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Attitude Towards E-Learning Among DIET Students in Mizoram in Relation to their Educational Qualification and Stream of Study

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ABSTRACT
The present study is an attempt to compare the level of E-learning attitude of DIET students in Mizoram with respect to their educational qualification and stream of study. 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 findings reveal that there is no significant difference in attitude toward e-learning among DIET students in relation to their Educational Qualification and Stream of background subject study.

Keywords: Attitude, E-learning, DIET students, Educational Qualification, Stream of Study.

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 smart phones 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 (1935) “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.” Anastasia (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 is the delivery of learning or training through digital resources. It is provided via electronic devices such as computers, tablets, and even mobile phones that are connected to the internet. It makes learning more flexible, accessible, and time-saving' (Armitage and O'Leary, 2003). 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.

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, smart phone, 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. There are few studies in Mizoram 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 NEP 2020, the study is conducted on this topic.

3. REVIEW OF RELATED LITERATURE:

Abdullah et al (2015) studied 'Students' attitude towards Information Technology and the Relationship with their Academic Achievement'. The results revealed a statistically significant difference between Arts and Science students in terms of their attitude toward IT in favor of Science students and also proved that there was no statistically significant correlation between students' academic achievement and their attitudes toward IT. Students at a medium level of academic achievement tended to score higher on the affection toward IT compared with students at a satisfactory level of academic achievement.

Dhamijia (2014) conducted a study on the "Attitude of undergraduate students Towards the use of e-learning". It can be concluded that most undergraduate students have a positive attitude towards e-learning. There are no significant differences in the attitudes of Arts and Science undergraduate students towards the use of e-learning. There exists no significant difference in the attitude of Arts and Commerce Undergraduate students towards the use of e-learning .There exists no significant difference in the attitude of Science and Commerce undergraduate students towards the use of e-learning. There exists a significant difference in the attitude of Male and Female undergraduate students towards the use of e-learning. A significant difference attitude was observed with regards to gender and locality of students in favor of male and urban undergraduate students.

Dhas (2017) conducted a study on the 'Attitude of College Students towards E-Learning'. The study is undertaken with the view of assessing the attitude of College students towards E-learning in relation to gender, subject, optional subjects, locality, qualification, marital status, religion, community and ambitions. The College students show an average attitude towards e-learning and there is no significant difference among the College students with respect to their gender, stream, locality, marital status or educational qualifications.

Khanra (2017) conducted research on 'Attitude of Under-graduate students towards e-learning in West Bengal: A case study of Jadavpur University'. The findings revealed that the majority of the students may be considered to have a positive attitude towards online learning. It has been discovered that male undergraduate students have a better outlook than their female counterparts. This study has also shown that undergraduate students in the science stream exhibit more positive attitudes than those in the arts stream.

Karmakar and Behera (2015) conducted a study on "The Attitude of Higher Secondary School Teachers towards E-Learning in the Purulia District of West Bengal, India". The study revealed that the attitude of Higher Secondary School teachers of Purulia District of West Bengal is neither favourable nor unfavourable towards e-learning, i.e. satisfactory or average in attitude towards e-learning. The study also found that there is a significant difference in attitude in relation to gender,general, Sc and ST teachers while no significant difference was fund out with regards to locality and subject teachers.

Kar et al (2014) conducted a study on the 'Attitude of University Students towards E-learning in West Bengal'. The result revealed that students have high attitudes towards e-learning and their attitude scores did not differ significantly from their variables such as gender, stream of study, and residence.

Mandal (2018) conducted a study on 'Attitude towards e-learning among college students'. It is found that the total mean value of attitude towards e-learning in classroom instruction is average. Science stream students had a more positive attitude towards e-learning rather than Arts students. Teachers may be given training on e-learning so they can be able to use e-learning features in their teaching method.

Periasamy (2019) in his research study "Attitude towards E-learning among the B.ED trainees". It was found that there is a significant difference between undergraduate and postgraduate student teachers, rural residents and urban residents of B.Ed trainees, and first-year and second-year B.Ed trainees. There is a significant difference among the groups of subject specialization of B.Ed. trainees. The science students have more mean scores of attitudes towards e-learning than the other groups. The humanity and social science students change their attitude to enhance the technology-based learning situations.

4. OBJECTIVES OF THE STUDY

1. To compare the level of E-learning attitude among DIET students in Mizoram in relation to their Educational Qualification.
2. To compare the level of E-learning attitude among DIET students in Mizoram in relation to their Stream of study.

5. HYPOTHESES OF THE STUDY

1. There is no significant difference in attitude towards E-learning between –

a. HSSLC and Graduate DIET students

b. HSSLC and Post Graduate DIET students

c. Graduate and Post Graduate DIET students

2. There is no significant difference in attitude towards E-learning between

a. Arts and Science DIET students.

b. Arts and Commerce DIET students

c. Science and Commerce DIET students

6. RESEARCH METHODOLOGY:

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 categorized based on their level of educational qualification as HSSLC, Graduate and Post Graduate and the other based on their stream of background study as Arts, Science and Commerce DIET students.

