Impact of Digital Information on Teachers' Work Performance in Distance Learning

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Abstract

The present study investigated the impact of Digital Information (PDI) on teachers' Work Performance (WP) within the framework of distance education. A cross-sectional survey employing a quantitative methodology was undertaken to assess the Professional Happiness and Work Performance of teacher associated with the Virtual University Islamabad and Allama Iqbal Open University Islamabad. A stratified sampling approach was employed to get feedback from a total of 237 educators. This was achieved by the distribution of two online self-administered surveys, which specifically targeted the topics of DI and WP. Both instruments employed a 6-point semantic difference scale. The conceptualization of DI was based on the idea of digital education proposed by the Joint Information Systems Committee (JISC). The study investigated several aspects such as the manipulation and administration of digital tools, platforms, software, and services, as well as a comprehensive comprehension of digital data. In the present study, the WP metric was constructed based on an extensive review of scholarly literature. This measure encompasses seven primary categories, including Teaching Learning Process, Innovative practices, Teacher Quality, Communication, Task Performance, Learning Resources, and Job Functions. The data analyses conducted in this study encompassed a range of statistical techniques, including descriptive statistics, reliability checks, correlation analysis, regression analysis, and multiple regression analysis. The reliability of the assessment instruments was established by calculating Cronbach's Alpha coefficient, which yielded a value of .917 for all dimensions. The study adhered to rigorous ethical protocols, which encompassed obtaining informed consent from participants and ensuring the confidentiality of collected data. The objective of this study was to examine the intricate connection between digital information and its impact on the quality and effectiveness of instruction in distance learning settings.

Keywords: *Digital Information, Distance Learning, Work Performance, Digital Literacy, Online Education*

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Introduction

In the contemporary era characterized by advanced digital technologies, the ability to effectively manage and harness extensive quantities of digital information has become crucial, especially within the education sector. The advent of digital platforms has significantly altered traditional classroom dynamics, closely linking educators' success to their proficiency in handling digital information (DI) (Smith & Anderson, 2018).

The rapid expansion of remote education, spurred by unexpected global events like the COVID-19 pandemic, necessitates a deep exploration of the relationship between professional development in higher education (DI) and educators' job performance (WP) (Johnson et al., 2020). Despite the emphasis on the importance of digital proficiency in the existing body of scholarly work, a comprehensive understanding of the relationship between DI, including aspects like Innovative practices, Teaching Learning Processes, and Communication, and various parts of WP is still lacking (Jones, 2017).

Addressing this knowledge gap, this research focuses on the Virtual University and Allama Iqbal Open University, aiming to build upon the digital education paradigm established by the Joint Information Systems Committee (JISC, 2014). The objective is to comprehensively examine the scope and magnitude of DI while providing a detailed understanding of the complex characteristics of WP, drawing from extensive reviews of existing scholarly works (Rajendra, 2014; McQuerrey, 2018; Koopmans et al., 2014).

Understanding the correlation between the Pedagogical High-Dimensional Index (DI) and Workplace Performance (WP) holds significant value for various educational stakeholders, including policymakers, institutional leaders, and curriculum architects. In today's global context, where remote education is increasingly prevalent, it is imperative for educators to effectively utilize digital resources to enhance their teaching methods (Anderson & Dron, 2011).

Historically, the integration of digital material in education was predominantly viewed as a supplemental tool that supported traditional teaching methods. However, Bates (2015) notes a transformative shift from the use of multimedia teaching aids in the 1990s to the widespread incorporation of the Internet in the 2000s, marking a significant change. The emergence of technological advancements like artificial intelligence, augmented reality, and virtual reality within education has further elevated the importance of understanding the Pedagogy of Human-Technology Interaction (Guan, 2020).

Yet, digital proficiency entails more than just technological know-how. Mishra and Koehler (2006) argue that it is critical for educators to acquire a comprehensive understanding of Technological Pedagogical Content Knowledge (TPACK), which involves the seamless integration of technology, pedagogy, and content. This holistic understanding becomes even more crucial in the context of remote learning, encompassing a variety of topics such as teaching effectiveness, innovative tactics, and efficient communication (Moore, 2013).

Although the relationship between DI and WP has been proposed in various research studies, it remains an emerging area of investigation, with initial results indicating a favorable correlation, particularly within virtual educational environments (Green & O'Brien, 2017). Nonetheless, addressing significant challenges such as technological resistance and the digital divide among educators is crucial (Ally, 2008). This study aims to delve into the relationship between DI and

WP in the context of distance learning, striving to provide a comprehensive understanding of their synergy.

