Effectiveness of Online learning among the prospective teacher educators

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Introduction
Teaching is a profession that requires specialized knowledge and skills, teacher candidates, in order to perform their jobs, should possess certain competencies. To acquire these competencies teachers should be given special training before starting their profession. Teachers who will guide the youth and will be a factor in shaping the future should possess adequate competencies to perform their duties. Recently, teacher training has shifted from theoretical teacher-centered approach to practice oriented learner-centered approach. To provide an effective and self-regulating instruction in a learning-rich environment, teachers should be trained in teaching approaches and strategies.

Lockdown and social distancing measures due to the COVID-19 pandemic have led to closures of schools, training institutes and higher education facilities in most countries. There is a paradigm shift in the way educators deliver quality education—through various online platforms. Transitioning from traditional face-to-face learning to online learning can be an entirely different experience for the learners and the educators, which they must adapt to with little or no other alternatives available. In this latest trend of the education system, students are facing numerous challenges as switching from a traditional classroom, with face to face instructor training to computer-based training in a virtual classroom makes an entirely different and difficult learning experience for them.

NEED AND SIGNIFICANCE OF THE STUDY

The information of the twenty first century which has been brought about by advance in the computer technology has created an information society in which majority of labor force are expected to hold information related jobs. In these days the unpredicted growth of interactive multimedia and e-content play a prominent in the teaching field of education. In modern era the e-content plays a vital role in teaching The application of
teaching and learning methods that promote deep and active learning and creativity in learners is the emphasis of the educational system of the present age. Teacher education, as a social institution must function according to the needs of the community, i.e., should nurture individuals that they educate to be creative and thoughtful with high academic ability. To achieve this objective, the traditional teaching methods (lectures, etc.) do not have the required effectiveness, but implementation of online-learning in teaching-learning process could be a way to realize this goal. Online-learning is one of the most important learning environments in the information era. Therefore, efforts and experiences related to this type of learning is given due attention around the world. E-learning can benefit self-regulation through the use of self-directed e-learning. The purpose of the current study is to have an overview of effectiveness of online learning among prospective teacher educators.

STATEMENT OF THE PROBLEM

Access to online learning resources has triggered a revolution in classroom settings from K-12 all the way up to postsecondary institutions. E-learning has become an invaluable resource to educators and classroom teachers, harnessing a new model of knowledge sharing wherein students possess the tools to learn at their own pace. This student-focused approach is unique in that students now share in their educational direction, maximizing both teaching resources and time. Online learning solutions provide much-needed effectiveness for teachers, allowing them to maximize the potential for individual learning curves and styles within the classroom. Many online learning solutions account for self-paced learning and allow students and teachers to work together to meet scheduled targets. Now more than ever, children, youth, and students are accessing information and news online, communicating, sharing, and exchanging ideas and concepts via technology. Online learning enables teachers to tap into this realm of constant learning by embracing the real-world application of theory through multimedia, video, chat, and interactivity. Educators can effectively harness the power of everyday technology to bring educational theories into the classroom. Online learning isn’t just capable of empowering students to progress beyond the course expectations, it also encourages them to explore and learn ahead of the curriculum in a way that makes learning functional, relevant to today’s growing inclusion of technology, and fun. So the Investigator intended to study the effectiveness of online learning of the prospective teacher educators and hence the study entitled as “EFFECTIVENESS OF ONLINE LEARNING AMONG PROSPECTIVE TEACHER EDUCATORS”.

OBJECTIVES OF THE STUDY

The following objectives framed for the present study.

i) To find out the effectiveness of online learning at M.Ed level.
ii) To enhance the effectiveness of learning among prospective teacher educators through online.
Hypotheses

1. There is no significant difference in the mean scores of the control and experimental group **prospective teacher educators** in their Pre-test.

2. There is no significant difference in the mean scores of the control and experimental group **prospective teacher educators** in their Post-test.

3. There is no significant difference in the mean scores of the control group prospective teacher educators Above 30 and Below 30 years of age in their Pre-test.

4. There is no significant difference in the mean scores of the experimental group prospective teacher educators Above 30 and Below 30 years of age in their Post-test.

