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RESEARCH ARTICLE

A COMPARATIVE STUDY OF ATTITUDE AMONG POST GRADUATE STUDENTS TOWARDS E-LEARNING

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ABSTRACT

The goal of the current study was to measure postgraduate students' attitudes toward online e-learning. Two hundred and thirteen (213) subjects were chosen using a stratified sample technique, with 95 male and 118 female postgraduate students between the ages of 20 to 27 serving as subjects. The subjects were drawn from Post Graduate Government, Sector-11, Chandigarh. They were further divided into four groups i.e. Group- A (seventy six (N=76) M.P.Ed., Male=31 and Female=45), Group-B (thirty three (N=33) M.A English, Male=13 and Female=20), Group-C (Seventy four (N=74) M.A history, Male=39 and Female=35) and Group-D (thirty (N=30) M.A Punjabi Male=12 and Female=18). An e-learning questionnaire created by Rani (2015) was used to gauge postgraduate students' attitudes toward e-learning. ANOVA, or one-way analysis of variance, was used to compare all of the groups. The Scheffe Post-hoc test was used to determine the direction and magnitude of the change when "P" values were deemed significant. A significance level of 0.05 was established. It is concluded that significant differences among male post graduate students on the sub variable e learning interest. When the mean values for all the classes were calculated, it was found that M.A. Punjabi students were more interested in e-learning than their counterparts who were M.P.Ed., M.A. Punjabi, M.A. History, and M.A. English. It is concluded that no significant differences among male post graduate students on the sub variable usefulness, ease of e-learning, e-learning confidence and variable attitude towards e-learning. The mean values of all the classes were compared, and it was found that M.A. Punjabi students had higher levels of interest in, ease of, confidence in, and variable attitude toward e-learning than their counterparts in M.P.Ed., M.A. History, and M.A. English. It was also found that M.P.Ed. students scored higher on the sub-variable usefulness than their counterparts. The sub-variables of e-learning interest, utility, convenience of use, e-learning confidence, and variable attitude toward e-learning were shown to be similar among female postgraduate students. When the mean values of all the classes were compared, it was found that M.P.Ed. students outperformed their counterparts in M.A. Punjabi, M.A. History, and M.A. English in terms of e-learning interest, utility, ease of use, confidence, and variable attitude.

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INTRODUCTION

A person's attitude is their prevailing inclination to react either positively or negatively to an object. Aptus is the Latin word from which the word attitude is derived. Attitude refers to an individual's feelings or beliefs. It is a person's inward feeling. A person's attitude toward his work is an emotionalized mental state. There is an emotional component to it, and his emotional state is crucial. To succeed at work, having a positive attitude is essential. Positive attitudes lead to improved performance. A positive teacher can motivate his students to learn more. The term "attitude" is typically used by social psychologists to describe our assessments of almost any element of the social world, including how positively or negatively we react to problems, people, social groups, and objects, including desserts. It is frequently challenging to alter views once they have been established. The fact that they are frequently ambivalent is a significant component of attitude. The term "attitude ambivalence" describes how our opinions on things, problems, people, or events are never consistently good or negative; rather, they are frequently a combination of both positive and negative reactions. A common definition of attitude is the propensity to respond positively or negatively to a specific class of stimuli, such as a country or rational group, a custom, or an institution. It has been suggested that affect, conduct, and cognition are distinct but connected aspects of attitude. The term "attitude" refers to a person's positive or negative sentiments