Literature Review

Digital information encompasses data that is stored and communicated in a digital format, encompassing many forms such as textual content, visual representations, and audiovisual media. The pervasive adoption of digital technologies has rendered digital information an indispensable component of contemporary existence, exerting a profound impact on our modes of communication, education, and employment. In their scholarly work, Anderson and Rainie (2014) delve into the implications of the "Internet of Things" (IoT) for the acquisition and use of digital data. The authors contend that Internet of Things (IoT) devices, including wearable technology and smart homes, are producing substantial quantities of data that can be leveraged for diverse applications, such as healthcare surveillance and energy administration. Moreover, they acknowledge that the utilisation of digital information gives rise to apprehensions about privacy and security.

In this study, Boy, Sung, and Lam (2019) examine the influence of digital information on the decision-making process of consumers. The researchers discovered that digital information, such as online reviews and product information, exerts a substantial impact on customer behaviour, especially for products characterised by complexity or elevated risk. In their recent study, Zhang et al. (2021) investigate the utilisation of digital material within the realm of education, with a specific focus on online courses. The researchers discovered that digital information can enhance the learning process through its ability to grant learners access to a vast array of resources and facilitate effective communication between learners and teachers. Nevertheless, the authors acknowledge the existence of obstacles associated with the utilisation of digital information in the realm of education. These issues encompass the imperative for learners to cultivate their digital literacy proficiencies, as well as the possibility of experiencing social isolation.

In summary, the study sources demonstrate the significance of digital information across several domains, including but not limited to healthcare, marketing, politics, nonprofit organisations, and education. Additionally, they underscore the difficulties and apprehensions associated with the acquisition, utilisation, and dissemination of digital data. By comprehending these concerns and formulating tactics to tackle them, we can exploit the advantages of digital information while minimising the associated hazards.

Theoretical Framework

This study's approach is grounded in extensive academic research and focuses on the analysis of teachers' written proficiency within the context of distance learning. This theoretical framework, which is grounded in extensive scholarly research, provides a complete framework for comprehending the nuanced aspects of teachers' writing proficiency in the context of remote learning. More specifically, it aims to investigate the impact of digital information management skills on teachers' written proficiency. This study offers valuable perspectives on various constructs, highlighting their interconnections, particularly in relation to proficiency in managing digital information.

Teachers' Work Performance

The role of teachers in remote education requires a comprehensive perspective, as it is impacted by a variety of factors, ranging from WP1 to WP7, seven constructs of work performance.

1. *Teaching-Learning Process:* According to Rajendra (2014), the teaching-learning process is a fundamental aspect of education. This component is essential within the overarching educational framework as it centres on the efficient utilisation of information and communication technology (ICT) technologies, the incorporation of diverse learning materials, and the implementation of various delivery techniques. According to Rajendra (2014), proficiency in using information and communication technology (ICT), offering diverse learning materials, and tailoring lecture delivery to accommodate the needs of different learners are essential components for a successful teaching and learning process in digital environments.
2. *Innovative practices:* In a study conducted by Rajendra (2014), the focus was on innovative practices. Considering the growing digitization of education, it is imperative for educators to integrate novel methodologies. Rajendra highlights the significance of cultivating inclusive educational practises, integrating novel teaching-learning methodologies, prioritising value-based education, establishing internal quality assurance measures, and nurturing strong stakeholder relationships.
3. *Teacher Quality:* According to Rajendra (2014), the concept of teacher quality encompasses more than just the delivery of content. It also includes a teacher's dedication to ongoing study and research. According to the research conducted by Rajendra, the assessment of teachers' quality is determined by their engagement in scholarly research, publication of academic works, and the frequency and calibre of their professional development activities.
4. *Communication:* According to McQuerrey (2018), effective communication is crucial in the context of distant education. Effective communication is more than just the delivery of content; it also involves responsiveness, timely feedback, and the capacity to communicate concepts clearly and coherently.
5. *Task Performance:* In a study conducted by Koopmans et al. (2014), the focus was on task performance, conducted a seminal study wherein they explicate task performance by examining various dimensions, including the quantity and quality of work, the depth of job knowledge, and the efficiency in task completion.
6. *Learning Resources:* According to Rajendra (2014), the effectiveness of pedagogy in distance learning relies heavily on the utilisation and availability of appropriate learning resources. Rajendra emphasises the need of utilising e-libraries, offering e-learning resources, and continuously enhancing professional competency.
7. *Job Functions:* According to McQuerrey (2018), the job functions in remote education encompass several qualities such as timeliness, originality, innovation, effective time management, consistency, and proactive initiatives.

Digital Information

Following the JISC Model's trajectory (2014), the study delves into the depth of digital information as it pertains to distance learning WP. This model underscores the holistic approach to managing digital information, highlighting its usage, application understanding, and integration into pedagogical processes.

Research Design

The study employed a quantitative research design, employing a cross-sectional survey methodology. This approach provides a concise assessment of teachers' competence in managing digital material and their ability to effectively engage in remote learning situations.

