EFFECT OF E-TEACHING ON ANXIETY IN HIGH SCHOOL TEACHERS

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ABSTRACT

The objective of this study was to assess the impact of e-teaching on anxiety in high school teachers. To conduct the study 800 high school teachers from the Raipur district of Chhattisgarh were selected. This group is evenly divided between government and non-government schools, with 400 teachers from each category. Stratified random sampling was used for the selection of the sample. A pre-validated questionnaire was utilized to evaluate the e-teaching proficiency of high school teachers. The anxiety in selected high school teachers was measured through Sinha and Sinha's (2007) comprehensive anxiety test. A negative and significant correlation was found between high school teachers' e-teaching proficiency and their anxiety, with a correlation coefficient of $r = -0.298$, which was statistically significant at the 0.01 level. The coefficient of determination ($R^2 = 0.11$) suggests that about 11% of the variation in anxiety can be attributed to e-teaching proficiency among high school teachers and as high school teachers' proficiency in e-teaching increases, their anxiety also tends to decrease significantly. Similarly, a significant but negative correlation was observed in a group of govt. and non-govt. high school teachers. It was concluded that enhancing e-teaching skills may therefore serve as a valuable tool for reducing anxiety among teachers, allowing them to feel more confident and comfortable with digital teaching methods.

Keywords: e-teaching, anxiety, high school teachers

INTRODUCTION

The prefix "e" is now commonly added to terms like real estate, retail, banking, entertainment, and education, where "e" stands for electronic. It refers to the use of the Internet for various activities. As the Internet becomes more integrated into our lives, we often see "http://www." as a familiar sign of a website, appearing everywhere from billboards to merchandise. In education, terms like e-teaching, e-learning, and e-education are becoming common. e-education includes online teaching, learning, and the support systems needed to make these possible. Klement et al. (2014) explain that e-teaching incorporates various instructional modes known as VARK (Visual, Aural, Reading/Writing, and Kinaesthetic). It relies on interactive tools that allow students to learn at their own pace. According to Lytvynova and Pinchuk (2018), ICT promotes independent learning, motivates students, improves consistency, enhances assessment practices, and helps keep track of educational achievements.

Anxiety, as defined by Seligman et al. (2000), is an emotion marked by inner turmoil, often accompanied by nervous behaviours like pacing, physical complaints, and overthinking. The American Psychiatric Association (2013) states that anxiety differs from fear; while fear arises from real or immediate threats, anxiety stems from anticipating future

threats. Barlow (2000) describes anxiety as a mood state where a person feels prepared to deal with potential negative events.

According to Bouras and Holt (2007), anxiety involves feelings of fear, uneasiness, and worry that are often generalized and disproportionate to the actual situation. It can lead to a lack of concentration, fatigue, muscle tension, and restlessness. People experiencing anxiety may avoid situations that previously caused them distress. Anxiety can diminish the quality of life and is linked to chronic symptoms or sporadic panic attacks (Rynn and Brawman-Mintzer, 2004).

A lack of knowledge about e-teaching, insufficient resources, and teacher anxiety can greatly affect the success of online education. Many educators feel unprepared to incorporate technology into their lessons because they lack training and familiarity with digital tools. This knowledge gap can lead to frustration and a hesitance to fully embrace online teaching methods, negatively impacting their confidence and ability to provide high-quality instruction. Hence the present study was planned to investigate the association between e-teaching and anxiety in high school teachers.

OBJECTIVES

1. To evaluate the relationship between e-teaching proficiency and anxiety in high school teachers.
2. To evaluate the relationship between e-teaching proficiency and anxiety in govt. high school teachers.
3. To evaluate the relationship between e-teaching proficiency and anxiety in non-govt. high school teachers.

HYPOTHESIS

H_1 There will be no significant correlation between high school teachers' e-teaching proficiency and their anxiety.

H_2 There will be no significant correlation between govt. high school teachers' e-teaching proficiency and their anxiety.