about performing the goal behavior. This implies that learner' attitudes toward engaging in computer-based e-learning activities, both good and negative, will have a direct impact on how they behave when using online learning for their studies. When learning online, various students have different perspectives. Determining how much a student uses the e-learning system can be aided by knowing how they feel about it (Ong and Lai, 2006). The phrase "e-learning" refers to the use of electronic technologies to convey knowledge to students either synchronously or asynchronously. Although the exact origins of the phrase are unknown, it is widely believed that e-learning evolved as the usage of personal computers and the internet increased (Wang et al., 2021). Allport (1935), an attitude is a state of readiness in the mind and brain that has been organized through experience and that directs or influences how a person reacts to all connected things and circumstances. E-learning, as defined by Ellis et al. (2009), is the use of information and communication technologies to improve student learning. The term "e-learning" encompasses a broad range of educational materials and approaches that are always evolving to meet the needs of educators and learners. The speed of internet connections and worldwide communication has made web material more dynamic and richer for users. E-learning platforms give students another, more adaptable way to communicate, making it easier for them to engage with others. Over time, the institution will have a strategic opportunity to enter the new field of education thanks to the e-learning experience it has gained. In a similar vein, this technology allowed students to access a variety of materials from anywhere at any time. Students now have greater control over their education, allowing them to collect the resources they require and study whenever they have free time. Network-based e-learning systems also promote the acquisition and sharing of knowledge by both individuals and groups, which can improve learning efficacy, stimulate knowledge innovation, and eventually raise competitiveness among individuals and groups.

Because of this, e-learning platforms seem to be an attempt to move closer to a higher-quality and more efficient education. According to Aixia and Wang (2011), e-learning application systems include resources management systems, learning management systems, virtual classroom systems, portal systems, multi-media recording systems, bulletin board systems, and teaching evaluation systems. The purposeful application of networked information and technology to teaching and learning is known as e-learning. The most common definition of e-learning is a form of ICT-facilitated learning that raises the standard of instruction and learning. Other words like distributed learning, network and web-based learning, online learning, and virtual learning are also used. All of them mostly relate to educational procedures that utilize information and communications technologies. To create a better learning environment, e-learning makes use of interactive technologies and communication networks. It has the power to completely change how education is conducted everywhere. The development of information and communication technology, or ICT, has revolutionized the corporate and educational sectors on a global scale. With the express goal of improving student outcomes through extensive use of technology, teaching and learning methodologies have undergone a dramatic redesign. E-learning has become more widely used by businesses and universities to give training and education in more efficient and economical methods. Information and communication technology, or ICT, is critical to many aspects of our life in the modern period and offers both great promise and challenges.

The majority of the world's educational systems view ICT initiatives in education as creative practices, and it is regarded as a crucial instrument for instruction and learning. As a result, teaching and learning methods are being updated to better serve students by utilizing electronic devices in the classroom, such as laptops, projectors, cell phones, etc. Using a variety of educational media enhances the quality of the teaching and learning process in the field of education. Information technology has made it necessary to modify the students' learning plan using e-learning resources.
Students and learning objectives are connected through e-learning, which also offers many methods for achieving the learning objectives. E-learning may often be accessed online via a web browser. E-learning refers to the dissemination of education, instruction, and learning using a variety of electronic means. It consists of the various components of a system cooperating with one another. According to Newton (2003), there are three primary goals of e-learning systems: increasing access to training and education; improving the caliber of instruction and learning; and helping universities keep a competitive edge in a student market that is changing. Students have greater control over their educational journey thanks to e-learning, which allows them to study whenever they have free time and access the necessary materials. Network-based e-learning systems also promote the acquisition and sharing of knowledge by both individuals and groups, which can improve learning efficacy, stimulate knowledge innovation, and eventually raise competitiveness among individuals and groups. Due to the rapid advancement of internet technology, e-learning has grown in popularity as a teaching method in higher education. E-learning has a competitive edge these days, and many colleges have adopted it, which affects students' academic performance. However, other universities and educational institutions continue to use very little interactive e-learning, which directly improves student performance and overall academic achievement. Thanks to technology, people may now learn from anywhere at any time without having to attend lectures, which also helps to transcend geographic boundaries.