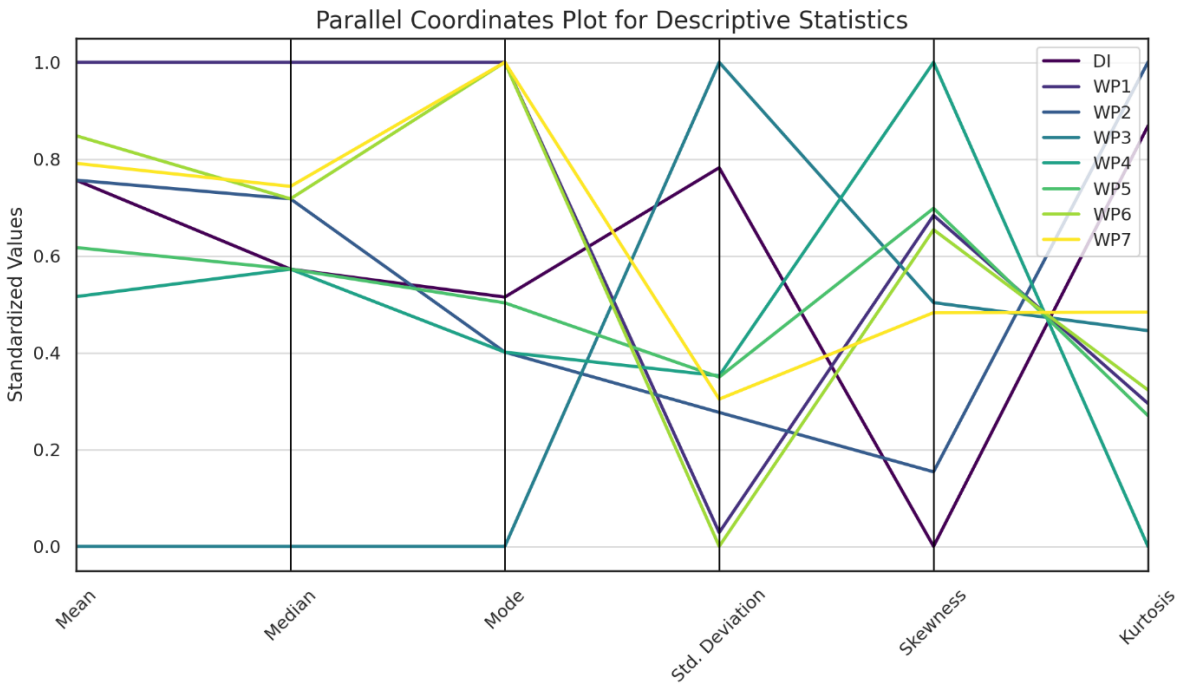
Participants*:* The study's participants consist of teachers from the Virtual University and Allama Iqbal Open University who are actively engaged in online learning. The research methodology adopted in this study was stratified sampling, with a specific focus on educators who possess significant experience in the field of online teaching. Among the 500 teachers that were approached, a total of 237 teachers provided responses. Data collection was executed via two online self-administered surveys gauging digital information and WP in distance learning. Both used a 6-point semantic differential scale. *Reliability:* All 237 replies were processed without any exclusions based on listwise deletion. The dependability of the scale, as assessed by Cronbach's Alpha, was found to be .903 for the eight items

Findings

In the research, data were gathered from 237 educators on various metrics. Descriptive statistics for select parameters are presented below:

Figure 1.

Parallel Coordinate Plot of Descriptive Statistics for Digital Information (DI) and Work Performance (WP) Variables.



The parallel coordinate plot in Figure 2 provides a visual comparison of standardized descriptive statistics across eight variables, including Digital Information (DI) and seven Work Performance (WP) variables (WP1 to WP7). Each line represents a variable, and each vertical axis corresponds to a different statistical measure, including mean, median, mode, standard deviation, skewness,

and kurtosis. The values are standardized to fit between 0 and 1, facilitating comparison across variables and statistical measures. This comprehensive visualization aids in identifying patterns, trends, and outliers in the data, offering insights into the central tendency, variability, and distribution shape of each variable.

Table1.

Descriptive Analysis Report for Digital Information (DI) and Work Performance (WP)

Variable	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
DI	5.0924	5.00	5.19	0.953	-2.651	7.677
WP1	5.3495	5.5000	6.00	0.74316	-1.194	2.553
WP2	5.0924	5.1700	5.00	0.81225	-2.323	8.855
WP3	4.2938	4.3300	4.33	1.01364	-1.578	3.897
WP4	4.8384	5.0000	5.00	0.83330	-0.520	-0.088
WP5	4.9454	5.0000	5.17	0.83256	-1.163	2.328
WP6	5.1893	5.1700	6.00	0.73522	-1.257	2.801
WP7	5.1291	5.2000	6.00	0.81990	-1.622	4.238

