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Digital Leadership of School Heads and Job Satisfaction of Teachers in the Philippines during the Pandemic

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Abstract. This study examines school heads' digital leadership as a predictor of teachers' job satisfaction in the Philippines during the pandemic. A total of 520 public school teachers across the 16 regions of the country answered the validated online survey questionnaires between March and May 2022. With the descriptive-predictive research design, descriptive statistics, and regression analysis, the study finds that school heads have a satisfactory level of digital leadership as perceived by their teachers. This finding suggests that Filipino school heads can, at least to a satisfactory level, guide their schools and stakeholders toward digital transformation to remain adaptable and competitive in a rapidly changing digital and social media landscape. Furthermore, Filipino teachers experienced satisfactory job satisfaction during the pandemic, which suggests that they continue to cope with and adapt to the new work and educational changes despite the plethora of challenges and transitions. Finally, this study reveals that school heads' digital leadership predicts teachers' job satisfaction. When leaders are competent to lead and model in the digital age, their subordinates become more satisfied with their work. Therefore, training programs for improving school heads' digital leadership are necessary to enhance their teachers' job satisfaction, especially since technology plays a significant part in diverse educational activities.

Keywords: digital leadership; job satisfaction; Philippines; school heads; teachers

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1. Introduction

The COVID-19 pandemic has overwhelmed the education system with changes in the teaching and learning process, professional development, communication, and management (Tanucan & Uytico, 2021). The abrupt use and integration of digital tools and platforms, especially in countries with technological gaps, have complicated the teaching and learning process. Nevertheless, learning and work continue amid all the issues and challenges, and everyone in school has to utilize the necessary technologies and other tools for digital communication in their daily activities. Digitalization became the answer to addressing the inability to hold face-to-face classes effectively and efficiently as well as improving the administration and supervision of schools (Babacan & Dogru, 2022). The role of school heads in this situation is crucial. They must fill in whatever knowledge and skill gaps they may have to be more equipped to achieve digital transformation in schools (Aksal, 2015). They must also take on the mantle of more technologically inclined leadership to help teachers and stakeholders utilize digital tools and other technological platforms in their educational activities (Karakose et al., 2021). Furthermore, they must act as digital leaders to provide the necessary skills and knowledge for a 21st-century education to harness digital transformations in schools (Veguilla-Martinez et al., 2022). This situation instigated the discussion on digital leadership, especially since education and administrative practices are increasingly technologically integrated.

Digitalization in schools is deliberately becoming the norm (Ainslee, 2018). Among many other efforts towards digitalization, schools' roadmap includes utilizing various online learning platforms, digital textbooks, and digitized administrative activities. This period of transformation lays the foundation for a world where education becomes more accessible and available as long as digital and technological infrastructure and resources are prepared (Tanucan, 2019; Tanucan & Hernani, 2018). With this change comes the concept of digital leadership that can thrive in a digital environment where technology-oriented abilities support effective management and teamwork (Abbu & Gopalakrishna, 2021; Bresciani et al., 2021). According to Waldron (2021), digital leadership is a new management approach that supports and propels digital change in organizations to enhance the flexibility, efficiency, and effectiveness of transactions and procedures. This idea corroborates the explanation of De Araujo et al. (2021) that digital leadership is the ability of leaders to develop an insightful vision for the application, adoption, and promotion of technology at work. Likewise, it exhibits the ability of leaders to develop, manage, guide, and apply information and communications technology (ICT) for further improvement of institutions (Chin, 2010). Furthermore, digital leadership can initiate sustainable change (Trenerry et al., 2021) as it is known to be a cross-hierarchical, team-oriented, and suitable type of leadership (Oberer & Erkollar, 2018). Hence, school leaders with digital leadership can guide schools and their stakeholders toward digital transformation to be adaptable and remain competitive in a rapidly changing digital and social media landscape. In this situation, school leaders have to be guided by a set of standards of digital leadership so they can benchmark good practices and develop the essential abilities to harness digital transformation in their respective institutions.

