



TEACHERS' TECHNOLOGICAL CAPABILITY AND CAREER DEVELOPMENT

Reynaldo D. Deloviar, JR¹, Michael B. Vasquez², Leonor D. De Sale³

¹Colegio de la Purisima Concepcion reynaldodeloviar@gmail.com

²Colegio de la Purisima Concepcion, fmbvasquez@yahoo.com

³Colegio de la Purisima Concepcion, leonordesales@gmail.com

ABSTRACT

Proficiency in technology is crucial for career advancement, enhancing effectiveness, fostering innovation, and preparing educators for digital-age demands. This study investigated the relationship between Technological Capability and Career Development among 267 secondary teachers in Roxas City Division, focusing on digital literacy, pedagogical integration, peer collaboration, professional growth, continuous learning, and career exploration. The research explored variations in technological capability and career development based on teachers' age, sex, educational attainment, and length of service. In the quest to bridge age-related disparities in technological capabilities among educators and address the transformative impact of technology on career trajectories, this research addressed the under-explored relationship between technology capability and career development among educators in the constructs of DepEd Roxas City Division seeking to establish a connection between Information and Communications Technology (ICT) skills and career development, aiming to elevate educators' career prospects in this evolving educational landscape. The study utilized a quantitative descriptive correlational research design in which data were collected through a researcher-made questionnaire and analyzed using IBM SPSS Statistics version 26, employing various statistical methods such as frequency, mean, t-test, f-test, and Pearson's correlation. Results revealed an Excellently Manifested level of technological capability and career development in the Schools Division, with significant differences observed based on sex, age, and length of service. No significant differences were found based on educational attainment. The study highlighted the significant relationship between teachers' technological capability and career development, emphasizing the influence of demographic factors. It suggests that educational institutions and policymakers can leverage these findings to enhance professional growth strategies, ensuring teachers are well-equipped to navigate the evolving educational landscapes in the digital era.

Keywords: *Technological Capability, Career Development, Secondary Teachers.*

1. Introduction

In the rapidly evolving landscape of education, technological competence has become a cornerstone for educators, empowering them to thrive in their profession. The integration of technology has transformed from being a mere accessory to a pivotal tool that enhances instructional methods, fosters interactive learning, and equips students with the competencies necessary to navigate the dynamic challenges of the 21st century.

The transformative impact of technology on career development is evident on a global scale. In China, the emergence of tech giants like Alibaba and Tencent has not only created work opportunities but has also led to the formation of entirely new industries. The emphasis on Science, Technology, Engineering, and Mathematics (STEM) has reshaped career trajectories for millions of individuals, as noted by Chen & Wu (2019) and Liu et al. (2020).

Similarly, in Europe, diverse socio-economic landscapes influence technological capabilities in education. Nations like Germany have long championed technical-vocational education, aligning curricula closely with career pathways in industries heavily reliant on technology, such as manufacturing and engineering (Schmidt & Becker, 2018). The European Union's digital agenda has further unified education across the continent, emphasizing digital literacy and skills for career development (European Parliament, 2021, "Advancing Digital Literacy in the EU: A Comprehensive Overview", p. 45).

In the United States, a global technology hub, the demand for tech-savvy professionals drives the relationship between technological capabilities and career development. Educational technology plays a crucial role in enhancing teaching and learning processes, meeting the dynamic demands of the professional landscape (Anderson & Davis, 2022). Similarly, in the Philippines, particularly in the region where this study was conducted, the state of tech-savviness among Filipino teachers is crucial. The Philippines has been striving to improve digital literacy among educators to better align with global standards. However, there are significant challenges, including varying levels of access to technology and resources across different regions. In South East Asia, the adoption of educational technology is growing, but the extent and effectiveness of its implementation can vary widely. Addressing these disparities is essential to ensure that Filipino teachers are equipped with the necessary digital skills to foster a modern, dynamic educational environment (Santos & Reyes, 2023). Despite these advancements, there exists a gap in understanding how educators perceive and harness the relationship between technological capability and career development. Proficiency levels among educators vary in utilizing digital resources, emphasizing the critical need to enhance Information and Communications Technology (ICT) skills, particularly in regions where age-related disparities are evident among educators.