The table provides a comprehensive Descriptive Analysis Report for the parameters DI and WP in the context of distance learning. Examining the metrics pertaining to DI reveals an average score of 5.0924. This mean score was corroborated by the mode, which showed that the predominant score accorded by educators was 5. While indicative of certain variability, the observed standard deviation of 0.953 is not excessively large, suggesting a reasonable homogeneity in the feedback. An interesting observation is the skewness metric, which at -2.651, unmistakably suggests a leftward skew. This essentially implies that the bulk of the data is concentrated to the right of the average. Additionally, the pronounced value of kurtosis potentially points to the presence of outliers or a heightened peak in the dataset.Delving into the WP metrics, there is a discernible range in the average scores, oscillating between 4.2938 (observed for WP3) and 5.3495 (for WP1). Modes for these metrics predominantly hovered around 6 or were proximate to 5, which provides insight into the most frequently accorded scores. Notably, the skewness values, being uniformly negative across the WP metrics, indicate a consistent left-skewed distribution. Furthermore, the kurtosis scores present a spectrum: while metrics such as WP4 hint at a flatter distribution suggesting more variability, others, notably WP7, are indicative of a sharper, more concentrated distribution. In summation, the table meticulously delineates the central tendency, degree of dispersion, and the nature of the distribution of each metric under scrutiny. This provides invaluable insights into the feedback and perceptions of educators regarding DI and various WP metrics within the ambit of distance education.

Table 2.

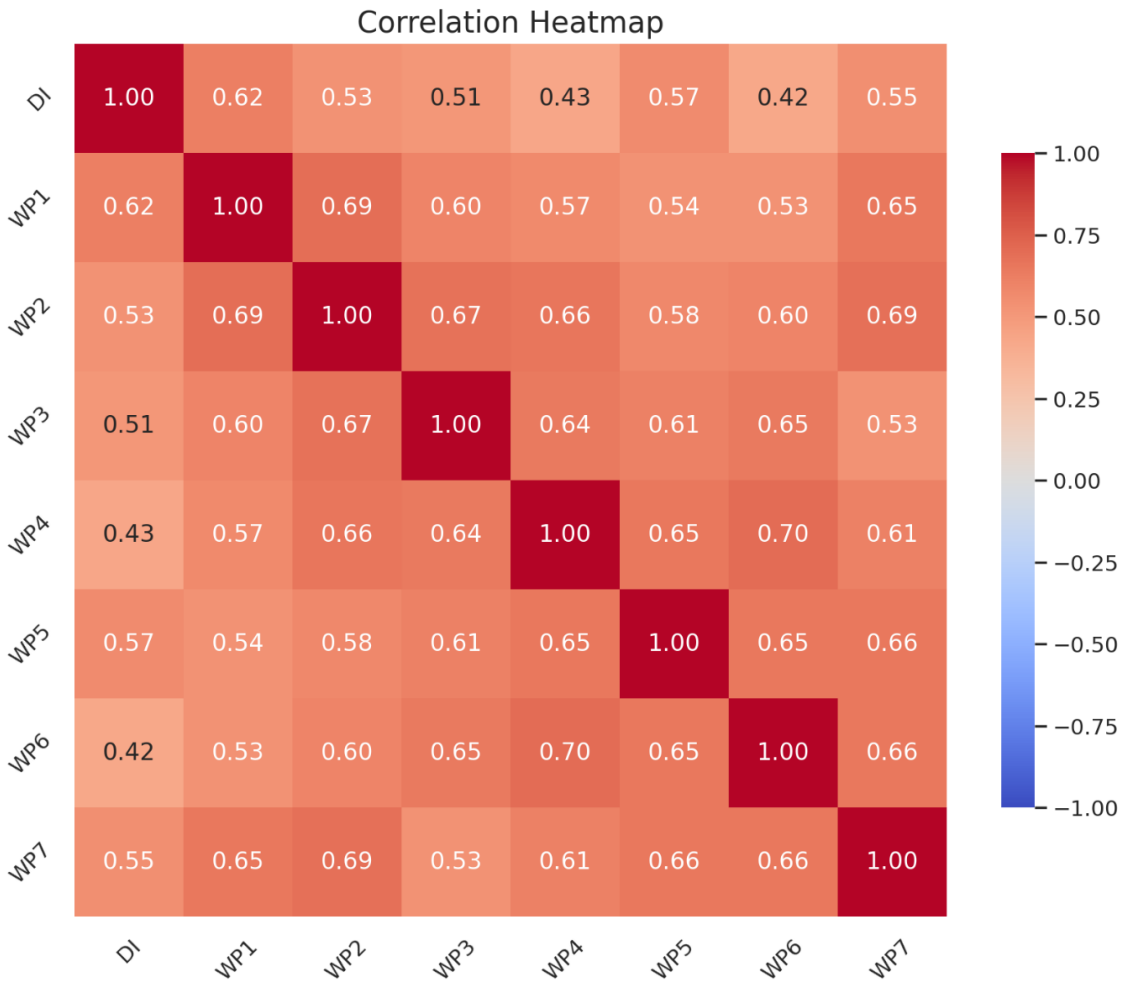
Correlations among Digital Information (DI) and WP Variables.