The International Society for Technology in Education (ISTE) has been conducting international-level research on the standardization of technology-oriented skills for the successful and long-lasting integration of technology in education for various groups (students, educators, coaches, and educational leaders) (ISTE, 2022). The ISTE standards have been acknowledged by various researchers in different nations, as seen in their studies that integrated the concept (e.g., Baek & Sung, 2020; Gomez et al., 2022; Kimm et al., 2020; Vucaj, 2020). More specifically, the latest standards for educational leaders of ISTE involve five areas: Equity and Citizenship Advocate, Visionary Planner, Empowering Leader, Systems Designer, and Connected Learner (ISTE, 2022). These standards serve as a framework for the digital education age, no matter where school heads are on the journey to integrate and promote technology in education. With the standards set for school heads to embrace (Van Wart, 2017), they would be more capable of defining and executing a radical change strategy to harness digital transformation in their institutions rather than simply digitizing their work and operations. Defining the standards for using technology in education would provide teaching and learning that are more creative and successful for the twenty-first century (Sam, 2011). It would also help school leaders set expectations for technology use and support rapid-cycle evaluation of technology benefits in teaching, learning, and administrative functions (Arinto et al., 2020). However, studies that use the latest ISTE standards to examine school heads' digital leadership are scarce. Thus, one of the objectives of this study is to respond to this matter.

In the Philippines, digitalization has slowly been changing the landscape of the country's education. During the pandemic, education from the primary to tertiary levels employed various teaching and learning methods that involved technology, which helped ensure the continuity of students' learning and employees' work. In particular, the Department of Education (DepEd) implemented the Learning Continuity Plan (LCP) at the basic education level (DepEd, 2020). The Commission on Higher Education (CHED) also fortified the inherent academic freedom of higher education institutions to adopt the necessary learning strategy to continue education at the tertiary level (CHED, 2020). These initiatives have integrated e-learning, distance learning, and other alternative delivery methods into education.

Additionally, the country is beginning to digitalize its educational practices with the launch of numerous initiatives such as DepEd Commons, DepEd TV, DepEd Radio, DepEd Learning Management System, and DepEd Mobile App, among others (Ponti, 2021; Hernando-Malipot, 2021). Such initiatives have helped mobilize the utilization of digital platforms and other technologies in classrooms. Likewise, they have been instrumental in supplementing the modular learning adopted by public schools to enhance student learning in various subject areas during the pandemic (Cho et al., 2021; Potane, 2022). Accordingly, the country's education is starting to focus on using ICT through the Digital Rise Program which equips classrooms, teachers, and students with online learning resources (Llego, 2020). Filipinos are among the world's most active Internet and social media users (Baclig, 2022), which are vital components for digital transformation in education.

With the country's efforts toward digitalizing schools, school heads must point the way forward in establishing a digital culture in schools to utilize their digital opportunities fully. Creating a digital culture in schools needs digital resources, such as leaders with developed digital leadership skills, to move it toward its successful implementation (Pendry & Salvatore, 2015). However, this endeavor could be a challenge, particularly in light of the numerous obstacles that prevent the country from fully utilizing and integrating technology in education. Without the necessary digital infrastructure and school leaders with the skills to use and model technology use and integration, schools and their stakeholders could hardly imbibe a culture of innovation and collaboration.