The existing literature highlights the urgency for further investigation into specific facets such as digital literacy, pedagogical integration, peer collaboration, professional growth, continuous learning, and career exploration. This is especially pertinent in locales like Department of Education Roxas City Division, where the potential benefits of strengthening technological competencies for educators to advance their career prospects are significant. The importance of this research lies in bridging the gap between technological capability and career development. The researcher, recognizing the need to investigate teachers' technical capabilities in their professional journey, aims to establish a strong connection between these constructs in the Schools Division of Roxas City. This research endeavor not only holds potential benefits for organizations and leadership but also addresses the broader significance of enhancing educational practices to meet the demands of an ever-evolving global landscape. As technology continues to shape the future of education and careers, understanding and fostering educators' technological capabilities becomes crucial for the advancement of both individuals and the education system as a whole.

LITERATURE REVIEW

Technological Capability

Technological capability among teachers is vital for modern education, with its proficiency in integrating technology into pedagogical practices gaining significant attention globally. Professional development emerges as a crucial factor in enhancing teachers' digital proficiency, influencing their confidence and capability in using technology effectively (Ertmer et al., 2012; Koh et al., 2015; Teo, 2015). Attitudes and beliefs towards technology also impact teachers' capability, with a growth mindset promoting its adoption (Venkatesh et al., 2013). Moreover, teachers' technological capability positively affects student engagement and learning outcomes, with innovative use of technology making lessons more interactive and appealing (Puentedura, 2006; Lai & Hwang, 2014). However, challenges such as inadequate technological infrastructure and time constraints hinder teachers' development (Ertmer et al., 2012; Zheng & Warschauer, 2018). Therefore, ongoing professional

development and investment in technological infrastructure are essential to prepare teachers for the demands of the digital age and ensure quality education.

The integration of technology into education has become a global trend, including in the Philippines, where educators are increasingly expected to possess technological capabilities to improve teaching and learning (Benosa, 2018). However, the digital divide poses a significant challenge, with disparities in internet access affecting teachers' ability to develop digital skills (ITU, 2020). Teacher education programs recognize the importance of technology integration, both for pre-service and in-service teachers, with continuous professional development playing a crucial role (Tan, 2017; Reyes et al., 2019). Despite various initiatives by the government to support teachers' technological capabilities, significant barriers continue to hinder the effective integration of technology in education. These barriers include limited access to technology and resistance to change, which can be traced to several underlying factors. (Salaveria, 2018; Torres, 2020).

Digital literacy is fundamental for teachers to navigate the digital landscape effectively, with proficient educators more likely to engage in continuous learning and innovative teaching practices (Sarmiento, 2014; De Guia et al., 2017). Pedagogical integration of technology enhances teaching effectiveness and career prospects for educators, but challenges such as limited resources— inadequate funding and insufficient investment in educational resources such as computer (Garcia & Lim, 2017; Tomaro, 2018). Peer collaboration fosters a supportive community where teachers can enhance their technological skills and advance their careers, but time constraints and varying levels of proficiency among teachers pose challenges (Tarrayo et al., 2022; Tan, 2019).

Career Development

In the rapidly evolving landscape of education, teachers' career development intersects with the enhancement of their technological capabilities. Frameworks like the Technological Pedagogical Content Knowledge (TPACK) emphasize the interplay between technological knowledge, pedagogical knowledge, and content knowledge (Koehler et al., 2013). Professional development programs play a crucial role in nurturing teachers' technological capabilities, aligning with their career development goals (Ertmer et al., 2012; Teo, 2015). Mentorship, collaboration, and teacher leadership also contribute significantly to career development, fostering knowledge exchange and skill enhancement (Boreen et al., 2019; Hixon et al., 2016; Harris, 2013). Moreover, policy, organizational culture, intrinsic motivation, and beliefs about technology influence teachers' career trajectories (Darling-Hammond et al., 2017; Louis et al., 2014; Ertmer et al., 2012). Continuous learning and professional development initiatives, especially those related to technology integration, can significantly enhance teaching practices, improve career prospects, and contribute to job satisfaction (Smith & Johnson, 2022; Richardson & Kim, 2016). As technology transforms the teaching profession, educators must remain adaptable and proactive in their technological skill development to thrive in their careers (Mishra & Koehler, 2013). However, several challenges complicate these initiatives.

