Dave E. Marcial
PhD in Education, Professor, Director
Dr. Mariano C. Lao Global Studies Center, Silliman University, Dumaguete City, Philippines
ORCID ID 0000-0003-0006-8841
demarcial@su.edu.ph

Aurielle Lisa Z. Maypa
BSIT, Instructor, Senior High School Faculty
Dr. Mariano C. Lao Global Studies Center, Silliman University, Dumaguete City, Philippines
ORCID ID 0000-0002-2797-2657
auriellezmaypa@su.edu.ph

Cindy Ruth R. Villariza
Bachelor of Science in Computer Science, Office Secretary
Dr. Mariano C. Lao Global Studies Center, Silliman University, Dumaguete City, Philippines
ORCID ID 0000-0002-8270-4866
cindyrvillariza@su.edu.ph

Grace L. Apao
Bachelor of Science in Office Management, Administrative Assistant
College of Business Administration, Silliman University, Dumaguete City, Philippines
gracelapao@su.edu.ph

PROFILES OF FILIPINO TEACHERS AND THEIR ONLINE TEACHING COMPETENCIES DURING THE PANDEMIC

Abstract. The COVID-19 pandemic accelerated the transition to online teaching, revealing gaps in educators' essential online skills. In response to this global shift, Filipino educators encountered challenges adapting to the demands of online instruction. This study delves into the profiles of 259 teachers in the Philippines, spanning both basic and higher education, to assess their online teaching competencies during the pandemic. Specifically, this paper examines the respondent's internet usage, social media ownership, and social technographic profiles. Secondly, the paper assesses and measures teachers' competencies in online teaching. Lastly, the study explores significant relationships and differences between the profiles and the competencies. Results show that 47.49% of respondents reported moderate ease in internet connectivity. While all respondents had Facebook accounts, only 11.97% actively used Twitter. A significant portion, constituting 60% of teachers, identified as "social media joiners," indicating active engagement on various platforms. The study reveals a moderate level of proficiency in online teaching skills among surveyed teachers. The result reveals that teachers' sex, civil status, internet satisfaction, and the social technographic profile demonstrated a statistically significant relationship with their online teaching competencies. Sex, civil status, teaching category, and highest educational attainment displayed substantial differences in online teaching competencies. The presence or absence of Facebook (FB) and Twitter accounts, internet satisfaction, and social and technological engagement showed notable differences in online teaching competencies. In conclusion, this research provides insights into the current landscape of online teaching proficiency among Filipino educators, highlighting both strengths and areas for improvement. The novelty of this paper lies in its comprehensive analysis of the correlation between educators' demographic profiles, social-technologic ladder, and online teaching competencies in the Philippine context. The results underscore the significance of sustained efforts in professional development to augment teachers' abilities, ultimately enriching the online learning experience for students.

Keywords: eLearning; ICT in Education; ICT Skills of Teachers; Online Distance Learning; Online Teaching.

1. INTRODUCTION

The worldwide emergence of the COVID-19 pandemic ushered in significant changes across diverse sectors, with a profound impact on the educational landscape. In light of the

© Dave E. Marcial, Aurielle Lisa Z. Maypa, Cindy Ruth R.Villariza, Grace L.Apao, 2024.

pandemic's escalation in the Philippines, health authorities advised the suspension of in-person classes as a precaution against the rapid spread of the virus. This directive compelled educational institutions to embrace innovative solutions, notably Online Distance Learning, to maintain the continuity of education while adhering to stay-at-home orders. Nevertheless, this transition posed new challenges for educators, encompassing technological unfamiliarity, pedagogical adjustments, student engagement concerns, and the need for meticulous preparation.

The problem statement. The efficacy of Online Distance Learning in the Philippines hinges significantly on the availability of reliable internet access. Despite recent enhancements, the country's internet infrastructure grapples with widespread availability and sluggish connectivity issues, as indicated by data from the Speedtest Global Index. Filipino adults exhibit a daily online presence, primarily through social media platforms. This trend predates the advent of online distance learning. Widely embraced platforms such as Facebook, YouTube, Messenger, Instagram, and Twitter continue to be popular among internet users. The pandemic, with its restrictions on face-to-face interactions, notably accelerated the use of social media.

However, concerns have arisen regarding the potential consequences of excessive social media usage, especially for students. Despite these concerns, educators and students have adapted, turning to social media as the primary platform for online distance learning. This shift necessitates strategic approaches to achieve educational objectives effectively. Successful implementation of online distance teaching in the Philippines requires educators to acquire specific skills and competencies. Key attributes include effective course planning, clear communication, and proficiency in utilizing various online educational systems. Additionally, educators must stay updated on technological trends and possess fundamental troubleshooting skills to provide technical support during online classes.

Analysis of recent studies and publications. Managing Online Teaching Resources is pivotal in the digital education landscape, involving the organization, curation, and utilization of diverse digital tools and materials. Educators must carefully select appropriate resources, ensure accessibility, and establish a well-structured repository, guaranteeing the seamless delivery of comprehensive and engaging online education [1].

Bi-chronous Delivery Strategies have emerged as an innovative method for balancing synchronous and asynchronous learning [2]. This approach aims to provide students with the benefits of real-time interaction, discussions, and activities while allowing flexibility for self-paced learning. It caters to diverse learning styles and preferences, maximizing student engagement and interaction in real-time and asynchronous learning settings.

Gamification and Game-based Learning strategies introduce gaming elements into educational contexts, transforming learning into an interactive and engaging experience [3]. By incorporating game mechanics and elements into lessons, educators create an environment where students are motivated to participate, compete, and progress in their learning journey. This approach enhances student engagement, intrinsic motivation, and skill development, making learning enjoyable and immersive.

