Education Quarterly Reviews

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.

21st-Century Administrative Skills of School Administrators Based on Teachers' Perceptions in the Samut Prakan Primary Education Service Area 2

Narumol Sirisri[1], Sumitra Yapradit[2]

[1,2] Department of Educational Administration, Faculty of Education, Sarasas Suvarnabhumi Institute of Technology, Thailand

Correspondence: Narumol Sirisri. E-mail: eyesamut23@gmail.com

Abstract

The objectives of this study were: 1) to examine the level of 21st-century leadership skills of school administrators based on teachers' perceptions in the Samut Prakan Primary Education Service Area 2, and 2) to compare the 21st-century leadership skills of school administrators based on teachers' perceptions, classified by educational qualifications, work experience, and school size. The sample used in this research consisted of 289 teachers from the Samut Prakan Primary Education Service Area 2, selected through stratified and simple random sampling methods. The research instrument used was a 5-point Likert scale questionnaire with a reliability coefficient of 0.98. The data were analyzed using descriptive statistics, including mean, standard deviation, t-test, and one-way ANOVA. The results of the study revealed that: 1. The level of 21st-century leadership skills of school administrators, based on teachers' perceptions, was high both in general and in specific aspects. 2. When comparing the 21st-century leadership skills based on teachers' perceptions, classified by educational qualifications, work experience, and school size, there were no statistically significant differences at the .05 level.

Keywords: 21st-Century Leadership Skills, Teachers' Perceptions, Comparison

1. Introduction

The transition from the industrial society of the 19th and 20th centuries to the knowledge-based society of the 21st century has brought rapid changes, primarily driven by digital technology that connects global information networks. The acceleration of digital advancements has led to significant transformations, with experts agreeing that this shift is only just beginning and will intensify exponentially in the future. This rapid evolution inevitably impacts the education sector, requiring schools to adapt and prepare students with the necessary skills to navigate the 21st-century world. As educational systems undergo transformation, key questions arise: Are schools and educators prepared to cope with these changes? Are those in leadership positions equipped with the knowledge and skills to integrate technology into teaching and learning? Do school administrators understand these shifts and are they ready to manage them effectively? According to Churches (2008), the transformation of classrooms, teachers, curricula, and learning approaches must also be accompanied by a shift in pedagogy to reflect the ways

students learn and the world they will encounter in the future. Thus, instructional methods must focus on knowledge creation and knowledge deepening, where students engage in learning by doing through real-world applications. This approach fosters higher-order thinking skills, progressing from basic memory and comprehension to analysis, evaluation, and creativity, as outlined in Bloom's Taxonomy (Sommai, 2013). A critical issue in Thailand is the disconnect between education and real-life goals. Many students lack direction, which contributes to societal problems such as juvenile delinquency, substance abuse, and teenage pregnancy. The traditional rote-learning approach has failed to develop students' identities and life objectives, leaving them unprepared for adulthood. Thai education must shift from creating passive learners to fostering independent thinkers and problem solvers. The emphasis should be on quality education for all rather than for a select few. The education system of the 21st century must move away from outdated teaching models and focus on building a future-ready workforce capable of critical thinking, innovation, and adaptability (Wicharn, 2017).

In terms of educational leadership, Katz (1955) identified three essential skills for administrators: technical skills, human skills, and conceptual skills. Drake and Roe (1986) later expanded this framework to include educational and instructional communication skills and administrative skills. Similarly, Rocky (2013, cited in Wirote, 2010) emphasized the importance of team-building skills, arguing that school leaders must foster collaboration to effectively manage educational institutions. Yang (2016) studied 21st-century leadership skills in North America and found that technology proficiency is crucial for modern school administrators. Effective leaders must utilize technology to enhance teaching, support educators, and manage educational institutions efficiently. If school administrators lack these essential skills, they are unlikely to succeed. Dindred (1975, cited in Kanjanapa, 2008) found that the effectiveness of school administration depends on the leader's knowledge, skills, and experience in managing educational programs. Critical leadership competencies include technological proficiency, conflict management, interpersonal skills, leadership, public speaking, and organizational management. These skills enable administrators to foster an environment that promotes student success and institutional efficiency. Recognizing the importance of these competencies, this study focuses on 21st-century administrative skills among school leaders in Samut Prakan Primary Education Service Area 2, based on teachers' perceptions. As a teacher within this educational jurisdiction, the researcher aims to explore the development of administrative competencies necessary for modern educational leadership. The findings will provide insights into effective school management practices that align with the evolving educational landscape, ensuring enhanced learning outcomes and institutional effectiveness.

