



Original Article

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

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Abstract

In the era of digital transformation, teacher education is required to combine technological competency with Cognitive preparedness. This study aims to explore the correlation between perfectionism and digital competence among B.Ed Teacher- trainees. The aim of the study was to investigate perfectionism levels, regardless of gender, to examine digital competence of high and low perfectionism groups, and to analyze the relationship between perfectionism and digital competence. The population comprised the students of B.Ed. Degree from CCS University Aided and Self Finance Colleges of Meerut. The 2nd year student-teachers were randomly sampled, stratified by the number of years of teaching experience they had. The instruments employed were the Multidimensional Perfectionism Scale (MPS) of Hewitt & Flett (2025). Descriptive statistics, t-test and correlation analysis were used to analyze the data. The results showed that there was a significant difference between the perfectionism and digital competence of students by gender, and high perfectionism students showed a higher level of digital competence than their low perfectionism counterparts. A positive relationship was also found between perfectionism and digital competence. The study confirms that adaptive perfectionism is a facilitator of the development of digital competence, with 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 substantially impacted by digital technology. Teacher-trainees, who represent the future teaching workforce, are expected to be both digitally competent and cognitively prepared for the challenges of modern classrooms. Although digital competence ensures the ability to use technology productively, 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-Gomez-Pablos (2022) [7], MDPI (2024) [9]

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.

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.

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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] Development into the psychological aspects of perfectionism and its frequently detrimental effects. The article, published in The New Yorker, explores the ways in which perfectionism can contribute to chronic stress, self-criticism, emotional distress and, ultimately, have a negative impact on individuals' well-being and productivity. The authors stress that although perfectionism can be a key ingredient of high achievement, it is often associated with mental health problems, including anxiety, depression and burnout. This view is consistent with the negative aspect of perfectionism in educational contexts, where perfectionism leads to self-set limitations on learning and creativity. The article also highlights the need for the recognition and combating of perfectionism, which is relevant for the context of clinical and school work, and therefore relevant in the context of studies of the role of personality traits in teacher education and development of competence in digital technologies
2. Yulin and Danso (2025) [2] Emphasized the importance of integrating psychological readiness with digital skills training in teacher training policies. Emotional support should be integrated into the digital literacy curriculum, as it is an essential component in teacher preparation that will help prepare teachers for the technological and psychological challenges.

3. In recent studies, the significance of digital competencies of teachers has been emphasized regarding the effectiveness of technology-laden teaching. In recent studies, the importance of digital competence of teachers in effective teaching in technology-rich environments has been emphasized (Cuadrado, 2022; Springer, 2023) [3] competencies encompass not only the technical skills but also the pedagogical integration and digital well-being.
4. Psychological aspects of digital competence have been acknowledged. Sedera and Lokuge (2020) talked about the possible increase of stress and pressure around digital tasks because of perfectionism. Hizam et al. (2021) and MDPI (2024a, 2024b) [4] highlighted that teachers' emotional regulation and self-perceptions have an impact on how they describe digital tools and their use.
5. There has been little existing studies on the relationship between perfectionism and digital competence among the student-teachers of B.Ed. from India. Newland and Kivunja (2021) [5] emphasized the importance of team training and psychological training of teachers, but pointed out that there was not much research on the single personality traits.
6. Ferrari (2013) [6] has developed the DIGCOMP framework, which sets digital competence as a multi-dimensional competency consisting of information literacy, communication, content creation, safety and problem-solving. The process is broadly followed in Europe for educational policies and curriculum design for digital literacy. (Vuorikari et al., 2016) to guide educational policies and curriculum design for digital literacy.
7. Perfectionism plays a dual role in educational outcomes. Hizam S. M. (2021) [8] 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 (at 0.05 level)	There is no Significance difference
	Male	250	166.1	22.5			
	Female	250	162.6	21.6			