Learner-to-Assessment Engagement in an Online Learning Environment focuses on involving students in the assessment process, fostering self-regulated learning and reflection [4]. Encouraging self-assessment, peer review, and active participation in the assessment process enhances students' autonomy and metacognitive skills, providing opportunities to understand their learning progress and actively engage in their educational journey.

Digital Tools for Research encompass various software and applications aiding educators and students in conducting comprehensive research [5]. These tools facilitate information gathering, data analysis, content creation, and collaborative work, providing enhanced capabilities for efficient and effective research endeavors. They support various aspects of the research process, from data collection and analysis to presenting and disseminating findings.

Emerging Innovations in Teaching and Learning signify the continuous evolution and adoption of new methodologies, technologies, and pedagogical approaches in the educational landscape [6]. This includes AI-driven personalized learning, virtual and augmented reality applications, adaptive learning platforms, and innovative teaching methodologies. These innovations constantly redefine the educational landscape, offering new possibilities and enhanced educational experiences for educators and students.

The research goal. This paper pursues three primary objectives. Firstly, it delves into the intricacies of teachers' behavior in the digital sphere by examining their internet usage, social media ownership, and social technographic profiles. This objective seeks to comprehend teachers' comprehensive utilization of the Internet, the extent of their social media account ownership, and their engagement patterns across various platforms. Secondly, the paper aims to assess and measure teachers' competencies in online teaching. This involves evaluating their abilities in adopting and utilizing online teaching methods, encompassing technological adaptability, pedagogical approaches, content creation, and overall preparedness for engaging in online teaching practices. Lastly, the study intends to explore and elucidate significant relationships and differences between the profiles established in the first objective and the competencies identified in the second. This research carries substantial implications for the educational landscape in the Philippines amid the COVID-19 pandemic. It critically investigates the rapid adoption of Online Distance Learning, shedding light on the challenges educators and students face during this abrupt transition. The study showcases the adaptability of the education sector, illustrating how traditional teaching methodologies were swiftly redefined to suit virtual learning environments. Infrastructure challenges are underscored by examining the reliance on internet access and social media platforms for education, emphasizing the necessity for improvements to ensure a conducive online learning environment. Additionally, the study delves into the role of social media in facilitating education, emphasizing the need for balanced utilization while addressing potential downsides. Profiling teachers' competencies in online teaching concepts, operations, and tools underscores the critical need for ongoing professional development programs to equip educators with the requisite skills for effective teaching in online environments.

The innovation of this study lies in its thorough examination of the correlation between educators' demographic profiles, specifically emphasizing the academic social-technologic ladder, and their online teaching competencies in the Philippines. This nuanced analysis goes beyond conventional assessments of technical skills, offering a unique perspective on how educators' diverse backgrounds influence their proficiency in online teaching. The study's innovative contribution is its potential to guide targeted training programs and strategies, fostering more effective and inclusive online teaching practices based on the varied profiles within the teaching community.

2. THE THEORETICAL BACKGROUNDS

The evolution of modern education has been significantly shaped by the rise of digital technologies, particularly in response to the challenges posed by the COVID-19 pandemic. This period witnessed a swift shift towards remote learning, emphasizing the importance of various educational approaches such as flexible, online, and blended learning. Educational institutions globally faced the imperative of adapting quickly, leading to innovative strategies in educational technology, instructional design, the management of online teaching resources, and the exploration of bi-chronous delivery strategies.

Furthermore, the infusion of gamification, emphasis on learner-to-assessment engagement, and the utilization of Digital Tools for Research and Emerging Innovations in Teaching and Learning have transformed the educational landscape. This review delves into

the rich literature concerning these vital aspects, highlighting their significance in the contemporary educational milieu.

Flexible learning, online learning, and blended learning represent a paradigm shift in educational delivery, offering adaptable modes of instruction tailored to diverse learner needs and contexts. Online learning, particularly during the onset of the COVID-19 pandemic, gained prominence, providing remote access to educational materials, fostering self-paced learning, and enabling broader outreach [7]. Blended learning, combining traditional face-to-face instruction with digital platforms, presents a balanced approach by integrating offline and online resources [8]. The hybrid model aims to maximize educational benefits, addressing diverse learning styles while maintaining personal interactions and relationships within the educational framework [9].

Educational technology instructional design is pivotal in structuring engaging and effective educational materials using technology. This approach strategically employs digital tools, multimedia elements, and instructional strategies to create compelling and interactive learning experiences [10]. It encompasses curriculum development, learning platform design, and the integration of multimedia content, focusing on user-friendly, learner-centric design to enhance the educational process [11].

3. RESEARCH METHODS

The data utilized in this study originated from a specific segment of an open online course titled "Literacy to Knowledge Deepening Towards Digitally Resilient Preferred Futures" [12]. This course spanned nine weeks, from August 9, 2021, to October 16, 2021. The participants were educators from Philippine Basic Education and Higher Education Institutions, specifically from member schools within the Association of Christian Schools, Colleges, and Universities in the Philippines. The primary objective of this training initiative was to equip these educators with literacy skills and deepen their knowledge of online distance teaching. Throughout the open online course, teachers were exposed to "bi-chronous" learning, flipped classroom methods, and microlearning, all intended for adaptation into their online teaching approaches. Online survey questionnaires were integrated into the registration process, and 259 teachers actively participated and enrolled in this open online course.

