

ATTITUDE TOWARD E-LEARNING AMONG DIET STUDENTS IN MIZORAM

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Abstract: The present study is an attempt to find out the attitude of Mizoram DIET students toward e-learning and to compare their attitude with respect to their gender and locality. A descriptive research method was adopted for the study and the investigators collected 353 samples by simple random sampling method from the eight different DIETs in Mizoram. The major finding showed that DIET students of Mizoram showed an average attitude toward e-learning. The findings also reveal that there is no significant difference in attitude toward e-learning among DIET students regarding their gender and locality.

Keywords: Attitude, E-learning, DIET students.

1. INTRODUCTION

The 21st century is the digital age, an era of e-learning and the world of digital native people where information and knowledge in any field can be easily acquired at the tips of fingers through super high-speed internet-enabled smartphones within a second. All the required information and educational resources in any format can be accessed and downloaded for any purpose. Recent innovative e-learning strategies like Virtual classrooms, virtual reality, augmented reality, and game-based learning greatly leveraged the teaching-learning system to a new level. The recent practice of Artificial Intelligence Teachers (AI) to aid and substitute human teachers in various schools in different parts of the world may take over the role of human teachers in schools and higher institutions. In the future, there may be a time when students no longer need human teachers due to rapid advancement in e-learning and artificial intelligence where almost all the human tasks can be performed by artificial robots with ease and precision. So, it is high time to develop a positive attitude to be able to cope with those kinds of changes in technology to remain fit in today's highly competitive and sophisticated world. Policymakers and curriculum designers have to keep in mind the needs and integration of the most recent e-learning in the field of teacher education and school education.

According to Gordon Allport, "An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related." Thurstone said, "An attitude denotes the total of man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and other any specific topic." Anastasi (1976), defined attitude as a tendency to react favourably or unfavourably towards a designated class of stimuli, such as a national or racial group, custom, or institution. An attitude is a dispositional readiness to respond to certain situations, persons, or objects. Attitude testing is essential to achieve several purposes such as, 'to what extent the necessary attitudes have been developed in the students', 'to enable the students to develop desirable attitudes', 'to help teachers understand students' attitudes predispose the person to action, 'to help the teacher in good teaching' and 'to help the students in their career plans'.

E-learning can be defined as the use of digital technologies and media to deliver, support, and enhance teaching, learning, assessment, and evaluation". (Armitage and O'Leary, 2003). According to Naidu (2003), "E-learning refers to the systematic use of networked information and communication technology in teaching and learning". The delivery of instruction, teaching, and learning through the use of electronic media is known as e-learning. It is the result of several components of a system cooperating. E-learning application systems include portals, virtual classrooms, learning management systems, resource management systems, multi-media recording systems, bulletin board systems, and teaching evaluation systems, according to Aixia and Wang (2011). The goal of e-learning is to enable students to complete their coursework and get a credential without having to physically attend classes or universities. In light of the significance of electronic resources, the Indian government has launched various radio and television programs to offer educational content. SWAYAM PRABHA is a collection of DTH channels that use the GSAT-15 satellite to stream top-notch educational content around the clock. In a similar vein, anybody can access DIKSHA, NROER, NISHTHA, e-Pathshala, YouTube Channels, INFLIBNET, and numerous more e-platforms. NPTEL, IITs, UGC, CEC, IGNOU, NCERT, and NIOS are the entities that provide uplinks to these resources. Agencies and institutes like the UGC, NCERT, NCTE, and others are anxious to create. In Mizoram, SCERT has launched a television program called the Learning Ladder and Learning Pathway for the elementary and secondary stages where recorded educational content teaching videos are displayed on Television.

2. RATIONALE OF THE STUDY

The unprecedented COVID-19 pandemic lockdown greatly changed the mode of learning systems in various educational institutions and schools. There was a change from a traditional face-to-face mode to an online mode of teaching-learning processes, now we are already back to a face-to-face mode of learning system again. There is somehow a paradigm shift in the education system from a traditional face-to-face mode to an internet-mediated mode of learning. In the meantime, the various online platforms of education that we experienced during lockdown give us an insight into the field of distance online learning mode of education. It may be said that covid-19 lockdown is a blessing in disguise for the educational domain since it puts the education system into a whole new situation. It also brought out the mass development in the field of Information and Communication Technology (ICT) among students, parents, and teachers. The technology-mediated teaching-learning processes provide a wider knowledge to students and teachers.