Firstly, access to resources is a significant barrier. Many educators lack the necessary tools, such as up-to-date hardware and reliable internet access, which are essential for effective technology integration (Hew & Brush, 2007). Additionally, the cost of professional development programs can be prohibitive, especially for those working in underfunded schools (Ertmer & Ottenbreit-Leftwich, 2010).

Secondly, there is often a gap in support and training. Effective technology integration requires comprehensive training and ongoing support, yet many educators receive only minimal instruction and are left to navigate new technologies on their own (Ertmer & Ottenbreit-Leftwich, 2010). This can lead to frustration and underutilization of available tools.

Moreover, the rapid pace of technological change presents a continuous challenge. Keeping up with the latest advancements demands significant time and effort, and the pressure to constantly update skills can be overwhelming (Lawless & Pellegrino, 2007). This can lead to burnout and decreased job satisfaction if not managed properly.

Lastly, there are pedagogical challenges. Integrating technology effectively requires not just technical skills but

also an understanding of how to adapt pedagogical approaches to leverage new tools effectively (Mishra & Koehler, 2006). Without adequate training in these areas, technology can be used in ways that do not enhance learning outcomes.

Career development for teachers in the Philippines is recognized as a multifaceted process that involves continuous professional growth, skill enhancement, and knowledge acquisition (Abundo & Ortega, 2019). Initiatives like the Results-Based Performance Management System (RPMS) by the Department of Education (DepEd) aim to promote career development through performance appraisal and capacity building (DepEd, 2020). However, limited access to training and professional development resources in remote areas remains a barrier (Tupas, 2017). Technological integration in education is prioritized in the Philippines, but challenges persist in terms of teachers' technological capabilities (Caguioa, 2020).

Research indicates that teachers who actively engage in technology-related professional development are more likely to advance in their careers (Dizon et al., 2018). The implementation of the Teacher ICT Competency Framework and participation in technology-related training contribute to remarkable career growth (Dela Cruz, 2019; Ramos, 2020). During the COVID-19 pandemic, teachers who quickly acquired digital skills found themselves better positioned for career advancement (Aquino et al., 2021). Long-term teacher training programs focused on technology integration significantly contributed to career development, particularly in leadership roles within schools (Hernandez, 2022). Teachers' technological capabilities are closely intertwined with their career advancement and job satisfaction (Delos Reyes, 2021). To foster a culture of continuous professional growth, policymakers, educational institutions, and teachers should prioritize technology-related training and development opportunities (Buendia & Aclan, 2016). Continuous learning is essential for teachers to remain effective, especially in the context of technological advancements (Quirino, 2014). Professional development programs, online courses, mentorship, and communities of practice play crucial roles in teachers' continuous learning and career development (Reyes, 2016; Garcia, 2017; Dela Cruz, 2018). Autonomy triggers career exploration, leading to career improvement and high teaching standards among Filipino teachers (Gepila, 2020).

Statement of the Problem

This study was conducted to determine teachers' technological capability and career development in the Schools Division of Roxas City.

Specifically, this study sought to answer the following questions;

1. What is the level of teachers' technological capability as a whole and in terms of digital literacy, pedagogical integration, and peer collaboration in the Schools Division of Roxas City?
2. What is the extent of career development as a whole and in terms of professional growth, continuous learning, and career exploration in the Schools Division of Roxas City?
3. Is there a significant difference between the level of teachers' technological capability in Schools Division of Roxas City when grouped according to age, sex, educational attainment, and length of service?
4. Is there a significant difference between the extent of career development in Schools Division of Roxas City when grouped according to age, sex, educational attainment, and length of service?
5. Is there a significant relationship between the level of teachers' technological capability and the extent of career development within the Schools Division of Roxas City?

Hypotheses of the Study

1. There is no significant difference between the level of teachers' technological capability in Schools Division of Roxas City when grouped according to age, sex, educational attainment, and length of service.
2. There is no significant difference between the extent of career development in Schools Division of Roxas City when grouped according to age, sex, educational attainment, and length of service.
3. There is no significant relationship between the level of teachers' technological capability and the extent of career development within the Schools Division of Roxas City.

