

EXPLORING THE ROLE OF TEACHERS' SELF-EFFICACY AND SOCIAL SKILLS IN PREDICTING DIGITAL COMPETENCE IN HIGHER EDUCATION

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Abstract

Aim: The objective of this study was to examine how higher-education teachers' self-efficacy and social skills predict digital competence.

Methodology: Quantitative, cross-sectional survey research design among 300 public and government teaching professionals was employed. Data were collected using an online systematic questionnaire which included validated instruments: "the Teachers' Digital Competence Scale (TDiCs), General Self-Efficacy Scale (GSE), and the Social Skills Scale (SSS)". Analysis was conducted using SPSS version 26, using descriptive statistics, Pearson correlation, ANOVA, and multiple linear regression to assess associations and predictive capacity of the identified variables.

Result: Teachers reported high digital competence, moderate self-efficacy, and lower social skills. Self-efficacy significantly predicted digital competence ($p < .001$), followed by social skills ($p < .001$), with both accounting for 52% of the variance. A significant moderation effect ($p = .006$) showed that self-efficacy amplified the influence of social skills. ANOVA showed teaching experience significantly affected digital competence ($p = .007$), while age ($p = .051$) and gender ($p = .312$) were not significant.

Conclusion: The research depth concluded that two of the factors most determining teachers' digital competence in higher education are self-efficacy and social skills, with self-efficacy being the strongest predictive variable.

Keywords: Digital competence, Faculty development, Higher education, Self-efficacy, social skills, Teaching skills.

1. INTRODUCTION

The teaching profession in higher education is evolving quickly and with rising technological advancements, changing learner values, and global crises such as the COVID-19 pandemic [1]. With this diversifying environment continually evolving, quality teaching has become a key concept that goes beyond disseminating information towards fostering engagement, critical thinking, collaboration, and autonomous learning [2,3]. Consequently, both the qualities of good teachers have also expanded to encompass digital literacy, self-efficacy, and interpersonal skills; all considered to be central aspects of quality teaching in higher education settings [4,5]. The transformation from the teacher's historical role to technology-supported classroom roles has shifted teaching-learning culture [6]. Schools now increasingly depend on the web-based dissemination of course material, assessment, and interaction with students. Digital literacy involves more than the technical skill of using digital tools; it's about intentional and pedagogically-sound use of digital technologies within pedagogical approaches. Teachers who demonstrate high degrees of digital competence, for example, are likely to create inclusive educational spaces, differentiate learning, and address the diverse needs of students [7]. Research by Iqbal et al. (2024) discovered a strong positive relationship between digital competence and self-reported teaching effectiveness of faculty in higher education, underscoring the finding that being digitally competent enables pedagogical approaches and room for innovation focused on students as learners [8].

Although it is important to have digital tools that support learning, they do not guarantee effective teaching. Teachers also need to have high levels of belief in their own ability to engage students and manage a classroom with students, whether in person or online [9]. This belief system, called self-efficacy, plays an important role in determining teaching behavior, planning, and coping. Teachers with high self-efficacy tend to be better able to manage challenges, adopt new practices, and support student learning needs [10]. For instance, during the rapid transition to online education during the COVID-19 pandemic, Moorhouse et al. (2024) reported that educators with higher self-efficacy had greater adaptive capacity to digital teaching and experienced lower levels of stress than their less self-assured counterparts [11]. As such, these results emphasize the need to build and sustain teacher confidence at all times, especially during uncertain and rapid change.

Higher education is often more than the transmission of information and can be viewed as a relational space in which communication, emotion, and human connection is vital [12]. Effective pedagogy is frequently established on the faculty member's capacity to build trust, be empathetic, have dialogue, and establish group dynamics [13]. The value of this interrelationship is particularly relevant for online and blended learning where there are no tangible touchpoints and as such, the educator has to be purposeful in their endeavors to facilitate student engagement and feeling. Hu & Shen (2021) research has discovered that students consider good interpersonal communications with instructors to be better, closer, and more motivating and quality experiences [14]. This is an endorsement of emotional intelligence; discourse on the human dimension of education, which has previously been ignored by utilizing customary lecturing performance observers that often concentrate on outcomes. Together, social skills, self-efficacy, and digital competence form a tripod, which has pertinent influence on pedagogical quality [15-18].

