

Technology leadership in education



Introduction

When I first started teaching in the early 2000s, the job of a technology coordinator or technology leader in a school district was not a well-defined position. I remember only one technology director and possibly one or two network specialists in my whole school district in my first years of teaching. As a classroom teacher, I never interacted with them, as they were always behind the scenes setting up equipment and network infrastructure. I did not have any intention of pursuing instructional technology as a career path, let alone being a technology leader. But as the demand for and availability of technology resources grew over the years, my interest in finding a variety of digital tools to enhance student learning increased. Now, almost twenty years later, I consider myself fairly experienced with instructional technology and I enjoy finding ways to reimagine my teaching through technology. I've recently begun to consider a career change towards an instructional technology coach or technology leader. This reflection paper examines five essential topics of technology leadership, and how I will apply what I have learned in this course to help me be an effective technology leader.

Leadership Topic #1: Visionary Thinking and Strategic Planning

An educational technology leader must have a vision for the use of technology in a school district and a comprehensive plan of how to implement this vision. This vision begins with the cooperative efforts of various stakeholders of the learning community to craft a strategic plan incorporating the development of appropriate technology policies, the acquisition, monitoring, and maintenance of technology, the design of

effective professional development programs, and the coordination of technical support for users (Frazier & Herrington, 2017). A strategic plan committee should comprise of teachers, administrators, students, parents, and board members. Together, they will create a shared vision for how technology can enhance teaching and learning. A strong technology leader must continuously research best practices and educational trends to maximize student learning to reflect the demands of today's changing world.

Personally, I have never thought of myself much as a leader. I do not search out opportunities to be in the spotlight and assert authority. But, I am knowledgeable in educational technology and sharing my knowledge with others has naturally occurred through colleagues asking me for help and administrators asking me to facilitate technology workshops. This course has taught me that being a technology leader is multi-faceted and will require a variety of skills, some of which I would not consider strengths of mine. I am not experienced in administrative tasks such as managing a budget and I am certainly not an expert on network operations. I realize that I cannot take a 'one-man' approach to leadership. I need to regularly collaborate and seek advice from other professionals in their fields. These stakeholders need to be involved in the planning and decision-making processes. According to Frazier and Herrington (2017), when a diverse group of stakeholders is involved, "a variety of needs and ideas can be expressed and vetted, and a broad base of support can be established for the plan" (p. 169). It will be necessary to have the support and buy-in from these stakeholders when it comes to budgeting and implementing the school district's vision.

Leadership Topic #2: Managing Technology Resources for Effective Results

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The management of technology resources covers a wide variety of topics including the purchase and installation of equipment, the maintenance and life-cycle of the equipment, and the evaluation of their investment. One role of a technology coordinator is to decide what equipment and supplies to purchase. This includes software, hardware, and all the infrastructure needed to keep the network operating. These decisions must be made with the support of the administration and the board of education and be in alignment with any purchasing policies of the school district. I know that my school district has a specific policy for obtaining competitive bids and price quotations for products and services over a specified amount of money that is set by the state of Pennsylvania. If I were a technology leader in my district, I would need to secure three written price quotations for the purchase of equipment and supplies over \$11, 100 and three competitive bids for equipment totaling more than \$20, 600 (Northampton Area School District, 2019). It would be important to adhere to my district's purchasing policies and procedures of the budgeting process. Consulting with end users is a must in this stage, as purchases must support the needs of teachers and students, and reflect an understanding of how technology will assist the teaching and learning process.

Other major responsibilities of a technology coordinator are to maintain the technology resources already purchased, ensuring that they are operable and current, and evaluate their investment in terms of the beneficial impact on the learning process. It is necessary for the technology coordinator to have procedures for deciding which technologies are fully supported and which ones need to be upgraded or repaired. Most school districts have a

mixture of old and new technology. “ At some point in time, older technology becomes costly in both time and resources, and may even become cost-prohibitive, to repair or upgrade” (Frazier & Herrington, 2017, p. 84). As a technology leader, I will need to have transparent standards that evaluate the operability and effectiveness of each technology resource, in addition to procedures for providing technical support in a timely and prioritized manner.

To evaluate the educational value of technology, the technology coordinator should develop assessment tools based on the goals of a district’s technology plan, which may include surveys, interviews, and observations (Frazier & Herrington, 2017). I will need to justify to administrators and school board members that the money spent on these resources has a beneficial impact on teaching and learning. After data has been collected, I will analyze the information, make judgments about the program, and share these results with stakeholders. This will also guide future decisions for any additional technology needs. The ultimate goal is for the school district to make use of the technology resources it has and to continuously assess future needs to improve teaching, learning, and business functions.

