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STAKEHOLDER INVOLVEMENT IN IT PROJECTS SUPPORTING K-12 SYSTEMS: DOES LEADERSHIP MATTER?

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ABSTRACT

In this study, we investigated the roles of transformational leaders and project champions in the context of stakeholder involvement in an IT project supporting K-12 public education in the southern United States. We observed that leadership characteristics and champion behavior played a crucial role in the successful implementation of a self-service library system. The impact of leaders and project champions became evident through the growth in the number of volunteers supporting the implemented system. This growth ultimately led to the creation of a stakeholder reference group and an increase in volunteer participation. Based on the case study reviewed, we found sufficient support to justify future research in a larger sample population.

Keywords

Transformational leadership, project champions, stakeholders, public education, K-12 school systems, project management, library management, technology

INTRODUCTION

Businesses of all kinds continually encounter the opportunity to implement innovation and technology in order to improve business processes or address problems as they arise, but the central question is how to implement a solution while mitigating risk in order to realize maximum benefit for stakeholders (Howell and Higgins, 1990). Public education, like any corporation, must adapt to both internal and external forces. School administrators and politicians alike are plagued by any number of constraints such as budget cuts, understaffing, and legislation (e.g. No Child Left Behind Act) that render decision making challenging at best (Aske, Connolly and Corman, 2013; Weinraub, 2013).

Most agree that technology and innovation provide many benefits to enhancing and facilitating education in public schools while minimizing costs, but to realize these benefits all stakeholders must adopt and utilize the technology (Buckenmeyer, 2010). It is in this need to successfully guide the implementation and utilization of technology for public education that transformational leadership and project champions become a necessity (Dong, Sun and Fang, 2007; Howell and Higgins, 1990). This study will evaluate an actual case study project to provide evidence on how increased stakeholder involvement and the use of information technology are employed in an environment that displays the characteristics of transformational leadership guided by champion behavior and attributes.

The rest of this paper is organized as follows. The next section explains of the nature of public education and the benefits of organizational leaders with respect to guiding change represented by the introduction of technology. The third section provides an explanation of the research method employed in this study and how the information accumulated will be used to facilitate questionnaire development for a later study of greater scope. The fourth section contains a discussion of the case project used to gather information and provide anecdotal evidence. The final section of this paper offers a conclusion and a proposal of future research.

THEORETICAL FRAMEWORK

In today's educational atmosphere, accountability and performance means that the school leadership must utilize managerial skills that parallel those of the corporate world. Many theories of transformational leadership have been constructed, but little has been written on how leadership behavior increases stakeholder involvement. Like corporations, schools must evaluate their core capacities, and assess their cost structures to achieve stakeholder's expectation. Many of the educational articles are written based on the need for parental involvement to increase student learning. That increased involvement not only fills the gap where budget cuts create shortages, but also make new technology implementations successful (Onorato, 2013). It is

more effective when those volunteers exhibit characteristics of project champions and transformational leaders (Howell and Higgins, 1990). Effective transformational leaders enlist activities such as school fundraisers, newsletters, and rallies to express the schools' need for stakeholder participation from sources including individuals such as parents, school board members, community leaders, and political group affiliates (Dong et al., 2007; Onorato, 2013). Most studies agree that higher student achievement and engagement in learning activities stem from how actively and effectively technology is used in the classroom and learning environment. Since education operates as a service-related firm, schools must find effective ways to provide excellence in meeting learning objectives that incorporates stakeholder involvement and managerial support (Dong et al., 2007; Selwyn and Husen, 2010).

According to Olmstead (2013), stakeholder involvement develops into either a reactive or proactive response to the leadership environment. The expectations of the stakeholder determine the outcome level of involvement. Reactive responses results in more involvement within the school functions and environment. Proactive ones limit the volunteer to responding to only the student's learning activities (Olmstead, 2013). Increased stakeholder involvement and the use of information technology are fostered in an environment that displays the characteristics of a transformational leadership. The transforming leadership model motivates others to higher achievement that develops into a sense of self-empowerment (Onorato, 2013). The leader must first foster creativity and provide a supporting climate that enhances a team spirit (Onorato, 2013). A transformational leader effectively communicates futuristic vision and instills a sense of mission. When a stakeholder identifies with leadership, more than likely the support of the vision and active involvement in the mission will increase over time (Harrison and Wicks, 2013).

