the purpose of teacher collaboration and identified approaches to widely dispersed leadership (Peurach, 2016). Amidst this political environment, scholars have called for more attention to research-practice partnerships, recognizing "expanding the role of research in improving educational practice" (Coburn & Penuel, 2016, p. 48).

The Department of Defense Education Activity (DoDEA), though exempted from the mandates of NCLB and subsequent reauthorizations, strives to improve teaching and learning and has actively engaged in system-wide change and improvement efforts that draw on established best practice (Brady, 2014, 2017; DoDEA, 2011). DoDEA operates accredited primary and secondary schools worldwide for the families of active duty military and Department of Defense civilian employees with locations spanning to 11 countries in Europe and Asia, as well as 7 states, Guam, and Puerto Rico (DoDEA, 2018a). As a result of its global reach and ability to self-select best practices (without external mandate), DoDEA serves as a unique example of planning and structures for improvement with implications for comparison to other U.S. public schools, independent schools, and international schools. In fact, DoDEA regularly partners with local education agencies and has sponsored programs in approximately 3,000 non-DoDEA schools across 35 states over the last 10 years (Dailey-Perkins & Fulce, 2017). The research question for consideration is: What are the characteristics of effective planning and implementation of continuous school improvement?

CONSIDERATIONS FOR CONTINUOUS IMPROVEMENT PLANNING

In 1999, Stigler and Hiebert's book, *The Teaching Gap*, reported on findings of an international comparative study, placing it at the forefront of the education leadership literature for continuous improvement. While the concept of continuous improvement originated in the business field as far back as the 1800s (Bhuiyan & Baghel, 2005), a variety of scholars have recently extended the work, allowing the National Association of Secondary School Principals to publish a new report aptly, titled *What the Research Shows* (Valdez, Foster, & Ikemoto, 2019). Drawing from traditions in education and business, experts and theorists have offered valuable insights on effective strategies to drive positive change and improvement in schools. A framework for exploring the case of DoDEA's improvement planning emerged by drawing from a variety of these leadership theories and practices that focus on change and improvement. Prevalent themes from these experts include: (a) purpose-driven; (b) change as a continuous and complex process; (c) data-based practices, structures, and systems; (d) relationships for professional collaboration; and (e) capacity building.

Purpose-Driven

Successful schools across the globe are purpose-driven, focusing on providing a high standard of learning for students. Stigler and Hiebert's (1999) "six principles for gradual, measurable improvement" (p. 131) included the principle to "maintain a constant focus on student learning goals" (p. 132). Likewise, Dufour and colleagues' (2006) Big Ideas of Professional Learning Communities (PLCs) explicitly noted, "The purpose of our school is to ensure all students learn at high levels" (p. 14), which is a focus reiterated by Muhammad (2009) as essential to transforming school culture. The consensus among these experts is clear: the focus and overarching purpose of schools should be student success (Valdez et al., 2019).

Expanding on a student-centered focus, Fullan (2001) identified "moral purpose," broader in scope than student learning, as one of the five components needed to effect positive change

in schools. He posited the purpose of school is to make a "difference in the lives of children," and by extension, society as a whole. Moral purpose requires leaders to focus on both student learning and how to get there; hence, it includes the broader purpose of treating others (specifically teachers) fairly, because leaders can make a positive difference in the lives of teachers and school staff (Fullan, 2001, p 13). Similarly, Marzano, Waters, and McNulty (2005) discussed a broader focus on purpose that included "crafting a purposeful community," which they described as "one in which the collective efficacy and capability to develop and use assets to accomplish goals that matter to all community members through agreed-upon processes" (p. 99). They noted the focus of these efforts should be on "work that has a high probability of enhancing student achievement" (Marzano et al., 2005, p. 107).

Change as a Complex Process

Continuous improvement implies continual change, which can be difficult; and experts agree that leaders interested in improvement must understand the complex nature of leading for change. In *Leading in a Culture of Change,* Fullan (2001) noted the change process is so elusive that even experts fail to come to consensus on the most appropriate and efficient way to manage it. According to Fullan, "Management books contain reams of advice, but the advice is often contradictory, general, and at the end of the day confusing and nonactionable" (p. 5). One factor contributing to this complexity is that the nature of change is both contextual and dynamic. Stigler and Hiebert (1999) contended school culture contributed to the uniqueness and complexity of change efforts and suggested a continual, gradual, and incremental approach that responds to the particular context. This approach contrasts to sudden reforms implemented with no consideration for the context and culture of the particular setting (Stigler & Hiebert, 1999). It counters the notion that change can be controlled, in favor of a belief that it can only be understood and managed (Fullan, 2001). Therefore, it is important to refine senior leaders' understanding and approach to change, balancing complexity, ambiguity, and chaos with creativity, improvement, and clarity. According to Fullan (2001):

> All this complexity keeps people on the edge of chaos. It is important to be on that edge because that is where creativity resides, but anarchy lurks there too. Therefore, effective leaders tolerate enough ambiguity to keep the creative juices flowing, but also along the way (once they and the group know enough), they seek coherence. Coherence making is a perennial pursuit. Leadership is difficult in a culture of change because disequilibrium is common (and valuable, provided that patterns of coherence can be fostered). (p. 6)

Understanding the complexity of the change process facilitates a thoughtful and rigorous approach. Park and colleagues (2013) argued that improvement work must be not only iterative and gradual, but thoughtfully planned in a transparent yet rigorous fashion. To that end, leaders should consider the degree of the disruption caused by the change. Marzano and colleagues (2005) described the importance of leaders' ability to recognize and apply the appropriate skills and strategies. Some instances need "nurture" and "support" (Marzano et al., 2005, p. 115); higher order changes require leaders to act as "the driving force" (p. 118) and to "take a stand" (p. 118).

Data-Driven Practices, Structures, and Systems

While the core theoretical dimensions of continuous improvement include clarifying purpose and understanding the complexity of change, school leaders have sometimes turned to business literature for guidance on data-driven practices, structures, and processes. Recognizing

the need for improvement does not automatically include knowing what actions to take. Forman, Stosich, and Bocala (2017) identified that, while there is evidence to support the 'why' of continuous improvement in education, the 'how' remains the biggest obstacle.

One of the repeated problems in education involves the introduction of improvement reforms implemented with little support or adaptation to context (Farley-Ripple, May, Karpyn, Tilley, & McDonough, 2018). "That a practice, program, or service *can* work is of little value unless we discern *how to make it work* at scale in the hands of many different individuals working under diverse circumstances" (Bryk, 2009, p. 598). In response to the need to bridge the gap between setting goals and the pragmatic steps to reach those goals, Deming (2000) offered the Plan-Do-Study-Act (PDSA) model and discussed the need to focus on the methods and the system (the how) versus focusing solely on the desired result. He noted that business and education have long track records of setting specific goals, without providing information on how to get there (Deming, 2000).

The heart of continuous improvement processes is the use of data to inform the process of improvement, decision making, and professional practice. In a Carnegie white paper, Park and colleagues (2013) noted the critical role of using data in the improvement process, writing: "Indeed, almost all of the organizations we studied use data to monitor their work" (p. 24). Beyond the simple prescription to "use data," experts have identified actions around the use of data with detailed processes, structures, and practices. An early proposal for continuous improvement in education was found in Stigler and Hiebert's (1999) recommendation that schools implement the Japanese practice of Lesson Study in which groups of teachers critique a lesson to improve instruction one lesson at a time. One of the three big ideas of PLCs from DuFour and colleagues (2010) included the use of data to inform instructional practices. They argued that educator collaboration must focus on results by way of student learning and use the results to inform and improve professional practices.

Regardless of the overarching framework, additional processes, models, and protocols exist to support each phase of a data-driven continuous improvement process. However, it is important to identify which practices, structures, and systems will work best in a particular school or school district given the specific needs (Redding, Cannata, & Taylor Haynes, 2017).

Relationships for Professional Collaboration

Organizational improvement is a social process, and strategies for improvement and change must attend to social structures and needs. Fullan (2001) argued relationships are a cornerstone for shared data, purpose, and learning; and good relationships are a requirement for learning organizations:

> In the past, if you asked someone in a successful enterprise what caused the success, the answer was "It's the people." But that's only partially true. It is actually the relationships that make the difference. Schools and school districts can get tough about student learning, can use their minds to identify new and better ideas, and can establish strategies and mechanisms of development. But successful strategies always involve relationships, relationships, relationships. (Fullan, 2001, p. 51 & 70)

Specific practices and strategies that support the development of relationships in an organization include interpersonal matters, such as communication, and developing professional collaboration to strengthen engagement and shared responsibility (Park et al., 2013; Peurach, 2016). An example of a specific communication practice is celebration. In writing about the implications

for transforming school culture, Muhammad (2009) stated that meaningful and productive growth is primarily a function of the cohesion of human resources. He observed that one of the common traits among schools with a healthy school culture is celebration of the success among all stakeholders (Muhammad, 2009).

Encouraging professional collaboration to strengthen engagement and shared responsibility involves developing the necessary cultural structures. While describing cases of restructuring for PLCs, Fullan (2001) noted the broad variety of professional relationships and interactions that exist in schools to promote collaboration, support, problem solving, coaching, and fidelity monitoring. Likewise, Marzano and colleagues (2005) organized their findings and conclusions into a five-step plan of action to help school leaders articulate and bring to fruition a powerful vision for enhanced achievement of students, and the first two steps addressed structures around professional relationships. Structures to support teams of committed people with diverse knowledge of curriculum, instruction, and assessment of learning help to build professional collaboration (Thessin, 2015). Since teachers are the main contact point for students, it is crucial they are involved and committed to change efforts (DuFour et al., 2010; Stigler & Hiebert, 1999). Emerging research also highlights the potential value of research-practice partnerships (Coburn & Penuel, 2016; Wentworth, Mazzeo, & Connolly, 2017).

Capacity Building

In order to develop shared purpose, address the complexity of the change and improvement process, implement specific data-driven practices, and collaborate professionally, schools must develop the capacity of the people who make up the organization. Fullan (2001) noted:

> It is ironic that school systems are late to the game of knowledge building both for their students and for their teachers. Most schools are not good at knowledge sharing within their own walls, let alone across schools in the same district. . . . School systems, in any case, would be well advised to name knowledge sharing as a core value – to label it explicitly, which they do not now do – and to begin to work on the barriers and procedures to dramatically increase its use. (p. 104-105)

While Fullan (2001) described the characteristics of "knowledge organizations," Park and colleagues (2013) highlighted the importance of a *learning mindset*. Instilling a culture of continuous learning, a learning mindset within the system, requires building capacity through professional development. This investment must be embedded in day-to-day work to ensure success of the overall approach (Park et al., 2013).

CASE STUDY

This is a qualitative study, drawing on traditions of case study and action research as described by Creswell and Poth (2018) and Patton (2015). In focusing on DoDEA, we applied an instrumental case study design (Creswell & Poth, 2018) to look at planning for continuous improvement within this organization. The authors are part of the Virginia Tech project team, which collaborates with DoDEA toward continuous improvement goals. This collaborative, problem-solving approach is integral to action research (Patton, 2015); and our participation in this process with DoDEA uniquely situated us to provide insights about the case at hand. To assess DoDEA's planning process and take steps to employ continuous improvement, we analyzed key procedural documents, meeting notes, and personal communications between the two organizations. The

process involved inductive coding and categorization through the constant comparative method (Freeman, 2005).

A Description of the Case of DoDEA

DoDEA serves approximately 72,000 students, with 164 schools worldwide, including a virtual high school program (DoDEA, 2018a). Prior to the implementation of the Community Strategic Plan for school years 2013/14 to 2017/18, DoDEA operated as a system of schools with three distinct regions working somewhat independently. In an effort to improve communication, consistency, and, most importantly, student achievement, DoDEA reinvigorated its efforts to shift to a culture of continuous improvement. Director Brady (2014) described this shift as changing from a system of schools to a school system.

Although DoDEA's planning process for continuous improvement is unique to its context, we can extrapolate insights by examining the approach through the previously identified aspects of effective continuous improvement planning: (a) purpose-driven; (b) a recognition of change as a complex process; (c) utilizing data-based practices, structures, and systems; (d) capitalizing on relationships for professional collaboration; and (e) capacity building.

Honing Purpose-Driven Improvement

DoDEA centered all improvement efforts around student achievement. This focus resonated throughout their planning documents, and explicitly in the community strategic plans (CSPs), most recently framed as a *Blueprint for Continuous Improvement* (DoDEA, 2018b). As described in the Blueprint, the organization's mission is to "educate, engage, and empower each student to succeed in a dynamic world," (DoDEA, 2018b, p. 3). DoDEA's core values also reiterate a student-centered focus: "Students are at the heart of all we do" (DoDEA, 2018b, p. 8). DoDEA has even coined their continuous improvement overhaul as Restructuring for Student Achievement (RSA), which emphasizes that all efforts be directed toward student success (Brady, 2104, 2017).

Since 1995, DoDEA has been using CSPs to coordinate and communicate the organization's vision, mission, goals, and intended outcomes (DoDEA, 2011; Wright, 2002). Each CSP covers a 5-year period and "forms the foundation for all other strategic and operational planning," with an aim to "strengthen organizational accountability and transparency" (DoDEA, 2013, p. 3). Fittingly, DoDEA's current CSP has been named the *Blueprint for Continuous Improvement* (DoDEA, 2018b). While retaining the student-centered focus of the earlier CSP, this updated version hints at progress made as next steps in the change process are made more explicit, specifically with respect to changes to the organization's Vision and Core Values:

- Vision: Excellence in education for every student, every day, everywhere.
- Core Values
    - Student-centered: Students are at the heart of all we do.
    - Excellence: We strive to exceed expectations in all we do.
    - Continuous Improvement: Our organization, its systems, and processes will be continually reexamined and improved.
    - Lifelong Learning: Learning is an active process of discovery where we cultivate curiosity, perseverance, and the desire to learn.
    - Diversity: We honor the uniqueness of each individual and embrace diverse beliefs

and backgrounds. We respect differences and create inclusive environments which contribute to a better society for all.

- ○ Individual Potential: Individuals develop within an environment that nurtures intellectual, social, emotional, physical, and creative growth.
- ○ Shared Responsibility: Partnerships among families, students, staff, and community members are characterized by mutual commitment and collaborative effort that enrich the lives of our students.
- ○ Trust: We value relationships based on integrity, mutual respect, and open two-way communication. We cultivate a safe and risk-free culture that encourages and inspires innovation. (DoDEA, 2018, p. 8)

The Vision statement has been honed to reflect a student-centered focus, whereas the previous iteration focused more on the organization. In addition, the Core Values have been refined and more explicitly defined. These changes reflect DoDEA's flexibility with continuous improvement efforts. Within the Blueprint, each goal is defined by strategic initiatives that are broken into actionable steps referred to as critical success factors. Results are measured through key results indicators, which "are not a single measure, but represent the aggregate results of many smaller actions" (DoDEA, 2018b, p. 5).

Recognizing Change as a Complex Process

In looking at the evolution of DoDEA's strategic plans, the complexity of continuous improvement becomes evident. "The Blueprint will be flexible enough to adjust to changing education and DoD environments and enduring enough to drive DoDEA to fulfill its vision" (DoDEA, 2018b, p. 4). The Blueprint builds upon earlier CSPs, maintaining the structure of five overarching goals: (1) Student Excellence, (2) School Excellence, (3) Talent Excellence, (4) Organizational Excellence, and (5) Outreach Excellence. Rather than maintaining the status quo, though, the Blueprint noted the need to "continuously improve and refine [the] organizational direction" (DoDEA, 2018b, p. 3). This statement illustrates the organization's recognition of the complexity of the process, their readiness to the process, and their desire for transparency to stakeholders in order to enlist the whole system in this process.

Based on leadership priorities, stakeholder needs, and assessment data from previous feedback and assessments, DoDEA modified and adjusted the professional learning environment. The relationship between DoDEA and the Virginia Tech project team helped to support these changes as the organizations act as co-creators of ideas and vision for professional learning to improve instructional leadership. For example, to help ensure fidelity and alignment with the specific needs and priorities of the cooperative agreement with DoDEA, Virginia Tech convened a Leadership Advisory Board (LAB) and facilitated discussions related to professional learning and support for instructional leadership. The two organizations work closely together to develop and refine professional learning experiences, resources, assessments, and evaluation goals. The balance of vision between collaborators can be a challenging process due to conflicting ideas or viewpoints; however, DoDEA welcomes alternative perspectives and utilizes these collaborations to strengthen and refine their processes.

Incorporating Data-Driven Practices, Structures, and Systems

To support continuous improvement, leaders must establish appropriate efforts, practices, structures, and systems. A core element of DoDEA's organizational restructure was the creation of

three Centers for Instructional Leadership (CILs). The CILs are a practical representation of the advice from Park and colleagues (2013) "to set up structures across core processes or around specific goals" (p. 23). Initially conceptualized as "Centers of Excellence" (Brady, 2014), the CILs were created to develop instructional leadership to positively impact student achievement and support instructional excellence. According to documents shared at the start of the restructuring process:

> The primary mission of the CIL is to ensure high academic achievement for all DoDEA students. The Centers for Instructional Leadership will systematically develop high-impact educational leaders in their pursuit of excellence and equity. Success is measured when all DoDEA schools ensure that every student is adequately prepared for success in college, careers and citizenship. (DoDEA, 2016, p. 1)

The CIL mission ties directly back to the student-centered purpose of DoDEA. Four functions describe the CIL priorities and key considerations: (a) Leadership Development and Support, (b) Development for Systemic Priorities, (c) Learning Networks, and (d) Innovative Best Practices (Figure 1). As a driving force within the continuous improvement effort, the CILs improve communication and transparency across the system; provide resources, professional development, and support to stakeholders; implement initiatives related to organizational mission, goals, and direction; and promote the use of assessments and data in decision-making.

Leadership Development & Support
Provide systemic leadership development and support based on DoDEA HQ policies, procedures, and programs for teacher leadership, school-level administrators, district ISSs, and district and community superintendents.

Development for Systemic Priorities
Deliver professional learning for the implementation and sustainment of systemic priorities.

Learning Networks
Facilitate horizontal and vertical learning networks within and across schools, districts, and Centers for Instructional Leadership.

Innovative Best Practices
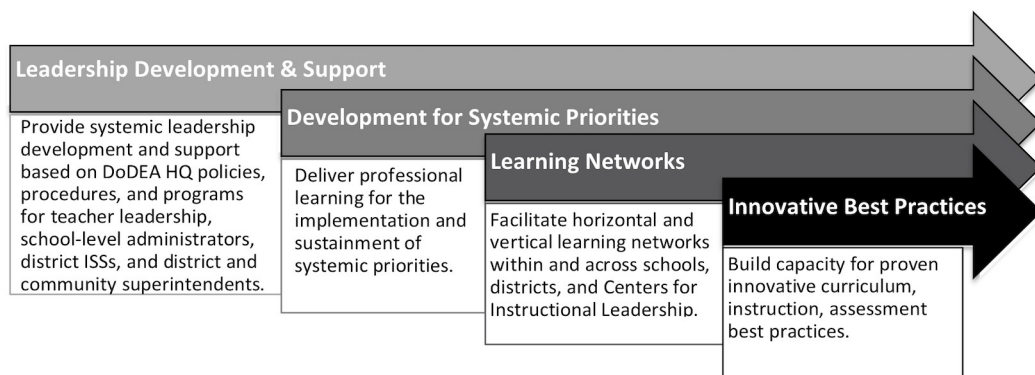Build capacity for proven innovative curriculum, instruction, assessment best practices.

Figure 1. Center for Instructional Leadership functions identified by the Department of Defense Education Activity (DoDEA).

