The Degree of Technological Leadership Practice among the Principals of Basic Schools in the Directorate of Education of the North-West Badia District from the Teachers' Point of View in Light of Corona (Covid-19) pandemic

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Abstract

This study was presented to find out the extent to which the technological leadership is practiced by the Directorate of Basic Schools in the Directorate of Education for the North-West Badia District in light of Corona (Covid-19) pandemic from the teachers' point of view. The survey was conducted using the questionnaire tool, which was distributed to five areas that express technological leadership, including leadership, vision and culture of learning in the digital age, excellence in professional practices, improvement and systematic development of social, legal and ethical issues. The basic education in the Directorate of Education of the North-West Badia Brigade in light of Corona (Covid-19) pandemic, from the point of view of teachers, came in a high percentage in all fields and in terms of the questionnaire. Which was in favor of females, as well as the scientific level was for the bachelor's class in addition There are no statistically significant differences at the significance level (a = 0.05) between the average estimates of the sample members on the total degree of the scale, and considering the difference in the number of years of experience. The study also indicated the importance of raising awareness and establishing courses and workshops for administrative leadership using technology by applying modern concepts and practices in technological leadership.

Keywords: technological leadership, corona pandemic, school principals.

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Introduction

The development witnessed by the world in the massive informational and technological explosion has made the world a small global village. The technological development raised the level of performance due to its ability to save time and effort and reduce paper burdens, which ensured its efficiency in high performance and an advanced level of school leadership in particular. Successful school management achieves educational goals in all its fields, and successful management lies in keeping pace with continuous developments and adapting to changes, and that the development witnessed by the world in terms of developments and changes. Employing technology in education is an important process because of its advantages, through the use of communication networks and computers in addition to other educational and administrative applications, in addition to its impact on the performance of students in a positive and effective way, and a significant improvement in their educational achievement/attainment.

Leadership reflect the results of school administration and the administration's response to the changes imposed by the requirements of the times, as we have what is called technological leadership to be another concept of educational leadership. Mawasi 2014 mentioned that the technological leader has a role not limited to his use of technology in the management of his school, but rather to his ability to provide what facilitates technology operations in education in all aspects and their ability to overcome the obstacles and challenges they face in using technology (Hamza, Jeremy, and Mansour 2016). Leadership is one of the main pillars of management, which focuses on the human aspects that are concerned with the vision and follows multiple strategies that depend on participation and interaction between the leader and the employees according to principles that ensure the achievement of the desired goals (Atwi, 2016) The emergence of Coronavirus (Covid-19) pandemic in the world led to the closure of schools. Here, the managers' burdens and responsibilities, which mainly include the safety of their employees and students, have increased, in addition to adapting to these changes by finding solutions. Therefore, the practice of educational leadership and technology is the most appropriate solution, as it is a good communication link inside and outside the school, if it is properly and successfully used (Mahmoud, 2020).

The Study Problem

Due to the technological development witnessed by the world, and integration into the world of technology led to the emergence of modern applications and technologies that facilitate the education process to achieve educational goals, and that keeping pace with technological changes and integrating them into administrative work contributes to raise the level of performance, accuracy and quality, in addition to saving time and effort and reducing paper burdens.

The study problem lies in the following:

- Weak use of technology leadership by the principal of basic schools in the Education Directorate of North-West Badia District in light of the outbreak of Corona from the teachers' point of view.

Objectives of the Study

The importance of the study is crystallized in knowing the extent of the practice of technology leadership among the principals of basic schools in the Directorate of Education of North-West Badia District in light of the Corona award from the teachers' point of view and finding statistically analytical differences at the significant level (a = 0.05) in the extent of the practice of technology leadership for the principal of basic schools, the Directorate of Education of North-West Badia District, from the teachers' point of view.

Significance of the Study

The importance of the study lies in identifying the extent of the practice of technology leadership among the principals of basic schools in the Directorate of Education of North-West Badia District in light of the outbreak of Corona from the teachers' point of view, and it is represented by two aspects, theoretical and practical.

The Theoretical Aspect:

The weakness of studies on technology leadership in light of Corona (Covid-19) pandemic.

The Applied Aspect:

Preparing training programs and courses that focus on the use of technology leadership by managers through holding courses of training and development centers in the Ministry of Education.