The educational arena experiences strategic inflection points like many corporations. The need for change evolves because of varying agendas of administrators, educators, and others external forces that influence the field of management and education. (Shoham and Perry, 2009). According to Shoham and Perry (2009), an accurate picture of the situation is achieved by considering the interests of the administration and leaders as an endeavor into project management while the faculty members and parents tend to evaluate change in terms of educational value and projected outcomes. Champions are especially useful in overcoming barriers imposed by both sides because they serve to drive projects to fruition while acting as trainers for people who will be using the proposed technology (Koc and Bakir, 2010).

Through participation-observance, a county in the southeast US became the case study of a successful blending of stakeholder engagement in IT project management and transformational leadership when creating and implementing a technology plan to automate the media centers within the district. A notable feature of this case study is the behavior and characteristics displayed by a parent volunteer. Even though management and leadership directives and behavior legitimize or sanction organizational change, it is often observed at various levels that there is a resistance to changes that are threatening to disturb the status quo (Dong et al., 2007; Matesic, 2009).

When change is enacted, the opinions of many are influenced by perceptions of managerial support and influence coupled with the prevailing opinions of influential persons in an individual's peer group (Polites and Karahanna, 2012). In many cases, a positive change agent can emerge from an employee's peer group in the form of a project champion that seeks new opportunities and acts to influence others (Howell and Higgins, 1990). This champion serves as a cheerleader, motivator, trainer, and general positive influence that drives change and helps to re-define the status quo which acts to create inertia. In most cases, this redefinition occurs as a stepwise process of unfreezing, recreating, and re-freezing the way things are accomplished as a business process (Cavusoglu, Hu, Li, and Ma, 2010; Keengwe, Kidd and Kyei-Blankson, 2009; Zhang and Xu, 2011).

Yukl (1989) defines transformational leadership as a leadership style capable of managing significant changes concerning organizational strategies and cultural norms shared by the members of a given organization. While transactional leadership focuses on the use of rewards to motivate followers, transformational leaders aim to influence by appealing to the higher-level needs of their followers. Transformational leadership seeks to overcome self-interest motivation on the part of followers by encouraging their involvement and active participation in the process of managing organizational change. According to Judge and Piccolo (2004), transformational leadership is manifested via the four characteristics: a.) Idealized influence, charisma, is the behavior of a leader that exemplifies norms that an observer wishes to achieve b.) Inspirational motivation is the portrayal of a vision or goal that followers will aspire to achieve c.) Intellectual stimulation challenges a follower to think and contribute to the overall achievement of expressed goals and outcomes d.) Individualized consideration characterizes the leader's attention to the individual needs of followers. In terms of champion behavior, transformational leaders act from within an employee's peer group for immediate sphere of influence (Cavusoglu et al., 2010; Dong et al., 2007). The prevailing attitude inspired by a champion is "if they can do it, so can I."

RESEARCH METHOD

The present paper focuses on one case study. The study of transformational leadership behavior in the context of IT projects implemented in K-12 system that we undertake is exploratory in nature. Descriptive and qualitative research is a commonly used approach according to Yukl (1989) for studies of transformational leadership. This assertion is further supported by the

work of Türel and Johnson (2012) who believe that descriptive techniques provide insight into the beliefs held by members of an identified population. In descriptive and qualitative research studies, it is common to use a limited number of subjects as a pilot sample to gather information that will be used to construct an instrument to be used in larger studies that will be carried out in the near future (Türel and Johnson, 2012; Yukl, 1989).

Yin (2009) identified participant-observation as one of the major sources of evidence for research using case studies. One benefit of this approach for collecting data for the situation at hand included the ability to present the depiction of stakeholder interactions in a more in-depth fashion. The other important benefit was the chance to look at the events taken place in this case study through the eyes of an actual participant. The resultant perspective assumes a more close reconstruction of events compared with the perspectives of outsiders.