As DoDEA worked to align curriculum to College and Career Ready Standards (CCRS), there has been a shift from using norm-referenced tests (e.g., TerraNova) to using criterion-referenced tests from the National Assessment of Educational Planning (NAEP). In school year 2017-18, the organization devised and implemented a Comprehensive Assessment System to include "all of the assessments that are administered system-wide within DoDEA," which are used to "support student learning, provide information for decision makers concerning instructional programs and services, and inform parents" (DoDEA, n.d.). The new system provides a list and description of all standardized assessments in order to help with communication, transparency, and alignment of curriculum.

As a formal methodology and process for continuous improvement, the CILs are developing and refining measures to assess growth and progress on strategic initiatives. These measures include CIL quarterly reports that are structured around the Deming's (2000) Plan-Do-Study-Act (PDSA)

Cycle. Langley and colleagues (2009) provided additional context with fundamental questions to help anchor the PDSA (Figure 2): What are we trying to accomplish; how will we know that a change is an improvement; and what change can we make that will result in improvement? Within this report framework, the Plan section includes the initiatives CILs focused on during the past quarter, and the Act section includes data sources used to evaluate the initiatives. The New World Kirkpatrick Model also provides a framework for evaluating training the CILs have facilitated. The third level of Kirkpatrick's model, Behavior, closely aligns to the Study phase of PDSA with a focus on applying learning when back on the job, assessing whether performance of critical behaviors is leading toward desired results (Kirkpatrick & Kirkpatrick, 2016).
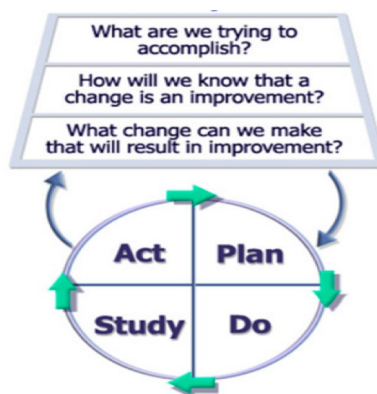
Figure 2. Model for improvement from Langley et al.'s (2009) book, *The Improvement Guide*.

To develop professional learning content, including events and activities, the CILs incorporate an ADDIE instructional system design: Analysis, Design, Development, Implement, and Evaluate (Molenda, 2003). Adopting the PDSA cycle helps to further ensure a continuous improvement mindset, as the cycle implies that the work is never done. Additionally, Virginia Tech is facilitating focus group sessions with stakeholders, as well as individual interviews with senior leaders, to evaluate the progress of the CILs' influence on improving student achievement.

Capitalizing on Relationships for Professional Collaboration

A core element of continuous improvement involves creating an environment to improve relationships and provide a structure for professional collaboration. This priority is emphasized and reiterated throughout the literature (Fullan, 2001; Muhammad, 2009; Park et al., 2013; Stigler & Hiebert, 1999).

Prior to the creation of the CILs, DoDEA operated as three distinct regions: Europe, Americas, and Pacific; communication and collaboration mainly occurred within the silos of each region. Effective and consistent communication is necessary for the success of any institution, but it is particularly important to DoDEA, given the frequency of military family transitions across regions. If schools across regions are not aligned in terms of vision, goals, curriculum, and standards, students will face unnecessary challenges with every transition.

For DoDEA, this requires the building and maintaining of relationships across regions and districts that are worldwide. The Community Strategic Plans (CSPs) and DoDEA's RSA provide

clear communication throughout the system as to DoDEA's purpose. Through the establishment of the CILs, DoDEA has increased opportunities for system-wide professional learning, through summits, workshops, PLCs, and focused collaboration. These enhanced structures and practices to build relationships will help sustain DoDEA's efforts to improve student outcomes.

In addition to building relationships within the organization, DoDEA collaborates with outside institutions and professionals in using established practices for implementation of strategic initiatives. One such collaboration is with Virginia Tech, a public land-grant university.

Sustaining Capacity Building

In order to truly become an organization of continuous improvement, it is essential to devote time and resources to the development and training of personnel (Park et al., 2013; Stigler & Hiebert, 1999). DoDEA has put extensive energy into capacity building within the organization and has provided professional learning for continuous improvement. One of the unique challenges in capacity building is the geographic distribution of schools, and DoDEA employs a variety of delivery models including webinars, train-the-trainer modules, face-to-face workshops, and online resources and tools. In larger school divisions throughout the world, multiple delivery models also are employed to provide expanded access to learning that is necessary for capacity building of the organization.

With the vision for the CILs in mind, DoDEA put forward a request for applications to develop a high-quality, dynamic, effective professional learning delivery model and resources for DoDEA leadership, including content development, delivery, evaluation, and an aligned comprehensive program improvement and assessment process. DoDEA adopted Virginia Tech's proposal for an alignment process (Figure 3) to design, implement, and evaluate a continuous improvement model for instructional leadership for the development of the CILs. In pursuit of project goals, Virginia Tech provided expertise in models for continuous improvement, principles of adult learning, and best practices in educational data-based decision making. The overall approach addresses the relationships among the goals, objectives, project activities, and anticipated impacts for the CIL professional learning model, program assessment, curriculum development, delivery, and evaluation.

Figure 3. Conceptual model of the approach to continuous improvement through DoDEA CILs.

Virginia Tech and DoDEA have worked closely together to design and implement professional learning and support, often negotiating fine details to ensure the project activities are aligned with the immediate and emerging needs of stakeholders. While the work began with a

commitment to provide professional learning through webinars and face-to-face delivery, the focus of those sessions evolved over time. During the inaugural year of this partnership, Virginia Tech coordinated the delivery of three learning modules that highlighted the importance and appropriate application of Professional Learning Communities (later referenced within DoDEA as Focused Collaboration/PLCs):

- Module 1: Role of Professional Learning Communities in Continuous Improvement
- Module 2: Developing Capacity with Professional Learning Communities
- Module 3: Implementing Change with Professional Learning Communities

On-site professional learning institutes provided valuable face-to-face time to arrive at a common understanding of learning walkthroughs and the potential for walkthroughs to drive continuous improvement within DoDEA's instructional leadership. Work on the Learning Walkthrough protocol continued as Virginia Tech facilitated professional learning designed to increase confidence with using the Learning Walkthrough tool as an intentional strategy for instructional leadership. This led to a healthy transition of ownership to the CILs, with their commitment to provide the next iterations of professional learning on the adopted Walkthrough protocol.

In addition, the Virginia Tech team developed a Toolkit with a variety of resources the CILs can use to enhance instructional leadership within DoDEA. The Toolkit is an online compendium of job aids, tools, and exercises that CIL personnel can easily access to support the work of instructional leaders in their efforts toward continuous school improvement. The Toolkit builds upon and connects with the professional learning modules available to CILs within DoDEA's Schoology course site. The Toolkit itself is organized into four major sections:

- Section 1: Developing the Capacity for Continuous Improvement, which introduces concepts about change and its management to achieve desired outcomes.

- Section 2: Leading Focused Collaboration/PLCs, which borrows from adult learning theory and focuses on developing the capacity to work effectively in professional learning communities, also known as focused collaboration.

- Section 3: Models and Skill Aids for Instructional Leadership, which highlights professional learning around facilitative leadership, coaching for learning, and performance monitoring for change in practice.

- Section 4: Data-Driven Decision Making, which offers a deeper understanding of how a variety of data sources can be used to improve, increase, and enhance teaching and learning.

The Toolkit is a dynamic resource that will continue to grow and evolve to meet the instructional leadership needs of DoDEA, particularly those connected with the CILs.

DISCUSSION

While the concept of continuous improvement is simple, the implementation is quite complex. Even small-scale changes to a system have ripple effects and unforeseen challenges, so change to a system as large as DoDEA is certainly a complicated venture. Although implementation of continuous improvement is still in early stages, many lessons have been learned. Having a

common goal (i.e., purpose) to rally around is essential. It acts as a motivator and director for all change and assists with clear communication and consistency across regions, districts, and schools. The strategic plans also help to communicate that direction and purpose by providing structure, while retaining enough flexibility to allow for creation and negotiation of details and plans for achieving the years' goals.

In considering the complexity of DoDEA's change process, commitment has been the key. Despite unforeseen challenges, such as moving forward with CIL work while not being fully staffed, the organization retains focus and momentum for continuous improvement. Continuing forward, while keeping organizational goals in mind, requires leaders to be resilient in the face of setbacks and to recognize these difficulties are part of the change process.

When examining how to implement continuous improvement with fidelity, DoDEA realized an organizational restructure was necessary. This is no small task for a worldwide organization serving 72,000 students with over 11,000 employees (DoDEA, 2018a). Though this endeavor required significant investment in terms of time, resources, and energy, DoDEA understood that to fully shift to a continuous improvement culture, a restructure of this magnitude was essential. In addition to the restructure, DoDEA has drawn upon evidence-based practices and models such as PDSA, PLCs, and the New World Kirkpatrick Model. While there are certainly cases where creating an individualized model or practice may be useful, this should not be the rule. Utilizing practices that have already been tested—and are adaptable to context, such as PDSA—can be the best route for ensuring success with continuous improvement.

It goes without saying that data and assessment are important. The necessary questions are how to collect the data and how to use the data, with particular attention to gaps in assumptions and perspectives (Farley-Ripple et al., 2018). An important shift for DoDEA has been implementing CCRS and shifting to NAEP assessments in order to align with standards used in U.S. public school systems. This decision reflects a student-centered purpose as it will help students transition between the DoDEA school system and the U.S. public school system. Additionally, DoDEA understands the importance of data on professional development initiatives for teachers and instructional leaders. While many of these evaluation efforts are still being formed and refined, the implementation of the PDSA model ensures attention to data related to these groups and initiatives.

Partnerships can be an integral factor in implementing continuous improvement (Coburn & Penuel, 2016; Park et al., 2013; Wentworth et al., 2017). DoDEA has sought to improve partnerships and communication within the organization, while also leveraging the expertise of outside entities (e.g., Virginia Tech). Clear and consistent communication is necessary, and the CILs are the organizational structure designed to improve vertical and horizontal communication. Other schools and education agencies seeking to leverage the potential of network-based improvement initiatives may need to make similar investments in system-level innovation infrastructure (Peurach, 2016).

Devoting time, energy, and resources to build capacity is crucial for successful implementation of continuous improvement (Park et al., 2013; Stigler & Hiebert, 1999). The five-year CSPs and the acceptance of Virginia Tech's approach represent DoDEA's ability to plan ahead for changes and invest the time required. In moving from a system of schools to a school system, DoDEA has made it a priority for training and professional development to occur at all levels, from headquarters and CIL chiefs, to principals and teachers. This all-encompassing approach has been made possible by utilizing diverse modes of delivery such as webinars, train-the-trainer modules, face-to-face workshops, and online resources and tools.

CONCLUSION

Although every school system presents a unique case (Redding et al., 2017), examining the planning and early implementation of DoDEA's systemwide change provides insights into the 'how' of continuous improvement, and the example can be useful for other large systems considering systemwide change. While it is too early to assess the effects of this change on student achievement, valuable information can still be gleaned. Becoming an organization that implements continuous improvement with fidelity is a difficult task (Park et al., 2013), but far from impossible. In participating in this walk with DoDEA, it has been clear that certain factors are crucial and applicable when systems consider change: a student-centered focus the organization can rally around; commitment by leaders to the change process; investment in organizational restructure; implementation of established models and practices; purposeful use of assessments and data for students and personnel; clear and consistent communication; use of collaboration; and devotion to the time, energy, and resources it takes to build capacity for a culture of improvement.

As education researchers and policy makers continue to wrestle with best practices and strategies for continuous improvement, we encourage further investigation of successful case studies. As noted by Valdez and colleagues (2019), "It is important for leaders to not just take specific actions, but also be intentional in why and how they are creating a learning environment together with school stakeholders" (p. 17). While research-practice partnerships can be helpful, the process is often oversimplified (Wentworth et al., 2017). To help strengthen the relationship between the research community and the practice community, Farley-Ripple and colleagues (2018) have provided a conceptual framework for rethinking the connections and exploring the gaps. Also, Redding and colleagues (2017) provide guidance for scaling continuous improvement practices by facilitating conditions and implementing appropriate supports. Continuous improvement strategies are effective only when coupled with sustained effort and attention to long-term goals. Even still, the fuel for that sustained effort often comes from celebration of short-term successes, and we encourage more sharing of such achievements.

REFERENCES

Bhuiyan, N., & Baghel, A. (2005). An overview of continuous improvement: From the past to the present. *Management Decision*, *43*(5), 761-771. Retrieved from https://doi.org/10.1108/00251740510597761

Brady, T. M. (2014). *Structuring for student achievement: DoDEA's vision for change*. Retrieved from https://www.dodea.edu/Restructuring/upload/StructuringForStudentAchievement.pdf

Brady, T. M. (2017). Director's update April 2017: *Advancing our priorities*. Retrieved from https://www.dodea.edu/upload/DirectorsUpdate2017_V4.pdf

Bryk, A. (2009). Support a science of performance improvement. *Phi Delta Kappan*, *90*(8), 597-600.

Coburn, C. E., & Penuel, W. R. (2016). Research–practice partnerships in education: Outcomes, dynamics, and open questions. *Educational Researcher, 45*(1), 48–54. https://doi.org/10.3102/0013189X16631750

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.

Dailey-Perkins, J., & Fulce, J. (2017). *DoDEA Educational Partnerships awards nearly $37 million in grants*. Alexandria, VA: Department of Defense Education Activity. Available at https://www.dodea.edu/newsroom/pressreleases/grantpartnership2017.cfm

Deming, W. E. (2000). *The new economics for industry, government, and education* (2nd ed.). Cambridge, MA: The MIT Press.

Department of Defense Education Activity. (n.d.). *DoDEA comprehensive assessment program*. Retrieved from https://www.dodea.edu/assessments/index.cfm

Department of Defense Education Activity. (2011). *CSP background report*. Retrieved from https://www.dodea.edu/CSP/upload/CSP-Background-Report.pdf

Department of Defense Education Activity. (2013). *Introduction to the DoDEA community strategic plan (CSP):* Volume I, school years 2013/14 -- 2017/18. Retrieved from https://www.dodea.edu/CSP/upload/CSP-Intro-Presentation.pdf

Department of Defense Education Activity. (2016). *Centers for Instructional Leadership*. Retrieved from https://www.dodea.edu/Restructuring/upload/CILsFactSheet.pdf

Department of Defense Education Activity. (2018a). *About DoDEA - DoDEA schools worldwide*. Retrieved from https://www.dodea.edu/aboutDoDEA/today.cfm

Department of Defense Education Activity. (2018b). *Blueprint for continuous improvement*. Retrieved from https://www.dodea.edu/Blueprint/

Dufour, R. DuFour, R., Eaker, R., & Many, T. (2006). *Learning by doing: A handbook for professional learning communities at work*. Thousand Oaks, CA: Corwin Press.

Farley-Ripple, E., May, H., Karpyn, A., Tilley, K., & McDonough, K. (2018). Rethinking Connections Between Research and Practice in Education: A Conceptual Framework. *Educational Researcher, 47*(4), 235–245. https://doi.org/10.3102/0013189X18761042

Forman, M., Stosich, E. L., & Bocala, C. (2017). *The internal coherence framework: Creating the conditions for continuous improvement in schools*. Cambridge. MA: Harvard Education Publishing Group.

Freeman, M. (2005). Constant comparative method. In S. Mathison (Ed.), *Encyclopedia of evaluation* (pp. 81-82). Thousand Oaks, CA: Sage Publications, Inc. https://dx.doi.org/10.4135/9781412950558.n101

Fullan, M. (2001). *Leading in a culture of change.* San Francisco, CA: Jossey-Bass.

Kirkpatrick, J. D., & Kirkpatrick, W. K. (2016). *Kirkpatrick's four levels of training evaluation*. Alexandria, VA: Association for Talent Development.

Langley, G. J., Moen, R. D., Nolan, K. M., Nolan, T. W., Norman, C. L., & Provost, L. P. (2009). *The improvement guide: A practical approach to enhancing organizational performance*. Hoboken, NJ: John Wiley & Sons.

Marzano, R. Waters, T., & McNulty, B. (2005). *School leadership that works: From research to results.* Alexandria, VA: Association for Supervision and Curriculum Development.

Molenda, M. (2003). In search of the elusive ADDIE model. *Performance improvement, 42*(5), 34-37. https://doi.org/10.1002/pfi.4930420508

Muhammad, A. (2009) *Transforming school culture: How to overcome staff division*. Bloomington, IN: Solution Tree Press.

Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.) Thousand Oaks, CA: Sage Publications, Inc.

Park, S., Hironaka, S., Carver, P., & Nordstrum, L. (2013). *Continuous Improvement in Education*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching.

Peurach, D. J. (2016). Innovating at the Nexus of Impact and Improvement: Leading Educational Improvement Networks. *Educational Researcher, 45*(7), 421–429. https://doi.org/10.3102/0013189X16670898

Redding, C., Cannata, M., & Taylor Haynes, K. (2017). With scale in mind: A continuous improvement model for implementation. *Peabody Journal of Education*, *92*(5), 589-608. https://doi.org/10.1080/0161956X.2017.1368635

Stigler, J., & Hiebert, J. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom*. New York, NY: Free Press.

Thessin, R. A. (2015). Learning from one urban school district: Planning to provide essential supports for teachers' work in professional learning communities. *Educational Planning*, *22*(1), 15-27.

Valdez, M., Foster, J. L., & Ikemoto, G. (2019). *What the research shows: Building ranks in action*. Reston, VA: National Association of Secondary School Principals.

Wentworth, L., Mazzeo, C., & Connolly, F. (2017). Research practice partnerships: A strategy for promoting evidence-based decision-making in education. *Educational Research*, *59*(2), 241-255. https://doi.org/10.1080/07391102.2017.1314108

Wright, R. K. (2002). *An assessment of the DoDEA Community Strategic Plan 2001–2006* [IDA Document D-2764]. Alexandria, VA: Institute for Defense Analyses. Available at https://apps.dtic.mil/dtic/tr/fulltext/u2/a414415.pdf

FUNDING

EXAMINING SECONDARY STUDENT ACHIEVEMENT IN LARGE AND SMALL HIGH SCHOOLS IN VIRGINIA

MICHAEL J. BROWN
Radford City Public Schools, Virginia

GLEN I. EARTHMAN
Virginia Polytechnic Institute and State University

ABSTRACT

The purpose of this study was to examine large and small high schools in Virginia to try to understand if the high school student population size influenced the student achievement of eleventh grade students based on identified predictor variables. From the literature review, the main research question, five guiding questions, and a methodology were developed that would best aid in the analysis of the data. Data were collected from the Virginia Department of Education for the 2012-2013 school year that consisted of eleventh grade Virginia Standards of Learning assessments, socioeconomic status, student attendance, minority population, and teacher quality. Hierarchical multiple regression was the statistical method used to analyze the data for the research questions.

The results of the study indicate there is a significant relationship between socioeconomic status, student attendance, minority status and student achievement. However, when student population size was introduced, the result for socio-economic status was not significant. The overall conclusion regarding socioeconomic status and student achievement is that the issue is not rooted in the size of a high school population, but in the school as a whole.

Overall, results of the study indicate that there is a relationship between a high school student population size and student achievement when statistically controlling for selected variables. From the data derived in this study, students in large high schools academically perform better than small high schools in Virginia when selected variables are controlled.

INTRODUCTION

The average number of school buildings per district has fallen in the United States since the 1940's (Lawrence, 2004, p. 41). Meanwhile, student population in the United States has increased steadily since 1985 and is projected to set new records every year from 2012 to 2021 (U.S. Census Bureau, 2010). The increase in student population since the 1940's has led to larger schools throughout the United States (Lawrence, 2004, p. 41). With an increase in student population size, educational administrators encounter numerous challenges in regards to providing optimal learning conditions and student achievement (Stewart, 2009, p. 20).