The study by Dotong et al. (2016) identified insufficient financial and infrastructure support, human capital, management support, and behavioral and environmental factors as barriers to using and integrating technology in education. Tanucan et al. (2021) also identified that age is a significant factor for teachers conducting remote digital teaching. Hence, there is a need for substantial training for senior teachers who are not technologically inclined or adept. The Philippines' inadequate digital infrastructure, outdated technology, and slow Internet connectivity (Salac & Kim, 2016; World Bank, 2020), coupled with the traditional mindset of school principals, were significant factors for the lack of technical staff for maintaining computers and computer networks, and providing support for Internet-related activities (UNESCO-UIS., 2014). This finding corroborates the study by Hero (2020) citing that principals' technological leadership does not influence teachers' technological leadership, implying that principals fell short in modeling and empowering their teachers in integrating technology into their functions. This situation would help explain why only a meager 23 percent of leaders in the Philippines considered themselves influential leaders in the digital era, as indicated in the Global Leadership Forecast 2018 (Development Dimensions International, 2018).

In light of these convoluted concerns, training programs that aim to improve school heads' digital leadership are justified. The problem is that the country's programs to capacitate or improve school leaders, particularly in their digital leadership, vis-à-vis identified standards such as the ISTE standards for education leaders, have not been deliberately emphasized. The recent study by Arinto et al. (2020) recommended the same idea, emphasizing the need for school leaders in the country to take the lead in setting expectations for technology use and supporting rapid-cycle evaluation of technology benefits following a set of standards determined by the national office of education. Failure to do so may adversely impact teachers' job satisfaction, the significant rise in stress and burnout (Zhai & Du, 2020), and the digital divide in the academic community (Talandron-Felipe, 2020).

Teachers' job satisfaction plays a crucial role that can affect the completion of various curricula regardless of the learning platform (Li & Yu, 2022). It is also crucial for students' overall learning (Devi & Soni, 2013) and schools' attainment of their objectives and overall growth (Jun, 2015; Sahito & Vaisanen, 2020).

Compared with traditional face-to-face teaching, teachers' situations become more challenging owing to their complex professional roles, disturbed job satisfaction levels, and lack of digital literacy during the pandemic (Li & Yu, 2022). Recently, several studies have started examining teachers' job satisfaction, with some primarily concerned with the predictors, variables, and degrees of job satisfaction (e.g., Gómez-Leal et al., 2022; Hewett & La Paro, 2020; Richards et al., 2019).

However, recent studies have examined digital leadership's role in job satisfaction. Matriadi et al. (2021) found that digital leadership positively and significantly affected employee job satisfaction in an energy company. Srimata et al. (2019) also found that school heads' digital leadership components significantly influenced teachers' school climate and engagement, suggesting that teachers experienced a degree of satisfaction in their job. Pasolong et al. (2021) explained digital leadership's role in inspiring employees to innovate and defend their ideas, making them feel satisfied in their jobs. The concept of Frederick Hertzberg's two-factor theory (also called Motivator Hygiene Theory) also explains the value of satisfaction in the workplace, particularly the role of leadership or management in engendering employee satisfaction (Lee et al., 2022). Other related studies described how employees' perceptions of digital leadership positively and significantly affected their work behavior, giving them more favorable job satisfaction and improved performance (Hamzah et al., 2021; Marbawi et al., 2022; Muniroh et al., 2021). Altogether, the literature points to the idea that digital leadership is a way of supporting employees, including teachers, to appreciate what they have been doing.

The Philippines is already on its way to digitalizing its education practices and operations. However, it needs substantial studies to help educational leaders craft training initiatives that will hone the digital leadership of school heads. To the researchers' knowledge, there is a gap in the literature that examines the level of digital leadership among school heads in the country and its link to teachers' job satisfaction. Hence, this study aimed to examine the digital leadership of school heads as a predictor of the job satisfaction of teachers in the Philippines. The objectives below guided the researchers to achieve the aim mentioned above.

1. Determine the level of digital leadership of school heads;
2. Ascertain the level of job satisfaction among teachers; and
3. Examine the digital leadership of school heads as a predictor of teachers' job satisfaction.

2. Methodology

This study followed a descriptive-predictive design as the analysis of the variables relevant to the aim of the study was carried out by employing descriptive and predictive quantitative methods. The study specifically sought to describe school heads' levels of digital leadership and job satisfaction among teachers. Furthermore, it examined the digital leadership of school heads as a predictor of teachers' job satisfaction. The data collection was done between March and May 2022, two years after COVID-19 had been declared a pandemic.