We are living in the age of the digital world, where information and communication technology are part and parcel of society. There will be no single house where you cannot find at least one single electronic gadget, like a computer, laptop, smart television, smartphone, etc. The big breaking news, events, and incidents happening on other sides of the world can be seen and learned within a few seconds from our place. That is why it is important to make use of those kinds of electronic resources for teaching and learning purposes. This kind of transition is happening in other enterprises as well. Prospective teachers today need to stay updated in the field of ICT and online learning to be able to cope with the rapid advancement in this field of education. The current Diploma in Elementary Education (D.El.Ed) curriculum in Mizoram is out of date; it needs to be revised and updated according to the latest developments in the field of technology and other disciplines. The NEP 2020 also emphasized the integration of online learning and technology in education. Recent digital innovations in education, like virtual learning, augmented reality, and artificial intelligence need to be merged with the curriculum in teacher educational institutions. Today's children are very smart in terms of handling electronic gadgets digital online gaming and others. So, the in-service and pre-service teachers today need to be charged and equipped with the latest knowledge of technology to be able to deal with the digital native children.

In the context of Mizoram, a proper detailed, comprehensive study of e-learning among prospective teachers seems to be very rare. Fanai et al. (2022) and Lalsangpuii et al. (2023) conducted a study similar to the present study, but they limited their study to the prospective teachers in Aizawl City only. The investigator feels that a more comprehensive and inclusive study on this topic is needed among District Institute of Education and Training (DIET) students since DIET students are the future teachers and builders of the nation at the elementary and secondary levels. A ground reality and current status of DIET students about their attitude toward e-learning is urgently needed to take further proper action to improve in this field. Realizing its relevance, importance, and need in today's digital education system and perfectly in line with new educational policy, this study was conducted.

3. REVIEW OF RELATED LITERATURE

Liaw and Huang (2011) conducted a study on the topic 'A study of investigating learners' attitude towards e-learning'. In an attempt to study and explore individuals' attitudes and behaviors in using e-learning, this research proposes gender difference, computer-related experience, self-efficacy, and motivation aspects. In this study, 424 university students used the Blackboard system and answered a questionnaire after using it for two months. The results demonstrate male students have more positive e-learning attitudes than female students do, computer related experience is a significant predictor of learners' self-efficacy and motivation toward e-learning.

Akimanimpaye (2012) conducted a study on 'Attitudes of undergraduate nursing students towards e-learning at the University of the Western Cape'. The survey was conducted on 213 undergraduate nursing students to assess their attitudes toward e-learning. The study employed the survey methodology by random sampling method. The results revealed that males and females differ significantly in terms of satisfaction levels. When specific variables with two outcome levels (age group, computer facility at home, computer training experience, and experience in e-learning before registering at UWC are considered, there is no statistically significant difference in the sample t-test) in learner satisfaction between these groups.

Dhamijia (2014) researched the "Attitude of undergraduate students Towards the use of e-learning". It can be concluded that most undergraduate students have a positive attitude toward e-learning. There exists a significant difference in the attitude of Male and Female undergraduate students towards the use of e-learning. There exists a significant difference in the attitude of Urban and Rural undergraduate students towards the use of e-learning.

Zabadi and Al-Alawi (2016) conducted a case study on “University Students’ Attitudes towards E-Learning at the University of Business & Technology (UBT)-Saudi Arabia-Jeddah”. They found out that UBT male and female students have a high attitude towards e-learning although male students possess a higher attitude towards e-learning than their female counterparts do. This indicated that there is a significant difference in attitude towards e-learning between male and female students. It was also found that UBT male and female students have a high attitude towards e-learning.

Thakkar (2017) in his research 'Students attitude towards E-learning' on students in diploma courses in the Information Technology branch of engineering. It was found that there is a high attitude towards E-learning and this high attitude is not affected by differences in gender, locality, or social category of students.

Ishmirekha (2017) conducted research on “A study of college students' attitude towards E-learning with special reference to North Lakhimpur, Assam”. The Attitude Towards e-learning Scale by Dimpal Rani was used to collect the data. The study revealed that the attitude of college students towards e-learning is independent with regard to gender and locality.

Xhaferia et al. (2018) conducted research on the ‘Investigation of Lecturer' Attitudes towards E-Learning according to Demographic Variables’. Several statistical techniques were used for analyses of data using SPSS, including t-tests, one-way ANOVA, and correlation analyses. The result revealed that lecturers have high attitudes towards e-learning and their attitude scores did not differ significantly with their variables: gender, faculty, and age, but have significant differences with factors of teaching experience and e-learning experience.