2. Method

This study employed a quantitative research approach with a descriptive correlational design to examine the relationship between teachers' technological capabilities and career development within the Schools Division of Roxas City in the Philippines. The population of interest comprised secondary public school teachers, and a simple random sampling method was utilized to select participants (Bhardwaj, 2019). The sample size was determined using Robert Slovin's formula, with a margin of error set at 0.03 and a 97% confidence level (Slovin, 1960). Bourley's proportional allocation technique was then applied to allocate respondents across different schools proportionally (Achon et al., 2019). Data were collected using a researcher-made questionnaire, validated by a panel of experts, and tested for reliability (Polit et al., 2007; Yusuf, 2019). Ethical considerations in research, as outlined by Creswell (2014) and Cohen (2002), ensure confidentiality and voluntary participation through rigorous practices. Confidentiality is maintained by anonymizing data, storing it securely, and using pseudonyms in publications to protect participants' identities. Voluntary participation is achieved through informed consent, where participants are fully informed about the study's purpose, risks, and their right to withdraw without consequences. Researchers avoid coercion, ensuring that participation is voluntary and that participants can decline or withdraw from the study at any time. (Creswell, 2014; Cohen, 2002). Analysis methods included frequency count, percentage, mean calculation, t-test, f-test, and Pearson-r to evaluate teachers' technological capabilities, career development extent, significant differences, and relationships between variables (Downie & Health, 1984; Higgins, 2005).

3. Results and Discussion

Level of teachers' technological capability in the Schools Division

Table 1. Level of teachers' technological capability in the Schools Division of Roxas City as a whole.

Indicators	Mean	Interpretation
Peer Collaboration	4.76	Excellent Manifested
Digital Literacy	4.72	Excellent Manifested
Pedagogical Integration	4.68	Excellent Manifested
Grand Mean	4.72	Excellent Manifested

Legend: 4.21-5.00 = Excellent Manifested; 3.41-4.20 = Regularly Manifested; 2.61-3.40 = Occasionally Manifested; 1.81-2.60 = Hardly Manifested; 1.00-1.80 = Not Manifested.

Note: Components are presented from Highest to lowest

The findings on teachers' technological capabilities in the Schools Division of Roxas City reveals an impressive proficiency, with a grand mean of 4.72, denoting an "Excellent Manifested" level. Indicators such as Digital Literacy (4.72), Pedagogical Integration (4.68), and Peer Collaboration (4.76) all fall within this high level of manifestation. These findings underscore the advanced technological skills and collaborative efforts among teachers. Furthermore, it highlights a commendable level of technological competence among teachers in Roxas City, crucial for creating an environment conducive to contemporary educational practices and enhanced learning experiences for students. The result resonates with the research of Domingo (2016), which similarly underscores the significance of technological integration in modern pedagogical practices which further emphasizes the pivotal role of technology in enhancing teaching methodologies, fostering effective collaboration, and preparing students for a technology-driven world.

Extent of career development in the Schools Division of Roxas City

Table 2 Extent of career development in the Schools Division of Roxas City as a whole.

Indicators	Mean	Verbal Interpretation
Professional Growth	4.82	Excellent Manifested
Continuous Learning	4.81	Excellent Manifested
Career Exploration	4.80	Excellent Manifested

Grand Mean 4.81 Excellently Manifested

Legend: 4.21-5.00 = Excellently Manifested; 3.41-4.20 = Regularly Manifested; 2.61-3.40 = Occasionally Manifested; 1.81-2.60 = Hardly Manifested; 1.00 1.80 = Not Manifested.

Note: Components are presented from Highest to lowest

Tables 3 reveal the collective data from teachers in the Schools Division of Roxas City, focusing on the extent of career development. The mean scores and verbal interpretations demonstrate a strong commitment to professional growth, continuous learning, and career exploration, resulting in a grand mean of 4.81, categorizing the teachers' dedication as "Excellently Manifested". This implies a strong commitment to professional growth, continuous learning, and career exploration among educators in Roxas City Division.

Results showed that the key indicators such as Professional Growth (Mean = 4.82, Excellently Manifested), Continuous Learning (Mean = 4.81, Excellently Manifested), and Career Exploration (Mean = 4.80, Excellently Manifested) all received "Excellently Manifested" ratings. These scores collectively demonstrate an unwavering commitment to maintaining and continuously improving career development practices among educators in the Schools Division of Roxas City.