2. Research Objectives

1.2 .1 To examine the level of 21st-century administrative skills of school administrators based on teachers' perceptions in the Samut Prakan Primary Education Service Area 2.

1.2.2 To compare the 21st-century administrative skills of school administrators based on teachers' perceptions in the Samut Prakan Primary Education Service Area 2, classified by educational qualifications, work experience, and school size.

3. Research Hypotheses

1.3.1 The level of 21st-century administrative skills of school administrators, as perceived by teachers in the Samut Prakan Primary Education Service Area 2, is at a moderate level.

1.3.2 There are significant differences in the 21st-century administrative skills of school administrators, as perceived by teachers in the Samut Prakan Primary Education Service Area 2, when classified by educational qualifications, work experience, and school size.

4. Literature Review

4.1. Definition of Administration

Teerasak Upramai et al. (2020: 26) stated that administration refers to principles that serve as guidelines for operational processes, involving systematic steps and planning aimed at achieving specific goals. Individuals involved in education management must study and understand these principles to implement them effectively within their organizations.

Sirinya Siriprakon (2018: 8) defined administration as a process encompassing goals, personnel, and various resources. It is a branch of social sciences that integrates principles and theories from anthropology, sociology, psychology, and behavioral sciences. However, administration does not solely rely on scientific principles but also requires an artistic approach, meaning administrators must adapt management theories and knowledge to real-life situations. The core functions of administration include planning, organizing, directing, delegating, reporting, and budgeting. Additionally, key components of administration involve clear objectives, resource management, coordination, and ensuring efficiency and effectiveness in operations.

Wirot Sararatna (2010: 1) described administration as a process aimed at achieving organizational goals efficiently, relying on core functions such as planning, organizing, leading, and controlling.

Samma Rathanith (2010: 37) defined administration as a process where two or more individuals work together using planning, organizing, directing, controlling, and execution to achieve organizational objectives efficiently while maximizing the benefits of available resources and technology.

Hoy and Miskel (2008: 437) explained that administration is a process directed toward achieving predetermined goals through various components such as decision-making, organizational structure, motivation, and leadership, while also considering future implications and possible impacts.

4.2. Summary

Administration is a systematic operational process aimed at achieving organizational goals through planning, organizing, directing, and controlling. Effective administration requires not only scientific management of resources, personnel, and technology but also an artistic approach to apply theories and knowledge appropriately to real-world situations. This ensures the highest efficiency and effectiveness in collaborative operations.

4.3. Definition of Educational Administration

Kwanpicha Meekaew (2019: 11) defined educational administration as a systematic operational process led by school administrators to manage four key areas:
1. Academic administration
2. Budget administration
3. Personnel administration
4. General administration

Sunan Rungarunsangthong (2018: 11) described educational administration as the structured process of managing school activities. This involves planned methods and procedures to efficiently achieve educational goals. The purpose is to develop students with competence, skills, and moral values to live happily in society. Administrators, teachers, and stakeholders must collaborate to utilize limited resources effectively while ensuring compliance with educational standards.

Anuchit Sukkasi (2017: 11) explained that educational administration involves organizing various activities systematically to improve school operations, enhance personnel capabilities, and achieve educational objectives efficiently.

Noppong Boonjittradhulya (2014: 4) defined educational administration as cooperative efforts where multiple individuals work together to develop students in all aspects, including personality, knowledge, abilities, behavior, and ethics, to align with societal needs. This process involves controlling the learning environment, utilizing

resources effectively, and applying appropriate techniques to help individuals develop according to societal expectations.