H_2 There will be no significant correlation between non-govt. high school teachers' e-teaching proficiency and their anxiety.

REVIEW OF LITERATURE:

Kaur (2018) studied how computer literacy affects teacher effectiveness among secondary school teachers. The results showed a significant difference in effectiveness between computer-literate and non-literate government school teachers.

Correa et al. (2020) analyzed the digital proficiency of teachers in state public high schools in Palmas-TO. The results showed that most of the 182 teachers were at the B1-Integrator level, which is considered a moderate level of digital proficiency.

Mailizar and Fan (2020) studied the knowledge of Indonesian secondary teachers regarding the use of ICT in mathematics classrooms. The findings indicated that most Indonesian secondary mathematics teachers had inadequate knowledge of ICT and its application in teaching.

Fernández-Batanero et al. (2021) studied how educational technology can improve teaching, but many teachers find it stressful and overwhelming to use. The main finding was that teachers experience high levels of stress and anxiety when using educational technology. The study concluded that more research is needed to find ways to reduce these stress and anxiety symptoms in teachers.

Jamaludin et al. (2023) aimed to examine the digital anxiety faced by academicians when conducting online teaching. The results showed that digital anxiety does affect academicians, which can influence their willingness to adopt online teaching, either positively or negatively.

Zhong et al. (2024) studied the factors affecting teachers' anxiety about teaching in Virtual Reality (VR) environments. The results showed that better technical skills, higher self-confidence, and strong school support significantly reduced teachers' anxiety about using VR.

Swain (2024) investigated the digital competency of government school teachers using the DigCompEdu self-reflection tool, which consists of 25 items across seven domains. The findings reveal that a significant proportion of participants, specifically 30%, fall within a single competency level.

METHODOLOGY

Sample

800 high school teachers from the Raipur district of Chhattisgarh were selected as sample in the present study. This group is evenly divided between government and non-government schools, with 400 teachers from each category. Stratified random sampling was used for the selection of the sample.

Tools:

(a)e-teaching Questionnaire :

A pre-validated questionnaire was utilized to evaluate the e-teaching proficiency of high school teachers. The questionnaire consists of 20 statements to assess the teachers' e-teaching proficiency. The scoring system for this questionnaire is straightforward: each 'Yes' response earns 1 point, while each 'No' response receives 0 points. Consequently, the maximum possible score is 20, indicating a high level of e-teaching proficiency, while the minimum score is 0, reflecting no proficiency. This scoring pattern is structured so that a higher total score corresponds to a greater degree of e-teaching proficiency among the respondents. The reliability and validity of this inventory was established through Cronbach alpha (0.88) and LawShe Index (0.94).

(b)   Sinha's Comprehensive Anxiety Test

The anxiety in selected high school teachers was measured through Sinha and Sinha's (2007) comprehensive anxiety test. This test consists of 90 Yes/No type statements and the respondent needs to choose one of them. For a yes response, a 01 mark is awarded while for a No response 0 mark is awarded. The test-retest reliability coefficient of 0.85 makes this test reliable for measuring anxiety. The validity coefficient of this test with Taylor's Manifest Anxiety Test was calculated as 0.62 which makes this test a valid measure of anxiety at 0.01 level of statistical significance.

Procedure:

800 high school teachers were selected from the Raipur district of Chhattisgarh following the requirements of the research design. e-teaching proficiency questionnaire and Sinha and Sinha's anxiety inventory were administered and recorded responses were scored. The scores were entered in an Excel sheet in respective groups. Statistical measures suitable for the study were chosen to analyse the data. The results are presented in Tables 1, 2 and 3 respectively.
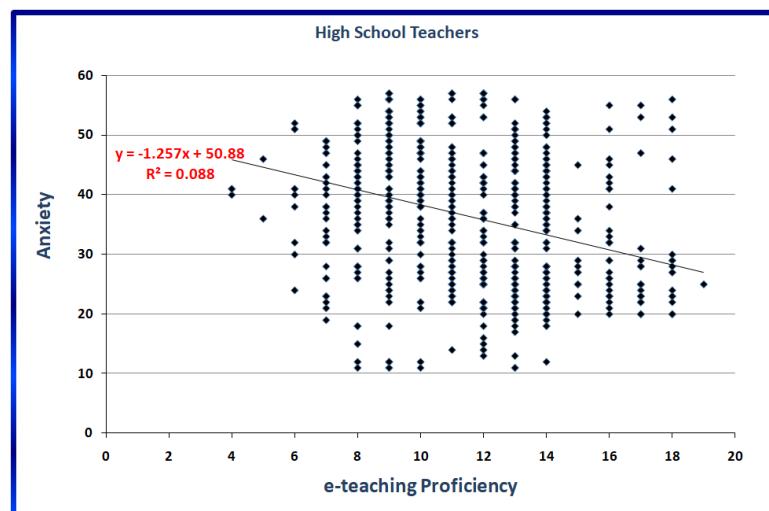
RESULTS

Table 1

Correlation Coefficient between e-teaching Proficiency and Anxiety in High School Teachers (N=800)

	'r'	Anxiety
e-teaching		-0.298**

r(df=798) .06 (p<.05) and 0.09 (p<.01); ** p<.01

Figure 1

Scatter Plot and Coefficient of Determination (R^2) for e-teaching Proficiency and Anxiety in High School Teachers (Sample Size N=800)

The results presented in Table 1 indicate the correlation between high school teachers' e-teaching proficiency and their anxiety, based on a sample of 800 participants. The Pearson Correlation Coefficient (r) is reported as -0.298 (p<.01), which signifies a negative correlation between the two variables. This means that as high school teachers' proficiency in e-teaching increases, their anxiety also tends to decrease significantly.

The coefficient of determination, R^2=0.088, indicates that approximately 8.8% of the variance in anxiety can be explained by e-teaching proficiency in high school teachers.
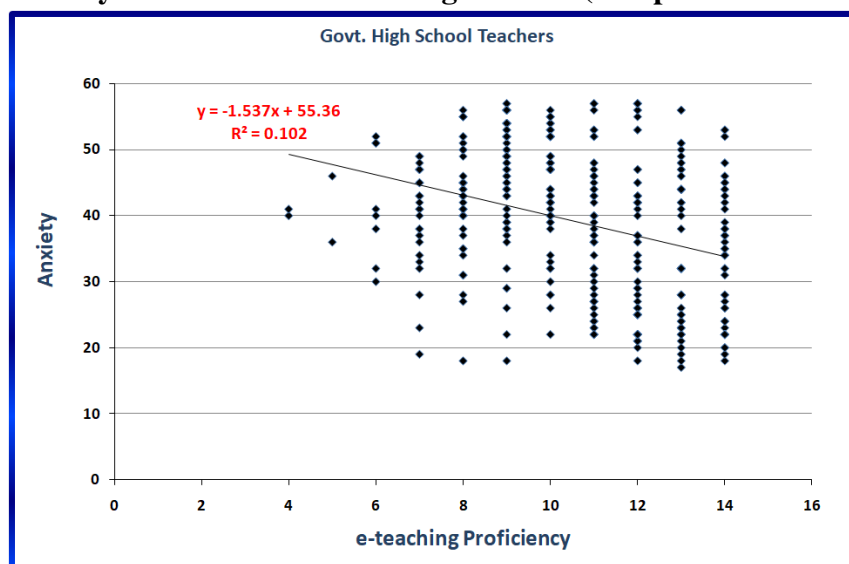
Table 2

Correlation Coefficient between e-teaching Proficiency and Anxiety in High School Teachers of Govt. High Schools (N=400)

	'r'	Anxiety
e-teaching		-0.320**

r(df=398) .09 (p<.05) and 0.12 (p<.01); ** p<.01

The results presented in Table 2 indicate the correlation between e-teaching proficiency of high school teachers of govt. school and their anxiety, based on a sample of 400 participants. The Pearson Correlation Coefficient (r) is reported as -0.320 (p<.01), which signifies a negative correlation between the two variables. This means that as govt. high school teachers' proficiency in e-teaching increases, anxiety also tends to decrease significantly.