The findings imply that the teachers exhibit a strong commitment to professional development, as evidenced by the highest mean score of 4.82 for "Professional Growth." This reflects their active engagement in activities to enhance skills, fostering a culture of continuous improvement. Additionally, the mean scores of 4.81 for "Continuous Learning" and 4.80 for "Career Exploration" indicate a proactive approach to staying informed and exploring career avenues. These results underscore a dedicated and forward-thinking mindset among educators, emphasizing continuous learning and potential growth opportunities within the education sector, ultimately contributing to the overall excellence of teaching practices in the region.

This contradicts to the study of studies by Johnson and Smith (2020), Turner and Brown (2021), and Wang and Li (2018) that while the self-reported data from Roxas City suggests a commendable commitment to professional development, a global perspective from recent studies introduces skepticism regarding the depth of impact on teaching practices, the acceptance of continuous learning opportunities, and the true extent of career exploration in the educational sector. It suggests that while local studies indicate a commendable commitment to professional development and career exploration among educators, recent global perspectives cast doubt on the depth of impact on teaching practices and the genuine acceptance of continuous learning opportunities. This contradiction implies several possibilities: first, there may be discrepancies in how professional development is perceived or reported locally versus internationally; second, local contexts and perceptions of career exploration may differ from global standards or benchmarks; and third, there could be methodological variations or biases in data collection and analysis between local and global studies. Addressing these implications requires careful consideration of cultural contexts, methodological rigor, and the alignment of local educational practices with broader international perspectives on professional development and career advancement in the educational sector.

Differences in the level of teachers' technological capability in the Schools Division of Roxas City and some variables

Table 3. Significant differences in the level of teachers' technological capability in the Schools Division of Roxas City and some variables.

Profile	f/t-Value	Significant Value	Probability
Technological Capability and Sex	2.744	0.006	s.
Technological Capability and Age	13.412	0.000	s.
Technological Capability and Length of Service	3.364	0.019	s.
Technological Capability and Educational Attainment	1.273	0.281	n.s

Legend: $p\text{-value} > 0.05 = \text{not significant (n.s.)}$; $p\text{-value} < 0.05 = \text{significant (s.)}$

As presented in Table 3, there are notable distinctions in the level of teachers' technological capability within the Schools Division of Roxas City across different variables. The results reveal statistically significant differences based on sex (2.744), age (13.412), and length of service (3.364), indicating variations in technological capability across these categories. However, no significant differences are observed based on educational attainment (1.273).

The data suggests that, in the context of technological capability, factors such as sex, age, and length of service play a significant role. Male teachers exhibit a higher level of technological proficiency compared to their female counterparts, as indicated by the significant t-value of 2.744 ($p = 0.006$). Similarly, there is an age-related aspect to technological capability differences, with teachers below 30 and those aged between 31-40 demonstrating higher levels than their older counterparts ($f\text{-value} = 13.412$, $p = 0.000$). Additionally, there is a discernible difference in technological proficiency based on length of service, with early-career educators (≤ 10 years) exhibiting higher capability than those in service for 21 years and above ($f\text{-value} = 3.364$, $p = 0.019$).

However, when considering educational attainment, the obtained $f\text{-value}$ of 1.273 with a significant value of 0.281 ($p > 0.05$) indicates that there is no significant difference in teachers' technological capability based on their educational background.

The rejection of the null hypothesis for age, sex, and length of service emphasizes the substantial impact of these factors on teachers' technological capability. Male teachers demonstrate a higher level of technological proficiency than their female counterparts, deviating from studies by Gronlund et al. (2017). Additionally, age-related variations indicate that younger teachers, particularly those below 30 and aged 31-40, exhibit higher technological capability compared to older age groups, highlighting a generational aspect. This observation underscores a generational divide where younger teachers, who have likely been exposed to technology from a younger age, may be more adept at utilizing technological tools and innovations in their teaching practices. In contrast, older teachers, who may have had less exposure to technology earlier in their careers, might face challenges in adopting and integrating new technological advancements. This generational aspect is significant as it impacts how effectively teachers can leverage technology to enhance classroom instruction, student engagement, and overall educational outcomes. Recognizing these age-related variations is crucial for designing targeted professional development programs and support systems that cater to the diverse technological needs and capabilities of teachers across different age groups in the educational sector.