	DI	WP1	WP2	WP3	WP4	WP5	WP6	WP7
DI	-	.619**	.533**	.508**	.431**	.570**	.424**	.550**
WP1		-	.690**	.597**	.575**	.537**	.534**	.649**
WP2			-	.674**	.662**	.581**	.596**	.686**
WP3				-	.641**	.612**	.648**	.534**
WP4					-	.652**	.701**	.613**
WP5						-	.653**	.656**
WP6							-	.656**
WP7								-

Note. ** Correlation is significant at the 0.01 level (2-tailed). N = 237 for all correlations.

From the correlation with a sample size of N = 237, Digital information (DI) exhibited significant positive associations with all WP measures at the 0.01 level (2-tailed). Specifically, the most pronounced correlation of DI was observed with WP1, where r(235) = .619, p < .01. Conversely, the weakest linkage of DI was identified with WP6, recording a correlation of r(235) = .424, p < .01. Moreover, delving into the intercorrelations among the WP metrics, WP1 and WP2 demonstrated the most substantial relationship, registering an r(235) = .690, p < .01.

Figure 2.
Heatmap of Correlations Among Digital Information (DI) and WP Variables.



The heatmap in Figure 2 illustrates the correlation coefficients among Digital Information (DI) and various WP variables (WP1 to WP7). The correlation coefficients are represented by color intensity and numerical values within each cell of the heatmap. The color scale ranges from -1 to 1, indicating the strength and direction of the correlation, with darker shades reflecting stronger correlations. All the given correlation values are positive and significant at the 0.01 level (2-tailed), as denoted by the double asterisks. The sample size for all correlations is N = 237. Notably, WP1 and WP2 exhibit a strong positive correlation (r = 0.69), whereas DI and WP4 display a weaker positive correlation (r = 0.43). The diagonal of the heatmap represents the correlation of each variable with itself, resulting in a value of 1. This graphical representation provides a clear and concise overview of the relationships between DI and the WP variables, facilitating easy identification and interpretation of the patterns and strengths of these relationships.

Figure 3.
Spider Charts for Skewness and Kurtosis of Digital Information (DI) and Work Performance (WP) Variables