METHOD AND PROCEDURE

Ninety-five (N=95) male and one hundred and eighteen (N=118) female postgraduate students between the ages of twenty to twenty-seven were chosen using a stratified sampling technique to serve as subjects for this study. The subjects were drawn from Post Graduate Government College, Sector-11, Chandigarh. They were further divided into four groups i.e. Group- A (seventy six (N=76) M.P.Ed., Male=31 and Female=45), Group-B (thirty three (N=33) M.A English, Male=13 and Female=20), Group-C (Seventy four (N=74) M.A History, Male=39 and Female=35) and Group-D (thirty (N=30) M.A Punjabi Male=12 and Female=18). An e-learning questionnaire created by Rani (2015) was used to gauge postgraduate students' attitudes toward e-learning. The complete group was compared using one-way analysis of variance (ANOVA). The direction and magnitude of the difference were determined using the Scheffe Post-hoc test in cases where "P" values were deemed significant. 0.05 was used as the significant level.

RESULTS

Table 1. Descriptive analysis among male post graduate students on the sub-variable E-Learning Interest

S. No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	31	43.38	4.16	.74
2.	M.A English	13	40.69	3.59	.99
3.	M.A History	39	43.59	6.26	1.00
4.	M.A Punjabi	12	47.08	5.29	1.52
Total		95	43.53	5.39	.55

The results for the sub-variable of interest in e-learning among male postgraduate students are shown in Table 1. The mean and standard deviation of the M.P.Ed. students' scores were 43.38 and 4.16, respectively. The mean and standard deviation of the MA English students' scores were 40.09 and 3.59, respectively. The mean and standard deviation of the MA History students' scores were 43.59 and 6.26, respectively. The mean and standard deviation of the scores of MA Punjabi students were 47.08 and 5.29, respectively.

Table 2. One way analysis of variance (ANOVA) results among male post graduate students on the sub-variable E learning interest

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	256.83	3	85.61	3.14	.02*
Within Groups	2476.78	91	27.217		
Total	2733.62	94			

*Significant at 0.05

Table 2 shows that there were significant differences between male postgraduate students on the e-learning interest sub-variable, as indicated by the P-value (Sig.).02 was discovered to be below the significance level of 0.05 ($p<0.05$). Scheffe's Post-hoc test was used to examine the direction and significance of the difference between paired means among male postgraduate students on the sub-variable of e-learning interest because the resultant P-value was deemed significant.

Table 3. Scheffe's post-hoc test results among male post graduate students towards on the sub variable e learning interest

Means		Mean difference	Std. Error	P-value (Sig.)
M.P.Ed (43.38)	MA History (43.59)	.125	1.25	1.00
	MA Punjabi (47.08)	3.69	1.77	.23
	MA English (40.69)	2.69	1.72	.48
MA English (40.69)	MA History (43.59)	2.82	1.67	.42
	MA Punjabi (47.08)	6.39	2.08	.03*
MA History (43.59)	MA Punjabi (47.08)	3.57	1.72	.23

*Significant at 0.05

Table 3 shows the mean difference between students pursuing an MA in History and those pursuing an M.P. Ed.12. Although not statistically different from their counterpart, MA History, the P-value (Sig.) 1.00 indicated that they had demonstrated a greater interest in online learning. The average difference between Punjabi students pursuing an MA and those pursuing an M.P.Ed. was 3.69. Although not statistically different from their counterparts with M.P.Ed., MA Punjabi showed a greater interest in e-learning, according to the P-value (Sig.).23. There was a mean difference of 2.69 between M.P.Ed. and M.A. English students. M.P.Ed. students showed a greater interest in e-learning, although not substantially more than their M.A. English counterparts, according to the P-value (Sig.).48. There was a 2.82 mean difference between MA English and MA History students. MA History showed a greater interest in e-learning than their counterpart, MA English, but not substantially, according to the P-value (Sig. 1.42). There was a mean difference of 6.39 between MA Punjabi and MA English students. MA Punjabi showed a substantially higher interest in e-learning than their counterpart, MA English, according to the P-value (Sig.).03. There was a mean difference of 3.57 between MA Punjabi and MA History students. Although it was not statistically significant, the P-value (Sig.).23 indicated that MA Punjabi had demonstrated a greater interest in e-learning than their MA History counterpart.