The respondents were the 520 public school teachers across the 16 regions of the Philippines. They were selected based on convenience sampling, as this study employed data collection via online platforms, making it difficult to control the population parameters fully. However, this sampling method effectively achieved the study's objectives, as it allowed for the widespread dissemination of the questionnaire during the pandemic when direct contact and social interaction were discouraged. Additionally, the use of the Internet has significantly increased, making it easier to reach the respondents of this study. The computed sample size using the Raosoft® software for the unknown population was 377 after calculating the 95% confidence interval, a 50% response distribution rate, a 5% margin of error, and 20,000 pre-set numbers for the unknown population. However, there was a high turnover in the survey, which led the researchers to prefer 520 respondents as their sample size. Table 1 presents the distribution of respondents from the country's different regions.

Table 1: Distribution of respondents by region

Demographic Variables	Number of Respondents	Percent
Region I - Ilocos Region	29	5.58
Region II - Cagayan Valley	28	5.38
Region III - Central Luzon	26	5.00
Region IV-A – Calabarzon ALABARZON	26	5.00
Region IV-B – Mimaropa IMAROPA	30	5.77
Region V - Bicol Region	28	5.38
Region VI - Western Visayas	32	6.15
Region VII - Central Visayas	40	7.69
Region VIII - Eastern Visayas	29	5.58
Region IX - Zamboanga Peninsula	31	5.96
Region X - Northern Mindanao	34	6.54
Region XI - Davao Region	41	7.88
Region XII – Soccks OCCSKSARGEN	31	5.96
Region XIII – Caraga Administrative Region	33	6.35
Cordillera Administrative Region	40	7.69
National Capital Region	42	8.08
Total	520	100

On the other hand, Table 2 shows the demographic profiles of the respondents. In terms of gender, the distribution of the respondents has a male population comparable to its female counterpart. Moreover, most of them are between 25 to 35 years old, with a bachelor's degree as their highest educational attainment, and with at least five years of teaching experience.

Table 2: Demographic profiles of respondents

Demographic Variables	Frequency	Percent
Gender		
Male	262	50.38
Female	258	49.62
Years of service		
1 - 5 years	208	40.00
6 -10 years	210	40.38
10+ years and above	102	19.62
Highest Educational Attainment		
Bachelor's degree	335	64.42
Master's degree	120	23.08
Doctoral degree	65	12.5
Age		
25 - 35 years old	208	40.00
36 - 44 years old	151	29.04
45 - 54 years old	121	23.27
55- 64 years old	40	7.69

n = 520

The data-gathering procedure followed five phases: Phase 1: Identification of questionnaires that measure the variables of the study; Phase 2: Validation of the identified questionnaires guided by three education experts; Phase 3: Pilot testing of questionnaires to determine their internal reliability consistency; Phase 4: Implementing the questionnaires through an online survey in a Google Form distributed via social media groups and institutional websites; and Phase 5: Screening of gathered data. In Phase 1, the study used two questionnaires: the ISTE standards for education leaders (ISTE, 2022) to measure school heads' levels of digital leadership; and the Teacher Job Satisfaction Scale of Pepe et al. (2017) to measure teachers' level of job satisfaction. In Phase 2, the identified questionnaires underwent a series of reviews by three education experts to ensure that each item aligns with the intended concepts of the study's variables and the respondents'

context and culture. In Phase 3, the computation of the questionnaires' Cronbach's alpha ratings commenced after the pilot testing. A total of 30 respondents, who were public school teachers, were invited to participate in the pilot testing of the questionnaires. The ISTE standards for education leaders' questionnaire achieved a Cronbach's alpha rating of .87, and the Teacher Job Satisfaction Scale had a Cronbach's alpha rating of .86. Both ratings indicate high internal reliability consistency. In Phase 4, the prospective respondents answered the questionnaires distributed online via social media groups and institutional websites. Before answering the questionnaire, the respondents had to read the essential ethical protocols to which the study adhered, which include the purpose of the research, informed consent, and respect for autonomy and confidentiality. The respondents could choose whether to participate in the study or not. In Phase 5, screening of the gathered data commenced by excluding incomplete surveys and those whose responders were not legitimate, regular DepEd teachers. The responses were kept private in a computer file that could only be unlocked using a password.