Limits of the Study

Human Limits: Basic Education Teachers

Geographical Limits: Basic schools in the Education Directorate of North-West Badia District.

Time limits: the first semester of the academic year 2021-2022

Determinants of the Study

Generalization of results is related to the validity, reliability and objectivity of the study tool, the recipients of the teachers, in addition to the generalization of the results to similar samples in society.

Terminology of Study

- ✓ Practicing degree
- ✓ Technology leadership
- ✓ Principals of basic schools
- ✓ Corona (Covid-19) pandemic

Review of Theoretical Literature and Previous Studies

First: Theoretical Literature

- **The use of technology in school administration**

A school is the main pillar in building society by building the student's personality in all its aspects, and this is done by keeping pace of social, political and technological developments and changes. Keeping pace with technology and including it in all administrative work contributed significantly to it, as it was based on reducing the administrative burden by saving time and effort, by providing a database that facilitates obtaining feedback on the school environment. Yunus 2016 explained that keeping pace with developments is not limited to owning computers only, but also includes the process of mastering them by introducing digital culture to their administrative and educational work. Given the challenge posed by the crisis on educational leaders, there must be solutions to complete the educational process, as it was resorted to the use of modern technology to overcome the crisis because of its characteristics in the education process and its employment in administrative work to achieve an advanced and integrated infrastructure.

- **Educational Leadership**

Leadership is the main axis on which school activities are based, as it seeks to motivate workers to cooperate with each other to achieve educational goals and strengthen the spirit of teamwork. Educational leadership includes the school environment that arises by providing a healthy environment and strengthening relations between the principal and the staff by motivating and organizing the work of workers within the school environment in a positive and regular way, the educational goals are achieved, deviating from traditional leadership styles and keeping pace with the various changes makes the manager under a challenge that measures his susceptibility and readiness to keep pace with technological developments. His technological leadership practices have a positive and effective impact on the educational and administrative process by employing technological tools. This includes the importance of technological leadership as it saves time and effort, as well as completing the work accurately, reduces paper burdens and ensures the quality of workmanship and professionalism, the possibility of protecting, storing, retrieving, analyzing, interpreting and simulating data, and also as a means of communication with others. Abed 2015 mentioned that it contributes to reducing barriers to decision-making by providing and linking data. In 2014, Abu Tajlekh classified the technological leadership requirements into administrative requirements: Procedures and plans that are based on dealing with technological leadership in accordance with the school environment and its capabilities and

trying to adapt to technological developments and self-development and raise the level of their capabilities by moving away from traditional methods, as regulations and laws are established according to foundations that are compatible with new developments.

Material and technical requirements: These include the provision of all necessary equipment, devices, tools and the Internet to create websites that carry out school work. Technological leadership is classified into three basic elements, which are (Bilkhair, 2016): Hardware such as: (computers, modern devices), software such as: (databases, mail, applications, etc.) and the role of the school principal in achieving technological leadership, the human element such as (managers, analysts and intellectual capital).

Specter and Meyer indicates that leaders of educational institutions must possess high qualifications, so that they have the ability to adapt to continuous and permanent changes and developments, as he provides the same level of performance that he used to provide in the non-technological environment (Shepherd, Taylor, 2019)

- Leadership and Vision

The role of the leader is based on implementing the vision by stating the common goals and links between the Ministry of Education and the school to achieve the common links that aim to keep pace with the continuous developments and changes, as technological applications are used appropriately, and also contribute to motivating workers to reach effective findings based on research in the exploitation of technology.

- Improvement and Organized Development

That technology be used appropriately to achieve the educational goals in determining the appropriate tools and techniques for administrative and educational work, in addition to the continuous follow-up of the maintenance work of the tools and techniques in the school and the adoption of appropriate teaching methods that keep pace with technological developments.

- Ethical Issues of Technology

Awareness of values, habits and ethics when using technology, and the correct use of maintaining safety while using technology in school. This study revealed the degree of practicing technological leadership at the Directorate of Basic Schools in the Directorate of Education of North-West Badia District in light of Corona (Covid-19) pandemic from the teachers' point of view.

