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21st Century Leadership Skills, Technological Competence and School Performance

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Abstract. This study ascertained the level of 21st-century leadership skills of school heads, the technological competence of teachers, and school performance. The descriptive-correlational research method was employed in this study. The main respondents of the study comprised 9 school heads and 45 elementary school teachers. Results revealed that school heads and teachers exhibit similar trends in their profiles, sharing commonalities in sex, age, and educational attainment. Most school heads boast over two decades of service, contrasting with teachers who are relatively new to the profession. Despite demographic differences, school heads display very satisfactory leadership skills across all indicators, showcasing consistency regardless of factors like sex, educational background, or length of service. Conversely, while teachers generally demonstrate proficiency in technology, they require further development in areas such as productivity, professional practice, and addressing social, legal, and human issues. Nevertheless, their technological competence remains consistent across different demographic profiles, indicating comparable proficiency. Assessments of both office and learners' performances range from very satisfactory to outstanding. Interestingly, there is no direct correlation observed between the leadership skills of school heads, the technological competence of teachers, and overall school performance, suggesting a complex interplay of factors influencing educational outcomes. The findings of this study can contribute to discussions to improve the quality of education.

Keywords: School leadership; Technological competence; School performance.

1.0 Introduction

The role of educational leadership and the use of technology in the classroom have become increasingly important in the twenty-first century's ever-changing environment. The effectiveness of school leaders and teachers' technological skills plays crucial roles in shaping educational outcomes and overall school success. This study examines the crucial variables of school principals' leadership skills, teachers' technical proficiency, and their collective influence on school performance. The study presents intriguing insights into the attributes of school administrators and educators, their proficiencies, and the influence of these aspects on academic achievement. It highlights the importance of technological competence and leadership skills in the classroom, as well as the complex interactions between a wide range of factors that affect students' academic performance. By thoroughly examining leadership skills and technological proficiency in relation to academic success, the current study adds to the corpus of material already in existence. It offers essential data that could influence future education policies and processes.

1.1 School Leadership

In the present day, educational administrators must possess sound discernment, which necessitates a keen awareness and comprehension of diverse leadership techniques (Amanchukwu, Stanley, & Ololube, 2015). Educational leaders must employ their judgment while making decisions in situations with unknown conditions. Leader training programs prioritize the development of judgment to enhance leadership methods (Daniel, 2019). Leadership is a complex process that entails exerting influence over people to drive them towards the attainment of organizational objectives and exceptional performance (Bajpai, 2022; Shahi, 2017; Nugraha, 2023; Mahajan, 2015). Management is a crucial element that significantly influences employee motivation and commitment, with various styles having distinct effects (Bajpai, 2022). Effective leadership is defined by the capacity to build a distinct vision, communicate it to others, allocate essential resources, and manage conflicting interests (Mahajan, 2015). Leadership has a vital role in enhancing the overall atmosphere within institutions and facilitating substantial transformations in organizations (Shahi, 2017; Nugraha, 2023). Furthermore, it significantly contributes to the improvement of employee engagement, which is crucial for the overall performance of the firm (Mahajan, 2015). Leadership is essential for encouraging individuals to achieve organizational goals and flourish. The research conducted by Andriani et al. underscores the favorable influence of leadership on organizational commitment, emphasizing leadership as a pivotal factor in establishing organizational culture (Ratni, Prima, Lita., Rida, Rahim., Verinita., 2023). Furthermore, research conducted by Abdolla (2022) emphasizes the importance of leadership competence in achieving institutional excellence, highlighting a robust association between leadership competence and organizational achievement. In addition, Lita et al. emphasize the significance of ethical principles such as truthfulness and moral uprightness in leaders, which are crucial for cultivating confidence and attaining exceptional performance within an organization. Efficient leadership not only ensures that personnel are in line with strategic objectives, but also tackles obstacles such as communication deficiencies and insufficient acknowledgment, thereby improving job performance and motivation (Prado, 2022). Exceptional educational leaders have a distinct and well-defined vision for their institutions, which influences and molds many areas of institutional existence. The article highlights the crucial significance of leadership in addressing worldwide emergencies like as the COVID-19 pandemic (Howard, C. & Dhillon, J., (2021). Successful leadership necessitates the utilization of interpersonal abilities to fulfill the varied expectations of stakeholders and guarantee the integrity and advancement of the institution (Miller, M., (2023). The research on educational leadership in Thailand highlights the need of indicators, model consistency, and reliability to promote effective leadership development (Nonthing, K., & Supakicco, P., 2021). The process of identifying crucial characteristics of outstanding leadership in education is achieved through the utilization of Q-methodology. This approach involves integrating the viewpoints of several stakeholders, including school leaders, governors, and academics (Dhillon, J. et al., 2017).

These findings emphasize the importance of having a common vision for the desired future, which should guide the development of educational programs, policies, and daily operations in educational institutions. Leadership in education is a complex and dynamic notion that is adapting to societal and educational changes (Sleemat, 2022). According to Bora (2023), boosting team spirit, providing a great work atmosphere, and enhancing student learning are all essential. There is a shift happening in leadership approaches, moving away from the traditional top-down method. Instead, there is a growing understanding of the significance of distributed leadership, where all members of the educational community have the potential to be leaders. Effective educational leadership goes beyond dealing with current issues and involves looking ahead and working with different stakeholders to create a vision for the school. Nevertheless, regardless of the effectiveness of leaders, they encounter multiple challenges that they must skillfully handle and control in order to achieve success.

Over the course of time, numerous leadership styles have been suggested by scholars, as no single style of leadership can be regarded as universally applicable. Regardless of the various leadership styles, a competent or efficient leader encourages, stimulates, and guides actions to accomplish group or organizational objectives. A combination of qualities derived from the intellect and the emotions is necessary for effective leadership. Leaders must exhibit attributes such as vision, passion, creativity, adaptability, motivation, inventiveness, confidence, imagination, experimentation, trial and error, and initiative in order to instigate transformation (Kothari, S., 2018). The authors, Alex-Nmecha and David-West (2022), argue that effective leaders should offer explicit instructions, establish clear goals, acknowledge, and value their team members, emphasize their personal and professional growth, and demonstrate integrity and strong ethical principles. Competent leaders effectively rally and inspire people to work together towards shared objectives, taking inspiration from the principles of educational

administration and the exceptional leadership demonstrated by Prophet Muhammad SAW (Elvi, D. & Asmendri, A., 2022). Effective leadership is essential in academic libraries as it plays a critical role in delivering services and achieving organizational goals by inspiring and guiding followers. In essence, successful leadership is an ongoing development journey that necessitates self-awareness and regular introspection to motivate and optimize the capabilities of those under one's guidance. A combination of qualities derived from the intellect and the emotions is necessary for effective leadership. Leaders must exhibit attributes such as vision, passion, creativity, adaptability, motivation, inventiveness, confidence, imagination, experimentation, trial and error, and initiative in order to instigate transformation (Kothari, S., 2018).