The SPSS software version 26 (SPSS 26.0 IBM Corporation, Armonk, New York, USA) analyzed the data, particularly the descriptive statistics and the regression analysis. The $p < .05$ was considered statistically significant.

3. Results

The findings in Table 3 showed that teachers have a satisfactory level of perception regarding the digital leadership of their school heads. Accordingly, all the five areas of digital leadership, such as Equity and Citizenship Advocate, Visionary Planner, Empowering Leader, Systems Designer, and Connected Learner, received a satisfactory rating.

Table 3: Teachers' level of perception of their school heads' digital leadership

Digital Leadership of School Heads	Min.	Max.	Mean	SD
Equity and Citizenship	1.25	4.00	3.506	0.436
Visionary Planner	1.60	4.00	3.332	0.420
Empowering Leader	1.40	4.00	3.482	0.443
Systems Designer	1.06	4.00	3.266	0.614
Connected Learner	1.00	4.00	3.486	0.437
Total Mean Score 3.41 = Satisfactory				

Note: n = 520. Confidence interval; 3.51 – 4.00: Very satisfactory, 2.51 – 3.50: Satisfactory, 1.51 – 2.50: Unsatisfactory, and 1.00 – 1.50: Very unsatisfactory

On the other hand, the findings in Table 4 showed that teachers have a satisfactory level of job satisfaction, with satisfaction with co-workers having the highest mean score (M = 3.775, SD = 0.378) and satisfaction with parents having the lowest mean score (M = 3.075, SD = 0.566).

Table 4: Teachers' level of perception of their school heads' digital leadership

Job Satisfaction of Teachers	Min.	Max.	Mean	SD
Satisfaction with Co-workers	2.00	4.00	3.775	0.378
Satisfaction with Students' Behaviors	2.00	4.00	3.627	0.484
Satisfaction with Parents	1.00	4.00	3.075	0.566
Total Mean Score 3.49: Satisfactory				

Note: n = 520. Confidence interval; 3.51 – 4.00: Very satisfactory, 2.51 – 3.50: Satisfactory, 1.51 – 2.50: Unsatisfactory, and 1.00 – 1.50: Very unsatisfactory

Finally, as shown in Table 5, the regression analysis is statistically significant on the grounds that the F-ratio = 47.601, R2 = 0.562, ΔR2 = 0.316, $p < 0.05$. Additionally, the value of R2 is 0.562, demonstrating that this model accounts for 56% of the variance of teachers' job satisfaction. The regression analysis displayed that all five areas of digital leadership were found to be predictors and have a substantial positive influence on teachers' job satisfaction. Among these predictors, Systems Designer (SD) (β = 0.243, B = 0.140, SE = 0.026, CI = 0.089 – 0.191, t-value = 5.398, $p < 0.05$) was indicated as the strongest predictor, followed by Equity and Citizenship Advocate (ECA) (β = 0.132, B = 0.108, SE = 0.038, CI = 0.032 – 0.183, t-value = 2.798, $p < 0.05$), Connected Learner (CL) (β = 0.128, B = 0.103, SE = 0.040, CI = 0.025 – 0.182, t-value = 2.601, $p < 0.05$), Visionary Planner (VP) (β = 0.125, B = 0.106, SE = 0.040, CI = 0.027 – 0.184, t-value = 2.655, $p < 0.05$), and Empowering Leader (EL) (β = .103, B = 0.082, SE = 0.037, CI = 0.010 – 0.155, t-value = 2.223, $p < 0.05$) respectively.