- Technological leadership under Corona (Covid-19) pandemic

The Corona (COVID-19) pandemic affected all aspects of life, as it negatively affected all aspects at the global level. The government took many measures to save the lives of its citizens. The most important of these legal measures include the Defense Law in Jordan (2) is the conversion of distance education to reduce the spread of the Coronavirus, since the educational environment is more of an environment in which there is mixing (Ministry of Education, 2020). Corona (Covid-19) pandemic led to the extensive use of technology, and the abandonment of traditional and realistic methods with modern and advanced methods that took the status of remote leadership. Consequently, the need arose to develop technology applications and programs that assist in the distance education process and the exchange of ideas, information and experiences (Jaffal, Samia Haddad, Nariman, Sameh and Hiba 2019). Mahmoud 2020 explained in his study in Zarqa Governorate, which was based on measuring the extent to which students benefited from the distance learning experience, defining the challenges and obstacles that faced students, the administrative staff, and the educational staff in light of Corona (Covid-19) pandemic, with the aim of improving the level of distance education. In view of the exceptional circumstances, there was a need for technological leadership to overcome the obstacles and challenges facing teachers, students, and administrative staff.

The educational and administrative process was suddenly and rapidly exposed to a new challenge and unprecedented changes. This led to the society's involvement in the vast technological world, which is characterized by speed, in terms of exchanging information and experiences with less effort, as the impact of Corona (Covid-19) pandemic, as the sudden and rapid change led to a state of tension and anxiety due to the lack of readiness of the necessary infrastructure and computerized curricula to complete the educational process, (Al-Anzi, 2015). Corona (Covid-19) pandemic affected education in all countries of the world, and made school

principals under pressure and responsibility in the stage of transforming education into distance learning in preserving the safety and health of the educational and administrative staff, workers and students, it is the responsibility of the principal. Given the social ties enjoyed by the principal in schools and his personal relationships with parents, he contributed to overcoming and overcoming the obstacles to education in light of the pandemic, allowing them to receive their education in a better way (Nanijo et al. 2020)

Among the new tasks of the principal in light of Corona (Covid-19) pandemic is to provide a stimulating environment for students and educational staff, and continuous awareness by the director on the importance of technology and ways to develop educational methods in light of the continuous changes. Hamash 2020 explained the role of the Directorate of Schools in distance education, and expressed a point of view in Jordanian schools in the northeastern Badia District by revealing the role of teachers during Corona (Covid-19) pandemic, assessing the obstacles and continuity of the use of distance education.

The study of Al-Tasha (2013) aimed to identify the requirements for applying electronic administration in the Ministry of Education in the State of Kuwait from the point of view of employees, in addition to developing the questionnaire. He followed the descriptive survey method by taking 380 stratified random samples from among the employees of the Ministry of Education of State of Kuwait. The findings showed that the degree of need for the application of electronic management requirements reached the medium degree.

The study of Hesse-Win and Kwan (2014) determined the relationship between the technological leadership of principals, teaching innovations, and academic optimism of students in Taiwan. The descriptive correlational approach was followed and the questionnaire was used as a tool for the study, and 755 male and female teachers sampled it. The most important findings were that the practice of technological leadership by managers affects positively and effectively on teaching and innovation, and that this style of leadership should be employed.

Anderson 2016 made a study that aimed at identifying the most important challenges and difficulties faced by managers practicing electronic leadership and knowing the reasons for success that could affect their performance. The study followed the qualitative research method and the researcher took a sample of 100 managers and his managers. The study concluded that there are challenges facing managers, the most important of which is a sense of isolation and the difficulty of tracking work continuously in the electronic environment, in addition to the importance of mutual trust. These findings appeared in the virtual work environment and they showed feelings of isolation and difficulty in monitoring.

The study of Al Kardam 2016 aimed at identifying the reality of technological leadership behaviors among secondary school leaders in the Asir educational region in Saudi Arabia from the teachers' point of view. This study followed the descriptive approach, and the questionnaire was the tool for collecting the sample data, which included (135) teachers from the Asir region. In reality, leadership behaviors and technology practices were high, and school leaders in general showed high leadership behavior for private technology in the use of modern educational technologies. Their performance does not differ from what they used to provide in real-world education, in addition to their long experience in leadership.

Raman and Ismail 2019 discussed a study aimed at identifying the impact of the technological leadership of the Directorate of Schools and its impact on the technology integration of teachers in the twenty-first century classrooms, where the descriptive approach was followed by taking a sample of 47 principals and 375 teachers. The findings showed that there is no statistical relationship that proves that the preparatory program for principals is based on technological leadership. In addition, there is no significant relationship between the technological leaders of the principals and the integration of teachers' technology in the selected schools.