Doley (2020) conducted research on “A study on B.Ed. trainees' attitude towards e-learning”. It is found that there is no significant difference in the attitude of B.Ed. students towards e-learning between male and female members. The data revealed that the attitude of B.Ed. students of male and female students have positive attitudes toward e-learning as the mean scores of male and female students are 229.1 and 224.3 respectively. It is also interpreted that the urban B.Ed. trainees have a more positive attitude towards e-learning than the rural trainees.

Lalsangpuii et al. (2022) conducted a study on ‘Attitude towards e-learning among prospective teachers in Aizawl City’, Mizoram. The study also included the comparison of their attitudes towards it regarding gender and age by Census survey method. The result revealed that prospective teachers have average attitudes towards e-learning and their attitude scores did not differ significantly regarding their age or gender.

Fanai et al. (2023) studied ‘Attitudes towards e-learning among D.El.Ed Students in Aizawl City’, Mizoram. The census survey method was adopted. The result revealed that D.El.Ed students in Aizawl City have below-average attitudes toward e-learning and they do not differ significantly with respect to their age and locality.

4. OBJECTIVES OF THE STUDY

1. To study the attitude towards E-learning among DIET students in Mizoram.
2. To compare the attitude towards E-learning between Male and Female DIET students.
3. To compare the attitude towards E-learning between Rural and Urban DIET students.

5. HYPOTHESES OF THE STUDY

1. There is no significant difference in attitude towards E-learning between Male and Female DIET students.
2. There is no significant difference in attitude towards E-learning between Rural and Urban DIET students.

6. METHODOLOGY AND PROCEDURE

A descriptive research method was employed for the present study, and a simple random sampling method was used to collect the data.

6.1. Population and Sample

All students of the eight Mizoram DIETs are the population of the study. A total of 353 sample students were selected by simple random sampling method for the study. The samples were grouped into two categories. Viz, one with male and female, and the other with rural and urban DIET students.

Table 1: Sample profile for the present study

Variables	Category	No. of students		Percentage
Gender	Male	194	353	54.95 %
	Female	159		45.05 %
Locality	Rural	221	353	62.61 %
	Urban	132		37.39 %

6.2. Tool used

Attitude Towards e-learning Scale (ATELS-RD) developed by Dimpal Rani was used to collect the data. It is a standardized tool used to measure the Attitude towards e-learning of a population above 14 years of age. The scale has four major areas, viz., 1. E-Learning interest, 2. Usefulness, 3. Ease of e-learning and 4. E-learning confidence.

6.3. Statistical technique used

Collected data were analyzed by using statistical techniques namely: Percentage, Mean, Standard deviation, and t-test.

7. ANALYSIS AND INTERPRETATION

7.1 Analysis and interpretation of attitude toward E-learning among DIET students in Mizoram.

Table 1.1: Attitude towards E-learning among DIET students in Mizoram

Range of Scores	z-	Range of Raw Scores	Frequency	Percentage	Level of E-learning attitude
+2.01 and above		291 and above	0	0	Extremely High
+1.26 to +2.00		271 to 290	1	0.28 %	High
+0.51 to +1.25		249 to 270	6	1.69 %	Above Average
-0.50 to +0.50		219 to 248	187	52.98 %	Average
-1.25 to -0.51		197 to 218	138	39.10 %	Below Average
-2.00 to -1.26		176 to 196	20	5.67 %	Low
-2.01 and below		175 and below	1	0.28 %	Extremely Low
		Total	353	100 %	