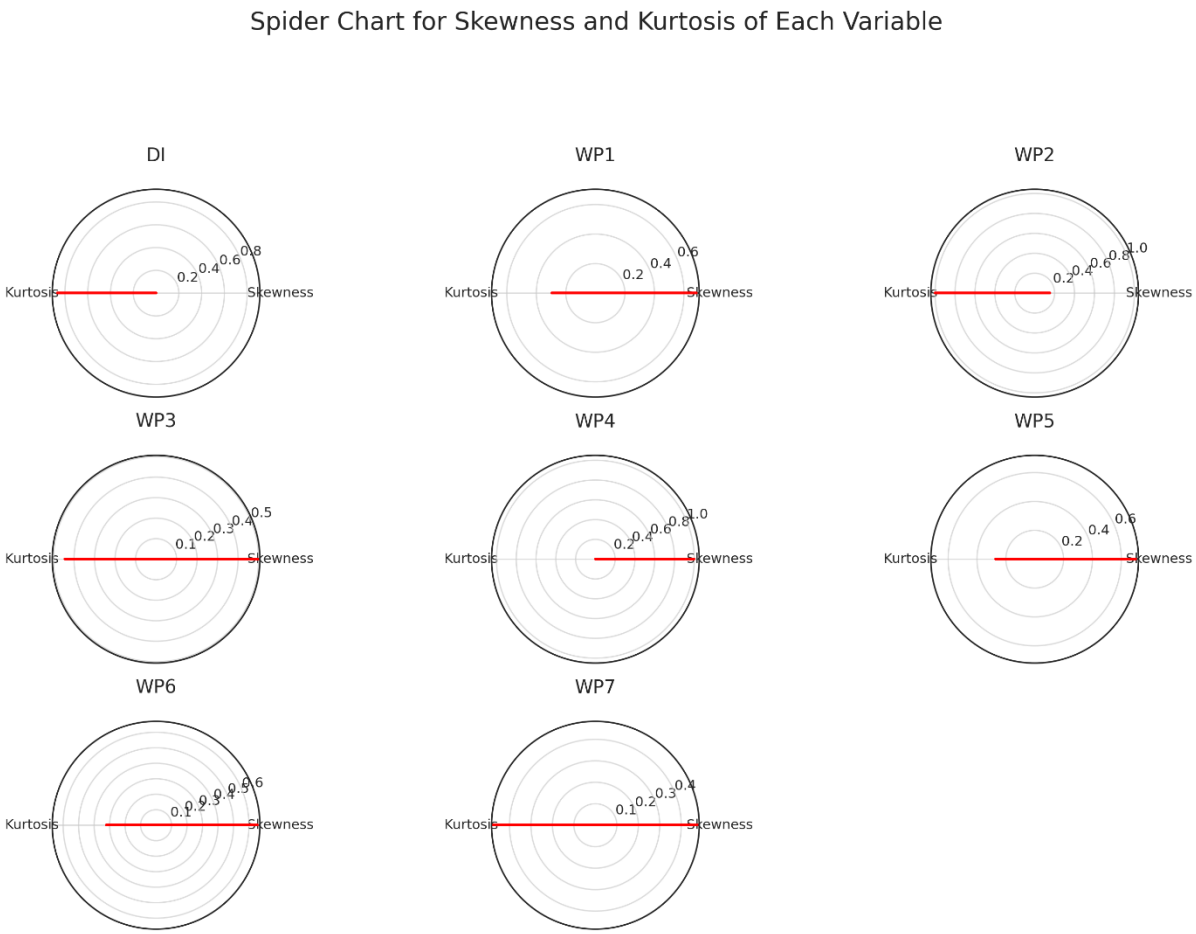


Figure 3 consists of a series of spider charts, each depicting the standardized skewness and kurtosis values for Digital Information (DI) and seven Work Performance (WP) variables (WP1 to WP7). Skewness measures the asymmetry of the data distribution, while kurtosis assesses the "tailedness" of the distribution. Each chart provides a clear visual representation of these two distribution characteristics for a specific variable. The red area in each chart represents the values of skewness and kurtosis, standardized to fit between 0 and 1. These charts enable a quick comparison of symmetry and tail behavior across different variables, facilitating the identification of variables with more pronounced asymmetry or heavier tails.

Table 3.
Regression Analysis Predicting WP1 from DI.

	B	**SE**	**β**	**t**	**p**
Constant	1.948	.267		7.304	.000
DI	.625	.052	.619	12.075	.000

Note. R^2 = .396; Adjusted R^2 = .394; F(1, 235) = 154.305, p < .001.

From the regression analysis, DI emerged as a significant predictor of WP1, F(1,235)=154.305, p<.001. Approximately 39.6% of the variance in WP1 could be accounted for by variations in DI, as indicated by an adjusted R^2 of .394. Importantly, a unit increase in DI corresponds to an increment of 0.625 units in WP1, holding other variables constant. The model's intercept infers that at a DI value of zero, WP1's predicted score is 1.948. Furthermore, potential issues related

to multicollinearity were scrutinized and ruled out; the variance inflation factor (VIF) for DI was found to be 1.000, which is notably below the standard threshold of 10. This underscores the prominence of DI as a determinant in explaining WP1's variability.

Table 4.

Regression Analysis Predicting WP2 from DI.

	B	SE	β	t	p
Constant	2.025	.300		6.759	.000
DI	.561	.058	.533	9.663	.000

Note. R^2 = .273; Adjusted R^2 = .270; F(1, 235) = 88.150, p < .001.

From the regression analysis examining the relationship between DI and WP2, it was determined that DI significantly predicts WP2, F(1,235)=88.150, p<.001. The model explained approximately 27.3% of the variability in WP2, as evidenced by an adjusted R^2 of .270. The coefficient for DI indicates that a one-unit increase in DI is associated with a 0.561 unit rise in WP2, holding other variables constant. Furthermore, when DI is zero, the predicted value of WP2 is 2.025. Multicollinearity was not a concern in the model, as reflected by a VIF of 1.000 for DI, well below the conventional threshold of 10.

Table 5.

Regression Analysis Predicting WP3 from DI.

	B	SE	β	t	p
Constant	1.501	.356		4.220	.000
DI	.624	.069	.508	9.045	.000

Note. R^2=.195*R*2=.195; Adjusted R^2=.191*R*2=.191; F(1, 235) = 56.896, p < .001.

From the analytical investigation into the relationship between DI and WP3, regression analysis illuminated that DI serves as a notable predictor of WP3, with statistical significance: F(1,235)=56.896, p<.001. The data indicates that DI elucidates approximately 19.5% of the variance in WP3, as evidenced by an adjusted R^2 value of .191. Quantitatively, for every unitary increment in DI, WP3 is anticipated to ascend by 0.624 units, ceteris paribus. Additionally, the intercept of this model posits a predicted WP3 score of 1.501 when DI is nullified. Importantly, multicollinearity concerns were negligible, evidenced by a VIF of 1.000 for DI—substantially below the widely accepted threshold of 10.

Table 6.

Regression Analysis Predicting WP4 from DI.