The current study is distinguished from previous studies in that it focused on the technological leadership of basic school principals in the Education Directorate of North-West Badia District from the teachers' point of view. The descriptive survey approach and the questionnaire were used as a means of collecting data, as the questionnaire was designed through Google Drive technology and then distributed to the target group to answer questions in light of Corona

(Covid-19) pandemic during education in schools electronically and remotely. The current study is distinguished from previous studies in that it focused on the technological leadership of basic school principals in North-West Badia district from the teachers' point of view. The descriptive survey approach and the questionnaire were used as a means of data collection. The questionnaire was designed using Google Drive technology and then distributed to the target group of teachers to answer questions in light of Corona (Covid-19) pandemic during education in schools electronically and remotely. Previous studies were reviewed to enrich the theoretical literature to develop the study and benefit from experiences, questions and tools, in addition to comparing the findings of studies with this study in terms of similarities and differences.

Tool of the Study

The data collection relied on a questionnaire and some consultations from specialized educators.

<u>Validity of the content of the study tool</u>: the extent to which the validity of the study tool is verified depends on taking the opinions of some experts in the educational fields, curricula, and teaching methods of school administration in order to achieve the safety of the content of the questionnaire and its suitability for the areas for which it was established.

<u>Correction of the study tool</u>: A five-point Likert method was used for the study tool, and this method is based on setting five levels for the degree of technological leadership practice, which are (often, sometimes, rarely and never).

<u>The validity and reliability of the study tool construction</u>: to ensure the effectiveness of the study tool, it was applied to an experimental sample outside its sample, and this method is called (testing and re-testing). As for the second method, it is the internal Cronbach alpha coefficient between the vertebrae, in addition to working on the values of the stability coefficients for the areas (Pearson Coefficient).

The study procedures were carried out by reviewing some previous studies on the same subject in terms of the stability and validity of the tool and carrying out awareness in order to facilitate

the process of the tool and ensure the quality of the study tool, as well as defining the study population and the sample through Morgan table. After distributing the tool electronically to male and female teachers, it is included using the SPSS program, analyzed, findings are presented and discussed, and recommendations are made.

Statistical Processing: determining the Pearson correlation coefficient and the Cronbach method, in addition to finding the arithmetic mean, standard deviations, and the findings of multiple variance analyzes. The findings of the values of the Pearson correlation coefficients between the paragraph and the area to which it belongs and between the paragraph and the total score were reached

The correlation coefficient of the paragraphs with the field to which they belong ranged between (0.19-0.65), while the correlation coefficient of the paragraphs with the total score ranged between (0.56-0.19), which is statistically significant at (a0.01), and these are acceptable values for conducting this study (Odeh, 2014).

Findings

This chapter includes what is related to the problem of the study, and in the following are the results of the study. The study was based on extracting the arithmetic means, standard deviations, ranks, and the practicing degree of male and female teachers' estimates in the questionnaire tool. Arithmetic means and standard deviations were used in the practice of technology leadership among basic school principals in the Education Directorate of North-West Badia District in light of Corona (Covid-19) pandemic from the teachers' point of view came to a high degree. The arithmetic mean was 3.84, and its standard deviation was 0.80. Below is an explanation for each area in the study of arithmetic means, standard deviations, and ranks for the practicing degree.

- The first area: leadership, vision: came high with an arithmetic mean of 3.99 and a standard deviation of 0.84, as the arithmetic mean for the paragraphs ranges between 4.1-3.7.

- Learning culture in the digital age: it returned to a high degree, with an arithmetic mean of 3.88 and a standard deviation of 0.88, as the arithmetic mean for the paragraph ranges between 4-3.73.

- The third area is excellence in professional practices, which came in a high degree, with an arithmetic mean of 3.93 and a standard deviation of 0.83. The arithmetic means for the paragraphs ranged between 4.10-3.78.

- The fourth area is improvement and organized development: the degree of technology leadership practice was high, with an arithmetic mean of 3.83 and a standard deviation of 0.89, and the arithmetic means of the paragraphs ranged between 3.94-3.73.