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

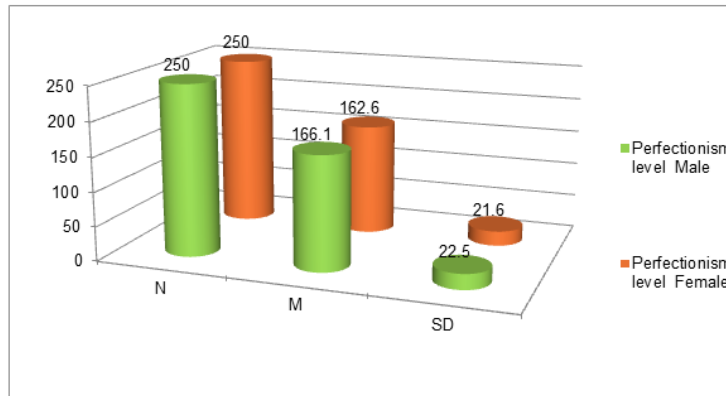
value of female is 162.6. Thus mean scores of male student – teachers is greater than female student – teachers. It is

shows that the male student- teachers have more Perfectionism level than 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:

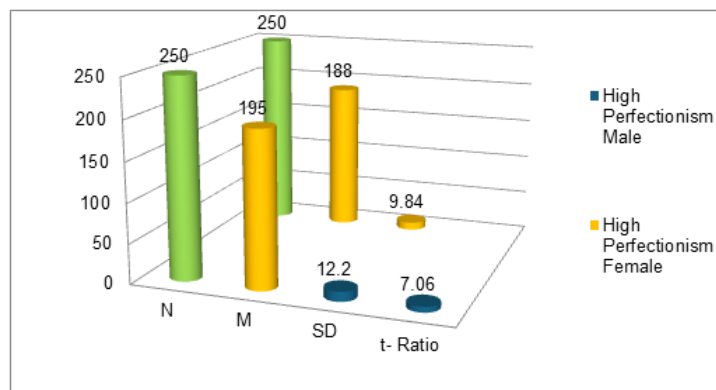
As the table no. 2 describes that the calculated t-value is 7.06 has been found to be significant at both the level of 0.05 and 0.01., therefore Null Hypothesis is rejected, it means, There is a significant difference between male and female B.Ed Student – teachers with regard to their high Perfectionism 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	There is a Significance at both the level
	Female	250	135	9.2			2.59 (at 0.01 level)	

Result and Data Interpretation:

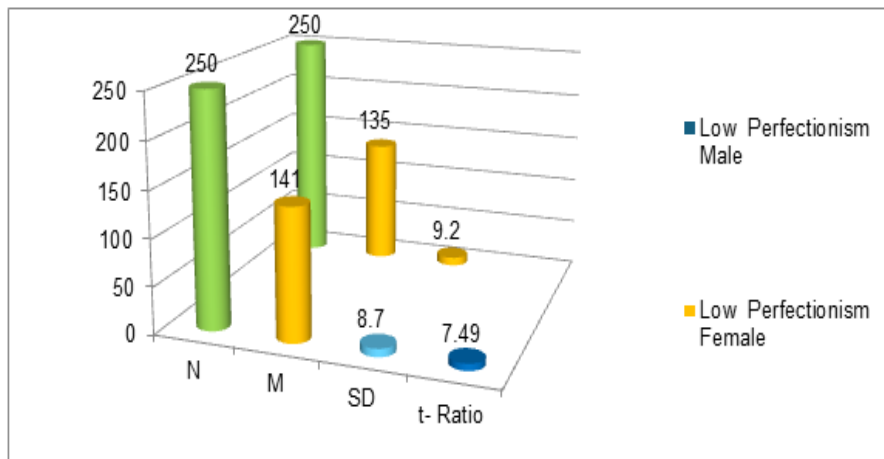
As the table no. 3. describes that the calculated t-value is 7.49 has been found to be significant at both the level of 0.05 and 0.01, therefore Null Hypothesis is rejected, it means, There is a significant difference between male and female B.Ed Student – teachers with regard to their Low Perfectionism 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	Significant at the level of 0.05
Digital Competence	500	0.09055	0.062	
Perfectionism	500			