Priyaporn Wongsanutraroj (2010: 8) stated that educational administration is a primary responsibility of school administrators, requiring them to establish structured methods and procedures for operations. Poor administration can negatively impact an organization, whereas effective leadership ensures goal achievement. Successful school administration integrates both scientific and artistic approaches, recognizing that administrators cannot work alone but must coordinate with diverse team members with different intelligence, skills, and needs. Therefore, administrators must employ appropriate management techniques and strategies to optimize efficiency.

Samma Rathanith (2010: 95) defined educational administration as school management processes where administrators collaborate with stakeholders to implement planning, decision-making, control, and management to ensure students achieve quality education, knowledge, and desirable characteristics, as intended by the education system.

4.4. Summary

Educational administration refers to the systematic management of schools, led by administrators and stakeholders, to develop and optimize four key areas:
1. Academic administration
2. Budget administration
3. Personnel administration
4. General administration

It aims to achieve educational objectives effectively by integrating scientific principles (e.g., planning, organizing, and resource management) with artistic approaches (e.g., adaptive leadership and strategic application of theories). A well-managed education system ensures student success and aligns with societal expectations.

5. Population and Sample

5.1. Population

The population for this study consisted of 1,166 teachers under the jurisdiction of the Samut Prakan Primary Education Service Area 2.

5.2. Sample

The sample size was determined using the G*Power version 3.1.9.2 program, applying the Correlation Bivariate Normal Model with the following parameters:
- Power Analysis = 0.99
- Level of significance = 0.01
- Effect size = 0.3 (Cohen, 1977, as cited in Nipithphon Sanitluea, Watchareeporn Sartpetch, and Yada Naphaarak, 2018).

The calculated sample size was 289 teachers, selected through stratified and simple random sampling methods.

6. Research Instrument

The research instrument was a questionnaire designed to assess 21st-century leadership skills of school administrators as perceived by teachers in Samut Prakan Primary Education Service Area 2. The questionnaire was developed based on a review of literature and theories on school leadership in the 21st century from various scholars, including Wattanakorn Torsorn (2018), Damnoen Piankha (2018), Kraison Jiamthong (2018), Boonsong

Krungcharee (2019), Nattapong Preechanontakul (2020), Porntip Mongkolsethien (2020), Sattabut Podhirut (2021), Atikarn Srisang (2021), Nipaporn Rodphaiboon (2022), Mwinzi (2016), and Maxine Driscoll (2019).

The synthesized leadership skills were categorized into four key competencies:
1. Communication skills
2. Technology and digital literacy skills
3. Analytical and creative thinking skills
4. Ethical, moral, and professional integrity skills

Structure of the Questionnaire
- Section 1: Respondent demographics (education level, work experience, and school size) in a checklist format.
- Section 2: A Likert-scale questionnaire (5-point scale) assessing the 21st-century leadership skills of school administrators across four competency areas.

Likert Scale Interpretation:
- 5 = Very high level of 21st-century leadership skills
- 4 = High level
- 3 = Moderate level
- 2 = Low level
- 1 = Very low level

7. Development and Validation of Research Instrument

The questionnaire development followed these steps:
1. Reviewing literature and theoretical frameworks related to 21st-century school leadership skills.
2. Constructing the questionnaire based on the four key competencies.
   o Section 1: Demographic data (checklist format).
   o Section 2: 21st-century leadership skills (Likert-scale format).
3. Consulting with an academic advisor for initial validation.
4. Seeking expert validation from three professionals in educational administration under Samut Prakan Primary Education Service Area 2, including:
   o 1 school director (Master's degree or higher, at least 5 years of experience).
   o 1 deputy school director (Master's degree, at least 5 years of experience).
   o 1 educational supervisor (Doctorate degree, at least 5 years of experience in educational supervision and evaluation).
5. Content validity analysis using the Index of Item-Objective Congruence (IOC) formula:
   +1 = The question aligns with the intended definition.
   0 = Uncertain.
   -1 = The question does not align with the definition.
   Questions with IOC values between 0.60 - 1.00 were selected for the final questionnaire.
6. Piloting the questionnaire (Try-Out) with non-sample teachers.
7. Reliability testing using Cronbach's Alpha (1990: 202-204) to ensure internal consistency.
8. Finalizing the questionnaire for data collection.