Therefore, these three realms tend to go hand in hand but can also strangely end up competing against each other. For instance, where there is a teacher who lacks the potential to be physically literate with confidence issues on their part, being able to utilize new methods will prevail. Similarly, in the reverse, a socially aware individual who lacks the advantage of digital literacy, will similarly be unable to engage learners to utilize what they are learning in a technology facilitated setting; yet with all three present, the chance of productive pedagogy multiplies exponentially [19]. These are the considerations upon which there can be an integrated consideration of relevance in contemporary conditions of learning, particularly where collegiate education environment introduce equity, inclusion, and well-being into the equation, that necessitates them not just to facilitate students building capabilities they will take with them into rich, complicated, and uncertain futures, but also to specify equity, inclusion, and well-being in terms of learning itself. Although the question of what influences the effective and successful factors of teaching called further study that examines the dynamic interaction of these factors, what affects teaching and its effective and successful outcomes in higher education [20]. Therefore, and from what we can infer from these studies they tended to focus on one or two factors discreetly rather than consider the interaction of the factors responsible for influencing teaching behaviors and the potential outcomes of teaching. Context-specific studies are particularly important when there are socio-cultural, institutional, and disciplinary contexts that could influence the importance or relevance of each factor on teaching and its effective and successful outcomes [21].

This study is extending this line of inquiry to examine how teachers' self-efficacy, and social attributes predict digital competence and effectiveness at the higher education level. This creates a context for considering psychological and interpersonal dimensions that may be combined (and thus interactive) to contribute to a framework that is integrated. This study provides a starting point for faculty development programs, teacher preparation efforts, and institutional policies for the purposes of improving effective teaching in a technology-enabled learning environment ultimately.

2. RESEARCH METHODOLOGY

2.1. Research Design

This research used a quantitative cross-sectional survey design to assess whether self-efficacy and social skills forecast digital competence of higher education teachers. The quantitative method allowed for systematic measurement of clearly defined constructs using standard instruments. Cross-sectional design allowed data collection at one point in time, hence taking a snapshot of current levels and inter-relationships between teachers' digital competence, self-efficacy, and social skills.

2.2. Participants and Sampling

The sample for the study comprised 300 higher education teachers. Participants were selected from various government and public institutions across various areas. The sample comprised faculty members from institutions based in Tripura to ensure geographical diversity for the study. One stratified random sampling method was employed to ensure that participants were well-represented from all types of institutions and teaching backgrounds. The recruitment criteria for all participants included at least one year of experience as a teacher in higher education and previous experience in digital teaching or blended teaching modes.

2.3. Tools for Data Collection

The study employed a structured questionnaire consisting of demographic details, Digital Competence, Self-Efficacy, and Social Skills. Each of the instruments has undergone validation and has been used widely in psychological and educational research. The entire battery of tools was administered on a 5-point Likert scale ranging from Strongly Agree to Strongly Disagree, with minor variation being assigned to the scale format following the original versions. Below is a detailed description of the tools used.

❖ Demographic Characteristics

The basic demographic information from the participants included age, gender, and years of teaching experience. For this study, the focus was limited to higher education settings, allowing for a comparative perspective across diverse teaching backgrounds.

❖ Teachers' Digital Competence Scale (TDiCoS)

"The Teachers' Digital Competence Scale (TDiCoS)", developed by Ergül and Taşar (2023), measures the ability of educators to effectively use digital technologies in the instruction process. This scale was prepared based on several

international digital competence frameworks, including DigCompEdu, UNESCO ICT Competency Framework, and national standards from Turkey. The final version of the TDiCoS consists of 19 items, which are set under a unidimensional factor model along the lines of a comprehensive measure of teachers' digital competence over aspects of instructional design, communication, digital resource use, assessment, professional development, and ethical use of technology. To complete the questions, educators must assess how frequently they utilize digital tools in the classroom. A 5-point Likert-type scale is used for the response alternatives, with 1 denoting Never and 5 denoting Always. If the responder is inexperienced with the instrument, there is also an option labeled NA (Not Applicable). The scale has an internal reliability coefficient of 0.949, thus indicating an extremely high consistency within itself and suggesting its suitability for use in the investigation settings related to higher education [22].