Masaudling (2018) assessed the supervisory strategies employed by administrators, the leadership competencies exhibited, and the job performance of teachers. The study revealed that administrators employed high-level supervisory strategies and demonstrated strong management skills and competencies, while teachers exhibited very high job execution. School administrators should carry out their responsibilities within a framework of favorable conditions and regulations that support them in meeting performance standards. School administrators must take into account several elements, including aspiring leaders, early, mid, and late career stages, as well as program dimensions. The study conducted by Oliva & Rodado (2013) found that educational leaders shown a significant level of proficiency in meeting standards and adapting strategically in several aspects such as change management, collaborative planning, and problem-solving. The study also discovered a strong correlation between the standards set for educational leaders and the ability of school heads to adjust strategically. Among the standards examined in the study, it was seen that school heads demonstrated the highest level of ethics and integrity. In light of the aforementioned outcome, the school administration should implement efforts to enhance the quality of their educational standards according to their strategic adaption procedures.

Liwa (2018) examined the role of school principals as leaders responsible for achieving high-quality instruction. The study found that school principals rated their own leadership actions and the way their instructors saw them as "highly practiced." In addition, teachers possess a well-honed ability for critical thinking, fostering the growth of learners' 21st-century skills, and employing instructional methodologies. Furthermore, there was no discernible correlation amidst the realm of leadership for instructional behaviors of notable school principals and the instructional practices of instructors. Moreover, there was no substantial correlation between the technology leadership behaviors of school principals and the reflective thinking of teachers. There was a clear and important connection between the technology leadership behaviors of school principals and the development of 21st-century abilities in students, as well as the use of pedagogical approaches by teachers. Therefore, it seems that the school principals are effectively fulfilling their roles in providing instruction and leading in the use of technology.

However, Oliva & Rodado's (2013) study's findings showed that school administrators should carry out their duties in accordance with guidelines and procedures that help them satisfy expectations. School administrators must consider many elements, including prospective leaders, early, mid, and late career stages, as well as program dimensions. The survey findings indicated that educational leaders had a commendable degree of standards, while school heads showed a strong ability to adapt strategically in several aspects such as change management, collaborative planning, and problem-solving. Additionally, the study showed a strong correlation between the strategic adaptability of school heads and the standards for educational leaders that were included in the study. The school heads were found to have the highest levels of ethics and integrity among the standards for educational leaders. Given the outcome, the school administration should implement efforts to enhance the quality of their educational standards regarding their strategic adaption procedures. Teachers should consistently assess the strengths and flaws of their school administrators.

Additionally, one of the fundamental elements that has a major impact on the caliber of the teaching and learning processes at every stage of the educational system is the caliber of school administrators. The competencies of practical school leaders are regarded the most significant aspects of a school leader's profile in the four indicated realms of the management domain. The capacity to formulate motivational strategies in accordance with the school's shared principles, the capacity to establish and nurture an efficient learning atmosphere for students, the capacity to precisely delineate and assign responsibilities and authority, and the capacity to guide and oversee colleagues, respectively. Studies on school leader competences emphasize the significance of particular skills and areas of expertise. The necessity of skills in strategy development, school development, human resource

management, and teaching process administration is emphasized by Bitterová et al. (2014). While Santos (2020) lists leading learning and teaching, school growth, organizational management, and professional progress as critical areas, Trakšelys (2016) highlights the necessity of professionalism. Bitterová et al. (2014) highlights the significant influence of public policy and accountability measures on the development and performance of school leaders. These findings indicate that it is important for professional education and training programs for school leaders to prioritize these essential skills and areas of expertise. Additionally, it is crucial to take into account external concerns like legislation and accountability.

The dearth of efficient performance management and self-evaluation in schools has been brought to light by a number of research. Khan (2019) discovered that numerous private schools in Karachi suffer from an inadequate system for evaluating and assessing instructors' performance, resulting in a deficiency of knowledge and competent administration. Jingkun (2012) outlined various factors contributing to the challenges in effectively managing the performance of college professors. These factors include the absence of competent supervisors, an excessive focus on rewards and penalties, and the absence of a framework for re-evaluation. These studies emphasize the necessity for enhanced self-assessment and performance monitoring in educational institutions. Many educational institutions oversee and track students' performance in exams, their progress in their studies, and the rate at which they complete their courses. However, their approach lacks formality and systematicity, making it challenging for them to comprehend the underlying reasons for the produced outcomes. The integration of performance metrics into performance management is in its early stages, and most people recognize the challenge of transitioning from measuring outcomes to implementing actions for improvement. Only a small number of individuals can provide evidence of the positive outcomes that have arisen from self-assessment, and an even smaller number actually assess the results of these improvement measures. There is a consensus that the external assessment of schools has stimulated the advancement of self-assessment.

Enhancing administrative effectiveness in educational institutions is mostly dependent on the managerial skills of principals. According to research, having skills such as resourcefulness, conceptual thinking, and administrative organization is important (Warman, 2022). Anietie, R. & Ayonuwe, G. (2022) argue that human abilities such as justice, empathy, communication, and organizational skills, including the ability to adapt to change, manage crises, and provide visionary leadership, are crucial for good school management. The study conducted by Atiş, D. & Engin, D. (2022) underscores the importance of managerial leadership in enhancing the quality of education. It specifically focuses on the influence of principle skills on educational performance. Furthermore, the principal's aptitude in proficiently overseeing, strategizing, academically supervising, and fostering robust connections with educators significantly contributes to enhancing teacher professionalism and the overall ethos of the school. Through the cultivation of these abilities, principals can adeptly maneuver the intricacies of school administration, resulting in enhanced administrative efficacy and ultimately, superior educational achievements. This study also found a notable correlation between organizational abilities and the administrative efficacy of principals. Effective organization will enhance the administrative efficiency of the principals. The study demonstrates a notable correlation between the communication skills of principals and their administrative performance. Furthermore, maintaining amicable communication between principals, instructors, and students would significantly improve their administrative efficacy within schools.

