BHARATI INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH & DEVELOPMENT (BIJMRD)

(Open Access Peer-Reviewed International journal)

DOI Link :: https://doi-ds.org/doilink/05.2024-43954288/BIJMRD/Vol%20-1%20/%202/jan-2024/A1

Available Online: www.bijmrd.com|BIJMRD Volume: 1 | Issue: 2 | January 2024 | e-ISSN: 2584-1890

Impact of E-learning & Face to Face Learning Strategies for Teacher Trainees in Relation to Some Personal Variables

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Abstract: *In the current scenario when globally there is digital advancement, teacher trainees are required to upgrade themselves with the use of technology, preparing e- modules, e-lessons and their evaluations, and the students' needs to have computer literacy and required supporting infrastructure to access the e-learning and administrators needs to make sure that adequate online resources are mobilized to meet the educational needs of their students. Hence it is a crucial area of research area. This study aims to investigate the Impact of some personal variables such as parental educational, occupation and income variation on the Components of E-learning & Face to Face learning strategies for teacher trainees. Purposive sampling method was used to select 200 teacher trainees studying in different teachers training colleges of Siliguri. Finding shows that there exists significant difference between the use ofthe component of E-learning strategies i.e.You-Tube& Live class (Google meet, Zoom)of teacher trainees in relation to parental education, occupation and income variations. There exists significant difference between the use ofthe component of Face-to-Face learning strategies i.e. Lecture method & Interaction session of teacher trainees in relation to parental education, occupation and income variations. It is concluded that parental education, occupation and income have significance relation with E-learning and Face to Face learning strategies for teacher trainees.*

Keywords: *E-learning, Face-to-Face Learning, Technology, Live Class, Lecture Method, Interactive Session.*

Introduction: As technology is rapidly-developing, there is fast change in the lifestyles of new generation. To combat with this transformation many teaching institutions are offering more "flexible" learning environments. For over a decade there is rapid expansion in the provision of online or e-learning experiences particularly in the higher education sector. Therefore, today e-learning is an important part of the student experience in most of the teaching institutes. Due to the rise of e-learning students are encouraged to take on more responsibility for acquiring knowledge by their own whereas traditional method of teaching was teacher-centered model of teaching, where the teacher transmits knowledge to students, and student had very little input. Therefore E-learning provides greater opportunity for student-centered learning then traditional face to face learning. As student learns from their own interest and curiosities, they not only tend gain in-depth knowledge and improve the quality of learning but also tend to have wider student participation and more cost-effectiveness of education.

Thus E-learning has become an important component in all teaching institutions all around the world. So, to keep with the current trend, even teacher training institution have started to adopt the digital world very

swiftly. Traditional face-to-face instructions is gradually shifting into online instruction. Institutions and faculties are getting equipped for virtual class room sessions, and therefore parents are forced to provide the needed technical devices and internet services to the students to attend the online classes. Hence education system is striving to invest in the faculty development and equipping the institutions to impart the best learning process, irrespective of time of learning, geographical area, and other privileges. The main aim of this change is to transform the learner's capability as per the global demands. Hence currently it is a subject of crucial issue for research.

The overall attitude of teacher trainees about the use of e-learning was negative. Moreover, the teacher trainees' responses about different dimension of obstacles of e-learning indicated that these students perceived the technical and management support, infrastructure and technology and instructors' characteristics as the most important obstacles of e-learning. (Bano R, Parveen K, Hussain M, 2021)

It is true that as individuals we all don't respond to one teaching method in the same way- some learn visually and others learn with repetition or writing. E-learning responds to those different needs with use of different types of material, whether that is audiovisual or interactive sessions, there is plethora of options to cater to the needs of each and every learner. In the coming days there will be full individual personalization of content and pedagogy enabled by cutting edge technology, multiple ways of using technology, facial expression or neutral signal response clubbed with hands on training too. In a world where shocking natural emergencies occur, we cannot afford to compromise on molding of younger generation. So, education system must be or will be prepare to empower the humanity to withstand and survive in this world happily, effectively and productively.

Rationale of the study:

In the current scenario when globally there is digital advancement, teacher trainees are required to upgrade themselves with the use of technology, preparing e- modules, e-lessons and their evaluations, and the students' needs to have computer literacy and required supporting infrastructure to access the e-learning and administrators needs to make sure that adequate online resources are mobilized to meet the educational needs of their students. Still there are challenges of online education and there is need to explore different ways to combat those obstacles and hence enhance the use of e -learning as an essential educational tool. In this regard, it is very important to know students views regarding e-learning. Present study was conducted to assess the Impact of some personal variables on certain components of E-learning & Face to Face learning strategies for teacher trainees. Therefore, it is expected that this study would provide fresh light into a field that has traditionally been dominated by face-to-face learning within real-life situation in class room, labs and wards and provided hands-on training to groom teacher trainees with knowledge and skills.