❖ **General Self-Efficacy Scale (GSE)**

For the assessment of self-efficacy, the study used "the General Self-Efficacy Scale (GSE)" prepared by "Schwarzer and Jerusalem in 1995". The GSE is a popular instrument combining self-perceptions of efficacy to cope with a diversity of challenging situations. Originally the GSE was meant for the general populace but has found much validation in educational settings, mostly pertaining to teachers. The levels of 10 items are rated on 4-point Likert ratings, where "not at all true" was given the response option of 1 and "exactly true" given an option of 4. Sample items included "I can always find the means and ways to get what I want if I try hard enough" and "I can always manage to solve difficult problems if I try hard enough." The scale has good psychometric properties in different cultural settings, showing reliability in Cronbach's alpha values varying generally between .76 and .90. Its versatility and dependability make it an appropriate measurement instrument to be used in the assessment of teacher self-efficacy in higher education contexts [23].

❖ **Social Skills Scale (SSS)**

"The Social Skills Scale (SSS)" utilized in this study was created by Hamid, Jabeen and Mahmood in 2019, to measure adolescents' interpersonal skills and subsequently adapted for teachers. "The SSS has 23 items divided into three subscales, Getting Along Skills (11 items), (Social Attributes (5 items) and Friendship Skills (7 items). The SSS was designed for the Pakistani school setting through an extensive multi-stage process of phenomenological exploration, expert validation and evidence testing". Items are measured on a 4-Likert scale from 0 (Never) to 3 (Always). Sample items include: "Cares for other people's feelings," "Shares everything," and "Is honest." While the SSS was designed with adolescents in mind, the items are fundamentally focused on social competencies that relate to socializing, which have relevance at any age. The overall reliability indicates the presented scale is acceptable and the overall internal consistency was good (Cronbach's alpha = .80) with subscale alphas ranged from .51 to .74. Due to its strong cultural fit and sound development, the SSS was seen to be an appropriate tool to measure teachers' social and interpersonal skills in the current study [24].

2.4. Data Procedure

Data were collected through an online survey administered via Google Forms and distributed to higher education faculty across public and government institutions through email, WhatsApp groups, and academic networks. The survey included a cover letter explaining the study's purpose, estimated completion time (10–15 minutes), and assurance of anonymity and voluntary participation. Informed consent was obtained via a digital checkbox. Data collection spanned four weeks, with reminder messages sent during weeks one and three. The online format ensured broad, convenient access across geographically dispersed faculty, particularly relevant in the post-pandemic digital era.

2.5. Ethical Considerations

This research followed strict ethical guidelines to protect the rights and privacy of participants. Prior to data collection, approval was obtained from the Institutional Review Board (IRB) of the lead researcher's university. Informed consent was obtained digitally before participants accessed the questionnaire.

2.6. Data Analysis

Data were analyzed using SPSS version 26. Descriptive statistics (means, standard deviations, frequencies, and percentages) were used to summarize the demographic profile of the participants and their overall responses. Pearson's correlation coefficient was employed to examine the relationships among teachers' self-efficacy, social skills, and digital competence. To assess the predictive role of self-efficacy and social skills on digital competence, multiple linear regression analysis was conducted. In addition, one-way ANOVA was applied to identify significant differences in digital competence across demographic categories such as age group, gender and teaching experience. The internal consistency of each scale was tested using Cronbach's alpha, with values of $\alpha \geq 0.70$ considered acceptable.

3. RESULTS

3.1. Demographic Profile of Participants

The demographic distribution in Table 1 indicates that the majority of participants were mid-career faculty members aged 35–44 years (44.7%), followed by those aged 25–34 years (24%) and 45–54 years (23.3%), with only a small proportion aged 55 years and above (8%). Gender representation was relatively balanced, with males comprising 56% and females 44%, minimizing gender bias. In terms of teaching experience, the highest proportion had 6–10 years of experience (31.3%), followed by 1–5 years (28.7%), 11–15 years (21.3%), and 16 years or more (18.7%) (Figure 1-3).