1.2 Technological Competence of Teachers

The successful incorporation of technology into schools necessitates the existence of knowledgeable and forward-thinking leadership. The principal plays a vital role in spearheading transformation inside schools, necessitating not just expertise and understanding but also adept leadership (Wardani & Triwiyanto, 2022). This leadership position entails cultivating awareness, formulating a vision, and communicating with utmost efficacy (Wardani, 2022). Principals are crucial in school improvement as their leadership is vital in molding ideas, establishing a vision, fostering trust, and distributing power (Ying-xiu, 2012). Principals, as effective change agents, must actively participate in innovation, follow it through, and attain favorable student results (Hussain, 2016). Typically, macro variables such as financial resources and technical equipment allocation in schools are considered the primary themes directly associated with technology leadership. Technology leaders in the role of school principals encounter several obstacles, such as bureaucratic processes, reluctance towards adopting new ideas, and insufficient resources (Sincar, 2013). Although they aspire to be at the forefront of technology, they frequently experience a sense of unpreparedness and a lack of requisite professional growth opportunities

(Perkins-Jacobs, 2015). Principals have a crucial role in managing and utilizing educational technologies, as they are required to exhibit conduct that shows leadership in technology, according to Eren (2011). Principals view technology as fulfilling multiple roles in their schools, such as facilitating communication, enhancing instruction, and managing data (Waxman, 2013). The exponential growth of the Internet has had a significant impact on the manner in which executives oversee and coordinate their teams. A significant number of employees engage in remote work, necessitating heightened flexibility and ongoing communication in order to effectively manage them. Technology has an impact on various aspects, ranging from the communication methods used by employees to the assessment tools accessible to leaders. Technology can facilitate leadership to some extent, but managers must utilize it well, else it might result in fragmented and inefficient leadership.

New opportunities for knowledge production and dissemination are presented by the swift advancements in information and communication technology. It is crucial to include both secondary and primary education in the context of global connection. The significance of school leaders in enhancing teacher quality and promoting school development is paramount, as emphasized in several studies. The films Sabrina (2020) and Jannana (2021) both highlight the significance of the principal's managerial aptitude and leadership approach in these domains. This is corroborated by Rohmah (2021), who emphasizes the principal's function as a manager in devising and executing work programs, employing efficient leadership systems, and demonstrating suitable communication styles. Sayuti (2017) asserts that the principal's comprehension of their responsibilities and functions, together with their capacity to effectively guide the institution and facilitate transformation, are crucial for attaining high standards of quality in education. These findings highlight the substantial influence of principals in molding the quality of schools through their expertise, management, and assistance to teachers.

The majority of teachers had advanced technology knowledge and skills, and they utilized these to a modest degree while creating lessons, teaching, assessing students' learning, and providing feedback. A strong correlation was found between the level of technology resources available and their utilization in teaching, as well as between the proficiency of teachers in technological abilities and their utilization in teaching. Teachers across units did not show any notable disparity in their technology knowledge and skills. However, there was a considerable discrepancy in the amount to which teachers utilized their technological knowledge and skills.

According to Samonte & De Guzman (2019), the influence of Information and Communication Technology (ICT) has been experienced in both local and worldwide educational environments. It has a crucial significance in both the process of teaching and the process of acquiring konwledge. The participants in the study rated their proficiency in ICT as "advanced" in terms of technical operations and concepts, but they rated their instructive competency as "basic." Respondents possess a fundamental understanding of ICT. Nevertheless, this does not suffice to affirm that teachers were skilled and proficient in Information and Communications Technology (ICT). The growth in profession of teachers plays a crucial role in effectively using computers into education. Administrators should set aside money specifically for ICT (information and communication technology), and instructors should attend workshops and training sessions to increase their understanding of computers.

A research study was conducted to analyze the suitability and readiness of integrating ICT (information and communication technologies) in six public high schools that have internet connection. The results revealed that educators and students in two out of the six schools shown a significant level of expertise and competence in recognizing parts of ICT, the hardware and software. However, only one school demonstrated high level of competence in utilizing ICT. Every faculty person in a certain school incorporated ICT into their teaching of English, Math, Science, and TLE. However, no faculty member in the school integrated ICT into their teaching of Social Studies. The presence of ICT resources and the availability of basic ICT training to staff and students in i-schools had a role in the integration of ICT in education. The initial level of ICT integration in teaching reflects the preparedness and willingness of both staff and students to use ICT tools in the teaching-learning environment. The study suggests several recommendations, including the implementation of retraining programs focused on information and communication technology (ICT), the creation of ICT-based teaching modules for Social Studies, the need for further research to examine the connection between social-demographic characteristics and the incorporation of ICT in teaching, and the correlation of students' ICT competencies with their performance in English, Math, and Science achievement tests in i-schools (Osea, Nacario, Foronda, & Lirag, 2014).

It is well acknowledged that technology is a major force behind transformation in the education sector (Fox, 2011; Sancho, 2010). According to Fox (2011), it has the capacity to transform teaching and learning by offering innovative approaches and adapting to evolving educational requirements. Nevertheless, the influence of this technology has been varied, as several technologies have not met the anticipated outcomes (Sancho, 2010). Despite this, there is no denying the technology's role in education, and much of its potential for advancement and development is still unrealized. The swift advancement of technology and globalization has transformed the education system, particularly in guiding schools towards excellence and competitiveness. Maintaining current competencies in line with evolving technologies is crucial. Leaders in educational institutions who are not keeping up with the times technologically are not able to keep up with the globe. The schools in the 21st century are characterized by diversity, which requires leaders to possess abilities that would enable stakeholders to achieve desired objectives (Luqman, Farhan, Shahzad, & Shaheen, 2012). Therefore, this investigation was undertaken to analyze the present management abilities of school principals, the technical proficiency of teachers, and their impact on school performance.

Given the discussion above, this study ascertained the level of 21st-century leadership skills of school heads, the technological competence of teachers, and school performance. The findings of this study can enhance conversations aimed at enhancing the quality of education.

2.0 Methodology

2.1 Research Design

This study employed a design based on descriptive correlation. The descriptive approach was shown to be suitable for summarizing the respondents' levels of technological proficiency, leadership abilities, and academic achievement when analyzed as a whole as well as when categorized based on their individual profiles. The means and standard deviations of both variables' effects on school performance were systematically described, together with the 21st-century leadership competencies of school heads across several dimensions and teachers' technological proficiency. According to Navarro and Santos (2011), the descriptive approach is employed to methodically depict the facts and attributes of a certain population or region of interest, with precision and objectivity.

Additionally, the study's variables were found to have a substantial link using the correlational approach. Correlation analysis is employed to examine the degree to which changes in one variable align with changes in one or more other variables, as determined by the correlation coefficient (Navarro and Santos, 2011). It was predicted that technology proficiency and leadership qualities will affect academic achievement. Hence, the study's results were considered vital for the formulation of personnel strategies at the school level.