Leadership Topic #3: Collaborating, Communication, and Team Building

A technology leader needs to be an effective communicator and collaborate with teachers, administrators, and members of the IT department. These are essential skills needed by all members of the educational community.

Teachers and school district leaders should model these 21st century skills so that students see they are as equally important as content skills. As

Thomas Friedman explains in his lecture, to help bring average learners to the global average, education of today requires the 3 C's of communication, collaboration, and creativity (Hipster, 2014). One strength that I can confidently say I possess is interpersonal skills and the ability to communicate and interact effectively with others. In my opinion, this is a necessary skill for a teacher to possess and I am baffled when I meet teachers who do not have good communication skills. A technology leader will need to communicate well to others on the different levels of a school district's organizational structure. As explained in topics 1 and 2, a technology leader will need to communicate their vision and justify the need for technology resources to district administrators and the board of education. Likewise, a technology leader needs to collaborate and build a team atmosphere with the members of the IT department. Together, they will share responsibility for the instructional technology department's projects and goals. The members of the IT team have highly specialized and advanced technical skills and knowledge, much beyond my current level of understanding. It will be my job to delegate project responsibilities to these team members which shows that I value and trust their abilities.

Leadership Topic #4: Supporting Professional Growth of Self and Others

Technology leadership involves constant research and learning about new developments in technology that could improve learning outcomes. The technology coordinator should “ regularly read about new products and developments, attend conference presentations and trade shows, and discuss products with vendors” (Frazier & Herrington, 2017, p. 173).

Technology has greatly evolved from when I first started teaching eighteen

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years ago. I have gone from teaching with absolutely no technology in my classroom in 2001 to teaching with all students having Chromebooks, an elaborate instructor set-up of multiple devices, and a wide variety of digital tools to choose from in 2019. New programs and new tools are being developed constantly with the objective of improving student learning. With new equipment comes the need for professional development and training for the teachers and staff who will be using it. Frazier and Herrington (2017) state that the allocation of resources for training of teachers is sometimes overlooked, but necessary to ensure that the investment in technology resources and infrastructure is maximized. The technology leader should be aware of best practices in planning and implementing professional development to aid teachers in improving student learning.

As a technology leader, I realize that I do not need to be the only one providing this training and professional development. A good leader knows how to use the resources and experience of adult professionals at his or her disposal. In the case of a school district, I will facilitate professional learning communities, using the abilities and knowledge of teachers and IT staff.

According to D'Annibale (2019), adults have “ motivation, varied backgrounds, task-oriented nature, and immediate needs to create the most effective professional development opportunities” (para. 3). My school district already makes use of teachers in this way. I have led two professional development workshops these past two years to different groups of faculty members on digital learning topics. It is important to create this collaborative climate of learning from and leading each other. It was nice

to be asked to lead these workshops, as I felt valued and respected as a professional.

Leadership Topic #5: Leading the Integration of Technology into Teaching and Learning

The International Society for Technology in Education (ISTE) has created the ISTE Standards for Students to guide educators when implementing technology. Frazier and Herrington (2017) state that the technology coordinator of a district should make sure that teachers are aware of these standards in order to incorporate them into their planning and teaching. Frazier and Herrington suggest showcasing the work of teachers who are already implementing these standards by incorporating them into professional development sessions. As a classroom teacher, I had never heard of the ISTE standards in any technology-related professional development session from my school district before. Taking these graduate classes with Wilkes University was my first introduction to them. If I were to assume the position of a technology leader in my district, I would integrate the ISTE Standards into the professional development program. Most of the technology workshops in my district the past few years have been focused on how to use the Learning Management System of Schoology and other specific software programs that we have recently implemented. I have heard students complain, however, that teachers have them use their Chromebooks for everything and many times, for low-level types of tasks that could have been accomplished faster and easier with paper and pencil. As a technology leader, I would incorporate more professional development for teachers which focus on pedagogy and the instructional shifts that need

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to take place when technology is used. Department of Education (n. d.) declares “ Technology alone does not transform learning; rather, technology helps enable transformative learning” (para. 1). Technology should be used daily within and beyond the classroom to enhance student learning. It should bring about a change in the learning environment that would otherwise be inconceivable without it, such as collaboration, inquiry-based learning, and connecting globally with others. As a technology leader, I will work with teachers to guide students to create personalized learning experiences through technology.

Conclusion

This course has helped me to realize that a technology leader must have a variety of skills and “ be comfortable wearing many hats” (Frazier & Herrington, 2017, p. 4). I know that I still have a lot to learn about the five leadership topics examined in this paper if I were to pursue a career as a technology leader. Effective leadership requires constant learning and investigating ways to improve one’s self. I plan to continue acquiring knowledge to have a complete understanding of the many aspects and requirements of the technology coordinator position, so that one day I could effectively implement the technology vision of an organization.

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