Table 1: Demographic Characteristics of the Participants		
Parameters	Frequency (n)	Percentage (%)
Age Group		
25–34 years	72	24
35–44 years	134	44.7
45–54 years	70	23.3
55+ years	24	8
Gender		
Male	168	56
Female	132	44
Teaching Experience		
1–5 years	86	28.7
6–10 years	94	31.3
11–15 years	64	21.3
16+ years	56	18.7

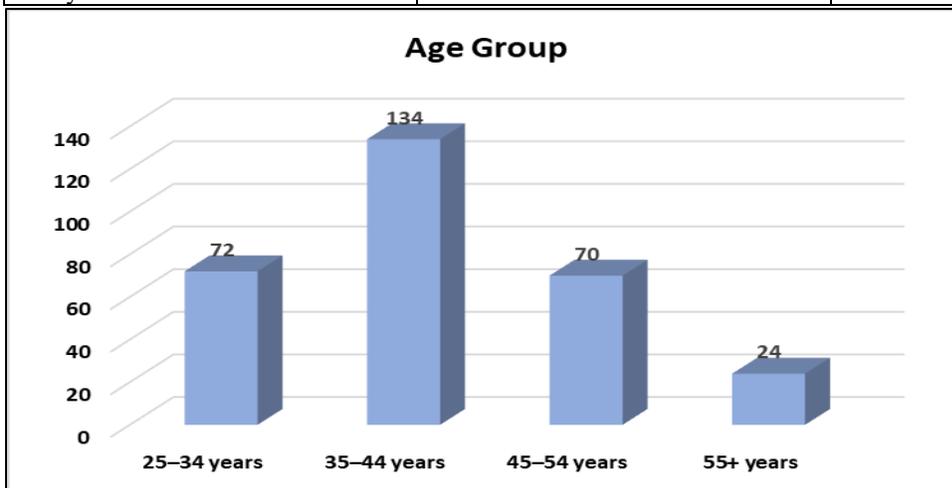


Figure 1: Demographic profile of participants (N = 300) by age group

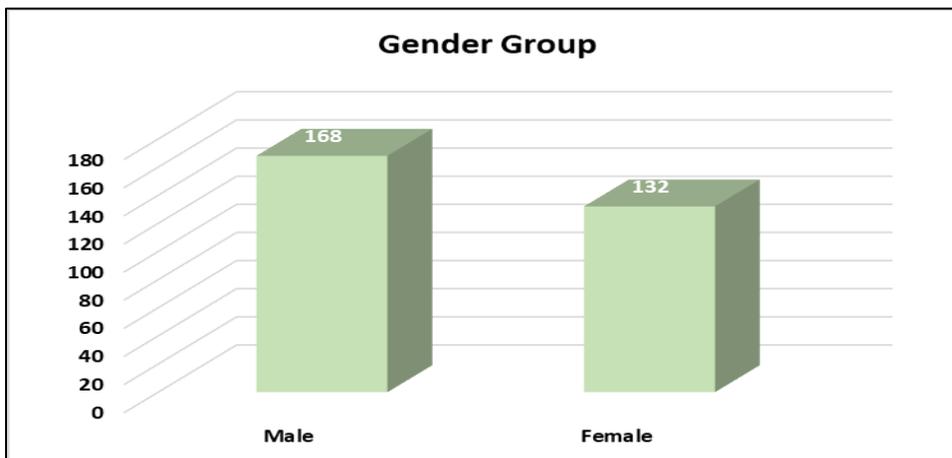


Figure 2: Demographic profile of participants (N = 300) by Gender group

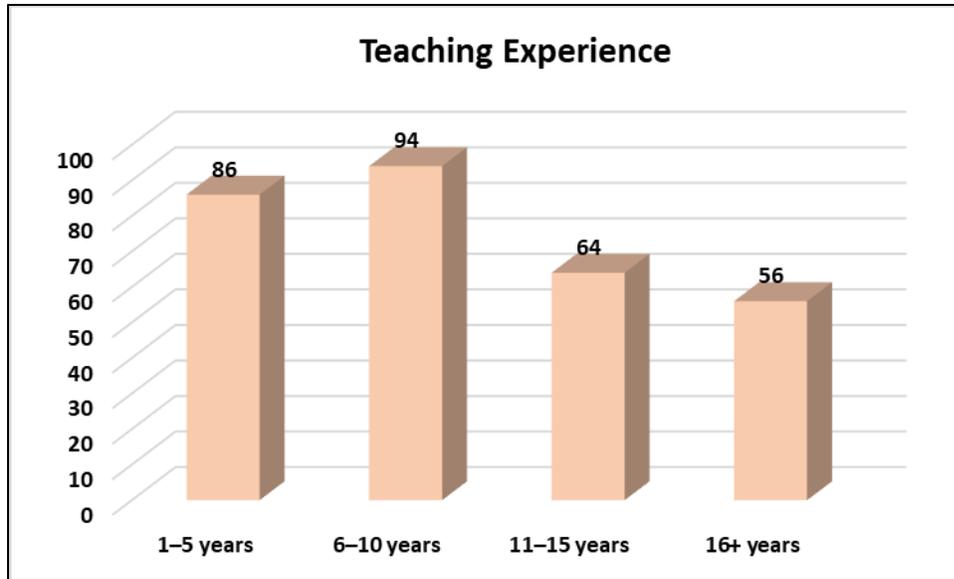


Figure 3: Demographic profile of participants (N = 300) by Teaching Experience

3.2. Assessment of Levels of Digital Competence, Self-Efficacy and Social Skills

The results in Table 2 indicate that teachers demonstrated high levels of digital competence ($\alpha = .94$), suggesting strong proficiency in integrating digital tools into their teaching practices. In contrast, self-efficacy was moderate ($\alpha = .88$), reflecting a fair level of confidence in managing teaching-related challenges, while social skills were comparatively lower ($\alpha = .82$), indicating less-developed interpersonal and relational competencies. Overall, these findings suggest that although teachers are digitally capable, improvements in self-efficacy and social skills could further enhance their effective use of digital technologies in higher education settings.

Variable	Min	Max	Mean (M)	SD	Cronbach's α
Teachers' Digital Competence (TDiCoS)	2.10	4.98	3.87	0.62	.94
General Self-Efficacy (GSE)	1.80	3.90	3.21	0.48	.88
Social Skills Scale (SSS)	1.95	3.85	3.04	0.53	.82