2.2 Research Participants

The research was carried out at Capiz, Philippines. The study included a total of 54 participants who were selected from 9 elementary schools. This group consisted of 9 school principals who were chosen using the complete enumeration technique, and 45 primary school teachers who were selected randomly from a population of 95. The researcher used a random selection method called draw lots to uniformly choose five (5) teachers from each school as respondents. The five submissions selected through a random drawing represented the samples used in the study.

2.3 Research Instrument

Primary and secondary data were collected from the sample respondents for this study using two sets of research instruments. The instrument selected by the school leaders comprised of two components. Part 1, Profile, created individual profiles of the school administrators based on their gender, age, highest level of education completed, and tenure of employment. The questionnaire on 21st-century leadership qualities, Part II, was derived from Huang's (2013) work. Ten subsections made up this tool: establishing the direction of instruction, collaboration, judgment, sensitivity, outcome orientation, organizational skills, written and spoken communication, growing others, and self-awareness. Every indicator was given a rating on a 5-point Likert-type scale, with 1 denoting the least degree of agreement or proficiency and 5 the highest.

The technology competency tool for educators was obtained from the Connecticut State Department of Education and the Alliance of Regional Educational Service Centers (2001). This application functioned as a self-assessment tool for teachers and offered a clear plan for enhancing their skill in technology. The indications were assessed using a 3-point Likert-type scale, where a score of 1 represented a novice level, a score of 2 represented gaining proficiency, and a score of 3 represented competency.

The school heads willingly provided the Office Performance Commitment and Review Form (OPCRF) evaluation for the purpose of evaluating office achievement, which was then incorporated into the profiles of the respondents. Additionally, the teacher responses willingly provided data on the class average of the learners, which was then incorporated in their profiles. These components were incorporated into the corresponding sections of the research tools for school administrators and educators.

2.4 Data Gathering Procedure

The researcher followed all protocols and ethical criteria when collecting the data for the study. The letter to the respondents provided a thorough explanation of the substance of the questionnaires, ensuring that they fully understood the requirements and advantages of their involvement in the study. During the stage of data collection, the researchers sought authorization from the university to carry out the study, after the incorporation and revision of the proposal in accordance with comments from the committee. A communication letter was prepared to collect data in the research area. Afterwards, the research instrument that was chosen, along with all the necessary documents such as the approved request to conduct the study and a letter about data protection notice, were physically given to the selected schools according to the calculated and identified samples. Participants were provided with timetables outlining the deadlines for filling out and submitting the data collection instrument. The tools were obtained immediately from the sample schools according to the predetermined schedule.

2.5 Data Analysis

The following descriptive statistical analyses were carried out: a) Frequency count and percentage were utilized to depict the prevalence of respondents' numbers in relation to their profiles. b) Mean and standard deviation were employed to describe the level of school leadership, technological competence, and school performance in terms of the OPCRF rating of school heads and the class average of the learners. Further inferential statistical tools that were employed included: a) the Mann Whitney U test and the t-test for Independent Samples were used to find the significant difference between variables with two categories, like sex; b) analysis of variance and Kruskal Wallis were used to find the significant differences among study variables with three or more categories, like age, highest educational attainment, and length of service; and c) Pearson-r was used to find the relationship between school achievement, technology proficiency, and governance abilities. However, due to the volume of samples that needed to be processed, non-parametric tests like the Mann Whitney U test and Kruskal Wallis were used to analyze data on school heads, whereas parametric tests like the t-test for Independent Samples and Analysis of Variance were used to analyze data on teachers because of large datasets and random sampling. The hypotheses were evaluated at a significance threshold of 0.05 using the SPSS Version 20 software.

3.0 Results and Discussion

3.1 Demographic Profile of the Respondents

Table 1 showed that most school heads (66.67%) and teachers (80.00%) were female. All school heads were aged 31 years and above (100%), while most teachers (64.44%) were aged 31 years old and above. Regarding the highest educational attainment, most of the school head and teacher respondents (66.67% and 55.56% respectively) had completed units in a master's degree program. Additionally, a portion of the school heads (33.33%) had attained their doctoral degree. Moreover, the profile revealed that the respondents had varying lengths of service, with more school heads (55.56%) having served for 21 years or more, while teachers were predominantly in the service for 10 years or less (55.56%).

Bacia's (2017) research corroborated these findings, revealing that the majority of school administrators in both elementary and secondary schools in Capiz were of the female gender. Nevertheless, a discrepancy arose over the greatest level of education achieved, since it was discovered that the majority of school administrators had successfully obtained a master's degree. Moreover, Reyes (2017) concurred in her dissertation that the Schools

Division of Capiz had a greater number of female school administrators and instructors. This suggests a trend where females are more inclined towards school governance and teaching roles than males. This frequency analysis indicates that both school head and teacher respondents in this district are pursuing their postgraduate studies, albeit not yet graduated. School heads appear to have longer years of service, while teachers are in their early years of teaching.

Table 1. Demographic profile

SCHOOL	SCHOOL HEADS N	F	TEACHERS N	F
Sex				
Male	3	33.33	9	20.00
Female	6	66.67	36	80.00
Age				
30 years & below		0.00	16	35.56
31 years & above	9	100.00	29	64.44
Highest Educational Attainment				
Bachelor's Degree	0	0.00	20	44.44
With Master's Unit	6	66.67	25	55.56
Master's Degree	0	0.00	0	0.00
With Doctoral Unit	0	0.00	0	0.00
Doctorate Degree	3	33.33	0	0.00
Length of Service				
10 years & less	2	22.22	25	55.56
11-20 years	2	22.22	9	20.00
21 years & more	5	55.56	11	24.44

3.2 Level of Leadership Skills of School Heads

Overall Leadership Skills

Table 2. Overall level of leadership skills of school heads

LEADERSHIP SKILLS	SD	MEAN	DESCRIPTION
A. Setting instructional direction	0.55	3.86	Very Satisfactory
B. Teamwork	0.53	4.26	Very Satisfactory
C. Sensitivity	0.25	4.25	Very Satisfactory
D. Judgment	0.73	3.91	Very Satisfactory
E. Result orientation	0.71	4.13	Very Satisfactory
F. Organizational ability	0.44	4.00	Very Satisfactory
G. Oral communication	0.32	4.22	Very Satisfactory
H. Written communication	0.29	4.44	Very Satisfactory
I. Developing others	0.16	4.14	Very Satisfactory
J. Understanding own strengths and weaknesses	0.31	4.37	Very Satisfactory
OVERALL MEAN	**0.20**	**4.16**	**Very Satisfactory**

In table 2, school heads' overall leadership abilities were "very satisfactory" (M=4.16). The school administrators had the best scores in written communication and self-awareness, but they obtained lower scores in establishing instructional goals and using sound judgment. This suggests that they demonstrated the lowest level of proficiency in expressing the vision of teaching and learning, as well as establishing high-performance standards for oneself or others. Their ability to foster creativity in teaching and learning, as well as their excitement for collaborating with external partners to enhance the quality of education, were the least developed talents among the several competencies they displayed satisfactorily.