The discernible difference in technological capability based on length of service, with early-career educators showing higher proficiency, aligns with Ertmer et al. (2012). This suggests that early-career educators may be more adept at adopting new technologies, possibly due to recent exposure during their education and a willingness to experiment. In contrast, the acceptance of the null hypothesis for educational attainment implies that teachers' technological capability is not significantly influenced by their educational background. This aligns with Niess (2005), indicating that preservice teachers' educational attainment does not predict their technology use, emphasizing that educational levels may not determine teachers' ability or willingness to integrate technology into their classrooms.

Differences in the extent of career development in the Schools Division of Roxas City

The differences in the extent of career development of teachers in the Schools Division of Roxas City when they are grouped according to sex, age, length of service and educational attainment is presented in table 4

As illustrated in Table 4, significant distinctions are evident in the extent of career development within the Schools Division of Roxas City, considering various variables. The results indicate statistically significant differences in career development based on sex (2.963) and age (4.196), while no significant differences are observed for length of service (0.676) and educational attainment (1.464), as shown by the respective $t/f\text{-values}$ and $p\text{-values}$.

Table 4. Significant differences in the extent of career development in the Schools Division of Roxas City and some variables.

Profile	f/t-Value	Significant Value	Probability
Career development and Sex	2.963	0.003	s.
Career development and Age	4.196	0.006	s.
Career development and Length of Service	0.676	0.567	n.s.
Career development and Educational Attainment	1.464	0.213	n.s.

Legend: p-value > 0.05 = not significant (n.s.); p-value < 0.05 = significant (s.)

The data emphasizes that, concerning career development, sex and age play a pivotal role within the context of the Schools Division of Roxas City. The rejection of the null hypothesis for "sex and age" emphasizes the substantial impact of these factors on teachers' career development. Males exhibit a higher extent of career development than females, as indicated by the significant t-value of 2.963 ($p = 0.003$). This finding may reflect various factors contributing to gender disparities in career progression. Potential reasons could include historical and systemic biases favoring males in career opportunities or advancement, differences in societal expectations or support for career development based on gender roles, and disparities in access to resources such as mentorship, networking opportunities, and professional development programs. Additionally, cultural and organizational factors within specific industries or sectors may also contribute to these observed differences. Addressing such gender disparities requires systemic changes in organizational policies, cultural norms, and support systems to ensure equitable opportunities and career advancement for all individuals, regardless of gender. Additionally, age-related variations indicate that teachers in the 31-40 age group demonstrate a higher extent of career development compared to other age groups (f-value = 4.196, $p = 0.006$). This finding suggests that there is a significant difference in career development across different age cohorts within the teaching profession. It is important to note that this observation is not solely attributed to a generational aspect but rather reflects the career stage and experience level of teachers in the 31-40 age range. Teachers in this age group may have accumulated more experience, gained specialized skills, or taken on leadership roles within their careers, contributing to their higher levels of career development compared to younger or older peers. Understanding these age-related variations is crucial for designing targeted career support initiatives and professional development opportunities that cater to the diverse needs and career stages of teachers across different age groups in education. This finding challenges the perspectives put forward by Harris and Ingersoll (2010) by suggesting that the relationship between age and career development in the teaching profession is influenced by context-specific factors. Rather than a straightforward generational aspect, the observed higher extent of career development among teachers aged 31-40 highlights that career progression is shaped by individual career trajectories, experience levels, and opportunities within specific educational contexts. Factors such as mentoring programs, professional growth initiatives, institutional support, and leadership opportunities likely play significant roles in influencing career development outcomes across different age groups. Understanding these context-specific dynamics is essential for developing targeted strategies that support career advancement and professional fulfillment among educators at various stages of their careers. The discernible difference in career development based on sex and age aligns with previous studies, challenging certain findings by Ridgeway & Correll (2011) and Harris and Ingersoll (2010). However, the acceptance of the null hypothesis for length of service and educational attainment implies that career development is not significantly influenced by these factors. This resonates with the study conducted by Heneman and Freedman (2012) and Ingersoll and Kralik (2004), suggesting that factors beyond length of service and educational attainment contribute to career advancement among teachers in the Schools Division of Roxas City.

Relationship between the Level of Teachers' Technological Capability and the Extent of Career Development in the Schools Division of Roxas City

Table 6. Relationship between the level of teachers' technological capability and the extent of career development in the Schools Division of Roxas City.

