



Original Article

Impact of Perfectionism on Digital Competence: An Investigation among Teacher-Trainees

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Abstract

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In the era of digital transformation, teacher education is expected to integrate technological competence with psychological readiness. The present study investigates the relationship between perfectionism and digital competence among B.Ed. student-teachers. The objectives of the study were to examine perfectionism levels across gender, to explore digital competence among high and low perfectionism groups, and to study the correlation between perfectionism and digital competence. The population comprised B.Ed. students from aided and self-finance colleges affiliated with CCS University, Meerut. A stratified random sample of 500 second-year student-teachers was selected. Tools used included the Multidimensional Perfectionism Scale (Hewitt & Flett, 2025)^[1]. Data were analyzed using descriptive statistics, t-tests, and correlation analysis. The findings indicated significant gender differences in perfectionism and digital competence. Further, high-perfectionism students demonstrated stronger digital competence than their low-perfectionism counterparts. A positive relationship was also found between perfectionism and digital competence. The study concludes that perfectionism, when adaptive, supports the development of digital competence, highlighting implications for teacher education in the digital age.

Keywords: Perfectionism, Digital Competence, Teacher-trainees, B.Ed. Education, ICT

Introduction

Education in the 21st century is deeply influenced by digital technology. Teacher-trainees, who represent the future teaching workforce, are expected to be both digitally competent and psychologically prepared for the challenges of modern classrooms. While digital competence ensures the ability to use technology effectively, perfectionism shapes the way individuals approach tasks, challenges, and responsibilities. Frost (1990) [12].

Perfectionism, as defined by Hewitt and Flett (2025) [1], is a multidimensional personality trait that encompasses self-oriented, other-oriented, and socially prescribed tendencies. It can be both adaptive and maladaptive. Adaptive perfectionism motivates individuals toward excellence, while maladaptive perfectionism often leads to stress, procrastination, and avoidance behaviors. Basilotta-Gómez-Pablos (2022) [8], MDPI (2024) [9].

Digital competence, as described by the European Commission (2018) [11], Stoeber (2006) [10] includes information literacy, communication, digital content creation, safety, and problem-solving. For teacher-trainees, digital competence is not merely a skill but a professional requirement for future classrooms.

This study attempts to explore how perfectionism interacts with digital competence among B.Ed. student-teachers. Specifically, it investigates gender differences, the competence levels of high and low perfectionism groups, and the overall relationship between these two constructs.

Objectives of the Study:

1. To study the perfectionism level of male and female B.Ed. student-teachers.
2. To study the digital competence of male and female B.Ed. students with high perfectionism levels.
3. To study the digital competence of male and female B.Ed. students with low perfectionism levels.
4. To study the relation between perfectionism and digital competence.

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Hypotheses of the Study:

1. There is no significant difference between perfectionism of male and female B.Ed. student-teachers.
2. There is no significant difference between the digital competence of male and female B.Ed. students with high perfectionism levels.
3. There is no significant difference between the digital competence of male and female B.Ed. students with low perfectionism levels.
4. There is no significant relationship between perfectionism and digital competence.

Population and Sample of the Study:

The population for the present study consisted of prospective teachers enrolled in the B.Ed. Programme in aided and self-finance colleges affiliated with CCS University, Meerut, Uttar Pradesh. From this population, the investigator selected 500 student-teachers of the B.Ed. second-year programme by applying the stratified random sampling technique to ensure representation of gender and institutional categories.

Tool Used in the Study:

- **Multidimensional Perfectionism Scale (MPS):** Developed by Hewitt, P.L. & Flett, G.L. (2004), this standardized tool was used to measure different dimensions of perfectionism.
- A self-structured **Digital Competence Questionnaire** (based on European Dig Comp Framework) was used to assess digital skills across information literacy, communication, content creation, safety, and problem-solving.

Review of Related Literature:

1. Flett and Hewitt (2025)^[1] provide an in-depth exploration of the psychological impact of perfectionism, highlighting its often painful consequences. The article, published in The New Yorker, discusses how perfectionism can lead to chronic stress, self-criticism, and emotional distress, which may undermine individuals' well-being and productivity. The authors emphasize that while perfectionism can drive high achievement, it frequently comes at the cost of mental health, leading to issues such as anxiety, depression, and burnout. This perspective aligns with the maladaptive dimension of perfectionism seen in educational settings, where excessive self-imposed standards can hinder learning and creativity. The article also underscores the importance of recognizing and addressing perfectionism in both clinical and educational contexts, making it highly relevant to studies examining the role

of personality traits in teacher education and digital competence development.