Oliva & Rodado (2013) provided evidence that educational leaders possess a strong commitment to high standards and are adept at strategically adapting to change in areas such as inviting change, collaborative planning, and problem-solving. Furthermore, Liwa (2018) confirmed that school principals had a high level of proficiency in their leadership behaviors, both in their own self-perception and as perceived by their instructors. In addition, there was no significant link observed between the teaching methods employed by teachers and the leadership characteristics exhibited by school principals.

Leadership Skills According to Profile

Table 3 depicts the leadership qualities of school heads, categorized by sex, age, greatest educational attainment, and duration of service. These talents were rated as "very satisfactory" with a standard deviation of 0.20 and a

mean of 4.16. Irrespective of their background, they exhibited leadership skills that were deemed "highly satisfactory." Nevertheless, the data revealed that females (M=4.19) exhibited greater means in comparison to males (M=4.11). The average score of school leaders who had completed master's units (M=4.20) was greater than that of those with doctorates (M=4.08). In terms of tenure, school administrators with more years of service achieved the highest average score (M=4.21), while those in the middle range obtained the lowest score (4.08).

Table 3. Level of leadership skills of school heads when classified according to their profile

SCHOOL	MEAN	DESCRIPTION
Sex		
Male	4.11	Very Satisfactory
Female	4.19	Very Satisfactory
Overall	4.16	Very Satisfactory
Age		
30 years & below		
31 years & above	4.16	Very Satisfactory
Overall	4.16	Very Satisfactory
Highest Educational Attainment		
With Master's Unit	4.20	Very Satisfactory
Doctorate Degree	4.08	Very Satisfactory
Overall	4.16	Very Satisfactory
Length of Service		
10 years & less	4.13	Very Satisfactory
11-20 years	4.08	Very Satisfactory
21 years & more	4.21	Very Satisfactory
Overall	4.16	Very Satisfactory

Cuesta (2019) found that female school presidents tend to outperform their male counterparts in many leadership responsibilities, including setting direction, driving change, representing the organization, and providing coaching. Principals allocated to larger schools tend to excel more than those assigned to smaller schools in performing such responsibilities like (a) setting directions, (b) driving change, (c) representing the school, and (d) coaching. A proposal was made to ensure gender parity in leadership chances for teachers, regardless of their gender. Promotions should be prioritized for teachers who have served for a longer duration and have obtained advanced degrees in educational management.

3.3 Difference in the Leadership Skills of School Heads

Sex and Highest Educational Attainment

Table 4. Mann Whitney U analysis result

VARIABLES	MEAN RANK	P-VALUE	INTERPRETATION
Sex			
Male	4.17	0.517	Not Significant
Female	5.42		
Highest Educational Attainment			
With Master's Unit	5.50	0.437	Not Significant
Doctoral Degree	4.00		

The inferential analysis, as shown in Table 4, indicated that there was no statistically significant difference in the leadership qualities of school heads when categorized by sex (z=.648, p=.517) and greatest educational attainment (z=.778, p=.437). This implies that there was no substantial disparity in the leadership aptitude between male and female school administrators. Similarly, school administrators with bachelor's degrees shown comparable competence to those with doctoral degrees. Regardless of their gender and amount of education, school administrators shown comparable levels of leadership abilities.

Length of Service

Table 5 indicates that there was "no significant difference" in the leadership qualities of school heads based on their term of service (chi=.578, p=.749). This indicates that school heads demonstrate similar leadership abilities regardless of the duration of their tenure. Both school heads with shorter and longer service had comparable levels of leadership qualities.

Table 5. Kruskal-Wallis test result

VARIABLES	MEAN RANK	P-VALUE	INTERPRETATION
Length of Service			
10 years & less	4.00		
11-20 years	4.50	0.749	Not Significant
21 years & more	5.60		

3.4 Level of Technological Competence of Teachers

Overall Technological Competence

Table 6. The overall level of technological competence of teachers

INDICATORS	MEAN	DESCRIPTION
A. Educational technology concepts And operations	2.49	Proficient
B. Creating environments for learning	2.84	Proficient
C. Productivity and professional practice	2.30	Developing
D. Social, legal, ethical, and human issues	2.32	Developing
OVERALL MEAN	**2.49**	**Proficient**

According to the data shown in Table 6, teachers demonstrate a "proficient" level of technological ability, with a mean score of 2.49. Additionally, they were discovered to possess a high level of skill in establishing conducive learning settings (M=2.84) and comprehending educational technology principles and functions (M=2.49). This suggests that teachers have excellent proficiency in designing educational experiences that are in line with state subject standards, student information and technology standards, and the most effective methods. They have the ability to create novel roles for educators and students in technology-driven learning settings and proficiently oversee the utilization of technology in the classroom for educational objectives.

In addition, teachers demonstrated a high level of skill in effectively using technology tools to assess and comprehend the needs and capabilities of students, resulting in enhanced teaching methods and optimized student learning outcomes. In addition, they exhibited a profound comprehension of organizational matters pertaining to the implementation of technology in education, as well as adept problem-solving techniques for challenges with teaching and learning with technology.

Unfortunately, with a mean of 2.30 and SD of.32, teachers' professional practice and productivity were classified as "developing". Furthermore, the teachers' competence in social, legal, ethical, and human issues was improving, as indicated by a mean score of 2.32 and a standard deviation of 0.34. This result suggests that teachers have a limited level of proficiency in effectively utilizing technology to enhance their productivity. Although teachers demonstrated comprehension of technology ideas and the ability to build conducive learning settings, they were found to be less skilled in generating beneficial outcomes while adhering to the high ethical standards expected of 21st-century educators. They demonstrated emerging proficiency in handling pertinent technological challenges that arose in the educational setting. It is necessary to improve instructors' productivity by utilizing technology.

Technological Competence According to Profile

Table 7 indicates that the instructors' technological competency was judged as "proficient" (M=2.49) when categorized based on their age, sex, length of employment, and highest educational attainment. Male and female teachers demonstrated nearly identical levels of proficiency, with scores of 2.50 and 2.49, respectively. The study revealed that younger instructors (M=2.53) exhibited higher levels of proficiency compared to older teachers (M=2.46). Teachers who held a bachelor's degree had the highest average score, with a mean of 2.58. In addition, teachers who had been in service for 10 years or less showed the highest level of competency, with a mean score of 2.52. On the other hand, teachers with 11-20 years of service had the lowest mean score of 2.43.