Statement of the problem:

Therefore, the problem of the study is stated as:

"Impact of E-learning & Face to Face learning strategies for Teacher trainees in relation to some personal variables"

Objectives of the study:

1. To find out use of E-learning and Face to Face learning strategies for teacher trainees in relation to their parental educational.
2. To find out use of E-learning and Face to Face learning strategies for teacher trainees in relation to the occupation of parents.

3. To find out use of E-learning and Face to Face learning strategies for teacher trainees in relation to their parental income.

Hypotheses of the study:

Ho_1. The scores of the E-learning and Face to Face strategies for teacher trainees are not normally distributed in total and due to their intra variations/ intra variables wise.

Ho_2. There does not exist any significant difference of the mean scores of E-learning strategy of teacher trainees due to their parental educational variations.

Ho_3. There does not exist any significant difference of the mean scores of E-learning strategy of teacher trainees due to their parental occupation variations.

Ho_4. There does not exist any significant difference of the mean scores of E-learning strategy of teacher trainees due to their parental income variations.

Ho_5. There does not exist any significant difference of the mean scores of Face-to-Face learning strategy of teacher trainees due to their parental educational variations.

Ho_6. There does not exist any significant difference of the mean scores of Face-to-Face learning strategy of teacher trainees due to their parental occupation variations.

Ho_7. There does not exist any significant difference of the mean scores of Face-to-Face learning strategy of teacher trainees due to their parental income variations.

Operational Definition of the terms:

Learning Strategies- It implies to You-Tube& Live class (Google meet, Zoom) of E-learning strategies and Lecture method & Interaction session of Face-to-Face learning strategies.

Methodology of the study:

The Design of the study:

The present research work is a mixed type of research work, where, Normative and correlational, survey type research design was used and it is a non-experimental survey design adopted to accomplish the objectives of the study.

The Population and Sample of the study:

The study Population comprises of Teacher trainees, 200 students were taken by non-probability convenience sampling technique from selected teacher training institutes of Siliguri.

Tools Used:

Two self-made questionnaire's (five points liker scale) were prepared and used after validation by experts and reliability test.

Results and Discussions:

This is done in accordance with the objectives and hypotheses formulated**.**

Component wise differences on the use of E-Learning of nursing students

One of the objectives of the study was to be found out if there exist any component wise differences of parental education scores on the use of E-learning of teacher trainees, therefore the null hypothesis was stated as "there is no significant difference in the use of E-learning of teacher trainees in relation to component wise parental educationvariation".

In order to find out differences if any of the scores on use of E-Learning of above graduate and below graduate parents, the test of significance of difference between the means of two sub samples was calculated and tested for significance. The result has been presented in the following table:

Table 1: Summary of test of significance of differences between parental education Component wise variation (YOU TUBE) of teacher trainees on the use of E-Learning

Parental Education Variation	N	Mean	S. D	SE_D	't'	Remarks
Above Graduate	100	21.37	5.03	1.37	2.93	Significant
Below Graduate	100	20.61	7.28			

Critical value of 't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 2.93 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the use of E-learning of teacher trainees in relation to parental education variation will be rejected.

Table2: Summary of test of significance of differences between parental occupation Component wise variation (YOU TUBE) of teacher trainees on the use of E-Learning

Parental Occupation Variation	N	Mean	S. D	SE_D	't'	Remarks
Non-Service	100	24.49	5.76	1.87	3.05	Significant
Service	100	23.99	5.62			

Critical value of't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.05 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the use of E-learning of teacher trainees in relation to parental occupation variation will be rejected.

Table3: Summary of test of significance of differences between parental income Component wise variation (YOU TUBE) of teacher trainees on the use of E-Learning

Parental Income Variation	N	Mean	S. D	SE_D	't'	Remarks
Above Poverty Level	100	23.89	7.11	1.09	3.82	Significant
Below Poverty Level	100	21.05	5.62			

Critical value of't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.82 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the use of E-

learning of teacher trainees in relation to parental income variation will be rejected.

Table4: Summary of test of significance of differences between parental education Component wise variation (LIVE CLASS) of teacher trainees on the use of E-Learning

Parental Education Variation	N	Mean	S. D	SE_D	't'	Remarks
Above Graduate	100	28.16	7.13	2.32	3.81	Significant
Below Graduate	100	32.83	9.17			

Critical value of't' with df (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.81 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the use of E-learning of teacher trainees in relation to parental education variation will be rejected.

Table5: Summary of test of significance of differences between parental Occupation Component wise variation (LIVE CLASS) of teacher trainees on the use of E-Learning

Parental Occupation Variation	N	Mean	S. D	SE_D	't'	Remarks
Non-Service	100	34.70	9.15	3.12	3.83	Significant
Service	100	31.45	7.13			

Critical value of't' with df (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.83 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the use of E-learning of teacher trainees in relation to parental occupation variation will be rejected.