8. Data Collection

The data collection process involved the following steps:
1. Requesting approval from the Graduate School, Faculty of Education and Liberal Arts, Suvarnabhumi Institute of Technology, to conduct the study.
2. Submitting a formal request to school administrators in Samut Prakan Primary Education Service Area 2 for research participation.

3. Distributing the questionnaire to the sample group using Google Forms.
4. Verifying completeness and accuracy of the returned questionnaires.
5. Analyzing the collected data.

9. Data Analysis

The data were analyzed using statistical methods as follows:
1. Preliminary Analysis Checking completeness and accuracy of the returned questionnaires. Scoring responses according to predetermined criteria.
2. Descriptive Statistics Demographic data (education level, work experience, and school size) were analyzed using frequency and percentage. Leadership skills assessment was analyzed using mean ($\overline{X}$) and standard deviation (S.D.).
3. Inferential Statistics Comparing leadership skills across different demographic groups (education level, work experience, and school size) using One-Way ANOVA. If significant differences were found, Scheffé's method was applied for post-hoc pairwise comparisons.

10. Statistical Methods Used in Data Analysis
1. Instrument Validation Statistics Index of Item-Objective Congruence (IOC) to assess content validity. Cronbach's Alpha to test questionnaire reliability.
2. Descriptive Statistics Percentage (%) Mean ($\overline{X}$) Standard Deviation (S.D.)
3. Hypothesis Testing
   o Analysis of leadership skill levels using mean ($\overline{X}$) and standard deviation (S.D.).
   o Comparisons of leadership skills based on education level, work experience, and school size using One-Way ANOVA.
   o If significant differences were found, Scheffé's method was applied for pairwise comparisons.

11. Data Analysis

Analysis of 21st-Century Leadership Skills of School Administrators as Perceived by Teachers in Samut Prakan Primary Education Service Area 2

Table 1: Mean, Standard Deviation, Interpretation, and Ranking of 21st-Century Leadership Skills of School Administrators as Perceived by Teachers (n=289)

21st-Century Leadership Skills of School Administrators	Performance Level		Interpretation	Rank
	$\overline{x}$	S.D.		
1 Communication Skills	4.04	0.33	High	1
2 Technology and Digital Literacy Skills	4.02	0.34	High	3
3 Analytical and Creative Thinking Skills	4.01	0.32	High	4
4 Ethical, Moral, and Professional Integrity Skills	4.03	0.35	High	2
Overall (X_{tot})	4.02	0.29	High	

According to Table 1, the overall level of 21st-century leadership skills of school administrators, as perceived by teachers in Samut Prakan Primary Education Service Area 2, was at a high level ($\overline{X}$ = 4.02, S.D. = 0.29). When examining each skill category, the rankings from highest to lowest mean scores are as follows: Communication skills ($\overline{X}$ = 4.04, S.D. = 0.33) – Highest Ethical, moral, and professional integrity skills ($\overline{X}$ = 4.03, S.D. = 0.35) Technology and digital literacy skills ($\overline{X}$ = 4.02, S.D. = 0.34) Analytical and creative thinking skills ($\overline{X}$ = 4.01,

S.D. = 0.32) – Lowest Overall, all four leadership skills were perceived at a high level, with communication skills ranking the highest and analytical and creative thinking skills ranking the lowest.

Comparison of 21st-Century Leadership Skills of School Administrators as Perceived by Teachers in Samut Prakan Primary Education Service Area 2, Categorized by Educational Qualifications.