The reliability analysis of subscales (Table 3) shows that Teachers' Digital Competence ($\alpha = .94$) and General Self-Efficacy ($\alpha = .88$) achieved excellent internal consistency, confirming that these scales measured their respective constructs with high precision. Within the Social Skills Scale (SSS), reliability levels varied. Getting Along Skills ($\alpha = .74$) demonstrated acceptable consistency, indicating that items within this subscale were fairly cohesive. Social Attributes ($\alpha = .67$) reflected only marginal reliability, suggesting weaker agreement among items. Friendship Skills ($\alpha = .53$) presented poor reliability, indicating inconsistency and limited internal coherence of the items in this domain. Despite these variations, the overall SSS score ($\alpha = .82$) showed acceptable reliability, suggesting that the combined measure of social skills was more stable and consistent than its individual subcomponents.

Scale	Subscale	Items	Cronbach's α
TDiCoS	Overall	19	.94
GSE	Overall	10	.88
SSS	Getting Along Skills	11	.74
	Social Attributes	5	.67
	Friendship Skills	7	.53
	Total SSS	23	.82

3.3. Associations among Digital Competence, Self-Efficacy and Social Skills

The correlation results in Table 4 indicate that digital competence is positively and significantly associated with both self-efficacy ($r = .48, p < .01$) and social skills ($r = .42, p < .01$). This suggests that teachers who exhibit higher confidence in handling teaching-related challenges tend to demonstrate stronger digital competence, and those with better interpersonal and relational skills are also more adept at integrating digital tools into their teaching. Additionally,

self-efficacy and social skills are moderately correlated with each other ($r = .39, p < .01$), indicating a related but distinct contribution of each predictor to digital competence. Overall, these findings highlight the important roles of both self-efficacy and social skills in predicting teachers' digital competence in higher education.