Educational administrators are tasked with planning for and facilitating appropriate means in which to ensure success for the students they serve (Brown, Finch, & MacGregor, 2012, p. 207). Students' academic achievement as it relates to the size of a school population has been debated and studied by scholars for a number of years. A review of relevant literature notes some of the benefits and detriments of school population size as it relates to student achievement, curriculum, and cost–

efficiency (Fowler & Walberg, 1991; Lee & Smith, 1997; Leithwood & Jantzi, 2009; Lindahl & Cain, Sr., 2012; Program Review & Investigations Committee, 2006; Roby, 2004; Stewart, 2009).

RESEARCH QUESTIONS

The main research question of this study consists of the following: What is the relationship between a high school student population size and student achievement when statistically controlling for selected variables? To examine the relationship that a high school student population may have with student achievement, the following research sub-questions were utilized to guide this study:

1. What is the relationship between high school student population size and student achievement as measured by student performance on the Virginia Standards of Learning (SOL) in English reading and writing, U.S. History, Chemistry, and Algebra II assessments when socioeconomic status, student attendance, minority population, and teacher quality are statistically controlled?

2. What is the relationship between high school student population size and student achievement as measured by student performance on the Virginia SOL English reading and writing, U.S. History, Chemistry, and Algebra II assessments when only socioeconomic status is statistically controlled?

3. What is the relationship between high school student population size and student achievement as measured by student performance on the Virginia SOL English ng and writing, U.S. History, Chemistry, and Algebra II assessments when only student attendance is statistically controlled?

4. What is the relationship between high school student population size and student achievement as measured by student performance on the Virginia SOL English reading and writing, U.S. History, Chemistry, and Algebra II assessments when only minority population is statistically controlled?

5. What is the relationship between high school student population size and student achievement as measured by student performance on the Virginia SOL English reading and writing, U.S. History, Chemistry, and Algebra II assessments when only teacher quality is statistically controlled?

SIGNIFICANCE OF THE STUDY

School divisions in Virginia face circumstances that are beyond their control, such as available land area upon which to build school facilities, year-to-year budget fluctuations, student population growth or decline, and changes to standardized testing requirements. Issues that are a constant concern for school divisions include student achievement and accountability. To assist school divisions and superintendents in the constant planning of improving student achievement, relevant data needs to be examined while extracting strategies that are based on sound research methodologies and results. This study helps school divisions in Virginia by providing data that may potentially assist them with formulating strategies in regards to student achievement and the optimal student population size of buildings based on local conditions.

POPULATION

The population for this study consists of formal organizations designated as public secondary high schools that are governed by rules and regulations specified by the Virginia Department of Education. For the 2012-2013 school year, there were 309 public secondary schools in Virginia. Of the 309 public secondary schools in Virginia, only 102 met the defined criteria of this study, which was size of school – 51 large high schools and 51 small high schools. Of the 102 schools identified for this study, 51 met the criteria for large high schools and 51 met the criteria for small high schools

The population for this study is further broken down into high schools that consist of large and small student populations. The largest high school in the study is T.C. Williams with 2,906 students). The smallest high school in the study is Kecoughtan with 1,868 students. The largest high school in the small high schools group is Washington & Lee with 473 students. The smallest high school in Conference 1 is Highland with 67 students.

DATA COLLECTION

All data for this study were obtained and collected from the Virginia Department of Education, either through the utilization of current online data or by e-mail request through appropriate personnel employed by the Virginia Department of Education. Student information came from the Virginia Department of Education statistics and reports, data for researchers, Fall Membership Report. The Fall Membership Report is submitted by local school divisions to the Virginia Department of Education on September 30 of each school year. The fall membership count is limited to one unduplicated active record per student that attends public schools that enroll students.

The variables for this study were broken down into segments (End-of-Course Reading and Writing, U.S. History, Chemistry, and Algebra II SOL assessments, student attendance, socioeconomic status, minority population, and highly qualified teachers) that included the 2012-2013 student cohort who were enrolled in the eleventh grade at the time data were collected.

Standards of Learning (SOL) assessment was defined as the minimum grade level and subject matter educational objectives, described as knowledge and skills necessary for success in school and for the preparation for life that students were expected to meet in Virginia public schools and specified by the Standards of Quality (Virginia Department of Education, 2005).

Student attendance was defined by the percentage of attendance that equaled the average daily attendance divided by the average daily membership for each of the identified large and small high schools in this study.

Socioeconomic status was defined as the percent of students who were eligible for any of the following services: free or reduced price meals, Temporary Assistance for Needy Families, Medicaid, or identified as either migrant or experiencing homelessness. For this study, socioeconomic status was used as a measure of economic advantage or disadvantage within a family structure. A student that received the above-mentioned services fell below the federal poverty guidelines and was considered economically disadvantaged (U.S. Department of Education, 2012).

Minority population was defined via the Federal Race Code, and designated the racial categories that most clearly reflected the student's recognition of his or her community or with which the student most closely identified (U.S. Department of Education, 2012).

Teacher quality was defined by using the criteria for a highly qualified teacher as set forth by the federal government. The federal government considered a teacher highly qualified who had obtained full state certification as a teacher or passed the state teacher-licensing exam, held a license to teach in the state; and did not have certification or licensure requirements waived on an emergency, temporary, or provisional basis. A highly qualified teacher held a minimum of a bachelor's degree and demonstrated subject matter competency in each of the academic subjects in which he or she taught in a manner determined by the state and in compliance with Section 9101(23) of No Child Left Behind (U.S. Department of Education, 2003).

All the data for this study were collected for each formal organization designated as public secondary high school that met the specified school criteria. The data were managed using a Microsoft Excel spreadsheet. All the data for this study were examined thoroughly after entering it into the Microsoft Excel spreadsheet to make sure that it was correct. Once the data were entered into the Microsoft Excel spreadsheet, it was separated into large and small schools. The data then were imported into the latest version of IBM SPSS, a statistical analysis software program. Once the data were entered into IBM SPSS, it was again examined to identify any outliers or other abnormalities that potentially could have affected the proper statistical analysis of the data set.

DATA PROCESSING

After verifying the data were complete and correct in IBM SPSS, a regression analysis was performed. The reason why a regression analysis was performed on the data set is that it was the statistical analysis that has been identified to find relationships among a set of variables. The specific type of regression analysis to be performed on the data set was sequential multiple regression with an alpha level set at 0.05. While regression analysis allowed examination of relationships, sequential multiple regression allowed a closer examination of the dependent variable and a predictor variable while statistically controlling for the effects of various other independent variables on the dependent variable

The first research question was addressed by performing a sequential multiple regression analysis. The sequential multiple regression analysis used the mean scaled scores for the End-of-Course Reading and Writing, U.S. History, Chemistry, and Algebra II assessments for eleventh grade students as the dependent variable and school population size as the primary predictor variable while statistically controlling for socioeconomic status, student attendance, minority population, and teacher quality.

The second research question was addressed by performing a sequential multiple regression analysis using the mean scaled scores for the End-of-Course Reading and Writing, U.S. History, Chemistry, and Algebra II assessments for eleventh grade students as the dependent variable and school population size as the primary predictor variable while only statistically controlling for socioeconomic status.

The third research question was addressed by performing a sequential multiple regression analysis using the mean scores for the End-of-Course Reading and Writing, U.S. History, Chemistry, and Algebra II assessments for eleventh grade students as the dependent variable and school

population size as the primary predictor variable while only statistically controlling for student attendance.

The fourth research question was addressed by performing a sequential multiple regression analysis using the mean scores for the End-of-Course Reading and Writing, U.S. History, Chemistry, and Algebra II assessments for eleventh grade students as the dependent variable and school population size as the primary predictor variable while only statistically controlling for minority population.

The fifth research question was addressed by performing a sequential multiple regression analysis using the mean scores for the End-of-Course Reading and Writing, U.S. History, Chemistry, and Algebra II assessments for eleventh grade students as the dependent variable and school population size as the primary predictor variable while only statistically controlling for teacher quality.

When the results were determined on the five research questions, further statistical analysis was performed, specifically collinearity analysis and diagnostics using IBM SPSS. The collinearity analysis and diagnostics using IBM SPSS was performed to test for multicollinearity. Multicollinearity had the possibility of existing when two or more predictor variables in a regression model were closely related. Additionally, it occurred when one variable was predicted from one or more of the other predictor variables. The purpose of a regression model was to test each predictor variable and analyze what effect it had on the dependent variable, and establish a ranking order to see which one had the most effect on the dependent variable. Collinearity statistics help sort out the variables predicting power and help reduce the issues found if redundant variables were present.

In order to examine student achievement properly, it was determined that all the Standards of Learning scores identified for the study (English reading and writing, U.S. History, Chemistry, and Algebra II) would be combined into a composite score. The composite score (coded as Total Score) for large high schools ranged from a minimum of 2054.78 to 2334.52 with a standard deviation of 59.74 (Table 4.1). Also presented in Table 4.1 were the scores for each of the Standards of Learning assessments identified for use in the study (coded as Reading, Writing, U.S. History, Chemistry, and Alg II). Although a composite score was used to gauge student achievement, the consideration of each Standard of Learning assessment identified for the study aided in the understanding of the composite score (Table 4.1).

The other variables that were examined as a part of the study included socioeconomic status, student attendance, student minority population, and teacher quality. Socioeconomic status (coded as SES) is the percentage of disadvantaged students, which ranged from 4.74% to 60.60% with a mean of 23.48% and a standard deviation of 13.86% (Table 4.1). Student attendance (coded as Attendance) is the percentage of attendance, which ranged from 88.43% to 97.03% with a mean of 94.44% with a standard deviation of 1.55% (Table 4.1). For the variable of minority population, it was determined to sum the entire minority population subgroups identified for this study with the result being the percent of minority students that would be used for the data analysis portion of the study. Minority population (coded as Minority) ranged from 18.20% to 82.98% with a mean of 51.47% and a standard deviation of 16.66% (Table 4.1). Teacher quality (coded as HQ Teacher) for this study ranged from 94.99% to 100% with a mean of 98.22% and a standard deviation of 1.69% (Table 4.1). The range of students that were in the eleventh grade during the 2012-2013 school year ranged from 378 to 798 with a mean of 549.46 with a standard deviation of 92.93 (Table 4.1).

Descriptive statistics were presented in this section for small high schools in Virginia for each of the variables used in this study. The total number of high schools in the data set that met the criteria for small high schools in Virginia was 51. Upon examination of the data, it was determined that one small high school was missing data for socioeconomic status and two small high schools were missing data for Algebra II scores. Since missing data could skew results when a data analysis was performed, those three small high schools were excluded from the study. The removal of three small high schools from the small high school data set brought the total of small high schools to 48.

The composite score (coded as Total Score) for small high schools ranged from a minimum of 2054.88 to 2326.55 with a mean score of 2158.62 and a standard deviation of 49.21 (Table 4.2). Also presented in Table 4.2 are the scores for each of the Standards of Learning assessments identified for use in the study (coded as Reading, Writing, U.S. History, Chemistry, and Alg II). Although a composite score was used to gauge student achievement, the consideration of each Standard of Learning assessment identified for the study aided in the understanding of the composite score (Table 4.2).

The other variables that were examined as a part of the study included socioeconomic status, student attendance, student minority population, and teacher quality. Socioeconomic status (coded as SES) is the percentage of disadvantaged students, which ranged from 14.29% to 68.33% with a mean of 46.89% and a standard deviation of 12.25% (Table 4.2). Student attendance (coded as Attendance) is the percentage of attendance, which ranged from 87.13% to 97.81% with a mean of 93.68% with a standard deviation of 1.95% (Table 4.2). For the variable of minority population, it was determined to sum the entire minority population subgroups identified for this study with the result being the percent minority that would be used for the data analysis portion of the study. Minority population (coded as Minority) ranged from 0% to 77.65% with a mean of 23.12% and a standard deviation of 23.82% (Table 4.2). Teacher quality (coded as HQ Teacher) for this study ranged from 84% to 100% with a mean of 96.84% and a standard deviation of 4.11% (Table 4.2). The range of students that were in the eleventh grade during the 2012-2013 school year ranged from 23 to 120 with a mean of 77.97 with a standard deviation of 25.18 (Table 4.2).

DATA ANALYSIS

For the data analyses portion of this study, hierarchical multiple regression were used to investigate the five research questions. In this study, two models were employed for each research question. In the first model, the predictor variable(s) were entered to determine if they had a significant effect on the dependent variable, which in this case was student achievement. In the second model for each research question, the predictor variable(s) were entered to gauge what, if any, effect each had on the dependent variable along with student population size. For this study, a level of 0.05 was used to test for significance.

Preliminary analyses were conducted via the correlation table (Table 4.3) to explore for potential relationships between the predictor variables and the dependent variable of student achievement. Two predictor variables were found to be significant. The results of the correlation analysis indicated that the predictor variables of socioeconomic status and student attendance were statistically correlated with the dependent variable of student achievement in this preliminary examination. The correlations between the predictor variables of socioeconomic status and student attendance and the dependent variable of student achievement ranged from moderately positive to

strongly negative $r = .325$, $p < .05$ to $r = -.588$, $p < .05$. Of the two-predictor variables that were found to be significant, socioeconomic status was found to be the best predictor of student achievement.

Preliminary analyses were conducted in each research question to ensure that no violations of the assumptions of normality, linearity, or homoscedasticity existed through the examination of Normal P-Plots and Scatterplots. A preliminary analysis was conducted to check for multicollinearity. This was accomplished through the examination of the correlation table (Table 4.3). Two predictor variables were found to be significantly correlated with each other. They were socioeconomic status and student attendance, which were moderately negative $r = -.422$, $p < .05$. Further analysis was conducted to determine if multicollinearity was a problem in each of the five research questions through the examination of the VIF and Tolerance results for each of the predictor variables.

Data Analyses for Research Question 1

What was the relationship between high school student population size and student achievement as measured by student performance on the Virginia Standards of Learning (SOL) in English reading and writing, U.S. History, Chemistry, and Algebra II assessments when socioeconomic status, student attendance, minority population, and teacher quality were statistically controlled?

Hierarchical multiple regression was performed to investigate the relationship between high school student population size and student achievement, after statistically controlling for socioeconomic status, student attendance, minority population, and teacher quality. Preliminary analyses were conducted to ensure that no violations of the assumptions of normality, linearity, or homoscedasticity existed. This was conducted by the creation of a Normal P-Plot and a Scatterplot. After examination of the Normal P-Plot and Scatterplot, no abnormalities were found. An analysis was also conducted to determine if multicollinearity was present. This was accomplished by examining the collinearity statistics located in the coefficients table (Table 4.4). Specifically, the VIF and Tolerance results were examined. The VIF results ranged from 1.02 to 3.33. VIF results greater than 10 start to indicate relatively high levels of multicollinearity. The results for Tolerance ranged from .981 to .300. A Tolerance result of .10 or lower indicates multicollinearity may be a problem. The results of collinearity statistics examination revealed that collinearity was not a problem for the regression models that were obtained.

In model one of the hierarchical multiple regression, all the predictor variables (socioeconomic status, student attendance, minority population, and teacher quality) were entered. This model was statistically significant $F (4, 93) = 15.52$; $p < .05$ and explained 40% of the variance in student achievement (Table 4.5). After entry of school size in model two, the total variance explained by the model as a whole was 41%. The overall F test for this model was significant ($F (5, 92) = 12.94$; $p < .05$) (Table 4.6). The introduction of school size did not add anything significant to the explanation of the variance in student achievement after controlling for the predictor variables (R^2 Change $= .013$; $F (1, 92) = 1.97$; $p > .05$) and was not significant (Table 4.5).

Data Analyses for Research Question 2

What was the relationship between high school student population size and student achievement as measured by student performance on the Virginia SOL English reading and writing, U.S. History, Chemistry, and Algebra II assessments when only socioeconomic status was statistically controlled?

Hierarchical multiple regression was performed to investigate the relationship between high school student population size and student achievement, after statistically controlling for socioeconomic status. Preliminary analyses were conducted to ensure that no violations of the assumptions of normality, linearity, or homoscedasticity existed. This was conducted by the creation of a Normal P-Plot and a Scatterplot. After examination of the Normal P-Plot and Scatterplot, no abnormalities were found. An analysis was conducted to determine if multicollinearity was present. This was accomplished by examining the collinearity statistics located in the coefficients table (Table 4.7). Specifically, the VIF and Tolerance results were examined. The VIF result was 1.81. VIF results greater than 10 start to indicate relatively high levels of multicollinearity. The result for Tolerance was .551. A Tolerance result of .10 or lower indicates multicollinearity may be a problem. The results of collinearity statistics examination revealed that collinearity was not a problem for the regression models that were obtained.

In model one of the hierarchical multiple regression, the predictor variable of socioeconomic status was entered. This model was statistically significant $F(1, 96) = 50.67$; $p < .05$ and explained 34% of the variance in student achievement (Table 4.8). After entry of school size in model two, the total variance explained by the model as a whole remained at 34%. The overall F test for this model was significant ($F(2, 95) = 25.24$; $p < .05$) (See Table 4.9). The introduction of school size did not add anything significant to the explanation of the variance in student achievement after controlling for socioeconomic status (R^2 Change = .002; $F(1, 95) = .229$; $p > .05$) and was not significant (Table 4.8).

Data Analyses for Research Question 3

What was the relationship between high school student population size and student achievement as measured by student performance on the Virginia SOL English reading and writing, U.S. History, Chemistry, and Algebra II assessments when only student attendance was statistically controlled?

Hierarchical multiple regression was performed to investigate the relationship between high school student population size and student achievement, after statistically controlling for student attendance. Preliminary analyses were conducted to ensure that no violations of the assumptions of normality, linearity, or homoscedasticity existed. This was conducted by the creation of a Normal P-Plot and a Scatterplot. After examination of the Normal P-Plot and Scatterplot, no abnormalities were found. An analysis was conducted to determine if multicollinearity was present. This was accomplished by examining the collinearity statistics located in the coefficients table (Table 4.10). Specifically, the VIF and Tolerance results were examined. The VIF result was 1.06. VIF results greater than 10 start to indicate relatively high levels of multicollinearity. The result for Tolerance was .942. A Tolerance result of .10 or lower indicates multicollinearity may be a problem. The results of collinearity statistics examination revealed that collinearity was not a problem for the regression models that were obtained.

In model one of the hierarchical multiple regression, the predictor variable of student attendance was entered. This model was statistically significant $F(1, 96) = 11.36$; $p < .05$ and explained 10% of the variance in student achievement (Table 4.11). After entry of school size in model two, the total variance explained by the model increased to 19%. The overall F test for this model was significant ($F(2, 95) = 11.33$; $p < .05$) (Table 4.12). The introduction of school size explained an additional 9% of the variance in student achievement after controlling for student attendance (R^2 Change = .087; $F(1, 95) = 10.20$; $p < .05$) and was significant (See Table 4.11).

Data Analyses for Research Question 4

What was the relationship between high school student population size and student achievement as measured by student performance on the Virginia SOL English reading and writing, U.S. History, Chemistry, and Algebra II assessments when only minority population was statistically controlled?

Hierarchical multiple regression was performed to investigate the relationship between high school student population size and student achievement, after statistically controlling for minority population. Preliminary analyses were conducted to ensure that no violations of the assumptions of normality, linearity, or homoscedasticity existed. This was conducted by the creation of a Normal P-Plot and a Scatterplot. After examination of the Normal P-Plot and Scatterplot, no abnormalities were found. An analysis was conducted to determine if multicollinearity was present. This was accomplished by examining the collinearity statistics located in the coefficients table (Table 4.13). Specifically, the VIF and Tolerance results were examined. The VIF result was 1.48. VIF results greater than 10 start to indicate relatively high levels of multicollinearity. The result for Tolerance was .672. A Tolerance result of .10 or lower indicates multicollinearity may be a problem. The results of collinearity statistics examination revealed that collinearity was not a problem for the regression models that were obtained.