Table 5: Regression analysis indicating the role of school heads' digital leadership in predicting teachers' job satisfaction

Model	Unstandardized Coefficients Max.		Standardized Coefficients	T	Sig	95% Confidence Interval for B		R^2	ΔR^2	F	Sig.
	B	SE	B			Lower	Upper				
(Constant)	1.658	.131	.132	12.645	0.000	1.401	1.916	0.562	0.316	47.601	0.000
ECA	.108	.038	.125	2.798	0.005	.032	.183				
VP	.106	.040	.103	2.655	0.008	.027	.184				
EL	.082	.037	.243	2.223	0.027	.010	.155				
SD	.140	.026	.128	5.398	0.000	.089	.191				
CL	.103	.040	.132	2.601	0.010	.025	.182				

Note: n = 520. ECA – Equity and Citizenship Advocate; VP – Visionary Planner; EL – Empowering Leader; SD – Systems Designer; and CL – Connected Learner

4. Discussion

An analysis of the survey showed the digital leadership of school heads and teachers' job satisfaction during the pandemic. It also showed the regression analysis, which examined the school heads' digital leadership as a predictor of teachers' job satisfaction.

4.1 Digital Leadership of School Heads

The findings in Table 3 indicated that teachers have a satisfactory level of perception about the digital leadership of their school heads. Accordingly, all five digital leadership areas have a satisfactory rating. This finding suggests that school heads in the Philippines can, at least to a satisfactory level, guide their schools and stakeholders toward digital transformation to remain adaptable and competitive in a rapidly changing digital and social media landscape. Since the start of the COVID-19 pandemic, the digitalization of the education sector has become indispensable with the rapid adoption of digital and distant work setups (Tanucan et al., 2021; Tanucan & Uytico, 2021). School heads in this situation have had to fill in whatever knowledge and skill gaps they may have to be better equipped to achieve digital growth in schools (Aksal, 2015). They also have taken on the mantle of a more technologically inclined leadership to help teachers and stakeholders utilize digital tools and other technological platforms (Karakose et al., 2021). Furthermore, they served as digital leaders to their subordinates, providing the necessary skills and knowledge for a 21st-century education to harness digital transformations in schools (Veguilla-Martinez et al., 2022). However, having a sufficient level of digital leadership would need more enhancement, particularly in light of the numerous obstacles that prevent the country from fully utilizing and integrating technology in education.

The study by Dotong et al. (2016) identified insufficient financial and infrastructure support, human capital, management support, and behavioral and environmental factors as barriers to using and integrating technology in education. Tanucan et al. (2021) also identified that age is a significant factor for teachers' conducting remote digital teaching. Hence, there is a need for substantial training for senior teachers who are not technologically inclined or adept. The Philippines' inadequate digital infrastructure, outdated technology, and slow Internet connectivity were also significant issues (Salac & Kim, 2016; World Bank, 2020). The traditional mindset of school principals also hampers the full integration of technology in schools as they tend to devalue the role of ICT in education, leading to a lack of technical staff for maintaining computers and computer networks, as well as user support for Internet-related activities (UNESCO-UIS, 2014).

In light of these convoluted concerns, training programs that aim to improve school heads' digital leadership are justified. The problem is that the country's programs to capacitate or improve school leaders, particularly in their digital leadership vis-à-vis identified standards such as the ISTE standards for education leaders, have not been deliberately emphasized. The recent study by Arinto et al. (2020) made the same recommendation, emphasizing the need for school leaders in the country to take the lead in setting expectations for technology use and

supporting rapid-cycle evaluation of technology benefits following a set of standards determined by the national office of education. Failure to do so may adversely impact teachers' job satisfaction, the significant rise in stress and burnout (Zhai & Du, 2020), and the digital divide in the academic community (Talandron-Felipe, 2020). Nevertheless, helping school heads strengthen their digital leadership would open up new prospects and opportunities in the education sector while also providing solutions to existing and emerging issues when harnessing digital transformation in schools (Karakose et al., 2021).