Table 4: Pearson's Correlation Matrix of Study Variables

Variable	Digital Competence	Self-Efficacy	Social Skills	P-Value
Digital Competence	—			p < .01
Self-Efficacy	.48**	—		
Social Skills	.42**	.39**	—	

3.4. Predictive Role of Self-Efficacy, and Social Skills in Digital Competence

The multiple regression analysis (Table 5) revealed that self-efficacy and social skills together significantly predicted digital competence, explaining 52% of the variance ($p < .001$). Among the predictors, self-efficacy emerged as the strongest contributor ($p < .001$), indicating that teachers' confidence in handling teaching-related challenges accounted for approximately 18% of the unique variance in digital competence. Social skills also contributed significantly ($p < .001$), explaining an additional 8% of unique variance. These results suggest that while both factors are important, self-efficacy plays a larger role than social skills in predicting teachers' ability to effectively integrate digital technologies in higher education.

Table 5: Multiple Regression Predicting Digital Competence (N = 300)

Predictor Variable	sr ² (Semi-partial R ²)	β (Standardized)	t	p
Self-Efficacy	0.18	0.34	7.69	< .001
Social Skills	0.08	0.26	5.90	< .001

$R^2 = .52$, Adjusted $R^2 = .51$, $F(3,296) = 106.92$, $p < .001$

3.5. One-Way ANOVA Analysis for Digital Competence across Demographic Variables

The ANOVA results in Table 6 show that digital competence did not differ significantly across age groups ($F = 2.66, p = .051$), though the effect was close to significance, suggesting only minor variation among age categories. For gender, the difference was clearly non-significant ($F = 1.02, p = .312$), indicating that male and female teachers had comparable levels of digital competence. In contrast, teaching experience had a significant effect on digital competence ($F = 4.12, p = .007$), meaning that years of professional experience influenced teachers' ability to use digital tools effectively. Thus, of the three demographic factors tested, only teaching experience was a statistically significant determinant of digital competence.

Table 6: One-Way ANOVA Results for Digital Competence across Demographic Variables

Demographic Variable	Source	Sum of Squares	df	Mean Square	F	Sig.
Age Groups	Between Groups	3.24	3	1.08	2.66	0.051
	Within Groups	120.19	296	0.41		
Gender	Between Groups	0.43	1	0.43	1.02	0.312
	Within Groups	124	298	0.42		
Teaching Experience	Between Groups	4.98	3	1.66	4.12	0.007
	Within Groups	119.45	296	0.4		

The Tukey HSD post-hoc test for teaching experience (Table 7) revealed that a significant difference in digital competence was observed only between teachers with 1–5 years of experience and those with 11–15 years of experience (Mean Difference = $-0.26, p = .008$), with mid-career teachers (11–15 years) reporting significantly higher digital competence compared to early-career teachers (1–5 years). No other pairwise comparisons reached statistical significance, indicating that the digital competence of teachers with 6–10 years and 16+ years of experience did not differ meaningfully from other groups. These results suggest that digital competence tends to increase as teachers progress from early career (1–5 years) to mid-career (11–15 years), but then stabilizes, showing no substantial differences between mid- and late-career teachers.