Table 2: Analysis of Variance (ANOVA) for 21st-Century Leadership Skills of School Administrators by Educational Qualifications

21st-Century Leadership Skills of School Administrators	Source of Variation	df	ss	ms	f	p
1 Communication Skills	Between Groups	2	0.03	0.01	0.15	0.85
	Within Groups	286	31.12	0.11		
	Total	288	31.72			
2 Technology and Digital Literacy Skills	Between Groups	2	0.05	0.01	0.02	0.98
	Within Groups	286	34.79	0.12		
	Total	288	34.80			
3 Analytical and Creative Thinking Skills	Between Groups	2	0.03	0.01	0.16	0.84
	Within Groups	286	30.51	0.10		
	Total	288	30.54			
4 Ethical, Moral, and Professional Integrity Skills	Between Groups	2	0.06	0.03	0.25	0.77
	Within Groups	286	35.79	0.12		
	Total	288	35.85			
Overall	Between Groups	2	0.02	0.01	0.16	0.85
	Within Groups	286	25.80	0.09		
	Total	288	25.83			

$p < .05$

According to Table 2, the comparison of 21st-century leadership skills of school administrators as perceived by teachers in Samut Prakan Primary Education Service Area 2, categorized by educational qualifications, showed no statistically significant differences at the .05 level, both in overall and individual aspects.

Comparison of 21st-Century Leadership Skills of School Administrators as Perceived by Teachers in Samut Prakan Primary Education Service Area 2, Categorized by Work Experience.

Table 3: Analysis of Variance (ANOVA) for 21st-Century Leadership Skills of School Administrators by Work Experience

21st-Century Leadership Skills of School Administrators	Source of Variation	df	ss	ms	f	p
1 Communication Skills	Between Groups	2	0.15	0.07	0.67	0.50
	Within Groups	286	31.57	0.11		
	Total	288	31.71			
2 Technology and Digital Literacy Skills	Between Groups	2	0.09	0.04	0.36	0.69
	Within Groups	286	34.71	0.12		
	Total	288	34.80			
3 Analytical and Creative Thinking Skills	Between Groups	2	0.21	0.10	1.01	0.36
	Within Groups	286	30.33	0.10		
	Total	288	30.54			
4 Ethical, Moral, and Professional Integrity Skills	Between Groups	2	0.62	0.31	2.52	0.08
	Within Groups	286	35.23	0.12		

	Total	288	35.85			
Overall	Between Groups	2	0.16	0.08	0.91	0.40
	Within Groups	286	25.67	0.09		
	Total	288	25.83			

p < .05

According to Table 3, the comparison of 21st-century leadership skills of school administrators as perceived by teachers in Samut Prakan Primary Education Service Area 2, categorized by work experience, showed no statistically significant differences at the .05 level, both in overall and individual aspects.

Comparison of 21st-Century Leadership Skills of School Administrators as Perceived by Teachers in Samut Prakan Primary Education Service Area 2, Categorized by School Size.

Table 4: Analysis of Variance (ANOVA) for 21st-Century Leadership Skills of School Administrators by School Size

21st-Century Leadership Skills of School Administrators	Source of Variation	df	ss	ms	f	p
1 Communication Skills	Between Groups	3	0.65	0.21	1.98	0.11
	Within Groups	285	31.07	0.10		
	Total	288	31.72			
2 Technology and Digital Literacy Skills	Between Groups	3	1.10	0.36	3.10	0.27
	Within Groups	285	33.69	0.11		
	Total	288	34.80			
3 Analytical and Creative Thinking Skills	Between Groups	3	0.55	0.18	1.76	0.15
	Within Groups	285	29.99	0.10		
	Total	288	30.54			
4 Ethical, Moral, and Professional Integrity Skills	Between Groups	3	0.17	0.58	0.46	0.71
	Within Groups	285	35.68	0.12		
	Total	288	35.85			
Overall	Between Groups	3	0.52	0.17	1.96	0.11
	Within Groups	285	25.31	0.08		
	Total	288	25.83			

p < .05

According to Table 4 the comparison of 21st-century leadership skills of school administrators as perceived by teachers in Samut Prakan Primary Education Service Area 2, categorized by school size, showed no statistically significant differences at the .05 level, both in overall and individual aspects.