In model one of the hierarchical multiple regression, the predictor variable of minority population was entered. This model was found not to be statistically significant $F(1, 96) = 1.51$; $p > .05$ and only explained 1% of the variance in student achievement (Table 4.14). After entry of school size in model two, the total variance explained by the model increased to 29%. The overall F test for this model was significant ($F(2, 95) = 20.16$; $p < .05$) (Table 4.15). The introduction of school size explained an additional 28% of the variance in student achievement after controlling for minority population (R^2 Change = .283; $F(1, 95) = 38.23$; $p < .05$) and was significant (Table 4.14).

Data Analyses for Research Question 5

What was the relationship between high school student population size and student achievement as measured by student performance on the Virginia SOL English reading and writing, U.S. History, Chemistry, and Algebra II assessments when only teacher quality was statistically controlled?

Hierarchical multiple regression was performed to investigate the relationship between high school student population size and student achievement after statistically controlling for teacher quality. Preliminary analyses were conducted to ensure that no violations of the assumptions of normality, linearity, or homoscedasticity existed. This was conducted by the creation of a Normal P-Plot and a Scatterplot. After examination of the Normal P-Plot and Scatterplot, no abnormalities were found. An analysis was conducted to determine if multicollinearity was present. This was accomplished by examining the collinearity statistics located in the coefficients table (Table 4.16). Specifically, the VIF and Tolerance results were examined. The VIF result was 1.05. VIF results greater than 10 start to indicate relatively high levels of multicollinearity. The result for Tolerance was .952. A Tolerance result of .10 or lower indicates multicollinearity may be a problem. The results of collinearity statistics examination revealed that collinearity was not a problem for the regression models that were obtained.

In model one of the hierarchical multiple regression, the predictor variable of teacher quality was entered. This model was found not to be statistically significant $F(1, 96) = 3.84$; $p > .05$

and only explained 3% of the variance in student achievement (Table 4.17). After entry of school size in model two, the total variance explained by the model increased to 14%. The overall F test for this model was significant (F (2, 95) = 8.18; p <.05) (Table 4.18). The introduction of school size explained an additional 11% of the variance in student achievement after controlling for teacher quality (R^2 Change = .109; F (1, 95) = 12.08; p < .05) and was significant (Table 4.17).

CONCLUSION

The answer to the main research question of is there a relationship between a high school student population size and student achievement when statistically controlling for selected variables, the answer is yes according to the data. Where high school student population size influenced student achievement the most was when the predictor variables of student attendance, minority population, and teacher quality were taken into account. Out of the four variables that were analyzed in the second model of the hierarchical multiple regression, only socioeconomic status was found not to have a relationship with high school population size and student achievement. However, it should be noted that even though no relationship existed between socioeconomic status, student achievement, and high school population size, it does not mean that it should be excluded from consideration.

DISCUSSION

In research question one, the predictor variables of socioeconomic status, student attendance, minority population, and teacher quality were included in the hierarchical multiple regression. In model one, when all of the variables were accounted for, the results indicated that there is a correlation amongst all the variables and student achievement and were found to be statistically significant F (4, 93) = 15.52; p < .05. In model two, when all of the predictor variables were accounted for, they were found not to have a relationship with high school population size and student achievement (Table 4.5). This finding corresponds with two studies that examined similar multiple variables when school size and student achievement are taken into account (Lamdin 1996; Lindahl & Cain, Sr., 2012).

Although no relationship existed in model two of research question one, when all of the predictor variables were accounted for between student achievement and high school population size, model one should not be discounted entirely. The reason why the results for research question one, model one should not be discounted is the fact that school leaders and administrators have to deal with socioeconomic status, student attendance, minority population, and teacher quality in some form or fashion on a daily basis, no matter the size of the school or school division. The fact that these predictor variables were correlated with student achievement is an indication that they are important and should be considered when school leaders and administrators are looking at ways to make overall improvements to their school divisions. For this reason, the predictor variables were separated out for research questions two through five to investigate the possibility that when student population size is factored in, the predictor variables individually may have a bearing on student achievement.

For research question two, socioeconomic status was examined to determine if a relationship existed between student achievement and school population size. The first model of the hierarchical multiple regression produced a significant result. This indicates that there is a relationship between socioeconomic status and student achievement. However, when student

population size was introduced in model two of the hierarchical multiple regression, the result was not significant. This finding is surprising, since a number of studies included in the literature review found that socioeconomic status was a predictor of student achievement when student population size were considered (Fowler & Walberg, 1991; Leithwood & Jantzi, 2009; Program Review & Investigations; Stewart, 2009; Werblow & Duesberry, 2009). A closer look at the results of research question two would indicate that while no relationship existed between socioeconomic status, student achievement, and high school population size, the data tell a different story. In model one of the hierarchical multiple regression, the result was significant $F (1, 96) = 50.67; p < .05$ (See Table 4.8). This indicates that a relationship does exist between socioeconomic status and student achievement. The overall inference in regards to socioeconomic status and student achievement is that the issue is not rooted in the size of a high school population, but in the overall school population as a whole. Ready (2010) stated that "… the least disputed conclusion to emerge from educational research over the past half-century is that socioeconomically disadvantaged children are less likely to experience school success" (p. 271).

In research question three, model two, a relationship was shown to exist between high school population size and student achievement after controlling for student attendance (Table 4.11). This implies that no matter the size of a high school student population, the more frequently and regularly students attend school, the better they will perform academically. The finding that there is a relationship between student attendance, high school population size, and student achievement are similar with studies performed by other researchers (Lamdin, 1996; Roby, 2004; Werblow & Duesbery 2009). The part of the data analysis that caused alarm was when the Beta levels in model two were examined. It revealed that smaller high schools have a lower rate of student achievement on the Virginia Standards of Learning assessments than large high schools. This finding is in contrast to meta-analysis performed by Leithwood and Jantzi (2009), which found in terms of truancy and attendance, smaller secondary schools fare better in terms of academics than larger secondary schools.

The reason why smaller high schools have a lower rate of student achievement on the Virginia Standards of Learning assessments could be a result of the small high school population size that was examined as part of this study. The size range for small high schools was between 473 students and 67 students. In addition, the percentage of small high schools socioeconomically disadvantaged student population was double that of large high schools (Large – $M = 23.48$ vs Small – $M = 46.89$). This could explain why students do not perform as well academically in smaller high schools in Virginia. What this indicates is those students that attend small high schools in Virginia are experiencing economic difficulties, and those difficulties are affecting student achievement. School leaders and administrators need to be aware of this and seek to put measures into place that address this problem.

In regards to research question four, model two, the data indicated that there is a relationship between high school population size and student achievement after controlling for the percentage of minority students. Overall, when the size of a high school student population, whether it *was* large or small, was taken into account, student achievement suffered when a school had a larger percentage of minority students. This finding is similar to the study conducted by Lamdin (1996). Lamdin (1996) concluded that schools with a larger minority enrollment would have lower mathematics scores (p. 160). Additionally, another similar finding was presented in the study commissioned by the Kentucky Legislative Research Commission (Program Review and Investigations Committee, 2006). In that study, when race was factored in and analyzed, the results indicated that minority

students did not do as well as Caucasian students on standardized assessments despite the student population size (Program Review and Investigations Committee, 2006).

In this study, large high schools in Virginia (M= 51.47) had a higher percentage of minority students than small high schools in Virginia (M= 23.12). In theory, it could be reasoned that small high schools in Virginia will have a higher percentage of student achievement when the percentage of minority population is taken into account. This is in contrast to Werblow and Duesbery (2009) who found that schools with both large and small student populations showed some gains in terms of student achievement (p.18-21).

In regards to minority population, school leaders and administrators cannot control the level of minority populations in their schools. What they can and do control is the way in which they strive to reach students despite their minority status. Minority students in school today tend to be economically disadvantaged.

The results for the fifth research question, model two, indicated that there is a relationship between high school student population size and student achievement when controlling for teacher quality (Table 4.17). This finding indicates that high schools in Virginia with student populations between 2,906 and 1,868 tend to have a higher percentage of highly qualified teachers and thus students perform better on the Virginia Standards of Learning assessments. This finding is supported by an observation of the Beta level performed in model two of the hierarchical multiple regression for teacher quality (β = -.388, p < .05). This finding is also similar to Lindahl and Cain, Sr. (2012) results. In their study, Lindahl and Cain, Sr. (2012) found that as the size of the high school population increased, so did the scores on both the reading and math assessments examined in their study when teacher quality was taken into account (p.10).

In addition, a further indication of the Beta level reveals that as the size of the high school student population decreases when controlling for teacher quality, student achievement on the Virginia Standards of Learning assessments decreases. Essentially, what this observation indicates is that there is a probability that in smaller high schools in Virginia, teacher quality is not equivalent to larger high schools. Most small schools in Virginia are located in rural areas that for the most part struggle to recruit and retain highly qualified teachers. The reasons for this are varied, but one could speculate that in rural school divisions, the salary scales are not equal to larger schools divisions. From data derived in this study, students in large high schools do perform academically better than students in small high schools in Virginia.

REFERENCES

Brown, P. D., Finch, K. S., & MacGregor, C. (2012). A comparison of learning cultures in different sizes and types. *US-China Education Review A: Education Practice, 2(2)*, 206-222

Fowler, W. J., & Walberg, H. J. (1991). School size, characteristics, and outcomes. *Educational Evaluation and Policy Analysis*, *13*(2), 189-202. Retrieved from http://www.jstor.org.ez-proxy.lib.vt.edu:8080/stable/pdfplus/1164583.pdf?acceptTC=true

Lamdin, D. J. (1996). Evidence of student attendance as an independent variable in education production functions. *The Journal of Educational Research*, *89*(3), 155-162.

Lawrence, B. K. (2004). For authentic accountability think small. *Journal Of Education, 185*(3), 41-50.

Lee, V. E., & Smith, J. B. (1997). High school size: Which works best and for whom. *Education-al Evaluation and Policy Analysis*, *19*(3), 205-227. Retrieved from http://www.jstor.org.ezproxy.lib.vt.edu:8080/stable/pdfplus/1164463.pdf?acceptTC=true&acceptTC=true&jp-dConfirm=true

Leithwood, K., & Jantzi, D. (2009). A review of empirical evidence about school size effects: A policy perspective. *Review of Educational Research, 79(1),* 464-490.
doi: 10.3102/0034654308326158

Lindahl, R. A., & Cain, Sr., P. M. (2012). A study of school size among Alabama's public high schools. *International Journal of Education Policy & Leadership*, *7*(1), 1-27.

Program Review and Investigations Committee. (2006). *School size and student outcomes in Ken-tucky's public schools* (Research Report No. 334). Retrieved from Legislative Research Commission website: http://www.lrc.ky.gov/lrcpubs/RR334.pdf

Ready, D. D. (2010). Socioeconomic disadvantage, school attendance, and early cognitive develop-ment the differential effects of school exposure. *Sociology of Education*, *83*(4), 271-286.

Roby, D. (2004). Research on school attendance and student achievement: A study of Ohio Schools. *Educational Research Quarterly, 28.1*, 3-14.

Stewart, L. (2009). Achievement differences between large and small schools in Texas. *The Rural Educator, 30(2),* 20-28. Retrieved from http://web.ebscohost.com.ezproxy.lib.vt.edu:8080/ehost/pdfviewer/pdfviewer?sid=33b37d9a-c9fd-4f34-91aa-85bb2ecb3025@session-mgr104&vid=9&hid=125

U.S. Census Bureau. (2010). [Virginia-2010 census results total population by county].
Retrieved from website: http://www.census.gov/geo/maps-data/maps/pdfs/2010pop/va_totalpop_2010map.pdf

U.S. Department of Education. Institute of Education Sciences, National Center for Education Sta-tistics. (2012). *Digest of education statistics:2011* (NCES 2012-001). Retrieved from web-site: http://nces.ed.gov/programs/digest/d11/ch_2.asp

U.S. Department of Education. U.S. Department of Education, Office of Vocational and Adult Edu-cation. (2003). *From there to here: The road to reform of American high schools*. Retrieved from U.S. Department of Education, Office of Vocational and Adult Education website: http://www2.ed.gov/about/offices/list/ovae/pi/hsinit

Virginia Department of Education. (2005). *Nine out of 10 Virginia schools now fully accredited: Two percent of schools to 92 percent in 8 years* [Press release]. Retrieved from Division of Policy and Communications
website: http://www.pen.k12.va.us/VDOE/NewHome/pressreleases/2005/oct25.html

Werblow, J., & Duesbery, L. (2009). The impact of high school size on math achievement and dropout rate. *The High School Journal, 92(3),* 14-23. Retrieved from http://web.ebscohost.com.ezproxy.lib.vt.edu:8080/ehost/pdfviewer/pdfviewer?sid=33b37d9a-c9fd-4f34-91aa-85bb2ecb3025@sessionmgr104&vid=11&hid=125

APPENDICES

Table 4.1

Descriptive statistics for large high schools in Virginia for male and female students in the eleventh grade along with all variables used in study.

Coded As	N	Minimum	Maximum	Mean	Std. Deviation
Total Score	50	2054.78	2334.52	2201.1050	59.74209
Reading	50	423.16	467.43	446.8704	9.99259
Writing	50	407.96	507.58	469.4276	22.17709
U.S. History	50	416.45	491.87	452.6428	15.97711
Chemistry	50	392.33	471.19	424.5052	18.57789
Alg II	50	359.37	437.48	407.6590	15.77058
SES	50	4.74	60.60	23.4802	13.86239
Attendance	50	88.43	97.03	94.5558	1.55760
Minority	50	18.20	82.98	51.4716	16.66726
HQ Teacher	50	94.99	100.00	98.2288	1.69807
All Students G-11	50	378.0	798.0	549.460	92.9306

a. Lg_1 _Sm_2 =1.0

Table 4.2

Descriptive statistics for small high schools in Virginia for male and female students in the eleventh grade along with all variables used in study

Descriptive Statistics

Coded As	N	Minimum	Maximum	Mean	Std. Deviation
Total Score	48	2054.88	2326.55	2158.6254	49.21666
Reading	48	412.09	469.42	433.7350	10.45427
Writing	48	388.75	491.00	446.0190	18.48310
U.S. History	48	399.56	486.94	438.9438	16.46570
Chemistry	48	405.29	469.96	436.3098	18.04803
Alg II	48	345.35	447.67	403.6179	24.08975
SES	48	14.29	68.33	46.8917	12.25975
Attendance	48	87.13	97.81	93.6889	1.95221
Minority	48	.00	77.65	23.1233	23.82642
HQ Teacher	48	84.00	100.00	96.8452	4.11286
Total_Students_Eleventh_ Grade	48	23.0	120.0	77.979	25.1823

a. Lg_1 _Sm_2 = 2.0

Table 4.3

Correlations Between all Variables

		Total_Score	SES	Attendance	Minority	HQ Teacher
Total_Score	Pearson Correlation	1	-.588**	.325**	-.125	.196
	Sig. (2-tailed)		.000	.001	.222	.053
	N	98	98	98	98	98
SES	Pearson Correlation	-.588**	1	-.442**	-.123	-.187
	Sig. (2-tailed)	.000		.000	.226	.065
	N	98	98	98	98	98
Attendance	Pearson Correlation	.325**	-.442**	1	-.004	-.130
	Sig. (2-tailed)	.001	.000		.968	.203
	N	98	98	98	98	98
Minority	Pearson Correlation	-.125	-.123	-.004	1	.039
	Sig. (2-tailed)	.222	.226	.968		.700
	N	98	98	98	98	98
HQ Teacher	Pearson Correlation	.196	-.187	-.130	.039	1
	Sig. (2-tailed)	.053	.065	.203	.700	
	N	98	98	98	98	98

**. Correlation is significant at the 0.01 level (2-tailed).
Total Score = Student Achievement, SES = Socioeconomic Status, Attendance = Student Attendance, Minority = Minority Population, HQ Teacher= Teacher Quality

Table 4.4

Analysis using the coefficients table to check for collinearity between high school student population size and student achievement, after statistically controlling for socioeconomic status, student attendance, minority population, and teacher quality

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1758.655	356.813		4.929	.000		
	SES	-1.827	.313	-.548	-5.830	.000	.731	1.368
	Attendance	3.164	2.997	.098	1.056	.294	.755	1.324
	Minority	-.462	.191	-.196	-2.419	.017	.981	1.020
	HQ Teacher	2.102	1.550	.114	1.356	.178	.909	1.100
2	(Constant)	1814.875	357.211		5.081	.000		
	SES	-1.419	.426	-.425	-3.328	.001	.391	2.558
	Attendance	3.226	2.982	.099	1.082	.282	.755	1.325
	Minority	-.702	.255	-.298	-2.748	.007	.543	1.841
	HQ Teacher	1.777	1.559	.097	1.140	.257	.889	1.125
	Lg_1_Sm_2	-23.902	17.017	-.205	-1.405	.164	.300	3.338

a. Dependent Variable: Total_Score

Table 4.5

Model Summary of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for all predictor variables.
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.633[a]	.400	.375	46.32928	.400	15.527	4	93	.000
2	.643[b]	.413	.381	46.08882	.013	1.973	1	92	.164

a. Predictors: (Constant), HQ Teacher, Minority, Attendance, SES
b. Predictors: (Constant), HQ Teacher, Minority, Attendance, SES, Lg_1 _Sm_2
c. Dependent Variable: Total_Score

Table 4.6

ANOVA of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for all predictor variables.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133310.709	4	33327.677	15.527	.000[b]
	Residual	199615.385	93	2146.402		
	Total	332926.094	97			
2	Regression	137501.609	5	27500.322	12.946	.000[c]
	Residual	195424.485	92	2124.179		
	Total	332926.094	97			

a. Dependent Variable: Total_Score
b. Predictors: (Constant), HQ Teacher, Minority, Attendance, SES
c. Predictors: (Constant), HQ Teacher, Minority, Attendance, SES, Lg_1 _Sm_2

Table 4.7

Analysis using the coefficients table to check for collinearity between high school student population size and student achievement, after statistically controlling for socioeconomic status
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2248.839	10.764		208.921	.000		
	SES	-1.961	.276	-.588	-7.119	.000	1.000	1.000
2	(Constant)	2243.728	15.190		147.714	.000		
	SES	-2.081	.373	-.624	-5.584	.000	.551	1.814
	Lg_1 _Sm_2	6.235	13.021	.053	.479	.633	.551	1.814

a. Dependent Variable: Total_Score

Table 4.8

Model Summary of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for socioeconomic status
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.588[a]	.345	.339	47.64256	.345	50.676	1	96	.000
2	.589[b]	.347	.333	47.83495	.002	.229	1	95	.633

a. Predictors: (Constant), SES
b. Predictors: (Constant), SES, Lg_1_Sm_2

Table 4.9

ANOVA of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for socioeconomic status
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115024.007	1	115024.007	50.676	.000[b]
	Residual	217902.087	96	2269.813		
	Total	332926.094	97			
2	Regression	115548.782	2	57774.391	25.249	.000[c]
	Residual	217377.312	95	2288.182		
	Total	332926.094	97			

a. Dependent Variable: Total_Score
b. Predictors: (Constant), SES
c. Predictors: (Constant), SES, Lg_1 _Sm_2

Table 4.10

Analysis using the coefficients table to check for collinearity between high school student population size and student achievement, after statistically controlling for student attendance
Coefficients