Table 7: Tukey HSD Post-Hoc Test for Teaching Experience

Paired Comparison (I–J)	Mean Difference	Std. Error	t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference
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						Lower	Upper
(1–5 yrs) – (6–10 yrs)	-0.12	0.1	-1.20	296	0.455	-0.36	0.12
(1–5 yrs) – (11–15 yrs)	-0.26*	0.11	-2.36	296	0.008	-0.47	-0.05
(1–5 yrs) – (16+ yrs)	-0.17	0.12	-1.39	296	0.313	-0.41	0.07
(6–10 yrs) – (1–5 yrs)	0.12	0.1	1.2	296	0.455	-0.12	0.36
(6–10 yrs) – (11–15 yrs)	-0.14	0.11	-1.27	296	0.401	-0.35	0.07
(6–10 yrs) – (16+ yrs)	-0.05	0.12	-0.42	296	0.911	-0.29	0.19
(11–15 yrs) – (1–5 yrs)	0.26*	0.11	2.36	296	0.008	0.05	0.47
(11–15 yrs) – (6–10 yrs)	0.14	0.11	1.27	296	0.401	-0.07	0.35
(11–15 yrs) – (16+ yrs)	0.09	0.12	0.75	296	0.702	-0.15	0.33
(16+ yrs) – (1–5 yrs)	0.17	0.12	1.39	296	0.313	-0.07	0.41
(16+ yrs) – (6–10 yrs)	0.05	0.12	0.42	296	0.911	-0.19	0.29
(16+ yrs) – (11–15 yrs)	-0.09	0.12	-0.75	296	0.702	-0.33	0.15

3.6. Assessment of Moderation Analysis – Social Skills × Self-Efficacy Predicting Digital Competence

The moderation analysis (Table 8) revealed that social skills ($p < .001$) and self-efficacy ($p < .001$) were both significant positive predictors of digital competence. Importantly, the interaction term between social skills and self-efficacy (SSS × GSE) was also significant ($p = .006$), indicating that the positive effect of social skills on digital competence increases when teachers have higher levels of self-efficacy. The overall model explained 40% of the variance in digital competence, with the inclusion of the interaction term contributing an additional 3% of explained variance ($\Delta R^2 = 0.03$, $p < .01$). These results highlight that both social skills and self-efficacy are important for enhancing digital competence, and their combined effect produces an even stronger impact, with self-efficacy amplifying the role of social skills in teachers’ digital technology integration.

Predictor	β	t	p
Social Skill	0.25	5.65	< .001
Self-Efficacy	0.34	7.71	< .001
Interaction (SSS × GSE)	0.11	2.76	0.006

$R^2 = .40$, $\Delta R^2 = .03$, $p < .01$

4. DISCUSSION

The term "effective teaching in higher education" is articulated nowadays with reference to digital literacy, psychological resilience, and interpersonal skills [25]. With the increasing integration of technology with students' needs, we must acknowledge how such factors may add to or detract from digital competence [26-28]. As a result, the research sought to examine the predictive value of teachers' self-efficacy and social competence on digital competence. The results shows that psychological readiness and interpersonal competence are very important components of digital competence. Undoubtedly, self-efficacy is the strongest predictor of the two. The current study showed that teacher self-efficacy is a strong predictor of digital competence, explaining a significant 18% unique variance ($\beta = 0.34$, $p < .001$), and had a moderate correlation ($r = .48$, $p < .01$). This generally means that teachers who are confident that they will be able to manage challenges in their teaching role, address technological demands, and solve classroom problems are more likely to work with staff in a very meaningful way using technology in their teaching. This sufficiently satisfies the general idea that psychological readiness/confirmation is a central factor in the adoption of educational technologies. Wang & Chu (2023) also found that teacher self-efficacy positively and directly influenced teachers' digital competence and played a mediating role in institutional support [29]. Similarly, Zhou et al., (2023) found that greater self-efficacy was linked to more sophisticated application of digital tools, whereas burnout inversely correlated with digital competence [30]. Collectively, these results imply that digital proficiency is not merely a technical aptitude but a psychological preparedness influenced by teacher belief systems.

The present study also found that social skills significantly predicted digital competence, though to a lesser extent, accounting for 8% of the unique variance ($\beta = 0.26$, $p < .001$), with a correlation coefficient of $r = .42$ ($p < .01$). This indicates that teachers who possess strong interpersonal abilities—such as empathy, communication, and collaboration—are more likely to successfully implement digital tools in a way that fosters engagement and connection with students. Although the predictive strength was lower than that of self-efficacy, the significance suggests that social-emotional competencies are a meaningful component of tech integration. This is in line with Taghiyeva et al., (2024), who noted positive correlations between social-emotional skills and self-efficacy, though they found limited direct effects on technological capabilities [31]. Similarly, Mangarin & Namalata (2024) demonstrated that social skills

influence competence only when mediated by motivational factors such as self-drive, further supporting the idea that interpersonal attributes interact with internal beliefs to shape teacher performance [32].