One of the authors of this study actively participated in the process helping launch the self-service library project. This participation process took place for the entire school year. The author volunteered every Friday for six hours to the media center from August 2012 through May 2013. Over ten volunteers monitored and assisted students in using the system. Many of these volunteers consisted of two retired teachers, one retired military member, two school bus drivers, and five parents. In addition, volunteers helped with shelving the books, labeling, repairing, and other library-related tasks. The author also engaged in training other parent volunteers, which eventually required a work schedule to be drafted that complement the media specialist's work load. Through a prolonged and regular participation, the author witnessed first-hand manifestations of leadership behavior as well as stakeholder interactions. Subsequent analytical reconstruction of observed behavioral patterns provided us with the evidence to present theoretical and practitioner implications.

DISCUSSION AND FINDINGS

The county's board of education recognized the importance of incorporating advanced technology and increasing access to technology. The school system considered the need for a community-style partnership that encompasses both internal and external stakeholders: employees, educational leaders, parents, community leaders, and business partners. Out of this partnership, several IT projects were conceived: a self-service library, Bring Your Own Device (BYOD) initiatives, and an expansion of the district's wireless infrastructure.

The self-service library system required a group of full-featured software programs that are user-friendly, and low-maintenance - Centriva (Houston County Schools District, 2013). The already established the Surpass library software made implementation of the self-service project manageable. Anticipating the need for technological upgrades, the school system established seventy-one Windows Multipoint Servers as well as twenty Windows File servers for administrative purposes. (Houston County Schools District, 2013). All thirty-nine schools within the district are networked with 15-20 network drops for each of the district's thirty-seven media centers and two alternative resource centers. All schools participate in a wide-area network (WAN), with all schools at 100 megabit Ethernet switches (Houston County Schools District, 2013).

The first phase required all media centers to be centralized one at a time. The purchase of the Surpass Select software met that requirement. Based out of Calhoun, Georgia, the program offered centralized, stand-alone, and small library automation systems (Fiehn, 2006). The programs that Surpass offers can be supplemented by add-on modules for Z39.50 copy cataloging, serials, and enhanced content (Fiehn, 2006). The district chose the add-on module, Centriva, which incorporates browser–based technology with client-based circulation (Fiehn, 2006). This allows the Centriva data server to easily integrate into the already established Surpass Select library system.

The Surpass Select library system is a Windows based desktop application built for circulation, administration, cataloging, and reporting. Since the system required no special training, the software program supplemented the elimination of media assistant positions proposed in the school's budget reduction plan. The technological plan specifies a three-year goal that expands from July 1, 2011 to June 30, 2014. The collaboration of the plan consisted of a technology committee, school board members, and parent representatives. The system technology committee consists of members from the district's school of operations, finance, media services, school administrators, and school level technology coordinators. All proposed initiatives such as hardware/software implementations, technology related upgrades and purchases were approved by the committee.

The district received technological recognition from the Center for Digital Education (CDE) from 2004 - 2007. The CDE, a research and advisory institute, surveys and observes new trends in educational technology within school districts throughout the United States. The Digital School Boards Survey examines how school boards and their districts apply information technology that better engage local communities and constituents. The Survey looks at how schools improve service, delivery and quality of education to students (Center for Digital Education, 2007). The CDE advises the education industry, conducts relevant research, issues white papers, and produces surveys. School districts who successfully integrate information technology throughout the educational process are awarded and recognized for their efforts (Center for Digital Education, 2007).

In the case of the self-service library, the increase in stakeholder involvement stems from the transformational leadership model. The goal of the district is to improve on stakeholder involvement and establish acceptance of the technology plan. To be successful, the functions of the media center must draw stakeholders to the idea of shared learning. Many stakeholders are motivated by community service hours, comfort (a sense of belonging), or a passion for technology or reading materials (Bogel, 2013). Most volunteers have some stake in the success of the school. The purpose of the self-serve library was to increase student participation in the Accelerated Reading Program established by the media specialist. The mission of the school: make students into lifelong readers. Because the leader communicated the mission and clarified the vision to stakeholders, ambiguities and complications were reduced. Stakeholders tend to embrace an information technology project when they are more broadly and emotionally involved (Mishra and Mishra, 2013). Once the volunteers understood the goal, the project was easily accepted and increased involvement occurred.