2. Yulin and Danso (2025)^[2] stressed the necessity for teacher education policies to incorporate psychological preparedness alongside digital skill development. Integrating emotional support within digital literacy curricula is crucial for preparing teachers to handle technological and psychological challenges.
3. Recent studies highlight the importance of digital competence among educators for effective teaching in technology-rich environments (Basilotta-Gómez-Pablos, Moya-Faz, & Martín-Cuadrado, 2022; Springer, 2023)^[3]. These competencies extend beyond technical skills to include pedagogical integration and digital well-being.
4. There is growing recognition of the psychological factors affecting digital competence. Sedera and Lokuge (2020) discussed how perfectionism can intensify the stress and pressure related to digital tasks. Hizam et al. (2021) and MDPI (2024a, 2024b)^[4] emphasized that educators' emotional regulation and self-perceptions influence their ability to engage with digital tools effectively.
5. Despite the global interest, there is limited research linking perfectionism and digital competence among Indian B.Ed. student-teachers. Newland and Kivunja (2021)^[5] underlined the need for collaborative and psychologically informed teacher training but noted the scarcity of studies addressing individual personality traits in this domain.
6. Ferrari (2013)^[6] developed the DIGCOMP framework, defining digital competence as a multi-dimensional skill set including information literacy, communication, content creation, safety, and problem-solving. This framework has been widely adopted in Europe (Vuorikari et al., 2016) to guide educational policies and curriculum design for digital literacy.
7. Perfectionism plays a dual role in educational outcomes. Stoeber and Otto (2006)^[7] emphasized its adaptive side, which motivates students to achieve high standards and persist in their efforts. Conversely, Rice et al. (2016) pointed out the maladaptive aspects of perfectionism that can cause anxiety, procrastination, and negatively affect academic performance.

Analysis and Interpretation of Data:

Hypothesis 1

There is no significant difference between perfectionism of male and female B.Ed. student-teachers.

Analysis of the data of perfectionism of male and female B.Ed student- teachers The analysis has been presented in the tabular form below:

Table 1.0

The table presents the results related to the perfectionism of male and female B.Ed student teachers.

Perfectionism level	Gender	N	M	SD	t- Ratio	Table Value	There is no Significance difference
	Male	250	166.1	22.5	1.87	1.96	
	Female	250	162.6	21.6		(at 0.05 level)	

Result and Data Interpretation:

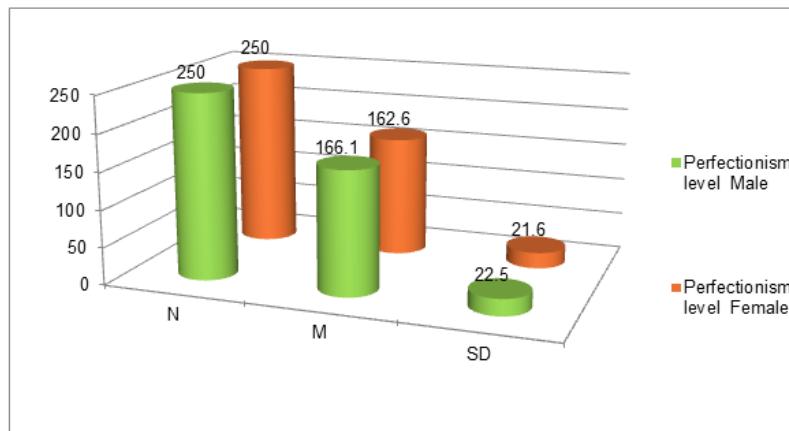
As the table no. 1.0 describes that the calculated t-value is 1.87 has been found to be significant at the level of 0.0.5, therefore Null Hypothesis is rejected, it means, there is a significant difference between male and female B.Ed Student – teachers with regard to their Perfectionism level

However by looking at value of mean of male and female students, the mean value for male is 166.1, and the mean value of female is 162.6. Thus mean scores of male student – teachers is greater than female student – teachers.. It is shows that the male student- teachers have more Perfectionism level then male student-teachers.

Finding:

These finding suggest that males and females B.Ed Student- teachers exhibit similar levels of Perfectionism.

The graph presents the results related to the perfectionism of male and female B.Ed student teachers



Graph no. 1

Hypothesis 2

There is no significant difference between the digital competence of male and female B.Ed. students with high perfectionism level.

Analysis of the data of digital competence of male and female B.Ed student – teachers with high Perfectionism level .