Importantly, the present study's moderation analysis revealed that self-efficacy strengthened the impact of social skills on digital competence ($\beta = 0.11$, $p = .006$), contributing an additional 3% of explained variance ($\Delta R^2 = 0.03$). This indicates that the more confident teachers feel, the more effective their interpersonal skills become in facilitating digital tool use. In other words, social skills are more impactful when supported by a strong internal belief in one's teaching capacity. This finding is consistent with Shi & Xu (2025), who found that digital competence moderated the relationship between resilience and self-efficacy, suggesting that psychological and interpersonal competencies are not isolated but interdependent. It echoes the broader theme in social cognitive theory that self-perceptions amplify or diminish the application of other traits [33].

In terms of demographic variables, the present study found that teaching experience had a significant effect on digital competence ($F = 4.12$, $p = .007$), particularly between teachers with 1–5 years and those with 11–15 years of experience (Mean Difference = -0.26 , $p = .008$). This implies that mid-career teachers are more digitally proficient, likely due to greater exposure to institutional digitalization initiatives and accumulated professional learning. However, no significant differences were observed for gender ($p = .312$) or age ($p = .051$). These findings differ slightly from Siddiq & Scherer (2016), who reported that age moderated the relationship between self-efficacy and ICT use, with older teachers relying more heavily on confidence beliefs to adopt technology [34]. While the gender neutrality found here supports equity in digital skill acquisition, other studies like Grande-de-Prado et al., (2020) showed men perceived themselves as more digitally competent, while women excelled in communicative and media-related digital tasks. These inconsistencies suggest that contextual and cultural variables play a strong role in shaping gendered experiences with digital tools [35].

With regard to the overall levels of variables, the present study revealed that teachers reported high digital competence ($M = 3.87$, $SD = 0.62$), moderate self-efficacy ($M = 3.21$, $SD = 0.48$), and lower social skills ($M = 3.04$, $SD = 0.53$). These results align with those of Preza-Medina (2023), who also found that higher education faculty perceived themselves to have strong technical competence but displayed variation across subdomains such as communication and ethics [36]. Likewise, Mcgar & McDonagh (2020) noted high digital usage among pre-service teachers, but reported gaps in pedagogical applications, further reinforcing the idea that digital competence is more than device familiarity—it also depends on context-specific, student-centered integration [37].

Besides, the current study set moderate to high positive correlations between all three constructs—digital competence, self-efficacy, and social skills—implying they strengthen one another. This interdependent nature is reflected in the results by Romero-Garcia et al. (2022), who reported a positive association between socio-emotional competence and self-efficacy among pre-service teachers [38]. The findings likewise support the notion that holistic teacher education for working in digital environments; that is, attending to both technical and interpersonal domains, is a stronger proposition for pedagogical success.

The converged referred to in the current study, which examined digital competence alongside psychological and social predictors, is an important addition to the literature, which commonly tests explanatory variables separately. For instance, Mannila et al (2018), argued that building teacher self-efficacy is one of the long-term digital readiness keys, and that ICT training in itself is not sufficient without attitude and belief efforts [39]. Thus, the present findings validate the triadic construction postulated as pedagogy of effectiveness - digital skills, self-confidence, and social competence, reflecting the change witnessed in higher education institutions to become more responsive to students and adaptable pedagogies.

5. CONCLUSION

The current research concludes that digital competence of higher education educators is a multifaceted construct that is strongly related to both self-efficacy and social skills. Educators who exhibit greater self-efficacy in professional skills, and higher levels of interpersonal skills, are more likely to implement digital tools into their instructional practices. Notably, a self-efficacy measure was the greatest predictor, and enhanced the positive relationship between social skills and digital competence. In addition, experience in teaching was also a major determinant, with mid-career teachers having greater digital competence than early-career peers. The results stress the need to create faculty development programs that extend beyond technical education to encompass psychological and relational skill development. An integrated model that encourages confidence, communication, and collaboration can more effectively prepare educators for technology-enabled higher education.

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