The competencies in the study were carefully chosen based on established standards and best practices in online education [13] [14]. Similarly, the criteria for competency assessment were developed considering the key dimensions that contribute to effective online teaching. The levels of competency assessment were designed to reflect a spectrum from basic proficiency to advanced mastery. The selection of these competencies and assessment methods aimed to provide a holistic understanding of educators' online teaching capabilities, considering both foundational and advanced skills required in the evolving landscape of digital education.

For Flexible Learning, Online Learning, and Blended Learning, the criteria include adaptability to diverse learning modes, effective use of online resources, and integration of face-to-face and digital elements. The assessment levels span from basic understanding to advanced mastery, capturing educators' abilities to design and deliver flexible and blended learning experiences. Educational Technology Instructional Designing focuses on proficiency in creating engaging educational materials using digital tools, multimedia elements, and learner-centric design, with assessment levels indicating increasing mastery of instructional strategies and multimedia content. Managing Online Teaching Resources assesses competence in organizing, storing, and distributing teaching materials online, reflecting varying proficiency levels in resource management. Bi-chronous Delivery Strategies evaluate mastery in using synchronous and asynchronous teaching methods, indicating the ability to seamlessly integrate both approaches. Gamification and Game-based in the Classroom criteria involve integrating

gamification elements for enhanced engagement, with assessment levels indicating the degree of integration and effectiveness. Learner-to-Assessment Engagement in an Online Learning Environment evaluates proficiency in engaging learners in assessment activities within the online setting, indicating the effectiveness of incorporating engaging assessment methods. Digital Tools for Research assesses competence in using digital tools for educational research, with levels reflecting increasing proficiency in applying these tools for research and data analysis. Finally, Emerging Innovations in Teaching and Learning criteria focus on awareness and application of innovative teaching and learning approaches in the digital age, with assessment levels indicating the ability to incorporate emerging trends and innovations into online teaching practices. The careful selection of criteria and levels ensures a thorough evaluation of educators' capabilities in key areas of online teaching.

The Likert Scale employed in the survey utilized a five-point rating system to gauge respondents' proficiency levels across various competencies. A rating of "1 - POOR" indicated a lack of knowledge or familiarity with the assessed task, signifying that the respondent was unaware of the subject matter. "2 - FAIR" denoted a basic understanding acquired through reading or hearing from external sources, without practical experience in the task. Moving up the scale, a rating of "3 - GOOD" suggested the ability to explain and discuss the task, albeit without direct experience in its execution. "4 - VERY GOOD" reflected a higher level of proficiency, indicating the capability to perform the task but with a reliance on guidance and support from an expert. Finally, a rating of "5 - EXCELLENT" signified an advanced level of proficiency, where the respondent demonstrated the ability to perform the task proficiently and independently, without the need for expert assistance. This Likert Scale design allowed for nuanced assessments, capturing varying degrees of expertise and experience among the survey participants.

4. THE RESULTS AND DISCUSSION

4.1. Teacher's Demographic Profile

The analysis of demographic data from the participating teachers in this study reveals several key insights. The distribution based on gender indicates that 33.59% of the teachers were male, while the majority, comprising 66.41%, were female. In terms of civil status, a significant portion, approximately 52.12%, identified as single, whereas 44.02% were reported as married. A smaller percentage—1.93% each—comprised the categories of widowed individuals and those falling under the 'others' classification.

The data indicates a diversified distribution among educational levels regarding the represented teaching categories. The percentages of teachers engaged in various teaching categories were as follows: 3.10% in Pre-School, 12.79% in Elementary, 24.03% in Junior High School, 16.28% in Senior High School, and the highest representation, 43.80% from College/Graduate School instructors. However, it is essential to note that the total count for the teaching categories is 258, as one entry had missing data.

Furthermore, the highest educational attainment of the teachers participating in this study showcases a breakdown of 53.28% with a Bachelor's degree, 33.20% with a Master's degree, and 13.51% with a Doctorate. This indicates a diverse range of educational qualifications among the respondents, offering a spectrum of expertise and educational backgrounds within the teaching cohort.

4.2. Teachers' Internet, Social Media Ownership, and Social Technographic Profile

Table 1, outlining participating teachers' Internet and social media profiles, brings several noteworthy aspects to light. In the first section of the table, the teachers' experiences in

connecting to the Internet, whether at school or home, are detailed. Notably, 47.49% of the respondents reported their experience as "not difficult," indicating a relatively smooth connection to the Internet. In comparison, 27.41% rated it as moderately easy. Smaller percentages were recorded in the "very difficult" category at 0.39%, and 6.18% reported a slightly challenging experience.

Furthermore, all teachers, totaling 100%, confirmed having a Facebook account, with none of the respondents reporting not having an account on this platform. In contrast, the presence on Twitter was notably lower, with only 11.97% of teachers possessing an account. The remaining 88.03% did not engage on this social media platform.

Table 1

Teachers' Internet and Social Profile

Internet and Social Media Profile	f	%
What is your experience connecting to the Internet in school or at home?		
1 – very difficult	1	0.39%
2	16	6.18%
3	71	27.41%
4	123	47.49%
5 – not difficult	48	18.53%
Total	259	100.00%
Facebook Account		
Yes	259	100.00%
No	0	
Total	259	100.00%
Twitter Account		
Yes	31	11.97%
No	228	88.03%
Total	259	100.00%

The data from this table indicates diverse internet connectivity experiences among the teachers, with a significant majority being comfortable users of Facebook as a social media platform. The widespread usage of Facebook among the respondents sharply contrasts with the notably lower presence on Twitter. These results offer insights into the participating teachers' social media habits and internet connectivity experiences, showcasing a robust presence on one platform and a significantly limited presence on another. These distinctions in social media engagement and internet accessibility can impact the methods and channels through which educators communicate and share information. This underscores the importance of tailored approaches in online interactions and information dissemination within the teaching community.