Result and Data Interpretation

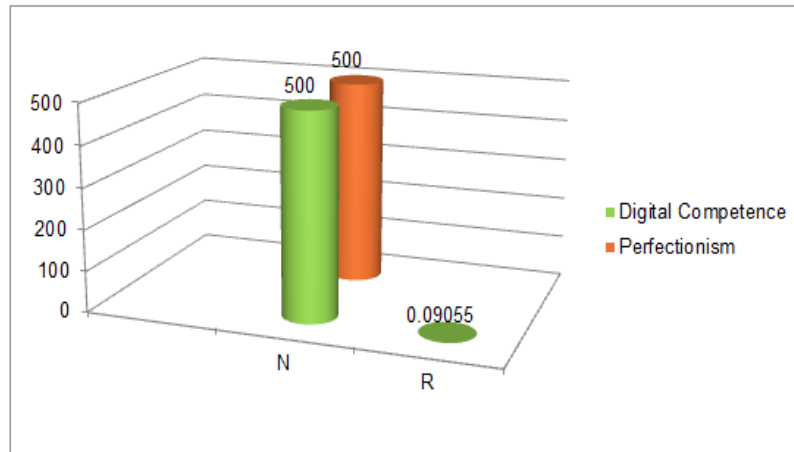
As the table no. 4 describe that the calculated is $r = 0.0905$. This value is greater than the table value of 0.062 obtained at 0.05 levels. Therefore null hypothesis is rejected.

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

Overall Finding of the Study:

- The findings of H1 that male and females B.Ed teacher-trainees exhibit similar level of Perfectionism.
- The Findings of H2 that Male B.Ed teacher – trainees have more high Perfectionism then females teacher-trainees.
- The Findings of H3 that female teacher-trainees have more low Perfectionism level than male teacher - trainees.
- The Findings of H4 that on the basis of the results, A positive correlation has been found between Perfectionism and Digital Competence of B.Ed teacher-trainees.

Discussion of Results:

The results show that perfectionism is related to digital competence. The gender differences indicate that male and female teacher-trainees differ in their perfectionism and technology use.

- Perfectionism drives teacher-trainees to learn digital skills.
- Perfectionism lowers digital self-efficacy.
- Teacher-trainees with higher levels of perfectionism are more digitally competent, suggesting a personality-related effect on digital competence.

The findings of the Results are in line with Stoeber & Otto (2006) Frost (1990) and Ferrari (2013) [6], establish that personality and psychological traits play an important role in technological competence.

Educational Implications:

1. **For Teacher-Educators:** Teacher preparation programs must emphasise the development of digital competence and personality characteristics, particularly perfectionism. Teacher educators should help student-teachers cope with perfectionism by promoting adaptive strategies like resilience, reflection and flexibility while using digital tools. This can empower teachers to use digital tools with confidence while safeguarding their mental health.
2. **For Curriculum Developers:** Digital literacy programs need psychological support. Besides digital

skills, curriculum should include emotional factors associated with digital learning, like anxiety and fear of failure, and perfectionistic self-standards. Incorporating coping skills and mindfulness practices will support student-teachers to reduce stress and improve digital tool use.

3. **For Student-Teachers:** Student-teachers should be encouraged to develop awareness of perfectionism to foster adaptive dimensions and limit the maladaptive. Student-teachers should be made aware of maladaptive perfectionism and encouraged to adopt a growth mindset that enables them to learn from their mistakes. This will improve their adaptability and self-confidence in teaching using digital skills.
4. **For Policy-Makers:** Teacher education policy should consider the dual importance of digital and psychological readiness. Teacher education policies should require the incorporation of emotional and personality development training with digital training. Access to mental health services and resilience training will help teachers cope with the challenges of digital classrooms.

Limitations of the Study:

1. The same study may be carried out in other states and in different universities.
2. Other variables such as self-monitoring, curiosity and motivation can be examined in addition to perfectionism.
3. Longitudinal research can explore the development of perfectionism and digital competence.
4. Experimental studies can examine ways to enhance digital competence of perfectionist students.

Suggestions for Further Research:

1. The same study may be carried out in other states and in different universities.
2. Other variables such as self-monitoring, curiosity and motivation can be examined in addition to perfectionism.
3. Longitudinal research can explore the development of perfectionism and digital competence.



4. Experimental studies can examine ways to enhance digital competence of perfectionist students.

Conclusion:

The study concludes that perfectionism has a strong influence on the digital competence of B.Ed. student-teachers. There were gender differences in perfectionism and digital competence. High levels of perfectionism were associated with digital competence, but perfectionism prevented improvement. The positive relationship indicates that teacher-training programs should focus on psychological and technological training. Finally, teacher-trainees with both perfectionism and digital competence are equipped for 21st Century classrooms, where perfection and innovation intersect.

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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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