Table6: Summary of test of significance of differences between parental income Component wise variation (LIVE CLASS) of teacher trainees on the use of E-Learning

Parental Income Variation	N	Mean	S. D	SE_D	't'	Remarks
Above Poverty Level	100	32.26	9.16	4.13	3.40	Significant
Below Poverty Level	100	28.95	7.13			

Critical value of 't' with df (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.40 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the use of E-learning of teacher trainees in relation to parental income variation will be rejected.

Component wise differences on the Face-to-Face Learning of teacher trainees

One of the objectives of the study was to be found out if there exist any component wise differences of parental education scores on the face-to-face learning of teacher trainees, therefore the null hypothesis was stated as "there is no significant difference in the face-to-face learning of teacher trainees in relation to

component wise parental educationvariation".

In order to find out differences if any of the scores on face-to-face Learning of above graduate and below graduate parents, the test of significance of difference between the means of two sub samples was calculated and tested for significance. The result has been presented in the following tables:

Table7: Summary of test of significance of differences between parental education Component wise variation (LECTURE METHOD) of teacher trainees on the Face-to-Face Learning

Parental Education Variation	N	Mean	S. D	SE_D	't'	Remarks
Above Graduate	100	21.70	6.84	2.49	3.71	Significant
Below Graduate	100	24.94	8.65			

Critical value of't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.71 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the face-to-face learning of teacher trainees in relation to parental education variation will be rejected.

Table8: Summary of test of significance of differences between parental occupation Component wise variation (LECTURE METHOD) of teacher trainees on the Face-to-Face Learning

Parental Occupation Variation	N	Mean	S. D	SE_D	't'	Remarks
Non-Service	100	24.56	8.12	2.78	3.87	Significant
Service	100	22.80	5.78			

Critical value of 't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.87 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the face-to-face learning of teacher trainees in relation to parental occupation variation will be rejected.

Table9: Summary of test of significance of differences between parental income Component wise variation (LECTURE METHOD) of teacher trainees on the Face-to-Face Learning

Parental Income Variation	N	Mean	S. D	SE_D	't'	Remarks
Above Poverty Level	203	24.15	8.43	1.98	2.79	Significant
Below Poverty Level	97	21.54	6.68			

Critical value of't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 2.79 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the face-to-face learning of teacher trainees in relation to parental income variation will be rejected.

Table 10: Summary of test of significance of differences between parental education Component wise variation (INTERACTIVE SESSION) of teacher trainees on the Face-to-Face Learning

Parental Education Variation	N	Mean	S. D	SE_D	't'	Remarks
Above Graduate	103	20.23	5.45	1.88	3.98	Significant
Below Graduate	197	23.62	7.87			

Critical value of 't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.98 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the face-to-face learning of teacher trainees in relation to parental education variation will be rejected.

Table11: Summary of test of significance of differences between parental occupation Component wise variation (INTERACTIVE SESSION) of teacher trainees on the Face-to-Face Learning

Parental Occupation Variation	N	Mean	S. D	SE_D	't'	Remarks
Non-Service	204	24.12	5.22	1.78	3.45	Significant
Service	96	23.11	6.75			

Critical value of't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.45 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level2.63 so it is significant and the null hypothesis that states there exist no significant difference between the face-to-face learning of teacher trainees in relation to parental occupation variation will be rejected.

Table 12: Summary of test of significance of differences between parental income Component wise variation (INTERACTIVE SESSION) of teacher trainees on the Face-to-Face Learning

Parental Income Variation	N	Mean	S. D	SE_D	't'	Remarks
Above Poverty Level	203	24.91	7.28	2.34	3.70	Significant
Below Poverty Level	97	21.67	5.12			

Critical value of't' with d f (98) at 0.01=2.63 and 0.05=1.98

The obtained value 3.70 is greater than the tabular value at 0.05 levels 1.98 and at 0.01 level 2.63 so it is significant and the null hypothesis that states there exist no significant difference between the face-to-face learning of teacher trainees in relation to parental income variation will be rejected.

Conclusion:

Research on the use and advancement of E-learning in teacher education is very much needed nowadays. This study therefore aimed to understand the experiences and challenges encountered by teacher trainees in Siliguri. The difficulties of E-learning as reported by participants included economical problem to purchase devices such as android phone, computer/laptop and data, connection problems and difficulties in communication with instruction. The findings helped identify the significant problems and necessary adaptations needed for these transformational approaches to teaching learning process and methods by which

students can be supported in the best way. The study has thrown some focus into e-learning challenges faced in Siliguri may also help in further researches of this field.

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