Table 2

Teachers' Social Technographic Profile

Social Technographic Profile	f	%
CREATORS (monthly publishes blogs and websites, uploads videos you created, uploads audio/music you created, write articles or stories, and posts them online	20	7.75%
CONVERSATIONALISTS (weekly updates status on a social networking site, posts updates on Twitter)	52	20.16%
CRITICS (monthly posts ratings/reviews of products or services, comments on someone else's blog, contributes to online forums, and edits articles on a wiki)	8	3.10%
COLLECTORS (monthly uses RSS feeds, vote for websites online, add "tags" to web pages or photos)	6	2.33%

JOINERS (monthly maintains a profile on a social networking site and visits social networking sites	60	23.26%
SPECTATORS (monthly reads blogs, listens to podcasts, watches video from other users, reads online forums, consumer ratings/reviews, and tweets)	88	34.10%
INACTIVES (none of the above)	24	9.30%
Total	**258**	**100.00%**

Table 2, delineating the Teachers' Social Technographic Profile, offers insightful data on engagement levels across various online activities. The table categorizes teachers into different technographic segments based on their online behaviors. The largest percentage of teachers, constituting 34.10%, were identified as "Spectators," engaging in activities such as reading blogs, listening to podcasts, watching videos from other users, reading online forums, consumer ratings/reviews, and using Twitter to follow and observe content without actively engaging in creation or conversation. Following this group, the second most prominent segment was "Joiners," accounting for 23.26%, comprising teachers who maintain profiles on social networking sites and regularly visit these platforms.

Further insights from the table reveal a substantial number, 20.16%, falling into the "Conversationalists" category, updating their statuses on social networking sites and posting regular updates on platforms like Twitter. Additionally, a smaller but notable percentage, 7.75%, were identified as "Creators," involving themselves in publishing blogs, websites, videos, music, and articles online. Only a few teachers, 3.10%, fell into the "Critics" category, contributing by providing ratings/reviews of products or services, commenting on blogs, participating in online forums, and editing wiki articles. The "Collectors," engaging in activities like using RSS feeds, voting for websites, and adding tags to web pages or photos, comprised 2.33% of the teachers. Finally, a segment of 9.30% fell under the "Inactives" category, indicating that they did not participate in any of the listed online activities.

This breakdown of the teachers' social technographic profiles illustrates various engagement levels across online activities. Most teachers tend to consume and observe content passively. In contrast, a smaller yet significant portion engages actively in creating, conversing, and critiquing content. These findings suggest varying degrees of involvement within the digital space, underscoring the necessity for tailored approaches in digital communication strategies and educational content creation for these educators. Understanding these profiles is crucial for designing effective and engaging online teaching strategies that align with the diverse digital behaviors exhibited by the teaching cohort.

4.3. Teacher's Online Teaching Competencies

Table 3 evaluates teachers' competencies in various online teaching concepts, presenting mean scores and corresponding descriptions. The results indicate that teachers demonstrated high proficiency in several key areas. Subjects such as Flexible Learning, Online Learning, Blended Learning, and Managing Online Teaching Resources received mean scores above 3.5, classified as "Very Good" competency levels. These findings suggest that teachers exhibited a strong understanding and capability in these areas of online teaching.

Table 3

Online Teaching Competencies on Concepts

Conceptual Competency	Mean	Description
Flexible Learning, Online Learning, Blended Learning	3.73	Very Good
Educational Technology Instructional Designing	3.48	Very Good
Managing Online Teaching Resources	3.57	Very Good

Bi-chronous Delivery Strategies	3.30	Good
Gamification and Game-based in the Classroom	2.93	Good
Learner-to-Assessment Engagement in an Online Learning Environment	3.34	Good
Digital Tools for Research	3.26	Good
Emerging Innovations in Teaching and Learning	3.37	Good
Overall Mean	**3.37**	**Good**

Additionally, while still notably proficient, competencies in other concepts like Educational Technology Instructional Design, Bi-chronous Delivery Strategies, Learner-to-Assessment Engagement in an Online Learning Environment, Digital Tools for Research, and Emerging Innovations in Teaching and Learning scored in the "Good" range, with mean scores falling between 2.93 to 3.48. Despite not reaching the "Very Good" level, these competencies were assessed positively, indicating a reasonably good understanding and skill set among the teachers in these areas. The overall mean score of 3.37, classified as "Good," reflects the collective competency level across all the evaluated online teaching concepts. While demonstrating strengths in various areas, there remains room for improvement and growth, especially in subjects such as Gamification and Game-based Learning, where the mean score was slightly lower than in other concepts.

These findings provide a comprehensive overview of the teachers' strengths and areas for potential development in online teaching competencies. While excelling in specific domains, there is an opportunity for further professional development and training, particularly in areas where competencies were rated slightly lower, to enhance overall effectiveness in online teaching practices.