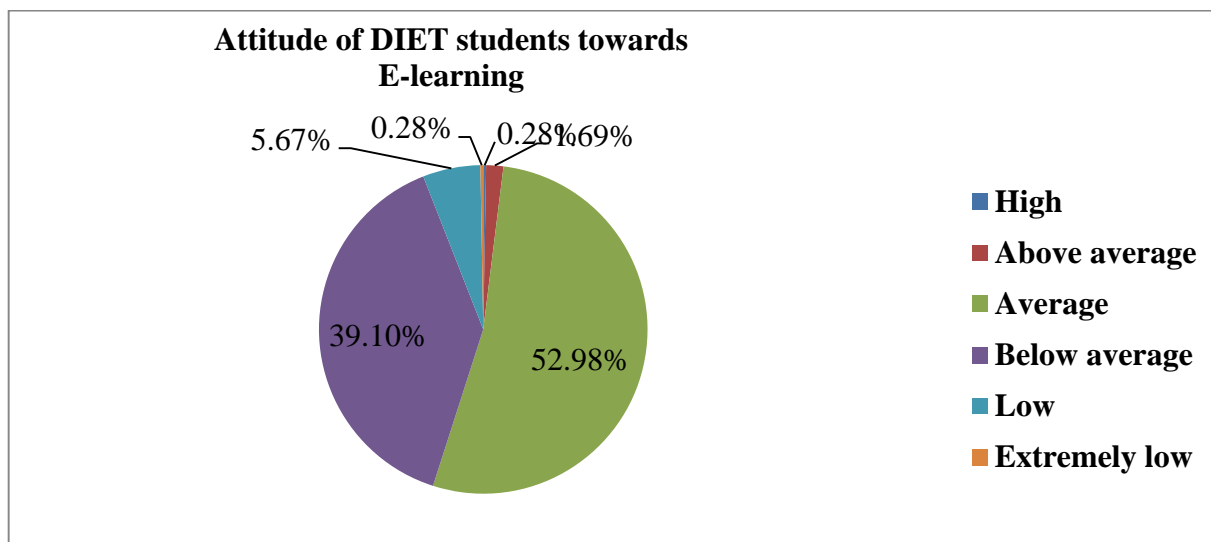
Fig. 1.1: Pie Chart showing attitude of DIET students towards E-learning.

Table 1.1 and Figure 1.1 showed that out of 353 DIET students studied, the majority of DIET students of Mizoram have an average attitude towards e-learning i.e., 52.98% (187). Among 353 students, 39.10% (138) of DIET students have below-average attitudes towards e-learning. The number of students showing above average is 1.67% (7), number of students in the low level of e-learning attitude is 5.67% (21), however, one student (1) each falls under high and extremely low-level categories which account for 0.28% each from the total sample study. No students are falling under the extremely high level of e-learning attitude. Therefore, it can be assumed that DIET students of Mizoram have an average level of e-learning attitude.

7.2 Analysis and interpretation of attitude towards e-learning among DIET students with regard to their gender.

Table 1.2: Comparison of E-learning attitude between Male and Female DIET students.

Level of E-learning attitude	Male		Female	
	No. of students	Percentage	No. of students	Percentage
Extremely high	0	0	0	0
High	1	0.62 %	0	0 %
Above average	4	2.51 %	2	1.03 %
Average	80	50.32%	107	55.16 %
Below average	63	39.63 %	75	38.66 %
Low	11	6.92 %	9	4.64 %
Extremely low	0	0 %	1	0.51 %
Total	159	100%	194	100%

Table 1.2 indicates that out of 159 male DIET students, 50.32% (80) students have average attitudes towards e-learning which forms the majority. Meanwhile, 0.62% (1) students show a high level, 2.51% (4) have above average level, 39.63% (63) students show below average level, and 6.92% (11) students show a low level of e-learning attitude respectively. There are no male students belonging to extremely low and extremely high levels of e-learning attitude.

Table 1.2 also shows that out of 194 female DIET students, 55.16% (107) female students have average attitudes towards e-learning which forms the majority. Two students (1.03%) have above-average levels, 38.66% (75) students show below-average levels, 4.64% (9) students show low levels and 0.51% (1) student shows extremely low levels of e-learning attitude. There are no female students belonging to extremely high levels of e-learning attitude.

Figure 1.2: Bar diagram showing the level of E-learning attitude between Male and Female DIET students.