Variable	N	Pearson's r	Significance Value	Probability
----------	---	-------------	--------------------	-------------

Technological Capability	267	0.688	0.000	s.
Career Development				

The data reveals a Pearson's correlation coefficient (r) of 0.688 between teachers' technological capability and the extent of career development. The associated p -value is 0.000, which is below the standard alpha level of 0.05, resulting to be statistically significant.

The obtained 0.688 correlation coefficient indicates a high to very high positive relationship between teachers' technological capability and the extent of career development in the Schools Division of Roxas City. This finding implies that teachers with higher levels of technological competency tend to experience greater career development opportunities.

The significant relationship leads to the rejection of the null hypothesis, stating no significant relationship between teachers' technological capability and the extent of career development. This means that in the Schools Division of Roxas City, teachers with advanced technological skills are more likely to experience greater career development.

The finding of this study disagrees with findings of Cuban (2013) which shows that teachers with advanced technological skills would be more likely to experience career growth. Ultimately, these contrasting findings underscore the complexity of the relationship between technological skills and career advancement in education. Factors such as organizational support for technology integration, professional development opportunities, and the evolving role of technology in teaching practices may influence how technological skills contribute to teachers' career trajectories.

This implies that factors beyond individual technological proficiency played a significant role in shaping teachers' career trajectories. Cuban (2013) highlighted the influence of the institutional context, the nature of the technology itself, and the teacher's own beliefs and values.

4. Conclusion and Implications

Based on the findings above the following conclusion were drawn: It is evident that teachers in the Schools Division of Roxas City exhibit commendable proficiency in technological capability, showcasing a high level of expertise in utilizing technology for instructional purposes. This reflects a technologically advanced teaching environment within the district. Additionally, the Schools Division of Roxas City has successfully implemented measures and programs supporting the professional growth and advancement of its teaching staff, thereby fostering a conducive atmosphere for career development. Notably, male teachers below 30 years old and with 10 years of service or less demonstrate higher levels of technological capability, while those aged 31-40 exhibit a higher extent of career development. These findings highlight positive correlations between age group, technological proficiency, and career advancement among male teachers. Furthermore, the study suggests that teachers with elevated technological capability are more likely to experience greater career development, emphasizing the interconnectedness of technological proficiency and professional growth in the district.

In the light of the study's significant findings and conclusions, the following recommendations are made for enhancing educational practices and professional growth in the Schools Division of Roxas City. Firstly, policymakers are advised to prioritize ongoing professional development programs tailored to educators' technological proficiency. This can include workshops, training sessions, and access to cutting-edge educational technology tools, fostering a technologically enriched learning environment for students. Additionally, sustaining successful measures supporting teaching staff's professional growth is crucial. Policymakers should encourage school administrators to provide diverse opportunities such as mentorship programs and avenues for pursuing advanced degrees, ensuring continuous career development. Notably, recognizing the higher technological capability of male teachers below 30 with limited service, targeted programs should be designed

for this demographic, integrating relevant technology content into the curriculum. Similarly, for teachers aged 31-40 displaying higher career development, policymakers and administrators should continue offering advancement opportunities and aligning the curriculum with the career needs of this age group. Finally, an integrated approach to professional development, addressing both technological proficiency and career advancement, is recommended. Policymakers and administrators should collaborate to align the curriculum with the importance of these skills, encouraging teachers' active engagement and benefitting students. Future research can explore the synergies between technological capability and career development, examining their collective impact on teaching effectiveness and student outcomes.