Table 4

Online Teaching Competencies in Operations

Operational Competency	Mean	Description
managing an online class using a learning management system	3.61	Very Good
teaching synchronously using a video conference tool	3.67	Very Good
creating pre-recorded lecture videos	3.55	Very Good
creating interactive presentation	3.52	Very Good
searching references using open education resources	3.51	Very Good
organizing teaching resources using the Cloud	3.20	Good
creating instructional online repositories using video-sharing platforms	3.28	Good
creating educational website	2.74	Good
networking using a social learning platform	3.17	Good
gamifying content using online tools	2.86	Good
conducting interactive discussions using online polls, voting, word cloud, and other real-time online activities	3.26	Good
creating rubrics using online tools	3.30	Good
searching and reviewing related literature using advanced search tools	3.31	Good
collecting data using survey tools	3.36	Good
writing using advanced word processing techniques, proofreading, and checking manuscripts using open and free software tools	3.34	Good
indexing, sharing, and publication using online academic networks	2.98	Good
visualizing data using a spreadsheet	3.24	Good
Overall Mean	**3.29**	**Good**

Table 4 assesses teachers' competencies in various online learning operations, presenting mean scores and corresponding competency descriptions. The data suggests a generally high level of proficiency among the teachers in fundamental operational aspects of online teaching. Competencies related to core teaching operations received commendable mean scores,

classifying them as "Very Good." These include managing an online class using a learning management system, teaching synchronously using a video conference tool, creating pre-recorded lecture videos, creating interactive presentations, and searching for references using open educational resources. These high mean scores (ranging from 3.52 to 3.67) suggest a robust understanding and adeptness in these essential online teaching operations.

While most competencies were rated as "Good," showcasing mean scores in the range of 3.20 to 3.36, some specific areas, such as creating an educational website and gamifying content using online tools, received slightly lower mean scores, marking them as areas for potential improvement. However, these competencies were still assessed positively within the "Good" range, implying a proficient level of understanding among the teachers in these operational fields. The overall mean score of 3.29, categorized as "Good," reflects the collective competency level across all evaluated online learning operations.

The findings indicate that, on the whole, teachers possess a firm grasp of essential online teaching operations. Nevertheless, there remains a potential for growth and development, particularly in specific areas like creating educational websites and gamifying content, where competencies were rated slightly lower than in other operational aspects.

These results provide a comprehensive assessment of the teacher's strengths and areas for potential development in online learning operations. The high proficiency in fundamental areas demonstrates a solid foundation. At the same time, identifying slightly lower-rated competencies highlights opportunities for targeted training and improvement to enhance the overall effectiveness of online teaching practices.

Table 5

Online Teaching Competencies on Tools

Tools Competency	Mean	Description
Moodle	2.38	Fair
Zoom	3.98	Very Good
MS PPT	3.98	Very Good
Canva	3.10	Good
YouTube	4.01	Very Good
Google Drive	4.07	Very Good
Weebly	2.00	Fair
H5P	1.83	Fair
Mentimeter	2.34	Fair
Poll Everywhere	2.38	Fair
Kahoot	2.61	Good
RubiStar	1.92	Fair
Google Form	3.83	Very Good
Mendeley	1.98	Fair
Google Advanced Search	3.03	Good
ORCID	1.83	Fair
MS Excel	3.91	Very Good
Overall Mean	**2.89**	**Good**

Table 5 evaluates teachers' competencies using online learning tools, denoting mean scores and corresponding competency descriptions. The data highlights varying proficiency levels among teachers using different online education tools. Several tools were rated as "Very Good" regarding competency, including Zoom, Microsoft PowerPoint (MS PPT), YouTube, Google Drive, Google Forms, and Microsoft Excel. These tools received high mean scores, ranging from 3.98 to 4.07, indicating a robust and advanced understanding among teachers in utilizing these tools effectively for online learning and teaching.

On the other hand, several tools were rated as "Fair," including Moodle, Weebly, H5P, Mentimeter, Poll Everywhere, RubiStar, Mendeley, Google Advanced Search, and ORCID, signifying a basic level of competence or the need for improvement in using these tools for educational purposes. Some tools fell within the "Good" range, such as Canva, Kahoot, and Google Advanced Search, demonstrating a moderate level of proficiency among teachers in employing these tools for online learning activities.

The overall mean score for all assessed tools was 2.89, classifying the collective competency level as "Good." While teachers exhibited high competence with some essential tools, several tools rated competencies as "Fair," indicating the need for potential training or further familiarization with these tools for practical use in online education.

These results provide valuable insights into teachers' strengths and weaknesses in using specific online learning tools. The high proficiency in commonly used tools, such as Zoom, YouTube, and Google Drive, suggests a strong foundation in utilizing these platforms. However, the lower competency levels in tools like Moodle, Weebly, and Mendeley indicate areas that may require additional training or support to enhance teachers' proficiency in these tools for online teaching purposes.

4.4. Significant Relationships and Differences between Profiles and Competencies

The statistical analysis examining the relationships between various profiles and online teaching competencies among educators reveals several key findings. Regarding the demographic profile, the teachers' sex and civil status demonstrated a statistically significant relationship with their online teaching competencies, denoted by low p-values of 0.02296796 and 0.03377452, respectively (Table 6). However, the teaching category did not show a significant association, as indicated by a notably higher p-value of 0.47153311. In contrast, the highest educational attainment displayed a significant relationship (p-value: 0.00741236) with online teaching competencies.

These findings suggest that within this cohort of educators, factors such as sex, civil status, and highest educational attainment may play a role in influencing online teaching competencies. However, the teaching category did not correlate statistically with these competencies. These insights can inform targeted interventions and training programs tailored to specific demographic groups, fostering a more effective enhancement of online teaching competencies.