12. Discussion of Research Findings

The study on teachers' perceptions of 21st-century leadership skills of school administrators in Samut Prakan Primary Education Service Area 2 revealed several significant findings:

Communication Skills The study found that communication skills among school administrators were at a high level. This could be attributed to their need to adapt to challenges in the 21st century and the organizational culture that fosters open communication. Training and the integration of technology in school management may also play a role in improving administrators' communication effectiveness. This finding aligns with Durnali et al. (2020),

who found that effective negotiation, persuasion, and conflict resolution skills help reduce internal school conflicts and foster a more open work culture among teachers.

Technology and Digital Literacy Skills The high level of technology and digital literacy skills among school administrators may stem from the increasing role of technology in enhancing learning quality and school management. Administrators must develop their digital skills to effectively support teachers and students in technology-based learning. This is consistent with Jones & Dexter (2018), who found that school administrators with strong technological skills can effectively utilize technology for secure data management, communication, and decision-making. Furthermore, Richardson & Sterrett (2018) emphasized the importance of professional development in technology, as administrators who undergo continuous training tend to exhibit higher technological proficiency.

Analytical and Creative Thinking Skills The study found that analytical and creative thinking skills among school administrators were at a high level. Administrators who are capable of introducing and implementing new ideas contribute to continuous school development and enhanced teaching and management strategies. This aligns with Kuratko & Audretsch (2019), who highlighted that innovation in educational leadership leads to organizational improvements and better student learning outcomes. Their study emphasized that leaders with strong analytical and creative thinking skills are better equipped to introduce sustainable innovations in education.

Ethical, Moral, and Professional Integrity Skills The high level of moral and ethical leadership skills among administrators suggests that they demonstrate high ethical standards, which help build trust among teachers and staff. Trust in leadership contributes to a positive working environment and encourages open communication and collaboration. This aligns with Sari & Setyowati (2021), who found that ethical leadership fosters trust and respect within the organization, leading to transparency and effectiveness in school management.

Comparison of Leadership Skills by Education Level, Work Experience, and School Size The study found no statistically significant differences in 21st-century leadership skills based on administrators' educational qualifications, work experience, or school size. This contradicts the initial hypothesis, suggesting that administrators in this education district develop their leadership skills similarly, regardless of external factors such as education level and years of experience. The findings indicate that 21st-century school leadership emphasizes lifelong learning, adaptability to technology, and efficient communication, which may not necessarily be influenced by traditional factors like experience or education level. The standardized training and professional development programs offered to school administrators could explain the uniformity in skills across different school sizes. This finding is consistent with Montathip Namnu (2018), who found no statistically significant differences in the 21st-century leadership skills of school administrators based on gender, education level, or work experience.

13. Recommendations

Recommendations from the Study
1. Communication Skills: School administrators should have the ability to effectively convey knowledge and information in alignment with the objectives of their work.
2. Technology and Digital Literacy Skills: Administrators should be proficient in utilizing technology to manage school operations efficiently and effectively.
3. Analytical and Creative Thinking Skills: Administrators should develop processes for out-of-the-box thinking to drive innovation and improvements in school management.
4. Ethical, Moral, and Professional Integrity Skills: Administrators should apply good governance principles in their management practices to ensure ethical and transparent leadership.

Recommendations for Future Research
1. Future studies should examine the impact of 21st-century leadership skills of school administrators on the quality of student education, to provide insights for improving school management practices.

2. Research should also explore the relationship between 21st-century leadership skills of school administrators and their role in promoting professional development, academic excellence, and establishing educational standards.

Author Contributions: All authors contributed to this research.

Funding: Not applicable.

Conflict of Interest: The authors declare no conflict of interest.

Informed Consent Statement/Ethics Approval: Not applicable.

References

Afsharid, M., Hostafa, H., Qafouri, F., & Jabari, N. (2012). Prioritizing Managerial Skills Based on Katz's Theory in Physical Education Offices of Universities in Iran. *World Applied Sciences Journal, 20*(3), 388–394.

Bradford, D., & Cohen, A. (1984). *Managing for Excellence: The Guide to Developing High Performance in Contemporary Organization.* New York: John Wiley & Sons.