- The fifth area is social, legal and ethical issues: as the degree of technological leadership practice was high, with an arithmetic mean of 3.86 and a standard deviation of 0.87, and the arithmetic mean for the paragraphs ranged between 4.04-3.69.

As for the results related to the problem that express statistically significant differences at the significance level (a = 0.05) in the degree of technology leadership practice among the principals of basic schools in the Education Directorate of North-West Badia District from the teachers' point of view is attributed to the variables of gender, educational qualification and years of experience. It was done by extracting the arithmetic mean and standard deviation of the study of technology leadership practice among the principals of basic schools in the Directorate of Education of North-West Badia District from the point of view of teachers according to the different variables according to the analyses. There were apparent differences between the computer averages of the extent of the practice of technology leadership among the principals of basic schools, according to the different variables. In place of these statistically significant differences, (MANOVA) analysis was relied upon in the findings. The findings indicated that they were in favor of females according to the statistically significant analyzes, as they were and the differences that were statistically significant showed that they were in favor of the bachelor's degree or less in terms of academic qualifications, in addition to the emergence of differences in the difference in the variable of years of experience.

Discussion of the Findings and Recommendations

Discussion in Relation to the First Problem

- Poor use of technology leadership by the principal of basic schools in the Education Directorate of North-West Badia District in light of the outbreak of Corona from the teachers' point of view.

It was concluded that the practicing degree of technology leadership at the Directorate of Basic Schools in the Directorate of Education of North-West Badia District in light of Corona (Covid-19) pandemic from the teachers' point of view came with a high degree in all fields. At the faculty level, communication has been made to the presence of technological means in the majority of basic schools, in addition to the non-reliance of current managers during Corona (Covid-19) pandemic on traditional means and the conversion of all work to an electronic form, in addition to the presence of previous experiences among administrators and administrators, and their possession of knowledge about technology through Intel courses, the International Computer License, and the educational leadership course that the Ministry of Education set up for all managers and administrators before the pandemic. Due to the characteristics and advantages provided by technology and its suitability for the current circumstances, the use of technology has become one of the necessities of successful management.

This result was also consistent with the study of Erian 2018 and the study of Al Kardam 2016, where they showed a high degree. This result contrasted with the results of the Sherman and Khattab 2018 study question, in which the result appeared to be moderate. Outcomes will be discussed by areas of technology leadership practice included in the questionnaire

First: Leadership and Vision:

The results showed that the field of leadership and vision came in the fifth stage with a medium to high degree. This result shows the extent to which principals and administrators are keen on teachers' participation in the school's vision, preparing plans elaborately, and activating the one-team spirit within the school during the pandemic period. It clarified the paragraph that stipulated that a longitudinal plan should be developed periodically in line with the vision of the Ministry of Education. The directors and administrators were keen to train cats that would develop their performance within the vision of the Ministry of Education and not be of personal or political inclinations. As for the paragraph that stipulates that it depends on the results of scientific

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research and there are no questionnaires in developing the development plan, the school got the last rank or degree with an arithmetic mean of 3.07 and a standard deviation of 0.90 due to the non-participation of the teachers in the questionnaire and expressing their opinion and their non-participation in its circulation, and it was limited only to its application in schools, which may prejudice the result and the truth of the questionnaire and its validity.

Second: the culture of education in the digital age: the field of culture, education in the digital age, ranked second, and all the paragraphs came with a high practicing degree, given that managers and administrators have a culture of learning in the digital age and during Covid-19 pandemic at a high rate, as they did not face a problem in using technology and its importance. As for the paragraph that stipulated encouraging teachers to integrate technology into the curricula, it ranked first. This is due to the awareness shown by managers and administrators of the importance of employing technology because of its many characteristics and the fact that it achieves results in an integrated and highly qualified manner. Corona (Covid-19) pandemic made realistic communication difficult, the existence of a means of communication was a necessity during the pandemic, as communication with the school environment during Corona (Covid-19) pandemic has become dependent on the use of modern technological means.

Third: Excellence in professional practices: the study concluded that the field of excellence in professional practice came in the first rank, and all paragraphs came with a high practicing degree, given that the main task of administrators and managers during Corona (Covid-19) pandemic is to deal and adapt to technology and introduce it in the field of learning and education. As for employing the available administrative systems (platforms and the system) with the aim of accessing the data of teachers and students, it ranked first due to the keenness of managers and administrators to make optimal use of the platforms and systems of the Ministry of Education to follow up the learning process properly during Corona (Covid-19) pandemic, which represents the link between education and school principals, to determine the level of interaction and response on the platforms, provide the ministry with everything that is important and new, create a database, and to document the data confidentially and credibly on the system on an ongoing basis.