Table 6

Test of Relationships between the Profiles and Online Teaching Competencies

Demographic Profiles	**χ2**	**p-value**	**df**	**Remarks**
Sex	11.343	0.02296796	4	Significant
Civil status	13.652	0.03377452	6	Significant
Teaching category	15.736	0.47153311	16	Not Significant
Highest educational attainment	20.902	0.00741236	8	Significant
Internet and Social Media Profiles	**χ2**	**p-value**	**df**	**Remarks**
FB	0	1	4	Not Significant
Twitter	6.854	0.14380776	4	Not Significant
Internet Satisfaction	28.525	0.02734292	16	Significant
Social Technologic	43.59	0.00851128	24	Significant

Regarding the Internet and Social Media profile, the presence or absence of Facebook or Twitter accounts did not exhibit a significant relationship with online teaching competencies, as evidenced by p-values of 1 and 0.14380776, respectively. Conversely, significant associations were observed between internet satisfaction and the social technographic profile

of the teachers with their online teaching competencies. The low p-values of 0.02734292 and 0.00851128, respectively, underscored the significance of these relationships.

These results indicate that the mere presence or absence of Facebook or Twitter accounts among teachers did not correlate with their online teaching competencies. However, internet satisfaction and the social technographic profile showed statistically significant relationships with online teaching competencies. This emphasizes the importance of considering factors related to internet satisfaction and social technographic behaviors when assessing and enhancing educators' online teaching competencies.

Table 7.

Test of Differences between Profiles and Online Teaching Competencies

Demographic Profiles	**F**	**p-value**	**Remarks**
Sex	574.73285198556	0.00	Significant
Civil status	576.34473677911	0.00	Significant
Teaching category	46.7202507433752	0.00	Significant
Highest educational attainment	489.901323042997	0.00	Significant
Internet and Social Media Profiles	**F**	**p-value**	**Remarks**
FB	1488.77168949771	0.00	Significant
Twitter	477.480604058511	0.00	Significant
Internet Satisfaction	54.9378025781114	0.00	Significant
Social Technologic	99.4645520241233	0.00	Significant

Table 7 presents the statistical analysis examining differences between various profiles and online teaching competencies among educators, revealing significant results across demographic and internet/social media profiles. Within the demographic profile, including sex, civil status, teaching category, and highest educational attainment, all factors displayed substantial differences in online teaching competencies, as denoted by low p-values of 0.00 and high F-statistics ranging from 46.72 to 576.34. These findings indicate that differences within these demographic factors significantly impact the level of online teaching competencies among educators.

Similarly, in the Internet and Social Media profile analysis, the presence or absence of Facebook (FB) and Twitter accounts, internet satisfaction, and social and technological engagement showed notable differences in online teaching competencies. The F-statistics were considerably high, ranging from 54.94 to 1488.77, with p-values of 0.00, highlighting significant disparities in how these online and social media behaviors relate to educators' online teaching competencies.

These results underscore the importance of considering demographic and online/social media behaviors in understanding and addressing variations in online teaching competencies among educators. The identified differences provide valuable insights for targeted interventions and training programs to enhance online teaching proficiency based on specific demographic and online engagement characteristics.

4.5 Discussions

The tables and results presented in this analysis offer a multifaceted view of teachers' profiles, online teaching competencies, and the correlations between these factors. The results unveil various demographic profiles among educators, demonstrating varying proficiency levels in online teaching competencies. The data emphasizes the diverse composition of teachers, showcasing a mix of experiences, qualifications, and roles within the educational sphere. The data also reflect a predominantly comfortable internet connectivity experience

among teachers, alongside a unanimous presence on Facebook, highlighting the importance of these platforms in their social and potentially educational interactions.

The results highlight significant associations between specific demographic characteristics—such as sex, civil status, and highest educational attainment—and competence in online teaching. These findings are pivotal as they advocate for tailored training programs and support systems to enhance educators' abilities in online teaching practices. Recognizing these correlations underscores the importance of developing strategies that consider and cater to the diverse profiles within the teaching community [15]. It signifies a need for more inclusive and practical approaches in online education to accommodate varied educator backgrounds and promote a more universally engaging and productive teaching environment [16].

Furthermore, the results showcase a high proficiency in fundamental online teaching concepts and the use of common platforms like Zoom, YouTube, and Google Drive. However, they also reveal specific areas where educators demonstrated lower proficiency, emphasizing a need for further training and familiarization with specific tools and concepts to improve their effectiveness in online teaching practices. The statistical analysis in these tables successfully establishes significant correlations between different demographic and online behavioral profiles and online teaching competencies, providing a robust foundation for targeted interventions and professional development. These findings introduce new insights into the impact of specific demographic factors on online teaching competencies and suggest the need for tailored strategies to address these differences. Ultimately, the results provide a roadmap for enhancing online teaching capabilities and promoting a more inclusive and effective educational environment that acknowledges and addresses the diversity among educators [17].

4. CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

Upon evaluating the online teaching competencies among teachers, it is evident that they possess a moderate level of proficiency in essential online teaching concepts, operations, and tools. However, there is a crucial need for improvement, especially in enhancing the academic social-technologic ladder. Furthermore, schools should prioritize strategizing to bolster the Internet infrastructure, aligning it more closely with the requirements of both teachers and learners. Teachers would benefit significantly from upskilling, focusing on deepening their knowledge to enhance student engagement. There is also a crucial need for sustained efforts to ensure that the acquired knowledge, skills, and competencies persist and evolve.

Based on the study's outcomes, several vital recommendations are proposed to enhance the landscape of online teaching in the Philippines. Firstly, there is a vital need for structured and continuous professional development programs [18]. These programs should be designed to elevate teachers' competencies, particularly emphasizing the enhancement of their academic social technologic ladder to adapt more effectively to the digital teaching environment. Simultaneously, institutions should consider significant investments in robust Internet infrastructure, creating an environment conducive to efficient online teaching and learning experiences for educators and students. Additionally, specialized training programs should be developed to focus on knowledge-deepening skills among teachers, emphasizing methods to strengthen subject matter expertise and thereby fostering enhanced student engagement in online learning environments [19]. Furthermore, continuous encouragement and support for educators in their ongoing skill development and learning should be provided, ensuring the sustainability and evolution of their competencies in response to the ever-evolving educational landscape [20]. These recommendations are crucial in fortifying the capabilities of teachers and institutions to adapt to the demands of effective online teaching methodologies.