Calwell, B. (2000). A Blueprint of Successful Leadership in an Era of Globalization in Learning. Paper Presented in a Regional Seminar of Leaders in Rajabhat Institutes, Rajabhat Institute Chombung, 10 November 2000. Ratchaburi: Rajabhat Institute.

Coats, T. (1986). *Education Community College.*

Cohen, J. (1977). *Statistical Power Analysis for the Behavioral Sciences.* New York: Academic Press.

Dindred, T. (1975). A Study on the Success of Secondary School Administration Programs at the University of Kansas. *Educational Administration Abstracts, 30*(4), 45-57.

Drake, T. L., & Roe, W. H. (1986). *The Principalship.* New York: Macmillan.

Driscoll, M. (2019). *Top 10 Characteristics of Awesome 21st Century School Leaders.* Retrieved from https://thinkstrategicforschools.com/top-10-characteristics-21st-century-school-leaders/.

Durnali, M., et al. (2020). School Administrators' Communication Skills as a Predictor of Organizational Silence. Retrieved from files.eric.ed.gov.

Fester, J. F., & Kettl, D. F. (1991). *The Politics of the Administrative Process.* New Jersey: Chatham House.

Greene, J. C. (1992). A Study of Principals' Perception of Their Involvement in Decision-Making Processes: Its Impact on Their Job Performance. *Dissertation Abstracts International, 79.*

Haimann, T., Scott, W. G., & Connor, P. E. (1985). *Management.* Boston, Massachusetts: Houghton Mifflin.

Hersey, P., & Blanchard, K. H. (1993). *Management of Organizational Behavior: Utilizing Human Resources.* New Jersey: Prentice-Hall.

Hoy, W. K., & Miskel, C. G. (2001). *Educational Administration: Theory, Research, and Practice.* New York: McGraw Hill.

Jones, W. M., & Dexter, S. (2018). How School Administrators' Beliefs About Technology Influence Their Actions and the Effectiveness of Technology Integration. *Computers & Education, 121*, 75–84.

Johnson, N. N. (2014). *10 Skills for Successful School Leaders (Adapted).* Retrieved from https://aaspa.org/wp-content/uploads/2014/07/NJohnson-10-Skills-for-Successful-School-LeadersAdapted.pdf.

Katz, R. L. (1955). Identification of Stream Drift Mechanisms: An Experimental and Observational Approach. *Ecology, 66*(1), 1749-1761.

Kuratko, D. F., & Audretsch, D. B. (2019). *Innovation and Entrepreneurship in the 21st Century.* This study explores how leadership and innovation in educational settings can lead to improvements in organizational effectiveness and student learning outcomes.

Mwinzi, D. (2016). *Administrative and Leadership Innovation in the 21st Century: A Secondary School Sub-Sector Perspective in Kenya.* Retrieved from https://files.eric.ed.gov/fulltext/EJ1149331.pdf.

Natasha, N. J. (2014). *10 Skills for Successful School Leaders (Adapted).* Retrieved from https://aaspa.org/wpcontent/uploads/2014/07/NJohnson-10-Skills-for-Successful-School-LeadersAdapted.pdf.

Richardson, J. W., & Sterrett, W. (2018). The Value of Professional Development in One-to-One Initiatives: A Case Study on Leadership's Role in Technology Integration. *Journal of Research on Technology in Education, 50*(3), 215–229.

Robbins, S. P. (1998). *Organizational Behavior: Concepts, Controversies, and Applications.* New Jersey: Prentice-Hall.

Robert, L. K. (2017). Skills of an Effective Administrator. *Harvard Business School Publishing Corporation.* Retrieved from http://poseidon01.ssrn.com.

Speck, M. (1999). *The Principalship: Building a Learning Community.* New Jersey: Prentice-Hall.

Taylor, F. W. (1916). *The Principles of Scientific Management.* New York: Harper.

Yukl, G. A. (2001). *Leadership in Organizations.* New Jersey: Prentice-Hall.