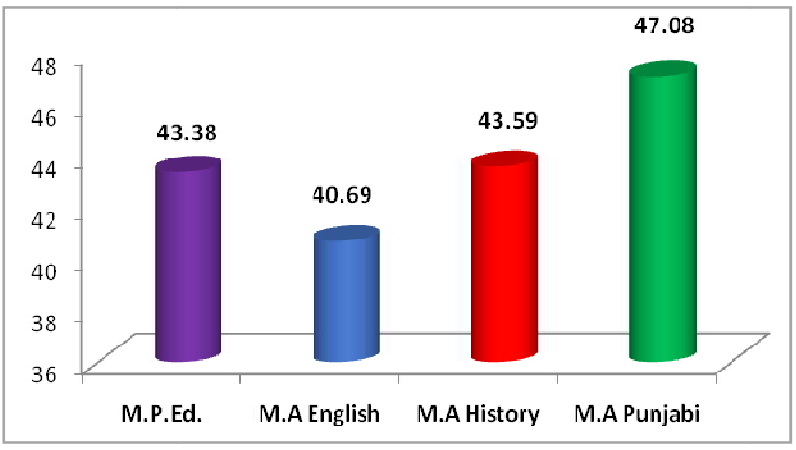

Figure 1. Graphical representation means score of e learning interest with regard male post graduate students

Table 4. Descriptive analysis among male post graduate students on the sub-variable usefulness

S.No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	31	89.93	13.41	2.40
2.	M.A English	13	85.53	8.54	2.36
3.	M.A History	39	88.00	10.04	1.60
4.	M.A Punjabi	12	85.25	11.02	3.18
Total		95	87.94	11.17	1.14

The results for the usefulness sub-variable among male postgraduate students are shown in Table 4. The mean and standard deviation of the M.P.Ed. students' scores were 89.93 and 13.41, respectively. The mean and standard deviation of the MA English students' scores were 85.53 and 8.54, respectively. The mean and standard deviation of the MA History students' results were 88.00 and 10.04, respectively. The mean and standard deviation of the scores of MA Punjabi students were 87.94 and 11.02, respectively.

Table 5. One way analysis of variance (ANOVA) results among male post graduate students on the sub-variable usefulness

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	285.387	3	95.12	.756	.52
Within Groups	11443.35	91	125.75		
Total	11728.73	94			

*Significant at 0.05

Table 5 shows that there were negligible differences between male postgraduate students who played on the sub-variable usefulness, as indicated by the P-value (Sig.).52 was discovered to be greater than the significance level of 0.05 (p>0.05). There is no need to use the post-hoc test because the P-value was determined to be insignificant.

Table 6. Descriptive analysis among male post graduate students on the sub-variable ease of e learning

S.No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	31	47.00	7.11	1.27
2.	M.A English	13	45.92	5.96	1.65
3.	M.A History	39	47.69	6.85	1.09
4.	M.A Punjabi	12	53.66	23.88	6.89
	Total	95	47.97	10.56	1.08

The results for the sub-variable of ease of e-learning among male postgraduate students are shown in Table 6. The mean and standard deviation of the M.P.Ed. students' scores were 47.00 and 7.11, respectively. The mean and standard deviation of the scores of MA English students were 45.92 and 5.96, respectively. The mean and standard deviation of the scores of MA History students were 47.69 and 6.85, respectively. The mean and standard deviation of the scores of MA Punjabi students were 53.66 and 23.88, respectively.

Table 7. One way analysis of variance (ANOVA) results among male post graduate students on the sub-variable ease of e learning

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	476.06	3	158.68	1.443	.23
Within Groups	10007.89	91	109.977		
Total	10483.95	94			

*Significant at 0.05

Table 7 shows that the P-value (Sig.) for the sub-variable of ease of e-learning among male postgraduate students was not significantly different.23 was discovered to be greater than the significance level of 0.05 (p>0.05). There is no need to use the post-hoc test because the P-value was determined to be insignificant.