The study has unveiled several avenues for further research that could contribute to a deeper understanding of online teaching competencies among educators. One potential research

direction involves conducting a focused analysis of the specific areas where educators demonstrated lower proficiency in online teaching. By exploring the root causes, challenges, and potential interventions in these identified areas, researchers can provide targeted recommendations for professional development. Another prospective area for investigation is a longitudinal study assessing the effectiveness of tailored training programs designed to enhance online teaching competencies. Following a cohort of educators over an extended period would enable researchers to evaluate the sustained impact of such initiatives and identify factors contributing to long-term success. The influence of social media, particularly platforms like Facebook, on teaching practices and educational interactions among teachers represents another intriguing avenue for research. Exploring how educators utilize social media and its impact on collaboration and students' learning experiences could yield valuable insights. Expanding the research to encompass educators from various educational levels, including primary, secondary, and tertiary education, would provide a comparative lens. Such a study could reveal commonalities and distinctions in online teaching profiles and competencies across educational levels. Finally, a qualitative study delving into the teaching strategies employed by educators in the online environment could offer a nuanced perspective. Understanding the intricacies of pedagogical approaches in the digital realm would contribute valuable insights to the ongoing discourse on effective online teaching practices.

The novelty of this study lies in its multifaceted approach to assessing online teaching competencies among educators in the Philippines. Unlike previous research, this study goes beyond conventional evaluations by delving into the intricate connections between demographic profiles and online teaching proficiency. The specific emphasis on the academic social-technologic ladder sets this study apart, recognizing the interplay of technical expertise, social engagement, and academic effectiveness within the digital teaching landscape. By uncovering associations between demographic characteristics, such as sex, civil status, and highest educational attainment, and online teaching competencies, the study provides unique insights that can inform tailored training programs and support systems. Additionally, the investigation into internet connectivity experiences, internet satisfaction, and social technographic profiles adds a nuanced layer to the understanding of challenges and opportunities in online education. The study's identification of specific areas for improvement, along with practical recommendations for professional development and infrastructure enhancement, contributes to the novelty of its findings. Furthermore, the outlined avenues for future research, including focused analyses, longitudinal studies, and exploration of social media's impact, position this study as a pioneering contribution to the ongoing discourse on effective online teaching practices.

ACKNOWLEDGMENTS

We express our gratitude for the generous funding the Philippine Private Education Assistance Committee provides through the Association of Christian Schools, Colleges, and Universities of the Philippines. Additionally, we sincerely thank the participants of the International LET-IN 2022 Conference held on October 6-8, 2022, via Zoom. Their valuable comments and suggestions significantly contributed to refining the earlier version of this paper.

REFERENCES (TRANSLATED AND TRASLITERATED)

[1] X. Wei, D. Guo, G. Yang, Y. Liu and Q. Zhang , Online Learning and Teaching Resource Management System Based on Virtual Reality Technology, *Springer*, Singapore, 2019.

[2] F. Martin, D. Polly and A. Ritzhaupt, "Bichronous Online Learning: Blending Asynchronous and Synchronous Online Learning," *Educause Review*, 8 September 2020. [Online]. Available:

https://er.educause.edu/articles/2020/9/bichronous-online-learning-blending-asynchronous-and-synchronous-online-learning.

[3] D. N. Karagiorgas and S. Niemann, "Gamification and Game-Based Learning," *Journal of Educational Technology Systems*, vol. 45, no. 4, pp. 499-519, 2017.

[4] D. Conrad and J. Openo, Assessment Strategies for Online Learning: engagement and authenticity, 1200, 10011 – 109 Street, Edmonton, AB T5J 3S8: AU Press, 2018.

[5] M. Adolphus, "How to...Use digital tools for research," *Emerald Publishing*, 2000. [Online]. Available: https://www.emeraldgrouppublishing.com/how-to/research-methods/use-digital-tools-research.

[6] C. Herodotou, M. Sharples, M. Gaved, A. Kukulska-Hulme, B. Rienties, E. Scanlon and D. Whitelock, "Innovative Pedagogies of the Future: An Evidence-Based Selection," *Frontiers*, vol. 4, October 2019.

[7] H. Baber, "Online learning during the COVID-19 pandemic, lessons learned and what's next?," *Qeios*, April 2023.

[8] U. Natarajan, "Blended Learning: Transforming the Traditional Modes of Teaching and Learning," *SingTeach*, September 2021. [Online]. Available: https://singteach.nie.edu.sg/2021/10/01/issue78-blended-learning-transforming-the-traditional-modes-of-teaching-and-learning/.

[9] S. B. Ng, "Developing a hybrid learning curriculum framework for schools," *UNESCO International Bureau of Education*, 2021.

[10] B. Allman and R. E. West, "Designing Technology-Enhanced Learning Experiences," in *Design for Learning - Principles, Processes, and Praxis*, EdTech Books, 2021.

[11] A. Christopoulos, P. Sprangers and S. Wang, "Integration of educational technology during the Covid-19 pandemic: An analysis of teacher and student receptions," *Cogent Education*, vol. 8, no. 1, 2021.

[12] D. E. Marcial, "Upskilling online teaching: An Open Online Course for Teachers on Literacy to Knowledge Deepening Towards Digitally Resilient Preferred Futures," 2021. [Online]. Available: https://www.davemarcial.net/su-aspire2021-implementation.html.