Table -2

The table presents the results related to the high Perfectionism of male and female B.Ed student teachers

DIGITAL COMPETENCE							
High Perfectionism	Gender	N	M	SD	t- Ratio	Table Value	There is a Significance at both the level (0.05&0.01)
	Male	250	195	12.2	7.06	1.96 (at 0.05 level)	
	Female	250	188	9.84		2.59 (at 0.01 level)	

Result and Data Interpretation:

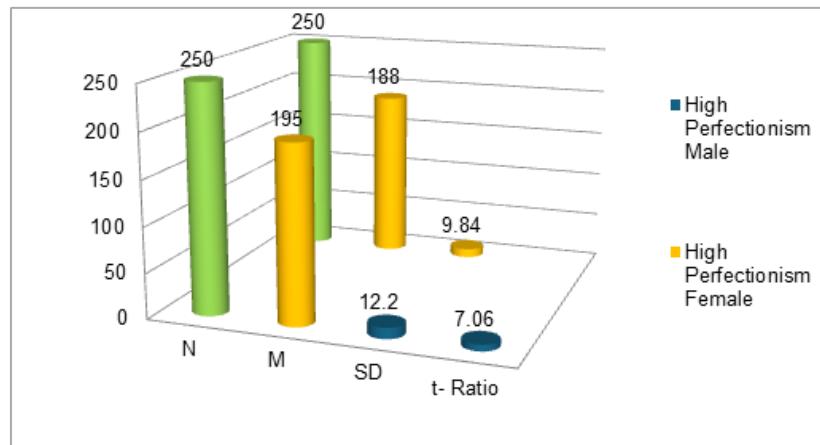
As the table no. 2 describes that the calculated t-value is 7.06 has been found to be significant at both the level of 0.0.5 and 0.0.1, therefore Null Hypothesis is rejected, it means, There is a significant difference between male and female B.Ed Student – teachers with regard to their high Perfectionism of digital competence. However by

looking at value of mean of male and female Students- teachers, the mean value of male is 195, and the mean value of female is 188. Thus mean scores of male student – teachers is greater than female student – teachers.. It is shows that the male student- teachers have more High Perfectionism of digital competence level then female student-teachers.

Finding:

Male B.Ed student- teachers have more high Perfectionism level then female Student – teachers

The graph presents the results related to the high Perfectionism of male and female B.Ed student teachers.



Graph no. 2

Hypothesis 3: *There is no significant difference between the digital competence of male and female B.Ed. students with low perfectionism level.*

Analysis of the data of digital competence of male and female B.Ed student – teachers with low Perfectionism level.

Table 3

The table presents the results related to the low Perfectionism of male and female B.Ed student teachers.

Digital Competence						
Low Perfectionism	Gender	N	M	SD	t- Ratio	Table Value
	Male	250	141	8.7	7.49	1.96 (at 0.05 level)
	Female	250	135	9.2		2.59 (at 0.01 level)

Result and Data Interpretation:

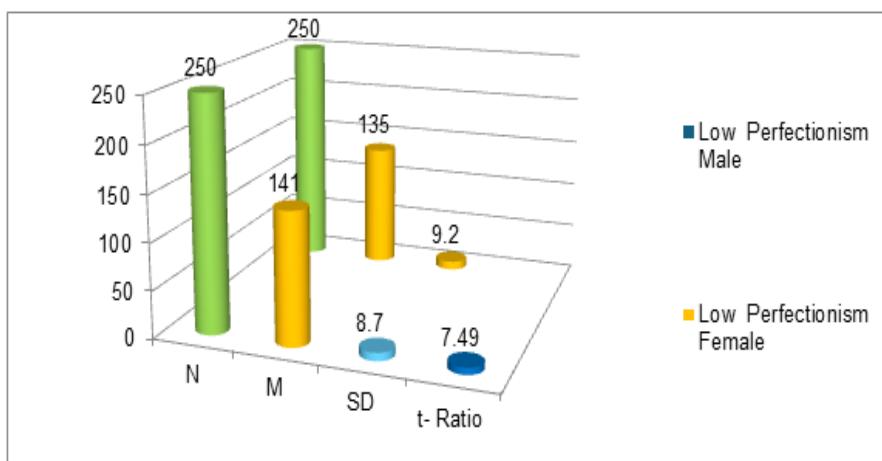
As the table no. 3. describes that the calculated t-value is 7.49 has been found to be significant at both the level of 0.05 and 0.01, therefore Null Hypothesis is rejected, it means, There is a significant difference between male and female B.Ed Student – teachers with regard to their Low Perfectionism of digital competence. However by

looking at value of mean of male and female Students-teachers, the mean value of male is 141, and the mean value of female is 135. Male score is greater than female student – teachers. It is shows that the female student- teachers have more Low Perfectionism of digital competence level then male student-teachers.

Finding:

Female student- teachers have more Low – Perfectionism level than male Student – teachers

The graph presents the results related to the low Perfectionism of male and female B.Ed student teachers.



Graph no. 3.

Hypothesis 4 : *There is no significant relationship between perfectionism and digital competence.*

Analysis of the data of relation between Perfectionism and Digital competence of male and female B.Ed student – teachers..