Table 1: Sample profile for the present study

Variables	Category	No. of students		Percentage
Educational Qualification	HSSLC	73	353	20.68 %
	Graduate	213		60.34 %

	Post Graduate	67		18.98 %
Stream of Study	Arts	263	353	75.92 %
	Science	59		16.72 %
	Commerce	26		6.36 %

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 descriptive statistics like Percentage, Mean, Standard deviation, and inferential statistics like t-test.

7. ANALYSIS AND INTERPRETATION:

7.1. Attitude toward E-learning among DIET students in relation to their Educational Qualification.

Table 2: Level of E-learning attitude of HSSLC, Graduate and Post Graduate DIET students.

Level of E-learning attitude	**HSSLC**		**GRADUATE**		**POST GRADUATE**	
	No. of Students	Percentage	No. of Students	Percentage	No. of students	Percentage
High	0	0 %	1	0.46 %	0	0 %
Above average	1	1.36 %	4	1.88 %	1	1.49 %
Average	30	41.10 %	120	56.34 %	37	55.23 %
Below average	37	50.69 %	74	34.74 %	26	38.80 %
Low	5	6.85 %	13	6.11 %	3	4.48 %
Extremely low	0	0 %	1	0.46 %	0	0 %
Total	73	100%	213	100%	67	100 %

Table 2 indicates that out of 73 DIET students having HSSLC qualification, 50.69% (37) students show below average level of e-learning attitude which forms the majority. Meanwhile, 1.36% (1) student shows an above-average level, 41.10% (30) students have an above-average level, 39.63% (30) students show an average level, and 6.85% (5) students show a low level of e-learning attitude. There are no students belonging to high, extremely high, and extremely low levels of e-learning attitude.

Table 2 also indicates that out of 213 Graduate DIET students, 56.34% (120) students have an average level of e-learning attitude which forms the majority. However, 0.46% (1) student shows a high level, 1.88% (4) students show above average level, 34.74% (74) students show below average, 6.11% (13) students show a low level, and 0.46% (1) student shows an extremely low level of e-learning attitude respectively. There are no students belonging to extremely high levels of e-learning attitude.

Table 2 indicates that out of 73 postgraduate students of DIET, 55.23% (37) students show an average level of e-learning attitude which forms the majority. Meanwhile, 1.49% (1) student shows above-average levels, 38.80% (26) students have below-average levels, and 4.48% (3) students show low levels of e-learning attitude. There are no students belonging to high, extremely high, and extremely low levels of e-learning attitude.

Table 3: Comparison of E-learning attitude between HSSLC and Graduate DIET students

Academic Level	No. of students	Mean	SD	SED	t-value	DF	Significance level
HSSLC	73	216.98	14.85	2.029	1.5	284	Not significant
Graduate	213	220	15.29				

Table 3 shows the comparison of e-learning attitudes between HSSLC and Graduate DIET students. From the table. It is observed that the mean score of DIET students with HSSLC level is 216.98 which is lower than the Graduate DIET students' mean score (220). So, the calculated t-value was found to be 1.5 with a degree of freedom 284, which is less than the critical value 1.97 and 2.69 at 0.05 and 0.01 levels of significance**.** This indicated that there is no significant difference in attitude towards e-learning among DIET students with regard to their academic level. So, null hypothesis No.1.a, i.e. 'There is no significant difference in attitude towards E-learning between HSSLC and Graduate DIET students' is accepted.

Table 4:Comparison of E-learning attitude between HSSLC and Post Graduate DIET students

Academic Level	No. of students	Mean	SD	SED	t-value	DF	Significance level
HSSLC	73	216.98	14.85	1.79	2.80	137	0.01
Post Graduate	67	221.84	14.73				

Table 4 indicates that the mean score value of HSSLC DIET students is 216.98 and that of Postgraduate DIET students is 221.84. The calculated t-value was found to be 2.80 with degree of freedom 137, which is greater than the critical value. 2.59 at 0.01 level of significance. This indicates that there is a significant difference in attitude towards e-learning between HSSLC and postgraduate DIET students. So, the null hypothesis No.1.b, i.e. 'There is no significant difference in attitude towards E-learning between HSSLC and Post Graduate DIET students' is rejected. Higher academic qualifications and more exposure to technology and complex curriculum in higher degree courses may be attributed to higher e-learning attitudes among postgraduate DIET students.

Table 5: Comparison of E-learning attitude between Graduate and Post Graduate DIET students.