References

- Abundo, M. L., & Ortega, R. A. (2019). Career development for teachers in the Philippines: An overview. *International Journal of Academic Research in Progressive Education and Development*, 8(4), 149–157.
- Achonu, C. J., Anyanwu, I. M., & Aniche, A. N. (2019). Proportional allocation technique: A better alternative in sample size determination for survey research. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 9(4), 34–42.
- Anderson, C., & Davis, K. (2022). The role of educational technology in enhancing teaching and learning processes. *Journal of Educational Technology*, 15(2), 87–101.
- Aquino, E. R., Estabillo, V. L., & Oracion, A. (2021). Digital skills and career advancement among teachers during the COVID-19 pandemic. *Journal of Educational Technology*, 18(1), 45–58.
- Bhardwaj, A. (2019). Understanding Slovin's formula: A step towards sampling techniques. *International Journal of Management, Technology, and Social Sciences (IJMITS)*, 4(2), 121–125.
- Boreen, J., Johnson, M. K., Niday, D., & Potts, J. (2019). Professional development and career advancement in education: A comprehensive review. *Journal of Educational Leadership, Policy, and Practice*, 34(2), 78–93.
- Buendia, M. P., & Aclan, L. (2016). Prioritizing technology-related training for teachers' continuous professional growth. *Philippine Journal of Education and Research*, 89(3), 134–145.
- Caguioa, M. C. (2020). Challenges in prioritizing technology integration in Philippine education. *Asia Pacific Journal of Education, Arts, and Sciences*, 7(4), 89–98.
- Chen, Y., & Wu, L. (2019). STEM education and career trajectories in China: A longitudinal study. *Journal of STEM Education Research*, 4(1), 45–57.
- Cohen, L. (2002). Research ethics: Informed consent and confidentiality. *British Journal of Nursing*, 11(8), 570–573.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.
- Cuneen, J., & Tobar, F. (2015). Descriptive correlational design in educational research. *Journal of Educational Research and Evaluation*, 3(2), 25–36.
- Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2017). Professional development in the United States: Trends and challenges. *Education Policy Analysis Archives*, 25(5), 1–34.
- Delos Reyes, J. (2021). Technological capabilities and career advancement among Filipino teachers. *Journal of Educational Technology*, 18(3), 112–125.
- DepEd. (2020). *Results-Based Performance Management System (RPMS) handbook*. Department of Education.
- Dizon, M. P., de Castro, J. P., & Del Rosario, C. A. (2018). Technology-related professional development and career growth among teachers in the Philippines. *Asia Pacific Journal of Education, Arts, and Sciences*, 5(1), 56–68.
- Downie, N. M., & Health, S. T. (1984). *Statistical methods for health care research*. J.B. Lippincott Company.
- Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers & Education*, 59(2), 423–435.
- European Parliament. (2021). *Digital agenda for education in the European Union*. Publications Office of the European Union.
- Garcia, J. R. (2017). Communities of practice in teacher professional development: A qualitative study. *Journal of Educational Research and Practice*, 45(3), 212–225.

- Garcia, M., & Lim, L. (2017). Challenges and opportunities in pedagogical integration of technology. *International Journal of Educational Technology in Higher Education*, 14(2), 89–102.
- Gepila, P. (2020). Autonomy and career exploration among Filipino teachers. *Philippine Journal of Education and Research*, 89(4), 178–191.
- Gronlund, A., Hellgren, J., Andersson, U., & Shultz, K. (2017). Gender differences in technology usage: A study of preschool teachers. *Journal of Educational Technology*, 14(3), 132–145.
- Heneman, H. G., & Freedman, T. (2012). Career development and advancement among teachers: A longitudinal study. *Journal of Educational Leadership and Administration*, 19(1), 56–68.
- Hernandez, J. R. (2022). Long-term effects of teacher training programs on career development. *Journal of Educational Technology*, 19(1), 78–91.
- Higgins, J. P. T. (2005). Measuring inconsistency in meta-analyses. *British Medical Journal*, 327(7414), 557–560.
- Hixon, E., & Ronfeldt, M. (2016). Mentorship and teacher leadership in career development. *Journal of Educational Leadership and Policy*, 28(2), 67–79.
- International Telecommunication Union (ITU). (2020). *Global ICT Development Index*. Geneva, Switzerland: International Telecommunication Union.
- Johnson, K., & Smith, L. (2020). Career development and advancement in the teaching profession: A global perspective. *Journal of Educational Leadership and Policy*, 27(4), 112–125.
- Koh, J., Chai, C. S., & Tsai, C. C. (2015). Teachers' digital competences: Factors influencing their development and use. *Computers & Education*, 82, 304–315.
- Koehler, M. J., Mishra, P., & Cain, W. (2013). The technological pedagogical content knowledge framework. In *Handbook of Technological Pedagogical Content Knowledge (TPACK) for Educators* (pp. 16–32). Routledge.
- Louis, K. S., Toomey, R., & Youngs, P. (2014). Career advancement and teacher beliefs: A longitudinal study. *Journal of Educational Leadership and Policy*, 26(3), 89–102.
- Mishra, P., & Koehler, M. J. (2013). Technological pedagogical content knowledge: A framework for teacher knowledge. In J. R. Sawyer (Ed.), *The Cambridge Handbook of the Learning Sciences* (pp. 332–352)