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	1186.734	294.731		4.027	.000		
	Attendance	10.555	3.130	.325	3.372	.001	1.000	1.000
2	(Constant)	1462.965	294.512		4.967	.000		
	Attendance	8.181	3.081	.252	2.655	.009	.942	1.062
	Lg_1 _Sm_2	-35.388	11.076	-.304	-3.195	.002	.942	1.062

a. Dependent Variable: Total_Score

Table 4.11

Model Summary of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for student attendance
Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.325[a]	.106	.097	55.68468	.106	11.368	1	96	.001
2	.439[b]	.193	.176	53.19188	.087	10.209	1	95	.002

a. Predictors: (Constant), Attendance
b. Predictors: (Constant), Attendance, Lg_1 _Sm_2
c. Dependent Variable: Total_Score

Table 4.12

ANOVA of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for student attendance.
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35250.918	1	35250.918	11.368	.001[b]
	Residual	297675.175	96	3100.783		
	Total	332926.094	97			
2	Regression	64135.355	2	32067.678	11.334	.000[c]
	Residual	268790.738	95	2829.376		
	Total	332926.094	97			

a. Dependent Variable: Total_Score
b. Predictors: (Constant), Attendance
c. Predictors: (Constant), Attendance, Lg_1 _Sm_2

Table 4.13

Analysis using the coefficients table to check for collinearity between high school student population size and student achievement, after statistically controlling for minority population
Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	2191.330	10.736		204.109	.000		
	Minority	-.293	.239	-.125	-1.230	.222	1.000	1.000
2	(Constant)	2336.872	25.239		92.590	.000		
	Minority	-1.169	.247	-.496	-4.730	.000	.672	1.488
	Lg_1 _Sm_2	-75.611	12.227	-.648	-6.184	.000	.672	1.488

a. Dependent Variable: Total_Score

Table 4.14

Model Summary of Sequential Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for minority population
Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.125[a]	.016	.005	58.43091	.016	1.513	1	96	.222
2	.546[b]	.298	.283	49.59791	.283	38.239	1	95	.000

a. Predictors: (Constant), Minority
b. Predictors: (Constant), Minority, Lg_1 _Sm_2
c. Dependent Variable: Total_Score

Table 4.15

ANOVA of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for minority population.
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5165.697	1	5165.697	1.513	.222[b]
	Residual	327760.396	96	3414.171		
	Total	332926.094	97			
2	Regression	99230.603	2	49615.301	20.169	.000[c]
	Residual	233695.491	95	2459.953		
	Total	332926.094	97			

a. Dependent Variable: Total_Score
b. Predictors: (Constant), Minority
c. Predictors: (Constant), Minority, Lg_1 _Sm_2

Table 4.16

Analysis using the coefficients table to check for collinearity between high school student population size and student achievement, after statistically controlling for teacher quality
Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	1828.135	179.744		10.171	.000		
	HQ Teacher	3.610	1.842	.196	1.960	.053	1.000	1.000
2	(Constant)	2019.108	178.829		11.291	.000		
	HQ Teacher	2.253	1.787	.122	1.261	.210	.952	1.050
	Lg_1 _Sm_2	-39.362	11.321	-.338	-3.477	.001	.952	1.050

a. Dependent Variable: Total_Score

Table 4.17

Model Summary of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for teacher quality

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.196[a]	.038	.028	57.74518	.038	3.843	1	96	.053
2	.383[b]	.147	.129	54.67406	.109	12.088	1	95	.001

a. Predictors: (Constant), HQ Teacher
b. Predictors: (Constant), HQ Teacher, Lg_1 _Sm_2
c. Dependent Variable: Total_Score

Table 4.18

ANOVA of Hierarchical Multiple Regression to investigate what is the relationship between a high school student population size and student achievement, after statistically controlling for teacher quality

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12813.534	1	12813.534	3.843	.053[b]
	Residual	320112.560	96	3334.506		
	Total	332926.094	97			
2	Regression	48947.082	2	24473.541	8.187	.001[c]
	Residual	283979.012	95	2989.253		
	Total	332926.094	97			

a. Dependent Variable: Total_Score
b. Predictors: (Constant), HQ Teacher
c. Predictors: (Constant), HQ Teacher, Lg_1 _Sm_2

EDUCATIONAL CHALLENGES OF SYRIAN REFUGEES IN TURKEY: THROUGH THE LENSES OF COMPLEX ADAPTIVE LEADERSHIP THEORY

HAMIT OZEN
Eskisehir Osmangazi University

ABSTRACT

This study evaluates the effectivity of school management according to the perceptions of Turkish school principals of Syrian refugee students through the lenses of complex adaptive leadership, which was conceptualized from complexity theory and complex adaptive leadership. This was qualitative research designed as a phenomenological study. The participants of the study were identified via a snowball sampling strategy. Nineteen school principals working at public schools in Turkey during the summer term of 2016-2017 and the fall term of 2017-2018 were selected as the participants. Data were collected using the interview technique and descriptive analysis was employed. The results showed that school principals commented on resource management, risk, decision making, and planning and control when functioning as managerial leaders. Secondly, they touched on network dynamics, change and innovation, and safe schools in terms of their adaptive leadership skills. Lastly, they pointed out interaction, win-win interdependency, and ethical values of enabling leadership. Overall, it was found that the structure of the Turkish Ministry of National Education is strictly centralized, and complex adaptive leadership does not function properly in this context. However, school principals do make ceaseless efforts to meet the educational and humanitarian needs of Syrian refugees.

INTRODUCTION

There are more people displaced by crises in the world now than at any point in time since World War II (UNHCR, 2016a). As of the end of 2016, 65.6 million people were forcibly displaced by conflicts nationally and internationally; this represents an increase of 3.3 million refugees since 2015 and is the equivalent of one person displaced every second. The ongoing crisis in Syria, which has been the deadliest in the Middle East, has taken a toll of millions of lives, with its effects reverberating around the globe. The Syrian Civil War has also created an educational crisis for Syrians in the Middle East and it is estimated that 380,000 Syrian refugee children are not receiving education (UNHCR, 2017). A generation of Syrian children is thus at risk of missing out on a formal education. The future of Syrian children, as well as the stability and prosperity of the region, will depend on ensuring that school-age children receive the education they need, which must take into account the circumstances that they face. These circumstances result in the lack of education, development of critical thinking skills, and opportunities that result from education, which could also make more youth vulnerable to recruitment to radical groups (Culbertson & Constant, 2015).

However, there are fruitful approaches to address the lack of learning spaces and lack of access to education in host nations of Syrian refugees. In Turkey, the Ministry of National Education (MoNE) imposed a plan for the education of Syrian refugee children, providing formal and informal education for a great number of at-risk out-of-school refugees by establishing Education in Emergencies and Migration Units. The MoNE has taken over the Student Education Management

Information System for Foreign Students to track the enrollment and learning achievements of Syrian students in order to promote evidence-based, prioritized programming. Although the lack of learning spaces remains a challenge, 574 classroom containers were erected. Turkey has also exerted efforts to widen tertiary education opportunities for youth through increased numbers of scholarships, strengthened partnerships, and the establishing and reinvigorating of coordination among relevant stakeholders. Protection was consistently mainstreamed in educational activities through several interventions such as Reaching All Children with Education (RACE), which has a strong focus on reaching out to children with special needs, enhancing protective environments, and developing a child protection policy in schools (UNHCR, 2016a). Conditional cash transfers for education building on the existing national system are also under development to ensure the attendance of children from vulnerable refugee families and other vulnerable children with a special focus on children with disabilities. Unfortunately, a lack of qualified teachers and non-payment of teachers has affected the program implementation. The Turkish government has advocated for the regular payment of teachers and has provided incentives in Turkey. Almost 13,000 Syrian volunteer teachers received regular incentives as of December 2016 (UNHCR, 2016b). Additionally, the lack of relevant curricula, programs, and teacher training to help refugee children become proficient in the Turkish language causes both academic and social problems and leaves the children unable to fully comprehend their classes. They may be become less engaged and learn less in school. Researchers (UNHCR, 2016a) claim that Turkish politicians have exerted efforts to educate refugee children. However, these efforts were made in a haphazard manner, lacking any stable system that pays attention to problems of psychology, language, culture, shelter, food supply, and education. In short, the problems that refugees face are not a matter of quantity but a matter of quality.

The management of the schools in which Syrian refugee students are educated has been an important issue in Turkey because the influx of Syrian refugees has created extra challenges. The number of Syrian children was 527,860 in 2016 but it rose to 608,084 in 2018 (MoNE, 2018). There are two schooling systems for Syrian refugees in Turkey. The first one comprises temporary education centers, where an adapted Syrian curriculum is taught. Staff and directors are under the supervision of official Turkish principals. The second one comprises public schools, which are called integrated schools. These schools teach both Syrian and Turkish students. Syrian students are enrolled only if they have a sufficient mastery of Turkish language skills (Arar, Örücü, & Ak Küçükçayır, 2018).

Previous studies on refugee education have usually employed general descriptive surveys or qualitative research to draw a general picture of the phenomena. Many researchers in the field see the dearth of theory-informed research and practice as a grave concern. This concern keeps us aware that a theoretical viewpoint is paramount for seeing phenomena from different perspectives. I have tried to fill this gap in the literature because there is a lack of empirical studies in the field regarding the leadership skills of the principals of Syrian refugees' schools as seen through theoretical lenses to understand their educational challenges.

In this paper, I aim to explore the perceptions of school principals who have enrolled Syrian refugee students to meet the educational and social needs and general situations of refugees because the growing exodus caused by political turmoil greatly affects children and their educational life. Thus, I also intend to understand the school principals' behaviors as they approach the issues they face at school through complex adaptive leadership (CAL) theory (Lichtenstein & Plowman, 2009). My focus will be on analyzing social phenomena through the lenses of CAL by employing a

qualitative research method because complexity suggests that growth and change in organizations are non-linear, iterative, and recursive (Obolensky, 2010; Uhl-Bien, Marion, & McKelvey, 2007).

THEORETICAL FRAMEWORK

The concept of management is developing day by day, including the ontological part of human experience. Leadership models of the last century are the products of top-down, bureaucratic paradigms. These models are eminently effective for an economy centered on physical production, but they are not well suited for more knowledge-oriented economies, which run completely via complex systems. Complexity science suggests a different paradigm for leadership that frames it as a complex interactive dynamic (Marion & Uhl-Bien, 2001; Obolensky, 2010; Schneider & Somers, 2006; Uhl-Bien, Marion, & McKelvey, 2007). The paradigm of CAL was employed for this study (Uhl-Bien, Marion, & McKelvey, 2007), as it was considered that CAL was a leadership approach well suited for complex and chaotic times. I will now expand on the elements of CAL, beginning with managerial leadership and then moving into the adaptive and enabling roles.

Managerial Leadership

Managerial leadership explains the actions of people in their managerial roles to plan, control, and coordinate organizational activities. Managerial leaders organize tasks, take part in planning, build vision and mission, acquire resources to reach the goals of an organization, manage crises and risks, and make decisions. Managerial leaders as described by CAL take for granted the exercising of authority and skills with consideration of the organization's needs for creativity, learning, and adaptability for actions that can have serious impacts on resource management, risk management, decision making, planning, and control (Uhl-Bien, Marion, & McKelvey, 2007).

Adaptive Leadership

Schools today are open to all kinds of influences and are complex organizations for which internal and external factors need to be considered. Adaptive leaders do not just make changes; they carefully recognize potential changes in the external environment and consider the best path that will positively affect the organization. Adaptive leadership involves changing behaviors in appropriate ways as situations change. CAL describes the conditions in which adaptive dynamics emerge and generate creative and adaptive knowledge with sufficient significance and impact to create change, letting leaders emerge naturally within the context (Uhl-Bien, Marion, & McKelvey, 2007). School principals as adaptive leaders are not acting as individuals, but rather as a dynamic of interdependent agents in the complex adaptive system of the school. To exhibit significance and impact, adaptive leadership must be embedded in an appropriately structured, neural-like network of complex adaptive systems and agents and exhibit significance and impact that generate change in the social system. Adaptive leadership has three dimensions: network dynamics, change and innovation, and crisis management (Uhl-Bien, Marion, & McKelvey, 2007).

Enabling Leadership

The role of enabling leadership in CAL is to prepare a context that catalyzes adaptive leadership and allows for the emergence of CAL. The functions are to enable effective complex adaptive systems dynamics by fostering conditions that catalyze adaptive leadership and allow for

its emergence and manage the entanglement between managerial and adaptive leadership, which includes managing the organizational conditions in which adaptive leadership exists, and also by helping to disseminate innovative products of adaptive leadership upwards and through the formal managerial system (Uhl-Bien, Marion, & McKelvey, 2007). Enabling leadership means to catalyze CAL leadership, which depends on an interactive relationship, interdependent context (Uhl-Bien, Marion, & McKelvey, 2007), and ethical leadership behaviors. The facets of enabling leadership are interaction, which creates effective networks in organizations, and interdependency, which derives from emergent conflicting constraints in its domain. The third facet comprises the ethical values of CAL, related to leadership and valuing creative consciousness in organizational life.

RESEARCH QUESTIONS

This is a qualitative study, conducted by a semi-structured interview technique, that focuses on the CAL perceptions of school principals who have registered Syrian refugee students in their schools. For this aim, qualitative, open-ended, semi-structured interview forms were used. The interviews were guided by an interview schedule, which included set questions and prompts. The research questions included the following:

What kinds of managerial skills do school principals employ for Syrian refugee students?
How do school principals manage the resources?
What risks do school principals confront?
What dynamics do school principals exert their managerial functions?
How do school principals control their plan?
What kind of adaptive skills do school principals employ for Syrian refugee students?
What are the interdependence mechanisms?
What do school principals think about change and innovation in the educational settings of Syrian refugees?
What kind of enabling skills do school principals employ for Syrian refugee students?
How do school principals establish interaction with Syrian refugees?

SIGNIFICANCE OF THE STUDY

The research findings will help schools identify, approach, and overcome the problems of their students and partners in a turbulent environment, especially those schools that educate refugees. Furthermore, the research will guide school principals and schools in complex environments to understand the skills needed to communicate and lead successfully as CAL. This study will provide outcomes that will help school principals to effectively challenge the conflicts in the complexity of a school ethos. This study will foster complex adaptive school principals to develop and strengthen the skills needed to comprehend the tenets of CAL and complex adaptive systems to manage their schools, adapt to a changing world, and enable their partners to behave according to complexity theory. Most importantly, the study will add significantly to the knowledge of complexity theory and CAL, and its practice, which may be the first such study in an educational setting.

METHODOLOGY

Research Method

I used a qualitative research paradigm. This methodological perspective is intended to study the perceptions of humans and the meanings that people construct in real settings. I employed phenomenology as a method for this research. Phenomenology could be defined as a theoretical point of view advocating the study of individuals' experiences because human behavior is explained by the phenomena of experiences rather than an objective, physically described reality that is external to the individual (Creswell, 2012).

This method was suitable because this research sought to understand the meaning of the school principals' experiences as leaders of both Turkish and Syrian refugee students. Secondly, phenomenology focuses on individuals' interpretation of their past and present experiences (Creswell, 2012). Finally, the researcher is inclined to let school principals interpret their own experiences through the lenses of CAL theory. I employed descriptive analysis, which has certain tasks that must be accomplished before an in-depth analysis. Coding of the transcribed data is an initial step. Afterwards, I derived the codes and themes from the elements of the theory using descriptive analysis.

There are some steps involved in collecting and analyzing data. One of them is epoche, where the researcher must refrain from judgement. The second step is phenomenological reduction, for which text descriptions were used to mine the meaning and the core of the school principals' experiences. Elaboration was performed using verbatim reports of what was lived, experienced, and perceived. Third, imaginative variation explained the important bases of the phenomena. While performing the study, I developed proposed conceptual meanings for the research gathered during this part. Fourth, I defined codes and themes that defined the emerging phenomena. Finally, aggregation was done with texting and structural explanations to clarify the phenomena.

Data Collection

I employed interviews to gather the data, asking one or more participants general, open-ended questions and recording their answers (Creswell, 2012). First, I conducted face-to-face interviews with open-ended questions in this study. The second avenue for collecting data was Skype interviews, if it was not possible to meet people face-to-face or if participants were geographically dispersed and unable to come to a meeting point for interviews (Creswell, 2012). The interview questions were developed based on themes that emerged from the CAL paradigm (Uhl-Bien, Marion, & McKelvey, 2007). A total of twenty-three interviews were conducted with school principals. Four of them were used for the pilot study. The data collection began in September and ended in December of 2017. All the interviews were tape-recorded and took from 40 minutes to 75 minutes.

Sample

The sample was intended to employ a purposeful criterion with snowball sampling to identify the research participants. Samples that are small and purposeful allow researchers to explain phenomena more deeply (Creswell, 2012). As I planned to understand the issues of a distinct group of school principals, criterion sampling was appropriate. The criterion for the research was that each school principal must work in a school that enrolled Syrian refugee students. Next, I employed snowball sampling (Creswell, 2012). Various school principals, mainly friends and colleagues, were contacted in order to locate potential participants to begin the sampling process. Initially, two

individuals were chosen on the assumption that this would provide a strong base to work from. Once individuals who met the criterion had been located and interviewed, they were asked if they knew of anyone else who might be willing to participate; those leads were then followed. Interviews were planned with 29 school principals. Six school principals declined the interview, declaring that they did not have the authority to talk. Of the 23 participants, 3 were female and 20 were male. There were 4 English, 11 religious culture, 3 technical, 2 mathematics, 1 class, and 2 preschool teachers. The participants had 9-28 years of teaching experience and had worked at least 4 years in their present schools. Their age range was from 27 to 56 years.

Triangulation, Reliability, and Credibility

Data analysis was triangulated via member control, coding, and using CAL theory. Member control is a process that requires feedback from participants to gather validation (Creswell, 2012). Reliability in qualitative research refers to the absence of random error so that if the research is repeated researchers will arrive at the same findings. Reliability involves transparency and replication (Pius, 2015). The study required the demonstration of transparency by documenting and referencing the qualitative study's research database (Creswell, 2012), in order to support the arguments for the reliability of the study findings. In addition, I made reference to existing research databases to obtain consistency in the study results and to confirm that the appropriate theory was utilized to guide the study. Construct reliability was employed to obtain the accuracy and dependability of the data collected. Furthermore, this study utilized peer collaboration to verify data. A peer examiner not only questions the analysis of data but also critiques the methodology, approach, and process (Creswell, 2012). Peer consultation terms were employed while data were analyzed. Recording interviews is a reliable method. In addition, in this study, transcripts were available to be checked by both the researcher and the participants to enable them to articulate their views about the position of the phenomenon being studied. The procedures of documentation enhanced the transparency on how the research was developed. Results or findings of the study were shared and reviewed together with the participants, allowing for accuracy, reliability, and credibility of the findings in the study (Creswell, 2012).

FINDINGS AND DISCUSSION

Managerial Leadership

The principals were asked about their managerial functions. Questions aimed to predict how school principals managed their schools by exercising managerial functions. Four sub-themes were obtained: mapping, analyzing, and supplying the needs; risk; dynamics; and planning and control.

Mapping, analyzing, and supplying the needs

Resource management is an important step for CAL. Principal No. 5 (P5) realized that the big picture looked bad. He first started to map the educational needs, but he was discouraged because the needs of the Syrian refugees were greater than he thought. The refugees needed food, clothing, doctors, and medicine. He dejectedly stated:

> In the beginning we wanted to learn their educational needs. However, we found that shelter, food, clothes, doctors, and medicine were urgent. One mother [was] saying that her children were skipping one or two meals every day (P5).

P1 observed the unpredictable psychological status of Syrian women, which isolated them from male teachers (mappers).