Academic Level	No. of students	Mean	SD	SED	t-value	DF	Significance level
Graduate	213	220	15.29	2.08	0.89	278	Not Significant
Post Graduate	67	221.84	14.73				

Table 5 shows that the calculated t-value was found to be 0.89 with degrees of freedom 278, which is less than the critical values 1.97 and 2.59 at 0.05 and 0.01 levels of significance. So, null hypothesis No.1.c, 'There is no significant difference in attitude towards E-learning between Graduate and Post Graduate DIET students' is accepted. However, Postgraduate DIET students have slightly higher mean score values than Graduate DIET students.

7.2. Attitude towards E-learning among DIET students in relation to their Stream of background Education.

Table 6: Level of E-learning attitude of Arts, Science and Commerce DIET students

Level of E-learning Attitude	ARTS		SCIENCE		COMMERCE	
	No. of students	Percentage	No. of students	Percentage	No. of students	Percentage
High	1	0.37 %	0	0 %	0	0 %
Above average	2	0.74 %	2	3.50 %	2	6.89 %
Average	137	51.32 %	34	59.65 %	16	55.18 %
Below average	113	42.33 %	15	26.32 %	10	34.48 %
Low	13	4.87 %	6	10.53 %	1	3.45 %
Extremely low	1	0.37 %	0	0 %	0	0 %
Total	267	100%	57	100%	29	100 %

Table 6 indicates that out of 267 DIET students with an Arts subject background, 51.32% (137) students have an average level of e-learning attitude which forms the majority. However, 0.37% (1) student shows a high level, 0.7% (2) students show above average level, 42.33% (113) students show below average level, 4.87% (13) show a low level and 0.37% (1) shows an extremely low level of e-learning attitude respectively. There are no students belonging to extremely high levels of e-learning attitude.

Table 6 shows that out of 57 DIET students with a Science background, 59.65% (34) students show an average level of e-learning attitude which forms the majority. Meanwhile, 3.50% (2) students show above-average levels, 26.32% (15) students are below average, and 10.53%.

Table 6 also shows that out of 29 DIET students with a Commerce subject background, 55.18% (16) students show an average level of e-learning attitude which forms the majority. However, 6.89% (2) students show above-average levels, 34.48% (10) students have below-average levels and 1.35% (1) student shows a low level of e-learning attitude. There are no students belonging to high, extremely high, and extremely low levels of e-learning attitude. Six (6) students show low levels of e-learning attitude. There are no students belonging to high, extremely high, and extremely low levels of e-learning attitude.

Table 7: Comparison of E-learning attitude between Arts and Science DIET Students

Stream of Education	No. of students	Mean	SD	SED	t-value	DF	Significance level
Arts	267	218.82	14.46	3.39	1.14	322	Not significant
Science	57	222.68	17.05				

Table 7 shows that the calculated t-value was found to be 1.14 with a degree of freedom of 322, which is less than the critical values of 1.57 and 2.59 at 0.05 and 0.01 level of significance. This indicates that there is no significant difference in attitude towards e-learning between Arts and Science DIET. So, null hypothesis No.2.a, i.e. 'There is no significant difference in attitude towards E-learning between Arts and Science DIET students' is accepted. Although a significant difference was not observed, science DIET

students have a higher mean score value than arts students. The absence of significant differences in attitude about a stream of education may be due to technology integration in teaching-learning processes into various streams is a common practice these days.

Table 8: Comparison of E-learning attitude between Arts and Commerce DIET Students.

Stream of Education	No. of students	Mean	SD	SED	t-value	DF	Significance level
Arts	267	218.82	14.46	3.46	1.48	289	Not significant
Commerce	24	220.96	16.4				

Table 8 shows that the calculated t-value was found to be 1.48 with a degree of freedom of 289, which is less than the critical value. So, the null hypothesis No.2.b, i.e. 'There is no significant difference in attitude towards E-learning between Arts and Science DIET students' is accepted. Although a significant difference was not observed, Commerce DIET students have a higher mean score value than Arts DIET students.

Table 9: Comparison of E-learning attitude between Science and Commerce DIET students.

Stream of Education	No. of students	Mean	SD	SED	t-value	DF	Significance level
Science	57	222.68	17.05	4.03	0.4	78	Not significant
Commerce	24	220.96	16.4				

Table 9 showed that the calculated t-value was found to be 0.4 with a degree of freedom of 78, which is less than the critical values of 1.97 and 2.59 at 0.05 and 0.01 levels of significance. This indicates that there is no significant difference in attitude towards e-learning between science and commerce DIET students. So, null hypothesis No.2.c, 'There is no significant difference in attitude towards E-learning between Science DIET students and Commerce DIET students' is accepted.

FINDINGS:

1. There is no significant difference in attitudes towards E-learning among DIET students in relation to their level of academic qualification.
2. There is no significant difference in attitudes towards E-learning among DIET students in relation to their Stream of academic subject background.

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 they will able to tackle effectively 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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