This finding suggests that both male and female teachers had a high level of technological competence, exhibiting excellent skill in using technology for educational objectives. The younger cohort of educators had greater aptitude in technology, possibly attributable to their familiarity with technology throughout their pre-service training and

initial years in the profession. Moreover, teachers possessing bachelor's degrees demonstrated competence, indicating that pursuing advanced studies may not be essential for them to excel in utilizing technology in the classroom. In addition, having experience in the service industry does not necessarily imply expertise in technology, even if one has spent more years in study. Teachers, who are familiar with the technological advancements of their day, can acquire expertise in using technology that is applicable to the classroom setting by engaging in self-directed learning and adapting to new tools and methods.

Table 7. Level of technological competence of teachers when classified according to their profile

VARIABLES	SD	MEAN	DESCRIPTION
Sex			
Male	0.15	2.50	Proficient
Female	0.18	2.49	Proficient
Overall Mean	0.17	2.49	Proficient
Age			
30 years & below	0.14	2.53	Proficient
31 years & above	0.18	2.46	Proficient
Overall Mean	0.17	2.49	Proficient
Highest Educational Attainment			
Bachelor's Degree	0.17	2.58	Proficient
With Master's Unit	0.17	2.50	Proficient
Master's Degree			
With Doctoral Unit			
Doctorate Degree			
Overall Mean	0.17	2.49	Proficient
Length of Service			
10 years & less	0.13	2.52	Proficient
11-20 years	0.18	2.43	Proficient
21 years & more	0.24	2.47	Proficient
Overall Mean	0.17	2.49	Proficient

3.5 Difference in the Teachers' Technological Competence

Sex, Age, and Highest Educational Attainment

Table 8. Mann Whitney U analysis result

VARIABLES	MEAN RANK	P-VALUE	INTERPRETATION
Sex			
Male	25.33	0.551	Not Significant
Female	22.42		
Age			
30 years & below	25.59	0.324	Not Significant
31 years & above	21.57		
Highest Educational Attainment			
Bachelor's Degree	23.18	0.936	Not Significant
With Master's Unit	22.86		

When teachers' technical ability was categorized based on their age (z=.985, p=.324), sex (z=.597, p=.551), and maximum educational attainment (z=.080, p=.936), the test results in Table 8 showed that "no significant differences" occurred between them. The p-values from each study suggested that there was no significant difference in technology competence Amongst teachers, there is a distinction between those who are male and those who are female, regardless of their age. Additionally, the highest level of educational attainment did not have an impact on the technological competence of instructors.

Length of Service

Table 9. Kruskal-Wallis test result

VARIABLES	MEAN RANK	P-VALUE	INTERPRETATION
Length of Service			
10 years & less	24.96	0.446	Not Significant
11-20 years	18.61		
21 years & more	22.14		

When instructors' technological ability was categorized based on their term of service, as indicated in Table 9, it was discovered that there was "no significant difference" (chi=1.614, p=.446). This suggests that the length of time teachers have worked, regardless of how long it has been, did not result in variations in their technological proficiency. All teachers in these groups had similar levels of proficiency.

3.6 Level of School Performance

The school performance in these clusters (see Table 10), in terms of their OPCRF, was "outstanding" with a mean of 4.64, while in terms of learners' achievement, it was "very satisfactory" with a mean of 87.69. This indicates that the schools performed exceptionally based on the key result areas achieved by the school heads. However, despite the schools performing at their best, learners exhibited unequal performance.

Table 10. Level of school performance in terms of office and learners' achievement

VARIABLES	SD	MEAN	DESCRIPTION
Office Achievement	0.33	4.64	Outstanding
Learners' Achievement	2.12	87.69	Very Satisfactory

This current result contradicts the findings of Vista (2017) titled "Performances of Students, Teachers, and Administrators in Basic Education, 2013-2016, Capiz, Philippines," which reported that both elementary and high school students in Capiz had satisfactory performance in the last three school years. It is possible that the clusters during the conduct of this study performed better than during the previous study. Additionally, Lindo (2017) attested in her study "Intelligences and Performances of School Administrators in Capiz, Philippines" that school administrators had a very satisfactory performance; however, the performance was not significantly different.

3.7 Relationships between Leadership Skills, Technological Competence, and School Performance

Table 11. Spearman's rho analysis result

Variables	Leadership Skills	Technological Competence	Office Performance	Learner Performance
Leadership Skills	X	r = 0.111, p= 0.776	r= 0.209, p= 0.589	r= 0.423, p= 0.256
Technological Competence			r= 0.128, p= 0.743	r= 0.261, p= 0.083
Office Performance				r= 0.369, p= 0.329
Learners' Performance				X

According to Spearman's rho coefficient (r=.111, p=.776), Table 11 shows that there was "no significant relationship" between the technological competence of teachers and the leadership abilities of school heads. In the same vein, there was no significant correlation between the leadership qualities of school heads and their office performance (r=.209, p=.589). Furthermore, there was no statistically significant correlation seen between the technical proficiency of teachers and academic performance (r=.128, p=.743), as well as between technological proficiency and students' accomplishment (r=.261, p=.083).

Liwa (2018) found a significant association between school administrators' self-perception of their leadership actions and teachers' perceptions. Nevertheless, there was no discernible correlation between the instructional leadership behaviors of school principals and the instructional practices of instructors. Moreover, no significant link was found between the technology leadership behaviors exhibited by school principals and the reflective thinking abilities of teachers. However, a significant and relevant association was found between the technology leadership behaviors displayed by school administrators and the degree to which teachers promoted the development of 21st-century skills in their students and utilized pedagogical methods. Thus, it appears that school principals are effectively fulfilling their responsibilities in terms of instructional and technology leadership.

Masaudling (2018) found significant relationships between administrators' supervisory strategies and teachers' job performance, between teachers' job performance and leadership competencies, and between administrators' supervisory strategies and leadership competencies, which contradicts the current findings. Moreover, there existed a partially significant correlation between supervisory tactics and the job performance of instructors, particularly when considering leadership qualities.

The results indicate a low positive correlation between leadership skills and technological competence, office achievement, and learners' achievement. This suggests that leadership skills have a negligible influence on the

variables tested, and there is a weak relationship between teachers and school performance. Thus, regardless of the leadership skills demonstrated by school heads, it appears that they have no direct influence on teachers' technological competence or school performance.