> We mapped their needs assigning female teachers and female translators, because women could not reveal their needs to male mappers (P1).

It could be suggested that the school principals were successful even though the situation was gloomy. The actions that the school principals took during the process of mapping the needs were very wise. P1 successfully approached the Syrian women by assigning female teachers and translators in order to work with the modesty and privacy of the Syrian women and their children, because Muslim women are usually reluctant to reveal themselves or express their gender-specific needs to men. According to Rusaw (2009), successful managerial school principals are career public servants for the most part, who may initiate and carry out the roles and responsibilities of leadership at multiple institutional levels, being sensitive to all kinds of values, which supports my study.

Finally, school principals took action to analyze and supply the needs. P3 complained about insufficient budgets because school principals did not have any financial or official power to supply needs.

> I prepared a list to supply their needs, but I had no budget. I relayed all their needs, except shelter, finding NGOs and benefactors via social media (P3).

It was impressive that this school principal did not simply wait for an official budget to come from the state. He used social media to find NGOs and private benefactors. Even though the financial gap is significant in supporting refugees' education, school principals are willing to establish networks to supply their needs. Managerial leaders might be identified as having personal characteristics, good networks, and competencies that enable them to create resources and make better decisions according to changing situations (Rusaw, 2009). This indicated that school principals employed a good practice of enabling leadership at the level of mapping, analyzing, and supplying needs.

Risk

Interviewers were asked questions about the risks that Syrian families and students faced and the risk management skills that the school principals showed. Principals were aware that risks were major concerns among Syrian families. P12 and P11 expressed their perceptions about mainly unemployment and economic and social risks. They also mentioned language barriers and prejudice. Life-threatening risks also appeared. The Syrian refugees were suffering from economic deprivation that pushed their children onto the streets as street vendors and beggars. P2, P18, and P11 all mentioned this.

> The refugees were saying that they do not have a permanent job. Life as a refugee particularly throws children into child labor, begging on the streets, and early marriages. To include them in education is just salvation (P2).

> Moreover, I talked to a mother. She said that her life was desperately bad. She could accept becoming someone's second wife to feed her children (P18).

> The language barrier was the first risk for us in their education (P11).

Social phenomena have made Syrian refugees open to criminal and terrorist organizations. Another risk is that Syrian women are also victimized and vulnerable, thought to be concubines for

Turkish men, and little girls are forced to be child brides, representing a great social and moral issue in the nation. The overall situation of Syrian refugees is severe in Turkey, including the language barrier (Amnesty International, 2014). Turkish school principals remark that the loss of education is particularly harmful for females, as females not participating in education are more at risk of entering into sex work and more likely to marry early, and therefore more likely to experience sexual abuse. School principals also pointed out several other problems, including the difficult economic conditions that teachers in temporary education centers face. P4 stated:

> The employment of Syrian teachers in temporary education centers is very hard because the salary is not enough or is not paid; for that reason, whenever they find a better job, they escape (P4).

Not only the wages of temporary education center teachers are low but also those of most Syrian refugees are not enough to support an adequate standard of living. Refugees from Syria, including children, tend to work as day laborers in construction, collect plastic materials from the garbage for recycling, wash dishes in restaurants, or do other menial jobs, earning between $2.50 and $15 per day (UNHCR, 2017), which means that children miss out on schooling. In this respect, school principals were able to see the educational risks, but the reality was heartbreaking. The Syrian refugee families were not meeting their basic needs such as healthy living conditions or permanent and secure jobs. The study findings support the idea that economic welfare today is not shared equally in the world, which increases the possible risks around the globe. Developed countries especially neglect the economic and social deprivation of refugees (Sheehey, 1996). It is a fact that prejudice is a great concern, creating conflicts and street fights between Turks and Syrian refugees. P6 addresses this issue:

> The refuge children of Syria face bullying not only by students but also teachers.
> If you ask me, I do not understand why they are here. They must return to their
> country to fight (P6).

It was understood that refugee students were perceived as a burden by some Turkish school principals and teachers. This prejudice, which is very prevalent, increased the tensions that caused conflicts on the streets and bullying in schools. There are heuristic and saliency biases whereby people, even school teachers, are likely to regard impactful events as more common than they actually are. The first influx of Syrian refugees was assumed to be temporary, but now it is permanent, which is now affecting the mindset of Turkish people. The perceptions of refugees, especially the Syrian refugee influx, changed across Europe during the refugee crisis, revealing suspicion and hostility, which creates a deadlock in the refugee problem (Georgiou & Zaborowski, 2017). The findings of this study also disclose similar situations.

Dynamics

Dynamics are another dimension of managerial leadership. For this dimension, I asked school principals what dynamics they used while performing their duties related to Syrian refugee students. They reported using social and cultural attachments and managing the diversity.

For example, P8 said that male and female refugee students did not want to stay in the same classrooms; they wanted sex-segregated classrooms.

Some Syrian girls and boys were wanting to study in sex-segregated classrooms. I invited an imam to talk to the children. Finally, they believed that it was not a sin (P8).

P8 approached phenomena from the aspect of social-cultural-religious attachment. Creating sex-segregated classrooms is generally not possible in Turkish educational settings because the education system is secular. It seemed that the school principal could only address this issue by declining the students. However, P8 employed attachment theory, which explains the development of the relationship center of the brain and shows how our internal working model of attachment impacts our behavior in close relationships. The term "attachment bond" is normally reserved for the warm, intuitive feelings felt by teachers towards children, which is increasingly recognized as the domain of the child-teacher relationship (Bowlby, 1988). It could be concluded that Turkish school principals found intrinsically suitable dynamics and implemented them by understanding human psychology.

Another finding was that some teachers did not want to teach Syrian students in their classrooms as they thought that the success of Turkish students would be negatively affected.

My teachers were reluctant to teach Syrian students because the Turkish students' success level was declining. They neglected the refugees because of their ethnic roots. Also, I urgently invited academics for lectures on managing diversity (P10).

P10 took immediate action to inform the teachers and Turkish families by establishing some lectures by university academics on inclusion and managing diversity. He believed that including the Syrian students in the classroom could possibly decrease the success levels of Turkish students, but, from a broader perspective, it would give insight into sharing emotions that would develop the human sides of both Turkish and Syrian students. Inclusive education means that all students participate in age-appropriate, regular classes and are supported to learn, contribute, and take part in all aspects of school life.

Planning and control

Principals were asked about planning their educational courses in light of CAL. Their perceptions were recorded under the themes of bypassing the hierarchy, entrepreneurship, and measuring performance. P9 asserted that she was not hopeful about planning and control because of the centralized management system.

My student did not know the Turkish or the Arabic alphabet. I made a specific lesson plan for him and found a Turkish Arabic teacher to teach them the Arabic alphabet. I mean I changed everything such as the curriculum, educational plans, and so on (P9).

As an example, P9 assigned an Arabic teacher who was a Turk to teach the Syrian students the Latin alphabet, and thus changed the central curriculum. Principals were eager to solve problems despite the fact that they did not have the formal power or budget for it, using instead their skills of entrepreneurship. They were not bound to the bureaucracy and they found solutions to work around their problems. The MoNE is responsible for refugee education together with the interim Syrian government. Both sides missed important points in designing refugee education. However, P9 found a solution using her legitimate and expert power when she established new standards.

Another serious problem was measuring performance. Refugee education is characterized by inadequate educational resources and inequality of opportunity. P14 presented another deficiency.

> Learning outcomes for refugee children are full of disappointments. We are in need of in-service training on authentic measurement techniques (P14).

The school life of Syrian refugee children in Turkish schools is tumultuous. They cannot be tracked regularly in terms of educational, physical, and psychological development. This causes refugee children to fall far below the age-appropriate grade levels. Measuring performance is a way of putting together the parts of the educational mosaic in a way that accurately reflects the student's learning and the teacher's teaching competence (National Academy of Engineering, 2009). P14 noted that they were not able to evaluate the Syrian refugee children and must be given in-service education on authentic assessment and evaluation techniques.

The most common issue is that school principals deal with the psychological problems of Syrian refugee students and they want to take some necessary steps to address these problems. P13 touched on this:

> We planned to find children who had post-traumatic stress disorder. I invited psychologists and psychiatrists for therapy with no cost (P13).

If good planning and control are employed, then a final step will come, which is corrective action. It is seen that school principals are aware of the importance of correcting deviations; in other words, the psychological conditions of refugee students must be healed. It can be claimed that school principals are successful in discovering these deviations and are able to take necessary actions. Because of the disruption of their physical, intellectual, cultural, and social development stemming from their refugee experiences, the children often suffer from depression, engage in vengeful behavior and conflicts, and experience anxiety and loneliness.

Adaptive Leadership

The principals were asked about their adaptive leadership functions. The questions addressed innovation in education and interdependence mechanisms. I found two categories revealed by the school principals.

Technology usage

Principals stressed the importance of technology usage. P14 tries hard to bridge the gap between Turkish and Syrian students. He pointed out that technology usage of refugee children is not at a satisfying level and legislation did not allow him to spend the budget on innovative devices. He also expressed that technological and social dynamics are key factors because integrating technology into the classroom is an effective way to connect with students of all learning styles. Furthermore, it is a tool for eliminating the inequality between Syrian and Turkish students in school.

> With Turkish students, we used tablets and interactive boards and other technological devices effectively. The Syrian refugee students have nothing. I mean no technological devices. They were excessively behind the Turkish and some other Syrian students (P14).

It has been long accepted that using technology in the classroom gives teachers and other faculty members the opportunity to develop their students' digital citizenship skills. Technology is believed to serve as a valuable tool in the educational experience of students (OECD, 2016), and that

is why the usage of it should be enhanced to develop refugee students' learning capabilities. It is a fact that not investing in and encouraging new and innovative ways of delivering training skills will result in many Syrian youth falling behind Turkish children and contemporary educational levels on the global scale.

Negative interdependency

Another important issue that P6 mentioned was the adverse effect of asymmetric beliefs. One of them was corporal punishment in school. P6 commented that Syrian families practiced it easily as immediate discipline. P6 tried to convince them that corporal punishment was legally banned in the Turkish education system. He endeavored to end corporal punishment by inviting an adolescent psychiatrist and psychological counselor, but this failed. Another important issue was that no matter how the Turkish principals wanted to change the daily routines of Syrian children and families at school, strong barriers were met. P16 stated that the Syrian refugees are extremely pessimistic about positive change in their lives. Furthermore, he observed that some refugees accuse the Turkish government of creating their situation by supporting the political turmoil in Syria.

> Syrian families justify corporal punishment as an immediate discipline. However, in the Turkish education system, beating is not legal. When Syrian teachers are beating students disproportionately, a very bad climate exists because there are some Turkish teachers that adopt corporal punishment (P6).

> It is too hard to say that something will develop soon from bad to good in the life of refugee children. Forget about change. They hold Turkish politics responsible (P16).

Syrian refugees are in unfavorable moods that engender learned helplessness (Seligman, 1975). This is a term explaining a human learning to accept and endure unpleasant situations, and being unwilling to avoid them. P6 and P16 found that Syrian refugees do not have any control over their situations in a continuously changing environment. This situation paralyzed the adaptive skills of the school principals because a desire for change and interdependence mechanisms are important dynamics for complex adaptive leaders (Obolensky, 2010). In brief, adaptive leadership is an emergent, interactive dynamic that produces adaptive outcomes in a social system (Uhl-Bien, Marion, & McKelvey, 2007). Adaptive skills of leaders are collaborative actions yielding change in a natural space. This space emerges from interactions among people and thus results in cooperative efforts. It is possible to say that school principals are aware of the fact that, before educational needs, Syrian refugees need more economic and social support. Currently school principals have insufficient economic and social power to focus on providing services to women and children to foster social inclusion and cohesion. It is critical that formal and informal agencies maintain a rich educational environment, decrease their hopelessness for the future, and enable them to change their wrong beliefs.

Enabling Leadership

CAL emphasizes good ability in enabling leadership. I asked questions about enabling the leadership skills of school principals. The questions scrutinized the means of interaction. I found sympathy and compassion and religious and cultural values, along with win-win policy and the importance of acting fairly. Some excerpts follow.

Compassion and values

A question was asked about how respondents established interaction. P1 and P19 expressed their beliefs that they use sympathy and compassion and religious and cultural values.

At least, I care for their hair. I look into their eyes and hug them (P1).

She was upset about her father, lost in the war. I prayed for her father and pointed to the sky, saying "your father is a martyr and in paradise now". When I use Islamic language, I see that we agree easily (P19).

Principals stated that urgent interaction was a must for impacting Syrian children. Despite the language barrier, school principals sympathized with them, caring for their hair and looking into their eyes. School principals took care of their needs without thinking about whether they were vital or not. Here we should note the meaning of "interaction". An interaction is a kind of action that occurs between two entities having effects upon one another (Obolensky, 2010). The idea of a two-way effect is an important point of an interaction, as opposed to a one-way casual effect. Human interactions enhance salient commonalities, which help to understand, connect, and analyze them. It is understood that principals engender the skill of social awareness by showing compassion to refugee students, which creates negotiation and shapes the students' inner worlds. Principals also used religious discourses to interact because that is a medium that affects the construction of meaning and individual identities. Religion still plays a major role in uniting the members of society by allowing them to frequently reference their common beliefs and values. Research in forced migration studies and religion highlights the importance of spirituality as a psychological support for many refugees (Godziak & Shandy, 2002).

Win-win policy

Generally, principals stated that the conflicts at school were frustrating because they were personal. Sometimes they became bothersome. P10 explained a dilemma in his school as follows:

A Syrian student was fighting with everybody. I invited his family. I first started talking about the good sides and his sharp brain. Then I expressed my excuses if we had hurt and humiliated the brother and mother… I supported the student by planning extra courses during the school period. Omar ranked third in school. We win together (P10).

In this situation, the principal realized that everybody at school was equal and did not alienated him. Instead he made him feel one of us. Principals balanced the situation and opened the doors to productive interactions and communications. Another way to create a win-win solution is to establish communication. P10 did not reprimand the student and the family. Lastly, it can be inferred that school principals were able to use motivational language effectively (Sullivan, 1988).

Acting fairly

P14 defined how he dealt with the issues and how he treated the Syrian students at school. He stated that he acted completely fairly and that both sides perceived it.

To tell the truth, I treat the Syrian students without segregating them. I do the same thing as what I would do with the Turks. Moreover, I took affirmative actions for Syrians to enable them to talk over their issues, leaving my door open to them (P14).

Syrian refugee students are minorities in Turkey. We can say that school principals are aware of their life conditions. Principals also are eager to establish a set of good behaviors by practicing school routines. Transparency, fairness, and empathy to meet ethical criteria are sought by leaders (Andre & Valaques, 1990). School principals were not oppressive and opened their doors to the Syrian refugees because they believed that enforcing ethical rules would enhance the personal and academic integrity of Syrian children (Brune, Haasen, Krausz, Yagdiran, Bustos, & Eisenman, 2002). This increases the reputation of Turkish society among people of the world. However, the MoNE is a huge centralized organization and it is impractical to communicate managerial decisions to different levels in the hierarchy because decisions are made daily and changed without applying pilot studies. Thus, the school principals, who are lower level managers, are uncomfortable while performing their tasks and might not use their enabling skills. However, they use their capabilities intrinsically and sometimes they bypass the bureaucratic rules.

CONCLUSION

The purpose of this research was to determine the perceptions of school principals regarding the educational challenges of Syrian refugees and how they approached them in their school routines through the lenses of CAL theory. I found three leadership styles according to CAL for school principals. These were managerial leadership, adaptive leadership, and enabling leadership. Results showed that school principals generally exerted conscientious efforts to map, analyze, and supply the needs of Syrian children and their families. After mapping the needs, principals analyzed the problems. Next, school principals spotted the risks successfully. As an example, if Syrian refugees are suffering from economic deprivation their children might become street vendors, while Syrian women become concubines. Young Syrian girls are also forced to become child brides. Uhl-Bien, Marion, and McKelvey (2007) state that CAL proposes that the function of an administrator should not be limited with centralized goals. Rather, administrators should act to enable informal emergence and to coordinate the contexts in the knowledge production era. It can be claimed that school principals were effective at spotting the issues, but their managerial skills were not strong enough for them to manage the resources and supply them. School principals were skilled at producing knowledge and coordinating the context. However, they were limited by the strict top-down, central bureaucratic structure of the MoNE and Turkish public administration system. Turkish policy makers and education planners must be aware of the fact that decentralized education promises to be more efficient, better reflects local priorities, and encourages the participation of all stakeholders and improved teaching quality. The present awkward structure does not allow school principals to manage the resources using managerial skills of CAL in complex and chaotic times. I found that the language barrier was an important issue and prejudice toward the Syrian refugees was prevalent among teachers. School principals were successful at crossing the language barrier and decreasing the prejudice somewhat. They used sociocultural attachments successfully and tried to convince the Syrian families to send their girls to schools by inviting academics to speak on inclusion and diversity. Post-war trauma because of learned helplessness was widely seen among Syrian families and their children. As a correcting action for deviation, school principals helped Syrian families and their children have psychiatric support. It was seen that the prolonged refugee crisis has created severe social turmoil in Turkey, causing societal trauma. However, school principals strengthened their inclusive policy and sectarian equity via common religious values in important humanitarian and educational interventions, while building local resilience by supporting community-based services.

From the perspective of adaptive leadership, principals pointed out that technology usage as a means of interaction is an important dynamic for an adaptive environment in complex adaptive systems, but the current usage was not at a satisfying level. Cults were important dynamics as a means of interaction, as well. Corporal punishment as an inappropriate behavior among Syrian refugees was another issue. School principals endeavored to end corporal punishment by inviting an adolescent psychiatrist and psychological counselor, but that effort failed. Interaction via dynamics in schools is insufficient for functioning in a complex environment. Individuals in schools as partners must also be interdependent. While interaction among school partners allows the dynamic interplay of effective communication, interdependency creates friendship and fraternity. Change and innovation in technology and positive beliefs and behaviors from a social perspective could create interdependency, from which potency emerges naturally, occurring with social networks of conflicting constraints. However, change and innovation and wrong sets of belief pressure school principals negatively to overcome the issues. Finally, Syrian refugees were pessimistic about their future. Some refugees also accused the Turkish government of creating their situation by supporting the political turmoil in Syria. Adaptive leadership at school is an interactive and interdependent dynamic that yields adaptive outcomes in a social system. Adaptive skills of a school leader are collaborative movements yielding change in a natural school space. This space emerges from interactions and interdependence among people and thus results in cooperative efforts. It is possible to say that school principals are aware of the fact that, before educational needs, Syrian refugees need more economic and social support. School principals currently lack the necessary economic and social power to focus on providing services to women and children to foster social inclusion and cohesion while economic and technological shortages occur, wrong sets of belief hinder the process, and strong pessimism creates turmoil. It could be claimed that the adaptive functions of school principals did not work in Turkish educational settings.

School principals opened their doors to Syrian children for meeting their needs. They tried all possible avenues, like referencing religious values to help children adapt to real life. One of the school principals supported a child who had lost her father by soothing her pain and referring to the father as a martyr. School principals used religious discourses to form relationships with Syrian children because religion is a medium that affects the construction of meaning, which enables the application of adaptive skills. It could be claimed that principals endeavored to facilitate conditions for the emergence of interactions among agents consistently with strategies and missions. However, the Turkish government was unprepared for such a refugee influx. Turkish school principals as enabling leaders were unable to promote behaviors that advance critical roles by challenging the crises that threaten to derail their adaptive functions by protecting their creative efforts from their directors or from environmental pressures. This limited their official capacity to engage in learning and adaptation to the new conditions, crises, and conflicts among partners. Even though school principals did their best, it could be concluded that their enabling leadership competency fell short of enabling effective dynamics to catalyze adaptive leadership and allow for emergence. Finally, CAL does not function properly in this context. However, school principals are still exerting ceaseless efforts to meet the educational and humanitarian needs of Syrian refugees.