4.2 Job Satisfaction of Teachers

The findings in Table 4 showed that teachers have a satisfactory level of job satisfaction, with satisfaction with co-workers having the highest score rating and satisfaction with parents having the lowest score rating. This finding implies that teachers in the Philippines are coping and adapting steadily to the new work and education despite the plethora of challenges and changes. Many reasons could contribute to the teachers' satisfaction. One could be the sense of networking and support they receive from their co-workers, as indicated in the findings. Numerous studies have stressed the value of having support from co-workers to combat feelings of isolation, mainly when working remotely (Mulki & Jaramillo, 2011). Sewell and Taskin (2015) also added that regular team communication was necessary to minimize any possible drawbacks of working remotely. In the Philippines, many public school teachers started physically reporting to school after a year of the pandemic, enabling them to work together and socialize.

Another reason could be the various interventions and innovations to address the challenges of the pandemic and to capacitate teachers in using and integrating the necessary technologies and other tools for digital communication in their daily activities. The diverse in-service training provided to the teachers on topics such as capability-building training, use of technology, and student counseling was vital to respond to the academic challenges and meet several demands, including the socio-emotional demands of students and teachers alike (Darling-Hammond & Hyler, 2020; Tanucan & Uytico, 2021). The flexible learning options implemented by DepEd and CHED have also been relevant to continuing the education services of schools and universities while considering the health and safety of teachers, students, and other stakeholders (CHED, 2020; DepEd, 2020).

This flexibility in education also considers each student's unique demands, learning preferences, rate of progress, and technology in education, thereby helping the teachers in the process. Moreover, the pandemic relief measures of the Philippine government such as the *Bayanihan to Recover as One Act* (Bayanihan 2) contributed the lion's share of the money for educational initiatives in the public education sector, freeing up additional funds for the purchase of necessary instructional materials and the construction of pertinent infrastructure. Assistance was also given to teachers and students during the epidemic under the provisions of the Act mentioned above. Notably, the coming together of concerned agencies and individuals, whether from the government or private sector, has been instrumental in the survival of many Filipinos (Canete et al., 2021) and the continuation of education amid and beyond the pandemic (Dayagbil et al., 2021).

Nevertheless, much work must be done for the country's education system to remain relevant, flexible, and resilient. A strong parent or stakeholder partnership with schools is crucial to this endeavor. As previously mentioned, this study's finding indicated a lower level of teachers' job satisfaction with parents compared to other job satisfaction constructs. This finding indicates that issues around parent-teacher or parent-school partnerships exist. According to De Dios (2022), Filipino parents seldom offer support or direction to their children in the remote learning environment because of their low educational background, limited subject knowledge, and low self-confidence in the teaching the learning process. Several technological and Internet-related constraints and difficulty in managing the work-home balance were also the common problems for parents (Palos-Simbre, 2021). Further, the lack of preparedness of parents for home-based learning is also a significant obstacle. In other countries, parental involvement in remote learning, including interventions to enhance parent-teacher communication, was necessary for the success of remote learning (Chen & Rivera-Vernazza, 2022; Knopik et al., 2021; Ricker et al., 2021). This shift in education from traditional teaching methods is a complex process that requires mutual communication and cooperation among various stakeholders, including parents (Tocalo, 2022). Hence, including parents' experiences and perspectives in decision-making, particularly in digitalizing education, is essential.