Teachers can acquire technological proficiency even in the absence of exceptional leadership from their school administrators. It is observed, meanwhile, that teachers' technology proficiency has no effect on students' academic achievement, indicating that students can succeed regardless of their teachers' technological proficiency. This provides partial evidence for the efficacy of conventional classroom teaching methods.

Moreover, the findings of the study lack definitive evidence in favor of the Skill Theory, which holds that acquired abilities and learned information are important components of successful leadership. According to the notion, leadership success is dependent on the acquisition of learnt skills, the development of a personal style, and the accumulation of knowledge. Although school administrators have very commendable leadership abilities, their performance in the office remains exceptional. This necessitates a thorough and precise evaluation of office performance in order to ascertain the genuine efficacy of school heads' leadership.

4.0 Conclusion

The study's findings provide multiple conclusions:

a. School heads and teachers share similar trends in their profiles regarding sex, age, and educational attainment, with most school heads having over two decades of service, while teachers are relatively new to the profession.
b. School heads demonstrate very satisfactory leadership skills across all indicators.
c. School heads demonstrate similar leadership abilities, regardless of gender, greatest level of education achieved, or time of service.
d. Teachers generally show technological proficiency, but they require further development in productivity, professional practice, and addressing social, legal, and human issues.
e. Teachers' technological competence remains consistent across different demographic profiles, indicating comparable proficiency.
f. Both office and learners' performances range from very satisfactory to outstanding.
g. The technological proficiency of teachers, the leadership abilities of school administrators, and academic achievement are not correlated.

Recommendations:

a. Provide professional development opportunities and post-graduate training for teachers early in their careers to enhance their competence. Consider promoting school heads having longer years of service.
b. Establish district-wide mechanisms for sharing outstanding practices to help school heads sustain and improve their leadership skills. Continuous professional development can foster resilience and dynamism in leading school organizations.
c. Prioritize technological advancement in elementary schools by including it in the School Improvement Plan (SIP). Acquire more technology facilities and equipment, and strengthen human resources through partnerships and linkages.
d. Triangulate the study's findings with other leadership assessments conducted in the context to verify results further.
e. Conduct a validation study to determine specific factors influencing teachers' technological competence by including a wide demographic profile.
f. Organize monitoring teams to evaluate office and learners' performances periodically for the benefit of students.
g. Encourage school heads and teachers to continually develop their leadership skills and technological competence, respectively, to enhance basic education service delivery. Triangulation of school performance with other leadership and technological competence perspectives using additional data sources can further clarify factors influencing performance.
h. Implement the proposed teacher development program on ICT following consultation and validation of the development proposal.

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9.0 References

Abdolla, A.M. (2022). The role of leadership merit in achieving organizational excellence. doi: 10.21928/uhdicearnc/27

Alex-Nmecha, J. & David-West, B. (2022). Effective Leadership as the Roadmap towards Academic Librarians' Service Delivery. Information Impact: Journal of Information and Knowledge Management, 13(1):64-71. doi: 10.4314/iijikm.v13i1.6

Amanchukwu, R. N., Stanley, G. J., & Ololube, N. P. (2015). A review of leadership theories, principles and styles and their relevance to educational management. Management, 5(1), 6-14. doi:10.5923/j.mm.20150501.02

Anietie, R. & Ayonuwe, G. (2022). School business management competencies for improved administrative effectiveness in public secondary schools in rivers state nigeria. Pedagogia: Jurnal Pendidikan, 11(1):41-55. doi: 10.24239/pdg.vol11.iss1.254

Atiş, D. & Engin, D. (2022). The Evaluation of Management Skills of School Administrators in the Context of Effective School. Anadolu journal of educational sciences international, 12(2):442-467. doi: 10.18039/ajesi.910568

Bajpai, D.A. (2022). Leadership. International Journal of Advanced Research in Science, Communication and Technology. https://doi.org/10.48175/ijarsct-3035

Bitterová, M., Hašková, A., & Pisoňová, M. (2014). School Leader's Competencies in Management Area. Procedia - Social and Behavioral Sciences, 149, 114-118. https://doi.org/10.1016/j.sbspro.2014.08.170

Bora, M. (2023). Leadership In Education. International Journal For Multidisciplinary Research. 10.36948/ijfmr.2023.v05i05.8139

Cuesta, A. P. (2019). Performance and practices among public elementary school heads. SMCC Higher Education Research Journal (Teacher Education Journal), 1(1). http://ejournals.ph/form/cite.php?id=14385

Daniel, D. (2019). Judgment and the Preparation of Educational Leaders. Journal of Research on Leadership Education, 14(3):191-211. doi: 10.1177/1942775117752455

Elvi, D. & Asmendri, A. (2022). Kepemimpinan Kepala Sekolah yang Efektif Berlandaskan Prinsip Kepemimpinan Nabi Muhammad SAW. 2(6):529-548. doi: 10.58578/anwarul.v2i6.772

Eren, E., & Kurt, A.A. (2011). Technological Leadership Behavior of Elementary School Principals in the Process of Supply and Use of Educational Technologies. Education 3-13, 131, 625-636.

Fox, R. (2011). Technological Practice and Change in Education. https://doi.org/10.1007/978-3-642-22383-9_1

Fullan, M. (2007). The new meaning of educational change (4th ed.). New York, NY: Teachers College Press.

Howard, C. & Dhillon, J. (2021). Q-sort as a tool for promoting outstanding leadership. in Practice, 1-9. doi: 10.1080/25783858.2021.1882264

Huang, T. (2013). Effective school leadership competencies: A psychometric study of the NASSP 21st century school administrator skills instrument (Unpublished doctoral dissertation). Lehigh University. http://preserve.lehigh.edu/etd

Hussain, M.A., Haider, S.Z., Ahmed, I., & Ali, S. (2016). School Principals as Effective Change Agents: A Study of Essential Skills and Attributes. Journal of Educational Research, 19, 49.

Ignacio, M., Prado, S. (2022). The role of leadership merit in achieving organizational excellence. doi: 10.21928/icearnc/27

Jannana, N.S. (2021). Strategi Kepemimpinan: Quality Continuous Improvement SMP Islam Prestasi Al Mubtadi-Ien Bantul Yogyakarta. Nusantara: Jurnal Pendidikan Indonesia. https://doi.org/10.14421/njpi.2021.v1i2-7

Jingkun, Z., & Jianlin, Z. (2012). Analysis on Reasons for Difficulties of Performance Management of College Teachers. https://doi.org/10.1007/978-3-642-24820-7_101

Jaswinder, Dhillon., Colin, Howard., Vivian, Cooke., Tom, Whittingham., J., Holt. (2017). Stakeholder Perceptions of Outstanding Leadership in Schools and Colleges in England.