EDUCATIONAL PLANNING IMPLICATIONS

Educational reforms in Turkey have been somewhat piecemeal and have not generally touched the core educational practices. Although various superficial modifications have been made in the past, most have not had the substantial effects that were hoped for. Fragmented changes

were made, usually to gain political advantage (Aksit, 2007) and neglecting the human aspects. For that reason, the basic systems to a large extent stayed the same because of the strict central structure creating an awkward MoNE. Turkish educational planning is far from a holistic approach and trivial changes have not yet touched the ontology of the human person. Educational planners are recommended to prepare school contexts that produce students who are aware of their physical, psychological, cultural, and social conditions. Education policy makers could design an education system that lets school principals confront uncertainties, being entrusted with appropriate levels of accountability and decision-making authority so that mutual trust forms the ethical foundation of partner empowerment.

REFERENCES

Aksit, N. (2007). Educational reform in Turkey. *International Journal of Educational Development, 27,* 129-137.

Amnesty International. (2014). *Struggling to survive: Refugees from Syria in Turkey.* London: Amnesty International.

Andre, C. & Velasquez, M. (1990). Justice and fairness. *Issues in Ethics, 3*(2). Retrieved April 10, 2006 from http://www.scu.edu/ethics/publications/iie/v 3n2/.

Arar, K., Örücü, D., & Ak Küçükçayır, G. (2018). Culturally relevant school leadership for Syrian refugee students in challenging circumstances. *Educational Management Administration & Leadership.* doi:10.1177/1741143218775430

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development.* London: Routledge.

Brune, M., Haasen, C., Krausz, M., Yagdiran, O., Bustos, E., & Eisenman, D. (2002). Belief systems as coping factors for traumatized refugees: a pilot study. *Eur Psychiatry. 17*, 451 – 458.

Creswell, J. (2012). *Educational research.* Boston: Pearson Education.

Culbertson, S., & Constant, L. (2015). *Education of Syrian refugee children: Managing the crisis in Turkey, Lebanon, and Jordan.* Available online: http://www.jstor.org/stable/10.7249/j.ctt19gfk74 (accessed on 18 October 2017).

Georgiou, M., & Zaborowski, R. (2017). *Media coverage of the refugee crisis: A cross-European perspective. Council of Europe report DG1(2017)03.* Strasbourg, Council of Europe.

Godziak, E. M., & Shandy, D. J. (2002). Religion and spirituality in forced migration. *Journal of Refugee Studies, 15*(2), 129-135.

Lichtenstein, B. B., & Plowman, D. A. (2009). The leadership of emergence: A complex systems leadership theory of emergence at successive organizational levels. *The Leadership Quarterly, 20*(4), 617-630.

Marion, R., & Uhl-Bien, M. (2001). Leadership in complex organizations. *The Leadership Quarterly, 12,* 389–418.

Morin, E. (1999). *Seven complex lessons in education for the future.* France: UNESCO.

MoNE. (2018). Bakan Yılmaz: 608 bin Suriyeli çocuğun eğitime erişimi sağlanmıştır. Available at: https://www.meb.gov.tr/bakan-yilmaz-608-bin-suriyeli-cocugun-egitime-erisimi-saglanmistir/haber/15549/tr (Accessed on 4 July 2018)

National Academy of Engineering. (2009). *Developing metrics for assessing engineering instruction: What gets measured is what gets improved.* Washington, DC: The National Academies Press.

Obolensky, N. (2010). *Complex adaptive leadership: Embracing paradox and uncertainty.* New York: Taylor & Francis.

OECD. (2016). Education at a glance 2016–Indicators. Available online: http://www.oecd.org/education/skills-beyond-school/education-at-a-glance-2016-indicators.htm.

Pius, S. A. (2015). *A qualitative study on leadership in cross-cultures at international institute for advanced instructions*. Philadelphia (Order No. 3717289). Available from ProQuest Dissertations & Theses Global. (1711739189),

Rusaw, A. C. (2009). Administrative leadership in the public sector. *Public Administration Review, 69*(3), 551-553.

Schneider, M., & Somers, M. (2006). Organizations as complex adaptive systems: Implications of complexity theory for leadership research. *The Leadership Quarterly 17*(4), 351–365.

Seligman, M. (1975). *Helplessness: On depression, development, and death*. San Francisco, CA: Freeman.

Sheehey, E. J. (1996). The growing gap between rich and poor countries: A proposed explanation. *World Development, 24*(8), 1379-1384.

Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly, 18*(4), 298-318.

UNCHR. (2016a). *Global trends: Forced displacement in 2016*. Available online: http://www.unhcr.org/5943e8a34 (accessed on 11 December 2018).

UNCHR. (2016b). *Regional refugee and resilience plan 2016-2017 in response to Syria crisis: Regional Strategic Overview*. New York: UNHCR.

UNCHR. (2017). *Left behind refugee education in crisis*. Available online: http://www.unhcr.org/59b696f44.pdf, 2017 (accessed on 11 August 2017).

JOB CONCERN FACTORS AND ACADEMIC STAFF ENGAGEMENT IN PUBLIC UNIVERSITIES, LAGOS STATE, NIGERIA

MARUFF AKINWALE OLADEJO
AZEEZAT TEMITOPE KAREEM
MULIKAT OMOLADE GHANNI
University of Lagos, Akoka, Nigeria

ABSTRACT

Job concern is a common element in any work organization. It is, no doubt, capable of determining the extent to which an employee is engaged with the job. This study therefore investigated job concern factors (namely workload, job hazard, and interpersonal discrimination) and academic staff engagement in public universities in Lagos State, Nigeria. The descriptive survey research design was used for the study. Five null-hypotheses, tested at .05 level of significance, guided the study. Participants were 250 randomly selected academic staff from two purposively selected public universities in Lagos State. A self-constructed questionnaire was used for data collection. Data were analyzed using inferential statistics, specifically One Sample t-test, Pearson Product-Moment Correlation, Pearson Chi Square, and Independent t-test respectively. Findings showed that in public universities in Lagos State, Nigeria, the level of academic staff engagement was low [t (249) = 230.15, p>0.05]. No significant relationship was found between workload and employee engagement [r (248) = -.611; p >0.05]. Further finding showed that employee engagement was significantly related to job hazard [r (248) = .502, p< 0.05]. There was also significant relationship between interpersonal discrimination and employee engagement [r (248) = .721; p <0.05]. Finally, there was no significant difference in employee engagement among academic staff in Federal and State Universities [t (249) = 3.122, p > 0.05]. It was recommended that Government and institutional administrators should ensure that the working environment is made more conducive for scholarly works, employ more qualified staff, and avoid interpersonal discrimination among academic staff.

INTRODUCTION

Job concern is a common element in any work organization. It is a source of tension and frustration which can arise through a number of interrelated influences on behavior, including individual, group, organizational, and environmental factors. According to Akpovi (as cited in Okoh & Ujuju, 2011), any situation that is seen as burdensome, threatening, ambiguous, or boring is likely to induce job concern for employees. This is the type of situation that would normally strike the individual as deserving immediate attention as it is viewed as unfortunate or annoying.

Berwick (2013) described job concern as employees' reactions to characteristics of the work environment that seem emotionally and physically threatening. It points to a poor fit between the individual's capabilities and his or her work environment, in which excessive demands are made of the individual or the individual is not fully prepared to handle a particular situation. In general, the higher the imbalance between demands and the individual's abilities, the higher will the employee experiences job concern. Job concern often shows high dissatisfaction among the employees, work mobility, burnout, poor job performance, and less employee engagement at work (Teniibiaje, 2013).

Job concern, no doubt, is likely to determine the extent to which an employee is engaged in work organization. How much one is engaged with one's job can be a product of the types of concerns

one experiences in one's work place. In other words, job concerns and employee engagement, especially as relate to academic staff is a study that should be continuously investigated.

Engagement generally is a positive attitude where an individual goes above and beyond the call of duty, so as to heighten the level of ownership, and to further the business interest of the organization as a whole (Erkutlu, 2014). By employee engagement, Lockwood (2014) conceptualized it as the individual's investment of his complete self into a job role. Employee engagement has been popularized by practitioners as well as the research/academic community, and it is regarded as the barometer that determines the association of the individual with the workplace.

Academic staff engagement (used interchangbly as employee engagement) is affected by workforce conditions such as a positive and safe work environment, supervision, work load and discrimination. Discrimination turns the employees emotionally brittle, an hitherto simple peace-loving employees now become paranoid and suspicious, fearful, and angry individuals. Thus, elimination of discrimination is crucial for the satisfaction, motivation, commitment, and enthusiasm, as well as less stress of the employees. In addition, interpersonal discrimination, work complexity, hazard exposure, and workload would directly lead to the possibility of forming job concern conditions among academic staff of university.

Several researchers had carried out studies on lots of issues that constitute job concerns in various work organisations. For instance, Rehman, Schabracq, and Cooper (2010) identified work schedule and heavy workload as the major factors that cause employee job concern. Finding from Kayastha and Kayastha (2012)'s study also established high occupational stress, heavy workload, strenuous working conditions, poor peer relations, unreasonable group, and political pressure as factors capable of causing job concerns for employees. In other words, any of those signs mentioned once experienced by the employees, is capable of causing feelings of concerns on the job. Kayastha and Kayastha then concluded that academic staff of university were most likely to experience serious concerns in educational setting. In the education sector, we contend that academic staff job concerns could be role ambiguity, working relationship, conflicting expectation, working condition, role overload, work mismatch, workload, work hazard, work discrimination, and work schedule.

On the relationship between job concerns and employee engagement, finding from the study of Igbal, Ghafoor, and Malik (2013) confirmed that the relationship between work overload and employee engagement was significant. Their results showed that the direction of the relationship is negative which implies that workers derive their engagement from minimal workload. In a recent related meta-analysis, Jones (2013) reported a meaningful correlation between interpersonal discrimination and employee engagement. He argued that employees who frequently encounter incivilities from others in their organization, display greater feelings of psychological distress, including higher rates of depression and anxiety which in turn, affect their engagement with the job. The impact of discrimination on employee has implications for work outcomes and physical well-being. A robust body of research suggests that the experience of interpersonal discrimination can lead to substantial negative physical outcomes. For instance, Goldman (2013) observed that gender-based discrimination related to the onset of physical ailments in women. Supporting this, meta-analytic evidence has shown that interpersonal discrimination correlates with increased incidents of physical health issues, which results in less engagement with the job by the employees (Jones). In response to interpersonal discrimination, employees may decrease their engagement and increase deviant workplace behaviors (Kickul, 2013).

Within Nigerian context, there seems to be little work that has been done on these factors that give serious concerns to the employees, especially academic staff in relation to their engagement with the job. Filling this research lacuna is the purpose of this study. On the basis of the above background, this study is therefore poised to investigate the job concerns in terms of workload,

poor supervision, hazard exposure, interpersonal discrimination and employee engagement among academic staff in public universities, Lagos State, Nigeria.

STATEMENT OF THE PROBLEM

The duties of academic staff are quite enormous. Working at the tertiary level of the education system is an inherently job concern profession with long working hours, heavy workloads, difficult students, and conflicting demands. The physical and psychology demands of academic staff at the tertiary level of education, particularly university make them more vulnerable to high levels of job concerns. One of the major problems that is therefore facing the Nigerian academic staff in public universities today seems to be lack of job engagement. It is widely believed that a worker who is well motivated and satisfied with his or her job is likely to be properly engaged and perform his or her duties efficiently and effectively. But despite the fact that several motivational measures have been implemented in a bid to ensure that academic staff are meaningfully engaged with their job, the reverse appears to have been the case. In other words, motivation may no longer guarantee effective employee engagement if there are other serious concerns on the job.

The effects of job concerns are evidenced in increased errors in memoranda, high medical bills, lateness to work, low job engagement, and low productivity. Despite the extremely negative effects of occupational concern on the human body and work performance, many institutional administrators seem not to have put in any concrete measures to address these job concern-related conditions that negatively affect academic staff engagement.

Furthermore, it appears there has not been a conscious establishment of a linkage between job concern factors and employee engagement among academic staff. It is in the light of these that this research investigated job concern factors namely workload, job hazard, and interpersonal discrimination, and employee engagement among academic staff in public universities in Lagos State, Nigeria.

PURPOSE OF THE STUDY

The purpose of this study was to investigate job concern factors namely workload, job hazard, and interpersonal discrimination, and employee engagement in public universities in Lagos State, Nigeria. In specific terms, the study was carried out in order:

  i.   to investigate the level of employee engagement.
  ii. to determine how workload relates to employee engagement.
  iii. to establish the relationship between employee engagement and job hazard.
  iv. to examine the relationship between discrimination and employee
       engagement.
  v.   to investigate the significant difference in employee engagement in Federal
       and State universities.

NULL HYPOTHESES

The following null hypotheses were formulated and tested at 0.05 level of significance to guide the study:

  1. The mean score of employee engagement is not significantly different from the hypothesized population mean.
  2. There is no significant relationship between workload and employee engagement.

3. Employee engagement is not significantly related with job hazard.
4. Interpersonal discrimination has no significant relationship with employee engagement.
5. Employee engagement is not significantly different in Federal and State universities.

LITERATURE REVIEW

This section deals with the review of relevant literature to the study in order to have a better understanding of what had been done in this area. The review was done in turn as indicated:

Concepts of Job Concerns and Employee Engagement

Job concern is a critical concept with lots of importance in employee's life. It indicates a proper balance both in work and personal life which also ensures organizational productivity and employee's job satisfaction (Edwards & Easton, 2013). Job concern refers to the level of satisfaction, motivation, involvement, and commitment individuals experience with respect to their lives at work (Kalra & Ghosh, 2014). It is the degree to which individuals are able to satisfy their important personal needs while being employed by the work organization. It is very important for employees to have a sound mindset in their work field to utilize their full potentials, and to add value to the organization. An effectively engaged employee is an asset for the organization as he or she will ensure the full productivity. According to Dolan, Garcia, Cabezas, and Tzafrir (2012), job concern is a major concern for employees and how organizations compact with this issue is both of academic and practical consequence. Regarding employee engagement, Lockwood (2014) submitted that it is simply an individual's investment of his complete self into a job role. Employee engagement is the extent to which organizational employees are committed to the organization, subsequently feel passionate about their jobs, and put discretionary effort into their work.

Workload and Employee Engagement

Workload refers to the intensity of jobs assignment. With respect to academic staff, it simply means the number of hours the academic staff in a teaching-learning situation is made to bear (Tett, Jackson, & Rothstein, 2011). Oyebola and Ojuolape (2012) stated that one of the reasons why there is low employee engagement among academic staff in schools is because of the workload that members of the academic staff assume. Most studies have reported inverse relationships between work overload and employee engagement (Bemana, Moradi, Ghasemi, Taghari, & Ghayoor, 2013). Finding from Igbal, Ghafoor, and Malik (2013)'s study indicated that the relationship between employee overload and employee engagement is significant. Their results showed that the direction of the relationship is negative which implies that the workers derive their engagement from less workload.

Job Hazard and Employee Engagement

In today's work environment, safety and quality continue to remain critical priorities in the context of improving productivity and efficiency in the organization. The issue of safety at workplace and its environs is receiving serious attention worldwide. Okoye and Ezejiofor (2013) asserted that workplace hazards are organizational events which influence employee's behavior, engagement, and attitude to work especially in workplace that lack adequate compensation for victims. The impact of safety environment affects the engagement of employees either positively or negatively (Kadiri, 2011). Due to no adherence to safety rules and regulations, and ignorance of

the imminent dangers associated with many organizations, work related accidents and incidents are common, thereby negatively affecting the job engagement of workers (Nkogbu, 2015).

Interpersonal Discrimination and Employee Engagement

Onyeonoru (2011) predicted that perceiving interpersonal discrimination at work will damage employees' feeling about their work and employer. Studies have shown that perceived racial and interpersonal discrimination has a negative effect on job engagement, commitment, and integration at work and a positive effect on turnover intent (Foley, Kidder, & Powell, 2012; Raver & Nishii, 2010). Research has also revealed that perceived racial discrimination is related negatively to perceptions of fairness (Del Campo & Blancero, 2011) and positively to job concerns (de Castro, Gee, & Takeuchi, 2012) and absenteeism (Jones, Ni, & Wilson, 2013).

THEORETICAL FRAMEWORK

The Social Exchange Theory (SET) is the most accepted and widely used theory in the recent research on employee engagement (Schaufeli, 2013). The essential principle of SET is that individuals make social decisions based on perceived costs and mutual benefits. It proposes that employees will be motivated to engage in their jobs when jobs are based on a fair and balanced system of exchange. This exchange relationship then evolves over time into trusting, loyalty, and mutual commitments.

There are key drivers that lead to employee engagement which are common in most business organizations. However, the components and the relative strength of each driver are likely to alter depending on the type of organization, sector, and demographic variations in the country or region. According to Social Exchange Theory, if employees perceive an organization as fair and just to them, they will reciprocate by putting in more efforts to work and by increasing their engagement, in accordance with the exchange ideology. The feeling of safety is influenced by the predictability and consistency of the fairness in assigning rewards, resources, or even inflicting punishment at work. In summary, SET theoretical foundation justifies the reasons why employees decide to engage more or less on their work, either positively or negatively, contingent upon the economic and socio-emotional resources received from their organization, or even decide to stay with their organization.

METHODOLOGY

Research Design

The design used for this study is the descriptive survey research design. This method was deemed the most appropriate design for this study because it involves chosen samples from a large population to discover the relative incidence distribution and interrelations of the study variables through questionnaire.

Population

The population of the study comprised 1566 academic staff in the University of Lagos (1042 staff) and the Lagos State University (524 staff) in Lagos State. The University of Lagos is a Federal-Government owned university, while the Lagos State University is owned by the Lagos State Government.

Sample and Sampling Technique

The purposive sampling technique was used to select the two universities in Lagos. This is because they are the only public Universities in Lagos State. However, a sample frame of all the academic staff in the two Universities was drawn using a stratified random sampling technique. Random sampling technique was then used to select the sample size. A total number of 150 and 100 members of academic staff was sampled from University of Lagos and Lagos State University respectively. Hence, the sample size for the study comprised 250 academic staff from the two institutions.

Research Instrument

A self-constructed questionnaire titled ''Job Concern Factors and Employee Engagement Questionnaire (JCFEEQ) is the instrument used for data collection. The questionnaire has two sections. Section A dealt with the demographic characteristics of the respondents such as name of the University, gender, age, department among others, while Section B was a close-ended question designed in line with the hypotheses postulated. This section addressed workload (5 items), job hazard (5 items), interpersonal discrimination (5 items) and job engagement (8 items). The direct scoring for positive statements was 4-1 where; 4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree. The reverse scoring for negative statements was 1 – 4; 1 = Strongly Agree, 2 = Agree, 3 = Disagree, 4 = Strongly Disagree.

Validity of the Instrument

The contents, the constructs, and the face validity of the instrument was carried out by experts in the field of Educational Management as well as Measurement and Evaluation. All the corrections and constructive criticisms made by these experts formed the basis for the final version of the questionnaire.

Reliability of the Scale Score

For the reliability of the instrument, the instrument was pilot tested in a study that was carried out on 30 participants from Federal College of Education (Technical), Akoka, Lagos State. A total number of 50 copies of the questionnaire was administered on academic staff, while only 30 copies which were completed filled were used. Cronbach method of estimating reliability was used to estimate the internal consistence/reliability of the instrument. The overall obtained Alpha value of 0.89 made the scale to be found reliable.