The stakeholder's role in the success of the project was enhanced became of the deep respect for and trust in the school's principal and media specialist. The principal exuded transformational leadership qualities and behaviors. He affiliated with the volunteers by providing personal attention, showing general support, and listening to parent's and volunteer's concerns. Because the principal was admired, respected, and trusted, he was able to communicate well with parents and volunteers. This idealized influence aroused devotion and involvement, increasing awareness and participation. Transformational leadership influences changes especially those that impact the school's environment. Along with the media specialist, the principal successfully merged the different values, interests, and social choices of stakeholders and the school into one common social good. High expectations, shared vision, and team spirit describe the inspirational motivation communicated to the parents (Onorato, 2013).

The appointed leader of the self-serve library, in this case the media specialist, sought a proactive approach to the project success. She increased parental awareness and understanding of how critical student's reading level affects educational achievements. The acceptance of the project means that the media center must offer experiences in civic responsibility, character education, and personal participation in a shared community space (Bogel, 2013). Because the media center served as the technological support for the school, the media specialist solicited increased stakeholder involvement and trained those interested on how to use of technology. Once the goals were clarified for volunteers, many started spending considerable amounts of time in the media center. With all ambiguities and complications reduced, collaboration among the stakeholders which eventually lead to work schedule and a volunteer reference group was formed. Each 'seasoned ' volunteer started to lead and train others in the use of the technology. During the project implementation (beginning of the school year), there were only three volunteers. As the volunteers became well informed and provided with meaningful tasks, recruitment increased from three to ten full-time volunteers.

Collaboration was the main intellectual stimulation for gaining the support and volunteerism of parents. Parents were allowed to come up with innovative ways to operate and manage the media center. The environment fostered creativity and new approaches as well as self-directing problem-solving. Many of the volunteers considered the time in the media center as a way to brush up on computer, typing, and past office skills. Because the media center serves as the technological support for the entire school community, media specialists are more capable of leading parental involvement, using technology to train parent volunteer (Farmer, 2002). The transformational leadership model works best once the stakeholder's needs and desires are respected. That respect eventually leads the parent volunteers to assume some leadership roles (Onorato, 2013).

CONCLUSION

The overall conclusion that we reach is that sufficient evidence exists to warrant future studies investigating the effect of leadership potential and desirable leader characteristics in technology projects supporting and facilitating public education. Specifically, we observed that transformational leadership and champion behavior were exhibited in the project explored in this paper by the several layers of stakeholders. Given the size and scope of the project analyzed, it is difficult to imagine any significant level of success without effective leadership the school administration and staff in conjunction with buy-in of parents and participants.

The school's principal and media specialist exhibited the characteristics of transformational leadership. Additionally, some parent volunteers acted to stimulate change, by supporting the addition of a self-service library in assuming the capacity of project champions. It is worth noting for this particular project that the combination of stakeholder's contributions produced value greater than the sum of individual parts as exhibited by the growth in the number of volunteers as organizational change occurred. This growth ultimately led to the creation of a stakeholder reference group and an increase in volunteer participation.

LIMITATIONS AND FUTURE RESEARCH

One of the limitations of this study lies in the area of research methods. We utilized the participant-observation approach which offers richness of details for the phenomenon under analysis. Yet, this method could lead to subjective conclusions on the part of the researcher due to the tendency to align himself/herself with a good cause pursued by a group of human

subjects he/she studies (Yin, 2009).   Future studies could rely on more than just one method for collecting pertinent evidence. Another limitation stems from the use of a single case study. The results obtained, however, will be used to facilitate instrument development for later studies. Therefore, a preliminary understanding can be established from a single case in terms of direction and focus. A future study is proposed that will look at multiple cases where students, parents, educators, administrators, and concerned individuals become involved as transformational leaders or champions in the implementation of technology. In a larger study, the factors that guide an individual to become a transformational leader along with the techniques employed by the individual as a leader can be investigated.

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