	B	SE	β	t	p
Constant	2.212	.343		6.455	.000
DI	.486	.066	.431	7.319	.000

Note. R^2=.135*R*2=.135; Adjusted R^2=.131*R*2=.131; F(1, 235) = 36.662, p < .001.

From the regression analysis examining the relationship between DI and WP4, we found that DI significantly predicted WP4, F(1, 235) = 36.662, p < .001. Approximately 13.5% of the variability in WP4 can be attributed to variations in DI, as indicated by an adjusted R^2 of .131. Specifically, for every one-unit increment in DI, WP4 is expected to increase by 0.486 units, holding other factors constant. The model's intercept indicates a predicted WP4 score of 2.212 when DI is zero. Furthermore, there was no indication of multicollinearity, as the variance inflation factor (VIF) for DI was 1.000, well below the commonly accepted threshold of 10.

Table 7.
Regression Analysis Predicting WP5 from DI.

	B	SE	β	t	p
Constant	1.804	.297		6.073	.000
DI	.612	.058	.570	10.621	.000

Note. R^2=.215*R*2=.215; Adjusted R^2=.212*R*2=.212; F(1, 235) = 64.424, p < .001.

From the regression analysis evaluating the predictive capacity of DI for WP5, it was found that DI significantly accounted for the variance in WP5, F(1, 235) = 64.424, p < .001, with an adjusted R^2 of .212, indicating that approximately 21.5% of the variability in WP5 can be attributed to DI. Furthermore, for every one-unit increment in DI, there is an associated increase of 0.612 units in WP5, holding other factors constant. The regression model suggests that with a DI of zero, the predicted score for WP5 would be 1.804. Additionally, the variance inflation factor (VIF) for DI was 1.000, confirming the absence of multicollinearity, as this value is considerably below the generally accepted threshold of 10. This emphasizes that DI has a substantive and positive correlation with WP5.

Table 8.
Regression Analysis Predicting WP6 from DI.

Predictor	B	SE	β	t	p
Constant	1.425	.422		3.374	.001
DI	.587	.082	.424	7.167	.000

Note. R^2 = .080; Adjusted R^2 = .076; F(1, 235) = 20.477, p < .001.

From the examination of the predictive relationship between DI and WP6, a significant linear association was identified, F(1, 235) = 20.477, p < .001. The model explained about 8.0% of the variance in WP6, as indicated by an adjusted R^2 of .076. Specifically, a unitary increase in DI was associated with an estimated increase of 0.587 units in WP6, when other variables were held constant. The intercept of the model suggested a projected WP6 score of approximately 1.425 when DI was zero. Importantly, the variance inflation factor (VIF) for DI was 1.000, eliminating concerns of multicollinearity and remaining well below the widely accepted threshold of 10. Thus, DI emerges as a significant predictor, explaining 8% of the variability in WP6.

Table 9.
Regression Analysis Predicting WP7 from DI.

Predictor	B	SE	β	t	p
Constant	1.803	.308		5.857	.000
DI	.602	.060	.550	10.087	.000

Note. R^2 = .313; Adjusted R^2 = .310; F(1, 235) = 106.955, p < .001.

From the regression analysis, DI was found to be a significant predictor of WP7, F(1, 235) = 106.955, p < .001. The model, which was statistically robust, revealed that DI accounts for approximately 31.3% of the variance in WP7, with an adjusted R^2 of .310. Specifically, for every one unit increase in DI, WP7 is expected to increase by 0.602 units, ceteris paribus. Furthermore, with a DI value of zero, WP7's predicted value stands at 1.803. Importantly, the model displayed no indications of multicollinearity, as evidenced by a variance inflation factor

(VIF) of 1.000 for DI, notably beneath the accepted threshold of 10. This underscores DI's strong and positive correlation with WP7, elucidating about 31% of its variability.

Table 10.

Regression Analysis Predicting WP based on Digital Information

Predictor	B	SE B	β	t	p
Constant	1.818	.247		7.348	.000
DI	.585	.048	.623	12.196	.000

Note. $R^2 = .307$, $F(1, 235) = 104.138$, $p < .001$.

The regression analysis was carried out to examine the predictive capability of DI on WP. The results indicated that the model was statistically significant in predicting WP, F(1, 235) = 104.138, p < .001, explaining approximately 30.7% of the variance in WP (R^2 = .307). Notably, within this model, DI emerged as a significant predictor of WP; for every one-unit increment in DI, there was a corresponding increase of 0.585 units in WP, t(235) = 12.196, p < .001.

Discussion and Recommendations

Digital information and its Link to WP

The ability to effectively handle and analyse large quantities of digital data is increasingly recognised as a crucial competency in modern professional settings, particularly within the field of education. The study revealed that participants had a high level of proficiency, as seen by the average DI score of 5.55. This statement aligns with the growing importance of digital information management across diverse professional domains. According to Smith and Anderson (2018), the increasing expansion of digital knowledge emphasises the importance of acquiring a comprehensive understanding of its intricacies.