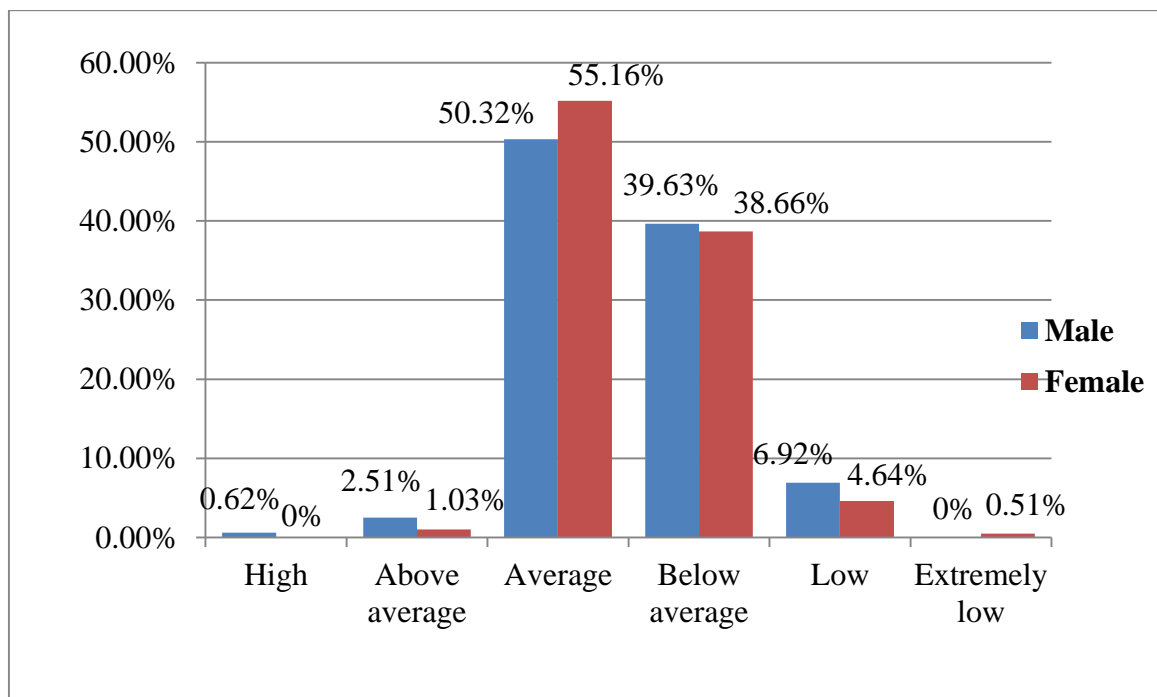


Figure 1.2 shows the level of e-learning attitude between male and female DIET students. The high and extremely low levels have the least number of students among the six levels while the level average has the most. It was found that the variation of male and female DIET students' attitudes towards e-learning is highest at average levels whereas it is smallest at below average levels.

Table 1.3: Comparison of E-learning attitude between Male and Female DIET students.

Gender	No. of students	Mean	SD	SED	t-value	DF	Significance level
Male	159	219.56	16	1.64	1.6	351	Not significant
Female	194	219.93	14.42				

Table 1.3 shows that the calculated t-value was found to be 1.6 with a degree of freedom of 351, which is smaller than the critical values of 1.97 and 2.59 at 0.05 and 0.01 levels of significance. This implies there is no significant difference found among DIET in their attitude towards e-learning with respect to their gender. So, the null hypothesis, i.e. 'There is no significant difference in attitude towards E-learning between Male and Female DIET students' is accepted.

7.3. Analysis and interpretation of attitude towards E-learning among diet students with regard to their locality.

sTable 1.4: Level of E-learning attitude between Rural and Urban DIET students.

Level of E-learning attitude	Rural		Urban	
	No. of students	Percentage	No. of students	Percentage
Extremely high	0	0	0	0
High	1	0.45 %	0	0 %
Above average	2	0.90 %	4	3.03

Average	117	52.95 %	70	53.03 %
Below average	93	42.08 %	45	34.10 %
Low	7	3.17 %	13	9.84 %
Extremely low	1	0.45 %	0	0 %
Total	221	100%	132	100%

Table 1.4 shows that out of 221 DIET students in rural areas, 52.95 % (117) students have an average attitude toward e-learning which forms the majority. Among 221 rural students, 0.45% (1) student show a high level, 0.90% (2) have above average level, 42.08% (93) students show below average level, 3.17% (7) students show a low level, and 0.45% (1) student shows an extremely low level of e-learning attitude. There are no students belonging to extremely high levels of e-learning attitude.

Table 1.4 also shows that out of 194 urban DIET students, 70 (53.03%) students have average attitudes towards e-learning which forms the majority. Among 194 urban students, 3.03 % (4) have above-average levels, 34.1 % (45) students show below average, and 9.8 % (13) students show low levels of e-learning attitude. There are no urban students belonging to high, extremely high, and extremely low levels of e-learning attitude.

Figure 1.3: Bar diagram showing the level of E-learning attitude between Rural and Urban DIET students.