[13] "How flexible is flexible learning, who is to decide and what are its implications?," *Distance Education*, vol. 38, no. 3, pp. 269-272, 2017.

[14] J. E. Klobas and S. Renzi, "A Classification of Approaches to Web-Enhanced Learning," in *Encyclopedia of Information Science and Technology*, 2009, p. 7.

[15] H. Singh, "Differentiating Classroom Instruction to Cater Learners of Different Styles," *Paripex - INdian Journal of Research*, vol. 3, no. 12, pp. 58-60, 2014.

[16] A. Germain and K. Barbara, "An Inclusive Approach to Online Learning Environments: Models and Resources," *Turkish Online Journal of Distance Education*, vol. 9, no. 2, April 2008.

[17] University of Washington Tacoma, "Digital Learning," 14 November 2023. [Online]. Available: https://www.tacoma.uw.edu/digital-learning/roadmap-effective-online-teaching.

[18] H. P. Filipe, E. D. Silva, A. A. Stulting and K. C. Golnik, "Continuing Professional Development: Best Practices," *Middle East Afr J Ophthalmol*, vol. 21, no. 2, p. 134–141, 2021.

[19] "Upgrade teacher's knowledge and skills to deliver quality education for all Filipino children," UNICEF, November 14 2023. [Online]. Available: https://www.unicef.org/philippines/media/6121/file/Teachers.pdf.

[20] "Provide continuous support to teachers, learners, and their families," UNESCO, 14 November 2023. [Online]. Available: https://www.iiep.unesco.org/en/provide-continuous-support-teachers-learners-and-their-families-13375.

Text of the article was accepted by Editorial Team 09.12.2023.

ПРОФІЛІ ФІЛІППІНСЬКИХ УЧИТЕЛІВ ТА ЇХ КОМПЕТЕНТНОСТІ ПІД ЧАС ВИКЛАДАННЯ ОНЛАЙН В УМОВАХ ПАНДЕМІЇ

Дейв Е. Марсіал
доктор педагогічних наук, професор, директор
Центр глобальних досліджень ім. д-ра Маріано К. Лао, Університет Сілліман, м. Думагете, Філіппіни
ORCID ID 0000-0003-0006-8841
demarcial@su.edu.ph

Оріель Ліза З. Майпа
BSIT, викладач, факультет старших класів середньої школи
Центр глобальних досліджень ім. д-ра Маріано К. Лао, Університет Сілліман, м. Думагете, Філіппіни
ORCID ID 0000-0002-2797-2657
auriellezmaypa@su.edu.ph

Сінді Рут Р. Вілларіза
бакалавр комп'ютерних наук, офісний секретар
Центр глобальних досліджень ім. д-ра Маріано К. Лао, Університет Сіллімана, м. Думагете, Філіппіни
ORCID ID 0000-0002-8270-4866
cindyrvillariza@su.edu.ph

Грейс Л. Апао
бакалавр наук з діловодства, адміністративний асистент
Коледж ділового адміністрування, Університет Сілліман, м. Думагете, Філіппіни
gracelapao@su.edu.ph

Анотація. Пандемія COVID-19 прискорила перехід до онлайн-навчання, виявивши прогалини основних онлайн-навичок, якими мають володіти викладачі. З огляду на глобальні зміни, філіппінські освітяни зіткнулися з проблемами адаптації до онлайн-навчання, особливо під час пандемії. З метою оцінювання навичок учителів з навчання онлайн було проаналізовано профілі 259 філіппінських учителів, які працюють як у базовій середній, так і у вищій освіті. Зокрема в дослідженні розглядається використання респондентами Інтернету, соціальних мереж та проаналізовані їх соціальні техногрaфічні профілі. Також у дослідженні оцінюються компетентності вчителів під час викладання онлайн. Крім цього визначено значні взаємозв'язки та відмінності між профілями та компетентностями вчителів. Результати показують, що 47,49% респондентів мають помірні труднощі з підключення до Інтернету. Хоча всі респонденти мали акаунти у Facebook, лише 11,97% активно користувалися Twitter. Значна частина, а саме 60% вчителів, визначили себе "користувачами соціальних мереж", що свідчить про активне використання різних онлайн-платформ. Також виявлено, що вчителі, які брали участь в опитуванні, мають середній рівень навичок, необхідних для викладання онлайн. Результати показують значний зв'язок між показниками рівня необхідних навичок учителів для викладання онлайн та їх статтю, громадянським статусом, задоволеністю інтернетом, а також соціальним техногрaфічним профілем. Наявність або відсутність акаунтів у Facebook (FB) і Twitter, задоволеність інтернетом, а також соціальна і технологічна активність показали помітні відмінності в компетентностях онлайн-викладання. Крім цього представлене дослідження дає уявлення про сучасний “ландшафт” навичок викладання онлайн серед філіппінських освітян, висвітлюючи як сильні сторони, так і сфери, що потребують удосконалення. Новизна цієї роботи полягає в комплексному аналізі кореляції між демографічними профілями освітян, соціально-технологічною драбиною та компетентностями викладання онлайн у філіппінському контексті. Результати підкреслюють важливість постійного професійного розвитку вчителів, спрямованого на підвищення їх кваліфікації, що в кінцевому підсумку має збагатити досвід учнів з онлайн-навчання.

Ключові слова: електронне навчання; ІКТ в освіті; ІКТ-навички вчителів; дистанційне навчання; онлайн-викладання.

(cc) BY-NC-SA

ThisworkislicensedunderCreativeCommonsAttribution-NonCommercial-ShareAlike 4.0 InternationalLicense.