The study concluded that the paragraph which stipulated: (it is keen to provide electronic copies of the educational activity for all school teachers) got the last rank due to the interest of principals and administrators during Corona (Covid-19) pandemic to provide educational bulletins and direct teachers to follow the website of the Ministry of Education and their educational platforms to follow up on everything new that serves the educational processes in how to employ technology in education.

Fourth: the improvement and development of the organizer: the improvement and development of the organizer came fourth, and all its paragraphs came in a high practicing degree due to the keenness of principals and administrators to adhere to the basic tasks, which is to provide a technological environment that contributes and helps teachers to accomplish all teaching work and responsibilities.

As for the paragraph that stipulates that cooperation with teachers with high experience and competencies in employing technology to improve educational processes, it ranked first for reasons due to the director's keenness, continuous follow-up, and attempts to raise the level of the teaching staff professionally and technologically, and to achieve what highly qualified teachers rely on to improve and develop school work. Teamwork relationships are among the advantages and elements of a successful school that achieves the best results.

As for the paragraph that explained that the various educational opportunities depend on exploiting the different applications of technology to meet the learning needs of the teacher and the student, it came in the last place with an arithmetic mean of 3.73 and one standard deviation of 1.04. This result is due to many reasons, including that managers during Corona (Covid-19) pandemic have a small part of the powers to provide various opportunities and various activities. The greatest reliance was on the experiences and skills that the teacher has directly and his adaptation to the nature of the Corona outbreak and his ability to deal with technology to reach the required goals, as the use of technology in teaching increases communication skills, diversity and creativity.

Fifth: social, legal and ethical issues: The field of social, legal and ethical issues came in the third rank as it showed effective and high practice in view of urging principals to exploit technology correctly and in an ideal way to ensure the achievement of goals and its use in the school to the fullest, as it has advantages in terms of privacy and confidentiality and through passwords and users, as well as putting the principals under accountability, responsibility, moral and legal in keeping the database of students and teachers from any leakage, sabotage or tampering.

As for the results related to the paragraph that illustrates the enhancement of environmentally security practices in employing technology within the school, it ranked first rank an arithmetic mean of 4.04 and a standard deviation of 0.95. This result is due to the fact that the use of technology gives a positive character in the school environment and that it maintains the progress of the learning process in a way that does not affect the teachers' psychological, academic, social aspects to avoid any incorrect and negative practices during Corona (Covid-19) pandemic. The results estimated that the paragraph that talks about motivating teachers to provide individualized educational programs for people with special needs, equally with their colleagues, got a poor average arithmetic score of 3.69, and its standard deviation was 1.12. The reasons that came with a low degree are that principals and teachers focused during Corona (Covid-19) pandemic on the majority of students and their failure in individual education programs for people with special needs during the pandemic for reasons due to the failure to train managers or to achieve an infrastructure for them before the pandemic. We found that there are statistically significant differences between the arithmetic means of the response by the study sample about the extent of his practice of technological leadership among the principals of basic schools at significance level (a = 0.05) for the difference in experience years.

In relation to gender, it is in favor of females due to the interest in technology developments and their employment in the learning process, their tendencies, and their interest in technology courses and workshops that contribute to reducing the burden, effort and time. As for when we differentiate to the academic qualification, the majority was in favor of the bachelor's degree Because this technology does not require a high scientific qualification, it only depends on the

extent of their ability to use technology in most cases, as it is involved in all aspects of life, which made the majority have the ability to deal with it, even if limited.

Recommendations

- There is a need to refer to previous studies in order to develop the school plan.

- It is necessary to provide technological education equipment in schools.

- Holding courses and workshops in order to improve the technological leadership skills of school principals.

- Providing research and educational publications aimed at teaching how to employ technology in school administration and learning in general.

- Providing education opportunities on technology to meet the needs of the teacher, student and administration.

- Evaluating previous and current experiences in various educational institutions and sharing results and knowledge between those institutions and technology leaders in order to develop technological plans.

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