Table 8. Descriptive analysis among male post graduate students on the sub-variable e learning confidence

S.No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	31	39.54	6.08	6.02
2.	M.A English	13	35.15	4.37	4.37
3.	M.A History	39	39.28	6.33	6.33
4.	M.A Punjabi	12	40.50	6.23	6.23
	Total	95	38.95	6.10	6.10

The results for the sub-variable of e-learning confidence among male postgraduate students are shown in Table 8. The mean and standard deviation of the M.P.Ed. students' scores were 39.54 and 6.08, respectively. The mean and standard deviation of the MA English students' scores were 35.15 and 4.37, respectively. The mean and standard deviation of the MA History students' scores were 39.28 and 6.33, respectively. The mean and standard deviation of the scores of MA Punjabi students were 40.50 and 6.23, respectively.

Table 9. One way analysis of variance (ANOVA) results among male post graduate students on the sub-variable e learning confidence

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	231.56	3	77.18	2.149	.09
Within Groups	3268.26	91	35.915		
Total	3499.832	94			

*Significant at 0.05

Table 9 shows that the P-value (Sig.) for the sub-variable of e-learning confidence among male postgraduate students was not significantly different.09 was discovered to be greater than the significance level of 0.05 (p>0.05). There is no need to use the post-hoc test because the P-value was determined to be insignificant.

Table 10. Descriptive analysis among male post graduate students on the variable attitude towards e learning

S.No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	31	220.41	20.52	3.68
2.	M.A English	13	207.30	9.69	2.68
3.	M.A History	39	218.00	23.55	3.77
4.	M.A Punjabi	12	226.50	31.50	9.09
	Total	95	218.40	22.66	2.32

The results for male postgraduate students on the attitude toward online learning variable are shown in Table 10. The mean and standard deviation of the M.P.Ed. students' scores were 220.41 and 20.52, respectively. The mean and standard deviation of the MA English students' scores were 207.30 and 9.69, respectively. The mean and standard deviation of the MA History students' scores were 218.00 and 23.55, respectively. The mean and standard deviation of the MA Punjabi students' results were 226.50 and 31.50, respectively.

Table 11. One way analysis of variance (ANOVA) results among male post graduate students on the variable Attitude towards e learning

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	2519.48	3	839.827	1.670	.17
Within Groups	45759.31	91	502.850		
Total	48278.80	94			

*Significant at 0.05

Table 11 shows that there were negligible variations between male postgraduate students' attitudes toward online learning, as indicated by the P-value (Sig.).17 exceeded the significance level of 0.05 (p>0.05). The post-hoc test is not necessary because the P-value was determined to be negligible.

Table 12. Descriptive analysis among female post graduate students on the sub- variable e learning interest

S.No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	45	44.64	5.05	.75
2.	M.A English	20	42.00	4.61	1.03
3.	M.A History	35	44.42	5.51	.93
4.	M.A Punjabi	18	42.72	5.74	1.35
	Total	118	43.83	5.27	.48

The results for the sub-variable of interest in e-learning among female postgraduate students are shown in Table 12. The mean and standard deviation of the M.P.Ed. students' scores were 44.64 and 5.05, respectively. The mean and standard deviation of the MA English students' scores were 42.00 and 4.61, respectively. The mean and standard deviation of the MA History students' scores were 44.42 and 5.51, respectively. The mean and standard deviation of the scores of MA Punjabi students were 42.72 and 5.74, respectively.

Table 13. One way analysis of variance (ANOVA) results among female post graduate students on the sub-variable e learning interest

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	131.44	3	43.81	1.601	.19
Within Groups	3120.49	114	27.37		
Total	3251.94	117			

*Significant at 0.05

Table 13 shows that the P-value (Sig.) for the sub-variable of e-learning interest among female postgraduate students participants was not significantly different.19 was discovered to be greater than the significance level of 0.05 (p>0.05). There is no need to use the post-hoc test because the P-value was determined to be insignificant.