Procedure for Data Collection

A letter of introduction was shown to the participants with a view to obtaining their permission to administer the questionnaires on them. Copies of the questionnaires for this study were administered personally by the researchers. The instrument was filled during administration, and collection was made immediately upon completion to ensure high return rate. The instrument was administered on 350 participants, out of which 250 completely filled copies were used for the study.

Method of Data Analysis

Data from completed questionnaires were analyzed using the inferential statistics. Null-hypothesis one was tested with One-Sample t-test, and Null-hypotheses two and four were tested with the Pearson Product-Moment Correlation Coefficient. Null-hypothesis three was tested with Pearson Product-Moment while Independent t-test was used to test Null-hypothesis five. All the hypotheses were tested at 0.05 level of significance.

RESULTS

Results from the analyzed data were presented in the following:

H0$_1$ The mean score of employee engagement is not significantly different from the hypothesized population mean

Table 1: Level of Employee Engagement

Variable	Mean	SD	N	df	t	P	Remark	Decision
Employee Engagement	18.25	2.44	250	249	230.15	.13	Not Sig	Accept H0$_1$

A one-sample t-test was run to determine whether the sample mean is not statistically different from hypothesized population mean. Table 1 showed that with an hypothesized population mean of 3, there was statistically difference between the sample and the hypothesized population mean scores. This indicates that the level of employee engagement in public universities in Lagos State, Nigeria was low [t(249) = 230.15, p>.05]. Thus, the null-hypothesis which stated that the sample mean is not statistically different from hypothesized population mean was retained.

H0$_2$ There is no significant relationship between workload and employee engagement.

Table 2: Relationship Between Workload and Employee Engagement

Variables	Mean	SD	N	df	r	P	Remark	Decision
Employee Engagement	18.25	2.44						
			250	248	-.611	.10	Not Sig	Accept H0$_2$
Workload	10.03	2.13						

Pearson Product-Moment Correlation Coefficient was run to determine the relationship between workload and employee engagement in public universities in Lagos State. Finding from Table 2 showed that there was negative, moderate, and insignificant relationship between the two variables [r (248) = -.611; p >0.05]. Thus, the researchers failed to reject the null-hypothesis which stated that there is no significant relationship between workload and employee engagement in public universities in Lagos State.

$H0_3$ Employee engagement is not significantly related with job hazard.

Table 3 Relationship Between Job Hazard and Employee Engagement

Variables	Mean	SD	N	df	r	P	Remark	Decision
Employee Engagement	18.25	2.44						
			250	248	.502	.03	Sig	Reject $H0_3$
Job Hazard	10.64	3.36						

Pearson Product-Moment Correlation Coefficient was run to determine the significant association between job hazard and employee engagement in public universities in Lagos State. Table 3 showed that the test was significant [r (248) = .502; p <0.05]. This indicated that there was significant relationship between job hazard and employee engagement. Thus, the null-hypothesis which stated that there is employee engagement is not significantly related with job hazard was rejected.

$H0_4$ There is no significant relationship between interpersonal discrimination and employee engagement.

Table 4: Relationship Between Interpersonal Discrimination and Employee Engagement

Variables	Mean	SD	N	df	r	P	Remark	Decision
Employee Engagement	18.25	2.44						
			250	248	.721	.02	Sig	Reject $H0_2$
Interpersonal Discrimination	12.22	1.03						

Pearson Product-Moment Correlation Coefficient was run to determine the relationship between interpersonal discrimination and employee engagement in public universities in Lagos State. Finding from Table 4 showed that there was positive, strong, and significant relationship between the two variables [r (248) = .721; p <0.05]. Thus, the null-hypothesis which stated that there is no significant relationship between interpersonal discrimination and employee engagement in public universities in Lagos State was rejected. It means that interpersonal discrimination has something to do with employee engagement.

H0$_5$ Employee engagement is not significantly different in Federal and State universities.

Table 5: *Difference in Employee Engagement Between Federal and State Universities*

Variable Universities		Mean	SD	N	df	t	P	Remark	Decision
Employee Engagement	Federal	14.40	2.54	250	248	3.12	.13	Not Sig	Accept H0$_5$
	State	13.94	2.45						

Using an alpha level of .05, an independent-samples *t* test was conducted to determine whether academic staff in Federal and State universities in Lagos State differed significantly on engagement. The test was not significant, $t(249) = 3.122$, $p > .05$. An examination of the group means indicated that academic Staff in Federal university ($M = 14.40$, $SD = 2.54$) and academic Staff in State university ($M = 13.94$, $SD = 2.45$) are not much different. Thus, the null-hypothesis which stated that employee engagement is not significantly different in Federal and State universities was retained.

DISCUSSION OF RESULTS

      The first null-hypothesis which stated that the sample mean is not statistically different from hypothesized population in order to determine the level of employee engagement in public universities in Lagos State was accepted because finding showed that with an hypothesized population mean of 3, there was no statistically difference between the sample and the hypothesized population mean scores. This clearly indicated that the level of employee engagement in public universities in Lagos State was low [$t(249) = 230.15$, p>.05]. This finding further reaffirms Oyebola and Ojuolape (2012)'s finding that there was low employee engagement in schools, and that one of the reasons is because of the workload that members of the academic staff do. We also contend that another reason for this finding could be due to poor working conditions where academic staff carry out their work in the sampled universities.

      The researchers failed to reject the second null-hypothesis which stated that there is no significant relationship between workload and employee engagement in public universities in Lagos State because there was negative, moderate, and insignificant relationship between the two variables [$r(248) = -.611$; p >0.05]. This finding contradicts that of Igbal et al., (2013) who reported that the relationship between employee overload and employee engagement was significant. Their results showed that the direction of the relationship is negative which implies that the workers derive their engagement from minimal workload. Shortage of academic staff could be responsible for their being over loaded with work, hence their low engagement.

      Also, the third null-hypothesis which stated that there is employee engagement is not significantly related with job hazard was rejected because there was significant relationship between employee engagement and job hazard. Okoye and Ezejiofor (2013) asserted that workplace hazards are organizational events which influence employee's behavior, engagement, and attitude to work especially in workplace that lacks adequate compensation for victims.

There was positive, strong, and significant relationship between interpersonal discrimination and employee engagement in public universities in Lagos State [r (248) = .721; p <0.05]. Thus, the null-hypothesis which stated that there is no significant relationship between interpersonal discrimination and employee engagement in public universities in Lagos State was rejected. Studies have shown that perceived racial and interpersonal discrimination has a negative effect on employee engagement, commitment, and integration at work and a positive effect on turnover intent (Foley et al., 2012; Raver & Nishii, 2010). Also, Jones (2013) had earlier reported a meaningful correlation between interpersonal discrimination and employee engagement. He argued that employees who frequently encounter incivilities from others in their organization display greater feelings of psychological distress, including higher rates of depression and anxiety which in turn affect their employee engagement.

Finally, the independent t-test conducted to determine significant difference in employee engagement in Federal and State universities was not significant, [t (249) = 3.122, $p >$ .05]. Thus, the null-hypothesis which stated that employee engagement is not significantly different in Federal and State universities was retained. We argue here that the possible reason for this non-significant difference could be due to the fact that academic staff in both the sampled Federal and the State universities are working within the same environment and working conditions.

CONCLUSION AND RECOMMENDATIONS

The need for academic staff to be engaged with their job cannot be over-emphasized. A well engaged academic staff will be able to offer quality teaching, community service, and research to the humanity, which will translate into quality output in terms of qualified graduates. It is hereby recommended as follows:

i. Interpersonal discrimination among academic staff should be discouraged. Rather, everyone should deal with fear without favor or any form of discrimination. This can go a long way at enhancing the level of employee engagement among academic staff once they feel secured and being treated fairly.

ii. Also, all necessary safety measures which will prevent academic staff from being exposed to avoidable job hazards should be put in place, especially by the institutional administrators. Government should also increase the hazard allowance made available to staff in order to have a better engaged staff.

IMPLICATIONS FOR EDUCATIONAL PLANNING

Findings from this study have certain implications towards effective planning that will ensure positive engagement of the academic staff. These implications include the followings:

i. Government and institutional administrators need to plan the working environment such that it is made more conducive for scholarly works in terms of the provision of necessary equipment, facilities, and materials that can enhance the level of engagement of the academic staff with their job.

ii. Government and institutional administrators need to plan for the recruitment of more qualified academic staff in line with staff-student ratio with a view to reducing the workload being currently experienced by the academic staff.

REFERENCES

Bemana, V., Moradi, Y., Ghasemi, U., Taghari, M., & Ghayoor, W. (2013). *Effective behaviour in organizations: Cases, concepts, and employees experiences*. New York: Irwin McGraw-Hill.

Berwick, R. (2013). Making the link between work-life balance practices and organizational performance. *Human Resource Management Review*, *19(3)*,9-22.

de Castro, H., Gee, Y., & Takeuchi, V. (2012). Predicting the salary satisfaction of exempt employees. *Personnel Psychology, 34(5),* 579 - 589.

Del Campo, K., & Blancero, G. (2011). *Sex differences in social behaviour*: *A social-role interpretation*. Hillslade, NJ: Erlbaum.

Dolan, H., Garcia, Y., Cabezas, I., & Tzafrir, E. (2012). What is the state of job engagement among academic staff at Malaysian universities? *Unitar E-Journal*, *7(1), 15-26.*

Edwards, S., & Easton, G. (2013). Reward systems and academic staff' performance: Evidence from Ghana. *Canadian Social Science, 9(5),* 57-62.

Erkutlu, J. (2014). *Strategic pay*. San Francisco: Jossey-Bass.

Foley, N., Kidder, W., & Powell, D. (2012). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology*. Chicago: Rand Mcnally.

Goldman, L. (2013). *Academic staff workplace*: *The social organization of tertiary institutions*. New York: Teachers College Press.

Igbal, E., Ghafoor, I., & Malik, E. (2013). *Job attitudes: Review of research and opinion*. Pittsburgh, PA: Psychological Service of Pittsburgh.

Jones, J. (2013). The development of an employee satisfaction model for higher education. *TQM Mag. 18 (5), 484-500.*

Jones, J., Ni, Y., & Wilson, D. (2013). Employee satisfaction in higher education: The case of academic and administrative staff in Turkey. *Career Development International, 8(7), 347-356.*

Kadiri, S A. (2011). *Safety handbook for professionals*. Lagos: Zub-chord Technical Ventures.

Kalra, P. & Ghosh, E. (2014). Levels of job satisfaction amongst Malaysian academic staff. *Asian Social Science Journal, 35(9), 122–126.*

Kayastha, L. & Kayastha, R. (2012). Gender differences and job engagement: A study of university teachers in the United States. *Women Manager Review 20(3), 177-190.*

Kickul, J. (2013). Which work factors determine job engagement? *Work*, *30(4)*, *433-439*.

Lockwood, W. (2014). *Personnel: The management of people at work*. New York: Macmillan Publishing Company.

Nkogbu, G. O. (2015). Impact of human capital development on organizational productivity in the Nigerian public sector: A case study of Nigerian Ports Authority (Delta Ports, Warri). Unpublished M.Sc Dissertation. Lagos: National Open University of Nigeria.

Okoh, L., & Ujuju, N. (2011). *Educational planning: Theory and methods*. Owerri: Izharsons Co Ltd.

Okoye, P. V., & Ezejiofor, R.A. (2013). The effect of human resources development on organizational productivity. *International Journal of Applied Research in Business and Social Sciences, 3(10), 250-268.*

Onyeonoru, I. P. (2011). *Industrial sociology in Africa context*. Ibadan: Samlad Press.

Oyebola, B. & Ojuolape, O. (2012). *Studies in motivation*. Lagos. Macmillan Books.

Raver, L., & Nishii, F. (2010). *Bureaucracy in education*. Baltimore: John Hopline Press.

Rehman, V., Schabracq, W., & Cooper, A. (2010). Worker sorting and job engagement: The case of union and government jobs. *Industrial and Labor Relations Review, 65(8), 595- 609.*

Schaufeli, W. B. (2013). What is engagement? In C. Truss, K. Alfes, R. Delbridge, A. Shantz, & E. Soane (Eds.), *Employee Engagement in theory and practice.* London: Routledge.

Teniibiaje, O. (2013). *Value orientation, needs satisfaction and job performance of public servants in Akwa Ibom State.* A Ph.D. Dissertation, University of Calabar, Calabar, Nigeria.

Tett, V., Jackson, Z., & Rothstein, P. (2011). Innovative behavior and job involvement at the price of conflict and less satisfactory relations with co-workers. *Occupational & Organizational*

APPENDIX
Job Concern Factors and Employee Engagement Questionnaire (JCFEEQ)

Dear Participant,

We are researchers in the above-mentioned Department in the University of Lagos. We are currently carrying out a research on job concerns and employee engagement. This questionnaire is mainly for research purpose. We hereby humbly request your cooperation by providing us with the required information. All information given be handled with strict confidentiality.

Please carefully read through the items and tick [√] the appropriate information related to you in Section **A** and answer all questions in Section **B.** Your anticipated cooperation will be highly appreciated. Thank you.

Researchers

Section A: Demographic Data

1.   **Gender**: (a) Male [ ]   (b) Female [ ]

2.   **Age**: (a) 31 – 35 yrs [ ]   (b) 36 – 40 yrs [   ] (c) Above 40 yrs [ ]

3.   **Teaching Experience**:   (a) 01 – 05 yrs [   ]   (b) 06 – 10 yrs   [ ]   (c) 11 – 15 yrs [ ]
                                (d) 16 – 20 yrs [   ]   (e) Above 20 yrs [ ]

SECTION B: Put a tick (✔) to indicate your level of agreement or disagreement to the options presented in the column below.

KEYS: Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD)

S/N	Workload	SA	A	D	SD
1.	I have too much work to do.				
2.	The job is taking too much out of me.				
3	I deal with several emotional difficult situations.				
4	Combining administrative work with academic work is tasking.				

5	I hardly have time to rest in my place of work				

	Job Hazard	SA	A	D	SD
1	I am being exposed to illness.				
2	I am being exposed to injury.				
3	The physical conditions on my job (noise crowding, temperature) are too much.				
4	My job is physically strenuous.				
5	My workplace environment is not maintained with adequate safety measures.				

	Interpersonal Discrimination	SA	A	D	SD
1	I have been treated with less courtesy than other people are in this institution.				
2	I am facing discrimination or harassment because of my race/ethnic background.				
3	I face discrimination because of my gender.				
4	I do not feel comfortable working with other colleagues.				
5	I am always being harassment				

	Employee Engagement	SA	A	D	SD
1.	I am more committed to performing to be the best of my ability.				
2.	I am committed to the mission statement of this institution.				
3.	I am not dedicated to the success of what I am doing.				
4.	I voluntarily do more than the job requires so that I contribute to the efficient operation of the institution.				
5.	I do not think of my job every time.				
6.	I hate the job I am doing.				
7.	As an academic staff, I feel happy each time I am going to work.				
8.	If I get better option, I am willing to leave this institution immediately.				

INVITATION TO SUBMIT MANUSCRIPTS

The editor of *Educational Planning*, a refereed journal of educational planning issues, invites the submission of original manuscripts for publication consideration. *Educational Planning* is the official journal of the International Society for Educational Planning. The audience of the journal includes national and provincial/state planners, university faculty, school district administrators and planners, and other practitioners associated with educational planning.

The purpose of the publication is to serve as a meeting place for scholar-researcher and the practitioner-educator through the presentation of articles that have practical relevance to current issues and that broaden the knowledge base of the discipline. *Educational Planning* disseminates the results of pertinent educational research, presents contemporary ideas for consideration, and provides general information to assist subscribers with their professional responsibilities.

Manuscripts preferred for inclusion are those from practitioners, reports of empirical research, expository writings including analyses of topical problems, or case studies. Unsolicited manuscripts are welcomed.

The following criteria have been established for the submission of manuscripts.

STYLE: All formatting should adhere strictly to the current guidelines set in the Publication Manual of the American Psychological Association.

LENGTH: The manuscript, including all references, figures or illustrations, charts, and/or graphs, should not exceed 20 pages. In addition, an Abstract (between 150-500 words on a separate sheet of paper) describing the focus of the manuscript should be included at the beginning of the manuscript.

WORD PROCESSING: SINGLE-SPACE all text using TIMES NEW ROMAN with a 10 point type. Headings and sub-headings should be in ARIEL with a 10 point type. Provide 1.0 inch margins top and bottom, and 1.5 inch left and right, with 1.0 inch header and 1.0 inch footer. The body of the manuscript must be no wider than 5 ½ inches to fit the paper. Lengthily tables, drawings, and charts or graphs should be scaled to the dimensions given and should preferably be camera-ready.

FORM of SUBMISSION: Send the manuscript to the Editor electronically in Microsoft Word as an attachment to an email. The email address is: tchan@kennesaw.edu

The manuscript should include the following:

Title Page
Title of the manuscript
Date of Submission
Author(s) name, mailing address, telephone number, email address, and fax number
Biographical sketch not to exceed 75 words
Abstract
An abstract not to exceed 500 words on a separate page
Body of the Manuscript
Text of the manuscript not to exceed 20 pages, including references, tables, etc.

If the manuscript does not meet the guidelines exactly, it will NOT be reviewed and will be returned to the author.

Author(s) name or any other identifying information should not be included on the abstract or the manuscript. Authors are responsible for copyright clearance and accuracy of information presented and submission implies that the same manuscript has not been submitted t other publications.

Editorial reviewers and editors will review all manuscripts. Points of view are those of the individual authors and not necessarily of ISEP.

Please send manuscripts to: Dr. Tack Chan – tchan@kennesaw.edu

For more information about ISEP go to: www.isep.info

ISEP
MEMBERSHIP SUBSCRIPTION FORM
(Please Print)

Name: _____

             Last   First   Middle

Organization/Department _____

_____

Mailing Address: _____

_____

           City   Province/State

_____

      Postal Code   Country

Email _____

Fees: Professional Membership and Subscription to Educational Planning = $125.00 USD

Payment by check, money order, or Purchase Order required with application.

NOTE: Annual Membership is based upon the calendar year – January to December.

MAKE CHECK PAYABLE TO: <u>ISEP</u>
RETURN MEMBERSHIP APPLICATION AND PAYMENT TO:
Dr. Carol S. Cash
Secretary/Treasurer, ISEP
<u>ccash48@vt.edu</u>
6543 Cold Harbor Road
Mechanicsville, VA 23111
USA

Fiftieth Annual Conference

International Society for Educational Planning

Washington, D.C.
October, 2020

Conference Registration Includes:
Registration & Membership
Breakfasts, Luncheons
Journal Subscriptions

www.isep.info

For further information contact:

Dr. Abebayehu Teleselassie
George Washington University

Abebayehu@gmail.com

51st Annual Conference
Port Elizabeth, South Africa

ORGANIZATION

The Society was founded December 10, 1970 in Washington, DC. Over 50 local, state, national, and international planners attended the first organizational meeting.

Since then its continued growth demonstrates the need for a professions organization with educational planning as its exclusive concern.

PURPOSE

The International Society for Educational Planning was established to foster the professional knowledge sand interests of educational planners. Through conferences and publications, the society promotes the interchange of ideas within the planning community. The membership includes persons from the ranks of governmental agencies, school-based practitioners, and higher education.

MEMBERSHIP IN THE SOCIETY

Membership in the society is open to any person active or interested in educational planning and the purposes of the Society. To join the Society or renew a membership please complete and submit the enclosed form.
Please forward check/money order/PO to:
ISEP
Dr. Carol S. Cash, Secretary/Treasurer
6543 Cold Harbor road
Mechanicsville, VA 23111
USA

EDUCATIONAL PLANNING