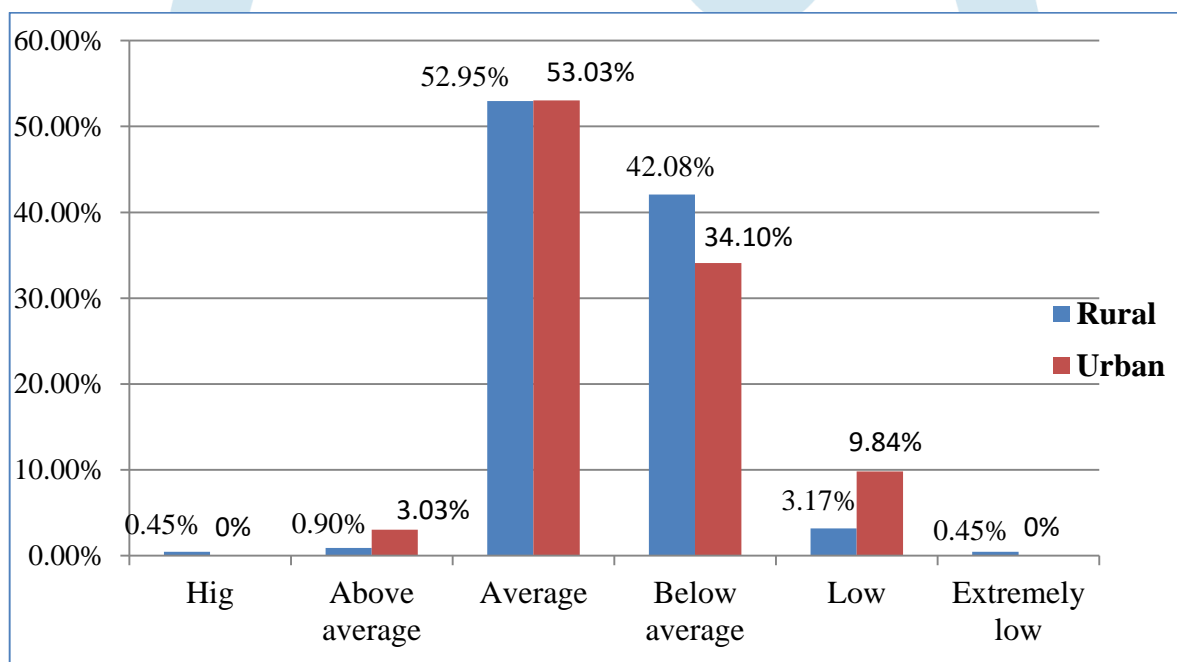


Figure 1.3 of the bar diagram shows that the high and extremely low levels have the least number of students among the seven levels. i.e. one student each, while the level average has the highest number of students. It was found that the variation of e-learning attitudes between rural and urban DIET students is the most at a below-average level whereas it is the least above-average level. No students belong to extremely high levels.

Table 1.5: Comparison of E-learning attitude between Rural and Urban DIET students.

Locality	No. students of	Mean	SD	SED	t-value	DF	Significance level
Rural	221	219.43	14.84	1.69	0.47	351	Not Significant
Urban	132	220.23	15.66				

From Table 1.5, the calculated t-value was found to be 1.69 with a degree of freedom of 351, which is smaller than the critical values of 1.97 and 2.59 at 0.05 and 0.01 levels of significance. This indicated that a significant difference is not found among DIET students their locality. So, the null hypothesis, 'There is no significant difference in attitude towards E-learning between Rural and Urban DIET students' is accepted

8. FINDINGS

1. DIET students of Mizoram have an average attitude toward E-learning.
2. There is no significant difference in attitude towards E-learning among DIET students with regard to their gender.
3. There is no significant difference in attitude towards E-learning among DIET students with regard to their locality.

9. CONCLUSION

Today's world is a digital age, the age of technology, an era of e-learning and Artificial intelligence. Technology is involved in every enterprise in human society. Education is no exception where various hardware and software of computer technology are employed in teaching-learning processes in schools and colleges. There are always new inventions and new innovative ways of teaching and learning due to rapid advancements in technology. So, the prospective teacher of today needs to have a positive attitude toward e-learning and need to equip them with skills, aware of its utility and importance so that students will be able to tackle when the issues and challenges arise in the future of educational transformation. The teachers' education system should be revamped with the integration of the most recent technology like Artificial intelligence and virtual classrooms to bridge the digital gap among prospective teachers.

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