Table 14. Descriptive analysis results among female post graduate students on the sub- variable e learning usefulness

S. No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	45	92.97	17.50	2.60
2.	M.A English	20	84.65	7.07	1.58
3.	M.A History	35	88.00	11.22	1.89
4.	M.A Punjabi	18	86.77	11.24	2.65
	Total	118	89.14	13.73	1.26

The results for the usefulness sub-variable among female postgraduate students are shown in Table 14. The mean and standard deviation of the M.P.Ed. students' scores were 92.97 and 17.50, respectively. The mean and standard deviation of the MA English students' scores were 84.65 and 7.07, respectively. The mean and standard deviation of the MA History students' scores were 88.00 and 11.22, respectively. The mean and standard deviation of the scores of MA Punjabi students were 86.77 and 11.24, respectively.

Table 15. One way analysis of variance (ANOVA) results among female post graduate students on the sub-variable usefulness

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	1211.91	3	403.97	2.208	.09
Within Groups	20860.63	114	182.988		
Total	22072.55	117			

*Significant at 0.05

Table 15 shows that, according to the P-value (Sig.), there were negligible differences among female postgraduate students who played on the usefulness sub-variable.09 was discovered to be greater than the significance level of 0.05 (p>0.05). There is no need to use the post-hoc test because the P-value was determined to be insignificant.

Table 16. Descriptive analysis results among female post graduate students on the sub- variable ease of e learning

S.No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed	45	48.26	5.58	.83
2.	M.A English	20	47.15	4.77	1.06
3.	M.A History	35	48.25	6.42	1.08
4.	M.A Punjabi	18	47.61	4.56	1.07
	Total	118	47.97	5.53	.50

The results for the sub-variable of ease among female postgraduate students are shown in Table 16. The mean and standard deviation of the M.P.Ed. students' scores were 48.26 and 5.58, respectively. The mean and standard deviation of the scores of MA English students were 47.15 and 4.77, respectively. The mean and standard deviation of the MA History students' results were 48.25 and 6.42, respectively. The mean and standard deviation of the scores of MA Punjabi students were 47.61 and 4.56, respectively.

Table 17. One way analysis of variance (ANOVA) results among female post graduate students on the sub-variable ease of e learning

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	22.61	3	7.537	.241	.86
Within Groups	3560.31	114	31.231		
Total	3582.92	117			

*Significant at 0.05

Table 17 shows that the P-value (Sig.) for the sub-variable of ease of e-learning among female postgraduate students was not significantly different.86 was discovered to be greater than the significance level of 0.05 (p>0.05). There is no need to use the post-hoc test because the P-value was determined to be insignificant.

Table 18. Descriptive analysis results among female post graduate students on the sub- variable e learning confidence

S. No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	45	38.57	4.95	.73
2.	M.A English	20	36.35	3.71	.83
3.	M.A History	35	36.94	6.25	1.05
4.	M.A Punjabi	18	37.16	5.11	1.20
	Total	118	37.50	5.23	.48

The results for the sub-variable of ease among female postgraduate students are shown in Table 18. The mean and standard deviation of the M.P.Ed. students' scores were 38.57 and 4.95, respectively. The mean and standard deviation of the MA English students' scores were 36.35 and 3.71, respectively. The mean and standard deviation of the MA History students' results were 36.94 and 6.25, respectively. The mean and standard deviation of the scores of MA Punjabi students were 37.16 and 5.11, respectively.

Table 19. One way analysis of variance (ANOVA) results among female post graduate students on the sub-variable e learning confidence

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	91.58	3	30.52	1.116	.34
Within Groups	3117.91	114	27.35		
Total	3209.50	117			

*Significant at 0.05

Table 19 shows that the P-value (Sig.) for the sub-variable of e-learning confidence among female postgraduate students players was not significantly different.34 was discovered to be greater than the significance level of 0.05 (p>0.05). There is no need to use the post-hoc test because the P-value was determined to be insignificant.