Khan, H., & Suhag, A.K. (2019). Performance and Appraisal Framework for Untrained Teachers Working in Private Schools of Karachi. IJAEDU- International E-Journal of Advances in Education. https://doi.org/10.18768/IJAEDU.531634

Kothari, S. (2018). Role Of Effective in Leadership on Employee Retention: An Empirical Study. Psychology And Education 55(1) Doi: 10.48047/Pne.2018.55.1.66

Liwa, I. (2018). School principals' leadership behaviors vis-à-vis teachers' instructional practices. West Visayas State University Research Journal, 7(2). https://ejournals.ph/article.php?id=14670

Luqman, A., Farhan, HM, Shahzad, F., & Shaheen, S. (2012).21st Century Challenges of Educational Leaders, way out and Need of Reflective Practice. International Journal of Learning and Development. https://doi: 10.5296/ijld.v2i1.1238

Mahajan, S., & Sharma, R. (2015). Impact of Effective Leadership on Employee Engagement. International Journal of Education and Management Studies, 5, 288.

Malinauskienė, D. (2021). Teacher Leader In Preschool Institution. Švietimas: Politika, Vadyba, Kokybė / Education Policy, Management And Quality. 10.48127/spvk-epmq/21.13.58
Masaudling, M. D. (2018). Leadership competencies: Their mediating effect on the relationship between supervisory strategies of administrators and job performance of teachers. Tin-aw, 2(1). https://ejournals.ph/article.php?id=13602
Michael, W., Miller. (2023). Leadership Preparation and Institutional Priorities: A Global Perspective on Higher Education. Open journal of leadership, 12(01):1-14. doi: 10.4236/ojl.2023.121001
Nacario, C. P., Osea, G. B., Foronda, V. R. & Lirag, M. B. (2014). Readiness and Acceptability of Information and Communication Technology Integration in Basic Education. Asia Pacific Journal of Multidisciplinary Research, 2(1).
Navarro, R. L., & Santos, R. G. (2011). Research-based teaching and learning. Quezon City, Manila: Lorimar Publishing.
Nonthing, K., & Supakicco, P. (2021). The Structural Relationship Model of Indicators of Outstanding Leadership for Teachers under the Local Administrative Organizations.. 7(2):235-247. doi: 10.12973/IJEM.7.2.235
Nugraha, A. (2023). Sustainable Leadership Development for Organizational Excellence. Hawalah: Kajian Ilmu Ekonomi Syariah. https://doi.org/10.57096/hawalah.v2i1.29
Oliva, E. A., & Rodado, M. E. (2013). Standards for educational leaders as correlate to strategic adaptation of elementary school heads. IAMURE International Journal of Multidisciplinary Research, 6(1). http://ejournals.ph/form/cite.php?id=2574
Patel, J.B., & Patel, S.I. (2014). New Approaches of Educational Leadership.
Peretomode, V. F. (1991). Educational administration: Applied concepts and theoretical perspectives. Lagos, Nigeria: Joja Educational Research and Publishers.
Perkins-Jacobs, M.V. (2015). Principals' Perceptions of Technology Implementation in High Schools and Their Effects on Leadership.
R. Santos, A., & Cajucom, R.L. (2020). Domains and Standards of School Leadership: Evaluation of Tertiary School Teachers. International Journal of Advanced engineering, Management and Science, 6, 124-128.https://doi.org/10.22161/ijaems.63.4
Ratni, Prima, Lita., Rida, Rahim., Verinita. (2023). Leadership Quality in the Millennial Era in Achieving Organizational Goals. Inovbiz, doi: 10.35314/inovbizmik.v3i1.3316
Ratni, Prima, Lita., Rida, Rahim., Verinita. (2023). Leadership Quality in the Millennial Era in Achieving Organizational Goals. Inovbiz, doi: 10.35314/inovbizmik.v3i1.3316
Rohmah, E. (2021). Principal As A Manager In Improving The Quality Of Education. Managere : Indonesian Journal of Educational Management. https://doi.org/10.52627/IJEAM.V3I2.130
Sabrina, F.F., Darmiyanti, A., & Bk, M.T. (2020). Kompetensi Manajerial Kepala Sekolah Untuk Meningkatkan Mutu Guru. https://doi.org/10.24252/IDAARAH.V4I2.16740
Samonte, K., & De Guzman, P. (2019). ICT competencies among public secondary school MAPEH teachers: An assessment. JPAIR Institutional Research Journal, 12(1). http://ejournals.ph/form/cite.php?id=15278
Sancho, J.M. (2010). Digital Technologies and Educational Change. https://doi.org/10.1007/978-90-481-2660-6_26
Shahi, R. (2017). Role of Leader in Improving Institutional Climate. International Journal of Scientific Research and Management (IJSRM). https://doi.org/10.18535/IJSRM/V5I10.12
Sincar, M. (2013). Challenges School Principals Facing in the Context of Technology Leadership. Kuram Ve Uygulamada Egitim Bilimleri, 13, 1273-1284.
Sleemat, M. A. I. A. (2022). Leadership in education management. International Journal of Health Sciences, 6(S6), 8794–8803. https://doi.org/10.53730/ijhs.v6nS6.12348
Trakšelys, K., Melnikova, J., & Martišauskienė, D. (2016). Competence of the leadership influence school improvement. https://doi.org/10.15181/andragogy.v7i0.1379
Warman, W (2022). Principal Managerial Competence and Academic Supervision on Vocational Teacher Performance. Journal of Education and Learning Innovation, 2(4):436-446. doi: 10.35877/454ri.eduline1286
Wardani, P.K., & Triwiyanto, T. (2022). Meta Analisis terhadap Peran Kepala Sekolah sebagai Pemimpin Perubahan. JMiE (Journal of Management in Education).https://doi.org/10.30631/jmie.2022.72.57-66
Waxman, H.C., Boriack, A.W., Lee, Y., & MacNeil, A.J. (2013). Principals' Perceptions of the Importance of Technology in Schools. Contemporary Educational Technology, 4, 187-196. https://doi.org/10.30935/CEDTECH/6102
Ying-xiu, Y. (2012). The Leadership of Principals in School Improvement. Theory and practice of education. https://doi.org/10.32806/JF.V3I1.2714
Ying-xiu, Y. (2012). The Leadership of Principals in School Improvement. Theory and practice of education.
Zhu, J., & Zhang, J. (2012). Analysis on Reasons for Difficulties of Performance Management of College Teachers. https://doi.org/10.1007/978-3-642-24820-7_101