Figure 2

Scatter Plot and Coefficient of Determination (R^2) for e-teaching Proficiency and Anxiety in Teachers of Govt. High School (Sample Size N=400)
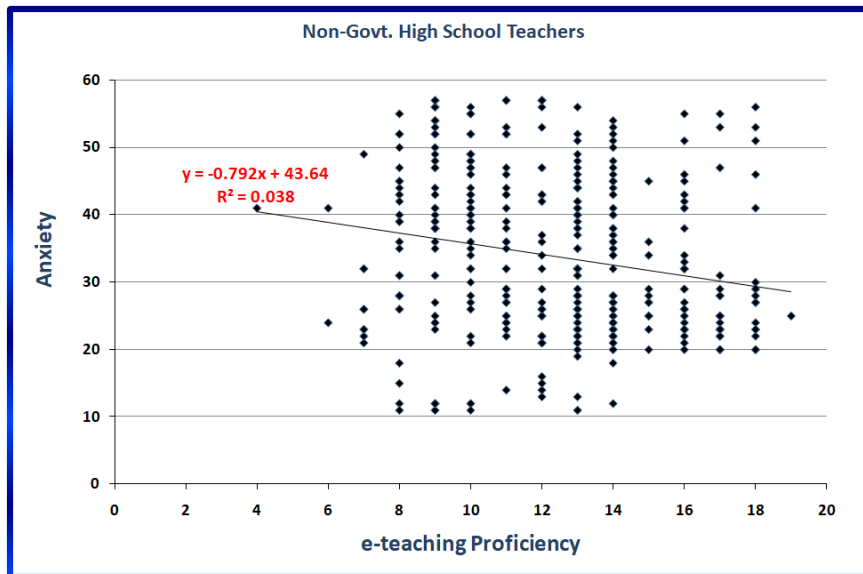

The coefficient of determination, R^2=0.10, indicates that approximately 10% of the variance in anxiety can be explained by e-teaching proficiency in high school teachers working in govt. schools.

Table 3

Correlation Coefficient between e-teaching Proficiency and Anxiety in High School Teachers of Non-Govt. High Schools (N=400)

	'r'	Anxiety
e-teaching		-0.195**

r(df=398) .09 (p<.05) and 0.12 (p<.01); ** p<.01

Figure 3

Scatter Plot and Coefficient of Determination (R^2) for e-teaching Proficiency and Anxiety in Teachers of Non-Govt. High School (Sample Size N=400)

The results presented in Table 3 indicate the correlation between e-teaching proficiency of high school teachers of non-govt. school and their anxiety, based on a sample of 400 participants. The Pearson Correlation Coefficient (r) is reported as -0.195 (p<.01), which signifies a negative correlation between the two variables. This means that as non-govt. high school teachers' proficiency in e-teaching increases, and their anxiety also tends to decrease significantly. The coefficient of determination, R^2=0.038, indicates that approximately 3.8% of the variance in anxiety can be explained by e-teaching proficiency in high school teachers working in non-govt. schools.

DISCUSSION:

The finding can be explained through Bandura's Self-Efficacy Theory (1977). This theory explains that confidence in one's abilities boosts motivation and performance. As teachers enhance their e-teaching skills, their confidence grows, improving their mental abilities and adaptability. This reduces anxiety as they feel more in control. Hence the results are consistent with the well-established theory of Bandura's self-efficacy theory.

CONCLUSION

Based on the results it can be concluded that e-teaching proficiency and anxiety in high school teachers are negatively correlated thereby indicating that enhancing e-teaching skills may therefore serve as a valuable tool for reducing anxiety among teachers, allowing them to feel more confident and comfortable with digital teaching methods.

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