Table 20. Descriptive analysis among female post graduate students on the variable attitude towards e learning

S.No	Groups	N	Mean	Std. Deviation	Std. Error
1.	M.P.Ed.	45	224.02	23.19	3.45
2.	M.A English	20	210.50	15.94	3.56
3.	M.A History	35	216.71	22.92	3.87
4.	M.A Punjabi	18	214.27	22.05	5.19
	Total	118	218.07	22.20	2.04

The results for the variable of attitude toward e-learning among female postgraduate students are shown in Table 20. The mean and standard deviation of the M.P.Ed. students' scores were 224.02 and 23.19, respectively. The mean and standard deviation of the MA English students' scores were 210.50 and 15.94, respectively. The mean and standard deviation of the MA History students' scores were 216.71 and 22.92, respectively. The mean and standard deviation of the scores of MA Punjabi students were 214.27 and 22.05, respectively.

Table 21. One way analysis of variance (ANOVA) results among female post graduate students on the variable attitude towards e learning

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	3063.58	3	1021.19	2.130	.10
Within Groups	54646.73	114	479.35		
Total	57710.31	117			

*Significant at 0.05

Table 21 shows the P-value (Sig.) for the variable attitude toward e-learning, which indicates that there were negligible differences among female postgraduate students.10 was discovered to be greater than the significance level of 0.05 (p>0.05). There is no need to use the post-hoc test because the P-value was determined to be insignificant.

DISCUSSION

The results above make clear that there are notable variations in the sub-variable of interest in online learning among male postgraduate students. The mean values of all the classes were compared, and it was found that MA Punjabi students were more interested in online learning than their counterparts who were M.P.Ed., MA History, and MA English. It has been concluded that they prefer using e-learning to obtain information, that they would like to learn how to use e-learning resources, and that occasionally e-learning diverts their attention. According to Rani (2023), there were no appreciable changes in the views of postgraduate students about e-learning across genders and streams. The aforementioned findings indicate that male postgraduate students do not significantly differ in the usefulness sub-variable. The mean values of all the classes were compared, and it was found that M.P.Ed. students were more valuable than their MA English, MA Punjabi, and MA History counterparts. According to a summary, e-learning is a trustworthy source of knowledge; users believe that information exchanged through e-learning is accurate; using e-learning is a waste of time; and e-learning has a negative impact on health. Mahapatra (2021) concluded that as students' opinions on e-learning were found to be rather positive, policymakers, administrators, and academicians from different educational institutions should take the necessary steps to encourage e-learning. The aforementioned findings indicate that among male postgraduate students, there are no discernible differences in the sub-variable of e-learning ease. When the mean scores for each class were compared, it was found that MA History students found online learning easier than their counterparts who studied Punjabi, English, and M.P.Ed. It has been summarized that, in my opinion, online learning is beneficial; it is an inexpensive source of information; it takes a lot of time; and I am tired from working on it all the time. According to Hartini et al. (2020), the high school physics teaching resources created using the E-learning cycle model were suitable for use in the classroom. The results above show that there are no appreciable variations in the sub-variable of e-learning confidence amongst male postgraduate students. The mean values of all the classes were compared, and it was found that MA Punjabi students showed greater e-learning confidence than their counterparts in the MA English, MA History, and M.P.Ed. It has been summarized that they are well-versed in e-learning; e-learning is a relatively new concept; e-learning is challenging for their task; and they feel anxious when they consider it. According to Abas et al. (2019), the E-learning instructional paradigm considerably enhanced the respondents' conceptual understanding of earth systems.