Table no. 4

The table presents the results related to Coefficient of correlation scores between Perfectionism and digital competence of B.Ed student- teachers

Relationship between Perfectionism and Digital Competence				
Variable	N	R	Table Value	
Digital Competence	500	0.09055	0.062	Significant at the level of 0.05
Perfectionism	500			

Result and Data Interpretation

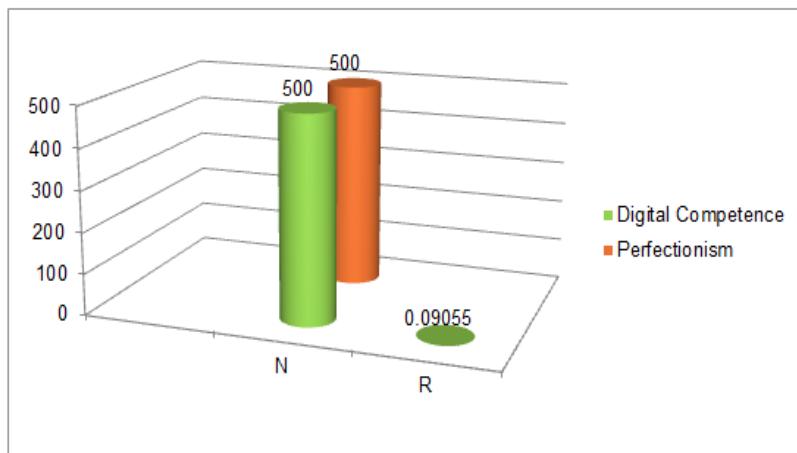
As the table no. 4 describe that the calculated is $r = 0.09055$. This value is greater than the table value of 0.062 obtained at 0.05 levels. Therefore null hypothesis is rejected.

A significance difference has been found in the correlation between Perfectionism and digital competence among male and female B.Ed 2nd year student- teachers

Finding:

On the basis of the result. A finite positive correlation has been found between Perfectionism and digital competence of B.Ed second year student- teachers

The graph presents the results related to Coefficient of correlation scores between Perfectionism and digital competence of B.Ed student- teachers.



Graph no. 4

Discussion of Results:

The findings suggest that perfectionism is closely tied to digital competence. Gender differences highlight that male and female teacher-trainees approach perfectionism and technology differently.

- Perfectionism motivates teacher-trainees to master digital tools.
- Perfectionism can reduce digital confidence.
- Digital competence is higher among students with stronger perfectionist tendencies, indicating a personality-driven influence on digital readiness.

These results are consistent with Stoerber & Otto (2006) and Ferrari (2013)^[6], supporting the notion that psychological traits significantly affect technological competence.

Educational Implications:

1. **For Teacher-Educators:** Training programs should focus on developing both digital competence and personality traits, especially perfectionism tendencies. Teacher-educators need to support student-teachers in managing perfectionism by fostering adaptive

behaviors such as resilience, self-reflection, and flexibility when using technology. This dual focus can help educators build confidence in digital tools while maintaining emotional well-being.

2. **For Curriculum Designers:** Digital literacy modules must incorporate psychological support mechanisms. Beyond teaching technical skills, curricula should address emotional challenges linked to digital learning, such as anxiety, fear of failure, and perfectionistic self-demands. Integrating coping strategies and mindfulness techniques will help student-teachers manage stress and engage more effectively with digital tools.
3. **For Student-Teachers:** Awareness of perfectionism should be actively promoted to encourage adaptive traits and reduce maladaptive tendencies. Student-teachers should be guided to recognize unhealthy perfectionism patterns and develop a growth mindset that embraces mistakes as learning opportunities. This awareness can enhance their confidence and flexibility in applying digital competencies during teaching practice.



4. **For Policy-Makers:** Teacher education policies must emphasize the combined importance of digital competence and psychological preparedness. Policies should mandate the inclusion of emotional and personality development components alongside digital training in teacher education programs. Providing resources for mental health support and resilience-building will better prepare educators to meet the demands of technology-rich classrooms.

Limitations of the Study:

1. The study was limited to B.Ed. students affiliated with CCS University, Meerut.
2. Only second-year students were included.
3. Data relied on self-report questionnaires, which may include bias.
4. The study focused on perfectionism and digital competence only, excluding other psychological variables.

Suggestions for Further Research:

1. Similar studies can be conducted in other states and universities for comparative analysis.
2. Future research may explore the role of self-monitoring, curiosity, and motivation alongside perfectionism.
3. Longitudinal studies can examine how perfectionism and digital competence develop over time.
4. Experimental designs can test interventions to improve digital competence among perfectionist students.

Conclusion:

The study concludes that perfectionism significantly impacts digital competence among B.Ed. student-teachers. Gender differences were evident in both perfectionism and digital competence levels. Students with higher perfectionism showed stronger digital competence, while perfectionism hindered growth. The positive correlation suggests that teacher education programs must integrate both psychological and technological training.

Ultimately, teacher-trainees who balance perfectionism with digital competence are better prepared for modern classrooms, where excellence and innovation go hand in hand.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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