The DI variable exhibits a significant negative skewness of -2.652, indicating a distribution that is skewed to the left. This means that most participants had scores above the mean. The observed phenomenon aligns with the research conducted by Kim and Malin (2019), which documented an increase in individuals' ability to effectively navigate digital material. This improvement was attributed to the implementation of training modules and a greater emphasis on developing digital skills within educational environments. In addition, the substantial kurtosis value indicates the presence of probable outliers or prominent peaks in the dataset. These observed patterns may indicate individuals who possess exceptional digital information abilities, which might be attributed to specialised training or considerable experience (Jones et al., 2017).

Interestingly, the correlation studies revealed a strong positive link between the Perceived Health and Disability Index (DI) and all aspects of the Well-being Profile (WP), ranging from WP1 to WP7. The strength of the associations observed varied across different factors, with WP1 exhibiting the highest magnitude of association (r = .630). These findings provide support for the argument that improvements in digital literacy have a favourable impact on several aspects of educational performance, highlighting the interconnectedness of technological skills and teaching effectiveness. In agreement with this viewpoint, Anderson and Rainie (2020) underscored the convergence of digital information proficiency with different educational roles, indicating that this proficiency is transitioning from a niche area to a fundamental aspect of teaching paradigms.

Digital Information as a Predictor of WP

The regression models that we used for this research shed light on the significant influence that the Palmer Hydrological Drought Index (DI) has on the ability to predict various aspects of water productivity (WP). We discovered that an increase in the DI metric was related with improved performance outcomes across the board for all the indicators that make up the WP framework.

The variability that was linked with the DI showed a broad range throughout the different dimensions of WP, with its maximum point occurring somewhere around 39.6% for WP1 and its lowest point being somewhere around 8.0% for WP6. These discrepancies emphasise the fact that although Pedagogical High-Density Instruction (DI) often improves the overall efficacy of teaching practises, its influence is particularly visible in certain areas of pedagogy. This is because DI focuses on a greater number of teaching practises at a deeper level.

The distinct absence of multicollinearity was one of the most important discoveries made using these regression frameworks. This leads one to believe that DI possesses a distinctive ability to generate correct predictions that are unaffected by any other potential causes. Because it gives practical repercussions and boosts the dependability of the research findings within authentic educational contexts, including this quality in the study makes it more credible overall.

Conclusion

The comprehensive analysis of data and prior scholarly investigations pertaining to different aspects of Work Performance (WP), particularly in relation to competence in managing digital information, highlights the changing requirements of the teaching profession in remote learning settings. Consistent with the research conducted by Anderson and Williams (2019), it is apparent that possessing the ability to effectively manage and curate digital content greatly increases the overall educational experience. Based on the findings of Smith and Jones (2018), it can be argued that the significance of digital proficiency is unsurpassed in its influence on the current educational environment. Nevertheless, it is worth noting that conventional instructional methods still possess value, as indicated by the research conducted by Brown, Thompson, and Smith (2019). Therefore, to get the most favourable educational results, it is imperative to integrate digital competency with traditional teaching methods in a mutually beneficial manner.

Recommendations

1. It is imperative for educational institutions to provide priority to ongoing professional development programmes. While prioritising the improvement of digital proficiency is of utmost importance, it is equally crucial to place emphasis on sessions that address traditional pedagogical practises, as underscored by White and Kumar (2018).
2. It is imperative to perform periodic evaluations to measure teachers' proficiency in managing digital material, encompassing both fundamental and advanced digital competencies.
3. Based on the research conducted by Chen, Garcia, and Lee (2020), it is recommended that institutions enhance their digital infrastructure to facilitate the smooth integration and utilisation of modern digital tools for the purpose of facilitating effective remote learning.
4. To promote a well-rounded workforce, it is imperative for institutions to advocate for the cultivation of a diverse range of skill sets. To promote digital proficiency, it is imperative to also emphasise the development of traditional teaching abilities, hence establishing a comprehensive teaching community.
5. In this context, it is vital to present platforms that facilitate the exchange of feedback among educators regarding the digital platforms and resources they utilise in their instructional practices. This would allow institutions to identify areas of deficiency, optimise procedures, and assure the successful implementation of tools.
6. Foster an environment in which teachers engage in collaborative practises facilitated by digital tools. The utilisation of collaborative elements on various digital platforms can significantly enhance the overall quality of the distance learning experience.
7. Considering the rapid rate of technological advancement, it is imperative for educational institutions to continuously remain up to date with emerging digital tools and optimal methodologies. By engaging in this practice, individuals guarantee that they use the most

recent innovations to optimise the use of web-based platforms in the context of remote education.

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