4.3 School heads' digital leadership as a predictor of teachers' job satisfaction

The findings in Table 5 show that each area of the school heads' digital leadership significantly predicted teachers' job satisfaction. This finding demonstrates how school heads' ability to guide their schools and stakeholders toward digital transformation to remain adaptable and competitive in a digital and social media landscape could influence teachers' job satisfaction. This finding concurs with the study of Matriadi et al. (2021), which demonstrated how digital leadership positively and significantly influenced employee job satisfaction in an energy company. Likewise, it also conforms to the study of Srimata et al. (2019), which described how school heads' digital leadership components significantly influenced teachers' school climate and engagement, suggesting that teachers experienced a degree of satisfaction in their job. It also corroborates the finding of Pasolong et al. (2021), which explained the role of digital leadership in inspiring employees to innovate and defend their ideas, making them feel satisfied in their job. The finding also supports the concept of Frederick Hertzberg's two-factor theory, which explains the value of satisfaction in the workplace, particularly the role of leadership or management in spurring employee satisfaction (Lee et al., 2022). Finally, this study also corroborates related studies that describe how employees' perceptions of digital leadership positively and significantly affect their work behavior, giving them more favorable job satisfaction and improved performance (Hamzah et al., 2021; Marbawi et al., 2022; Muniroh et al., 2021).

Teachers' job satisfaction should be highlighted in decision-making as it plays a crucial role that can affect the completion of various curricula regardless of the learning platform (Li & Yu, 2022). It is also crucial for students' overall learning (Devi & Soni, 2013) and schools' attainment of their objectives and overall growth

(Jun, 2015; Sahito & Vaisanen, 2020). School heads in this situation should harness their digital leadership skills to satisfy their teachers at work, especially since educational activities, including administrative functions, involve technology for more efficient and effective operations.

Creating a digital culture needs digital resources that will move towards its successful implementation (Pendry & Salvatore, 2015). Such resources include the leaders who have exhibited qualities of digital leadership. School stakeholders could hardly imbibe a culture of innovation and collaboration without the necessary digital infrastructure and school leaders with the knowledge and skills to use and model technology use and integration. With the rapid move to remote work, organizations must facilitate simplified communication channels between geographically dispersed teams, often in different time zones (Waldron, 2021). The Philippines, being an archipelagic country, will ultimately benefit from having a pool of leaders with digital leadership skills. Moreover, the country is already on its way to digitalizing its education practices and operations by adopting e-learning, distance learning, and other alternative methods of delivery (CHED, 2020; DepEd, 2020). Likewise, the country is beginning to digitalize its educational practices with the launch of numerous initiatives such as DepEd Commons, DepEd TV, DepEd Radio, DepEd Learning Management System, and DepEd Mobile App, among others (Ponti, 2021; Hernando-Malipot, 2021). These initiatives have been instrumental in supplementing the modular learning adopted by public schools to enhance student learning in various subject areas during the pandemic (Cho et al., 2021; Potane, 2022). Moreover, the country's education is starting to focus on using ICT through the Digital Rise Program, which equips classrooms, teachers, and students with online learning resources (Llego, 2020). Furthermore, Filipinos are among the world's most active Internet and social media users (Baclig, 2022), which is a vital component in the digital transformation of education.

5. Conclusion and Recommendation

The study revealed that Filipino school heads have a satisfactory level of digital leadership as perceived by their teachers. This finding suggests that school heads can, at least to a satisfactory level, guide their schools and stakeholders toward digital transformation to remain adaptable and competitive in a rapidly changing digital and social media landscape. Furthermore, Filipino teachers have satisfactory job satisfaction during the pandemic, which suggests that they are coping and adapting steadily to the new work and education despite the plethora of challenges and changes. Finally, this study reveals that school heads' digital leadership predicts teachers' job satisfaction. When leaders are competent to lead and model in the digital age, their subordinates will become more satisfied with their work. Therefore, training programs for improving school heads' digital leadership are necessary to enhance their teachers' job satisfaction, especially since technology plays a significant part in diverse educational activities. For future research, examining the socio-demographic profiles of school heads and teachers as a predictor of digital leadership may also substantiate the study's findings.

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