The aforementioned results show that male postgraduate students' attitudes regarding e-learning do not differ significantly. The mean values of all the classes were compared, and it was found that MA Punjabi students had a more positive attitude toward online learning than their counterparts who were MA English, MA History, and MA PEd. It has been concluded that online learning helps them when they skip class, that it is more engaging than traditional classroom instruction, that it lowers reading proficiency, and that it is expensive for them. The findings of Almobarraz and Farag (2012) showed that there was a generally favorable attitude toward e-learning. The results above make it clear that there are no appreciable variations in the sub-variable of interest in online learning among female postgraduate students. When the mean values of all the classes were compared, it was found that M.P.Ed. students showed more interest in online learning than their counterparts who were MA Punjabi, MA History, and MA English. It has been concluded that they prefer using e-learning to obtain information, that they would like to learn how to use e-learning resources, and that occasionally e-learning diverts their attention. According to Naade and Okwelle (2018), there was no appreciable change in the academic performance of the students in the experimental and control groups.

The aforementioned findings indicate that among female postgraduate students, there are no discernible variations in the usefulness sub-variable. The mean values of all the classes were compared, and it was found that M.P.Ed. students were more valuable than their MA English, MA Punjabi, and MA History counterparts. According to a summary, e-learning is a trustworthy source of knowledge; users believe that information exchanged through e-learning is accurate; using e-learning is a waste of time; and e-learning has a negative impact on health. According to Nath and Bairagya (2019), all B.Ed. students had the same attitude toward online learning, irrespective of the sort of home they came from. Rural-dwelling B.Ed. students were more upbeat than their city-dwelling counterparts. First-year B.Ed. students were less optimistic than second-year students. The results above show that there are no appreciable differences in the sub-variable of e-learning easiness amongst female postgraduate students. The mean scores for all the classes were compared, and it was found that M.P.Ed. students found online learning easier than their MA English, MA Punjabi, and MA History counterparts. It has been summarized that they believe e-learning is beneficial, inexpensive, and time-consuming. They also believe that working on e-learning constantly wears me out. According to Singh and Raza (2022), there were no disparities in the opinions of male and female students regarding e-learning according to their subject background, settlement, or tribe status. The results above show that there are no appreciable variations in the sub-variable of e-learning confidence among female postgraduate students. The mean values of all the classes were compared, and it was found that M.P.Ed. students showed greater e-learning confidence than their MA English, MA Punjabi, and MA History counterparts. It has been summarized that they are well-versed in e-learning; e-learning is a relatively new concept; e-learning makes them anxious; e-learning proves challenging for me. According to the aforementioned findings, there are no appreciable variations in the attitudes of female postgraduate students toward online learning. The mean values of all the classes were compared, and it was found that M.P.Ed. students had a more positive attitude toward online learning than their MA English, MA Punjabi, and MA History counterparts. It has been concluded that online learning helps them when they skip class, that it is more engaging than traditional classroom instruction, that it lowers reading proficiency, and that it is expensive for them. According to Behra and Seth (2023), there was no discernible difference between the opinions of men and women toward online learning. Furthermore, there was no appreciable difference in the opinions of students majoring in science, business, and the arts about online learning. Kumari et al. (2022) indicated that most students had a favorable opinion of online education. Among college students, there was no discernible correlation between attitude level and certain socio demographic factors.

CONCLUSION

It is determined that there are notable variations in the subvariable of learning interest among male postgraduate students. When the mean values for all the classes were calculated, it was found that M.A. Punjabi students were more interested in e-learning than their counterparts who were M.P.Ed., M.A. Punjabi, M.A. History, and M.A. English. The subvariables of utility, ease of e-learning, e-learning confidence, and variable attitude toward e-learning were shown to be similar among male postgraduate students. The mean values of all the classes were compared, and it was found that M.A. Punjabi students had higher levels of interest in, ease of, confidence in, and variable attitude toward e-learning than their counterparts in M.P.Ed., M.A. History, and M.A. English. It was also found that M.P.Ed. students scored higher on the sub-variable usefulness than their counterparts. The subvariables of e-learning interest, utility, convenience of use, e-learning confidence, and variable attitude toward e-learning were shown to be similar among female postgraduate students. When the mean values of all the classes were compared, it was found that M.P.Ed. students outperformed their counterparts in M.A. Punjabi, M.A. History, and M.A. English in terms of e-learning interest, utility, ease of use, confidence, and variable attitude.

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