Research Method

In the present study Experimental method was adopted for its suitability and accuracy. In order to determine the effectiveness of online-learning, the researcher used pre-test and post-test experimental design. The sample consists of 40 prospective teacher educators studying M.Ed programme in Tamil Nadu Teachers Education University in Karapakkam, Tamil Nadu. The were selected as a sample by using simple Random Sampling technique out of them 20 students were in control group and remaining 20 students were in experimental group. All the students were equally matched in terms of their previous knowledge in Philosophy. The investigator conducted a pre test to assess the knowledge of the prospective teacher educators through and Achievement test. Then for the treatment, Audio, videos, powerpoint presentation and text materials were prepared for two units in the theory paper and was used in the online classes. The treatment was conducted for 30 working days. Then a post test was conducted. The data thus collected were statistically analysed.
Hypothesis Testing

Table 1

Mean scores of the control and experimental group prospective teacher educators in their Pre-test and Post-test

<table>
<thead>
<tr>
<th>Test</th>
<th>Group</th>
<th>N</th>
<th>MN</th>
<th>SD</th>
<th>‘t’ Value</th>
<th>‘P’ value</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre test</td>
<td>Control group</td>
<td>20</td>
<td>24.15</td>
<td>5.081</td>
<td>0.718</td>
<td>0.049</td>
<td>Not Significant</td>
</tr>
<tr>
<td></td>
<td>Experimental group</td>
<td>20</td>
<td>23.20</td>
<td>3.037</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post test</td>
<td>Control group</td>
<td>20</td>
<td>24.70</td>
<td>4.485</td>
<td>3.699</td>
<td>0.012</td>
<td>Significant*</td>
</tr>
<tr>
<td></td>
<td>Experimental group</td>
<td>20</td>
<td>32.40</td>
<td>8.159</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Table-1 shows that the calculated t-value 0.718 is lower than the critical value 1.740 corresponding to the 0.05 level of significance in the Pre-test. This implies that the control group and experimental group prospective teacher educators do not differ significantly in their achievement in the pre-test. Hence the null hypothesis that there is no significant difference in the mean scores of the control and experimental group prospective teacher educators in their Pre-test is not rejected.

The Table-1 shows that the calculated t-value 3.699 is higher than the critical value 1.740 corresponding to the 0.05 level of significance in the Post-test. This implies that the control group and experimental group prospective teacher educators differ significantly in their achievement in the post-test. prospective teacher educators
Table 3

Mean scores of the control group prospective teacher educators with age below 30 and above 30 in their pre-test

<table>
<thead>
<tr>
<th>Testing of the Group</th>
<th>Age</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ – Value</th>
<th>‘p’Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>Below 30</td>
<td>13</td>
<td>21.85</td>
<td>3.997</td>
<td>-3.718</td>
<td>0.815</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>Above 30</td>
<td>7</td>
<td>29.17</td>
<td>3.971</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows the calculated t-value -3.718 is lower than the critical value 1.740 corresponding to the 0.05 level of significance in the Pre-test. This implies that there is no significant difference in the mean scores of the control group prospective teacher educators Above 30 and Below 30 years of age in their Pre-test. Hence the null hypothesis that there is no significant difference in the mean scores of the control group prospective teacher educators Above 30 and Below 30 years of age in their Pre-test is not rejected.

Table 4

Mean scores of the experimental group prospective teacher educators with age below 30 and above 30 in their Post-test

<table>
<thead>
<tr>
<th>Testing of the Group</th>
<th>Age</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ – Value</th>
<th>‘p’Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>Below 30</td>
<td>8</td>
<td>36.50</td>
<td>8.468</td>
<td>1.969</td>
<td>0.408</td>
<td>S</td>
</tr>
<tr>
<td></td>
<td>Above 30</td>
<td>12</td>
<td>29.67</td>
<td>6.998</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows the calculated t-value 1.969 is greater than the critical value 1.740 corresponding to the 0.05 level of significance in the Post-test. This implies that there is significant difference in the mean scores of the experimental group prospective teacher educators Above 30 and Below 30 years of age in their Post-test. Hence
the null hypothesis that there is significant difference in the mean scores of the experimental group prospective teacher educators Above 30 and Below 30 years of age in their Post-test is rejected.

**Findings of the study**

1. There is no significant difference in the mean scores of the control and experimental group prospective teacher educators in their Pre-test.
2. The control group and experimental group prospective teacher educators differ significantly in their post-test.
3. There is no significant difference in the mean scores of the control group prospective teacher educators Above 30 and Below 30 years of age in their Pre-test.
4. There is significant difference in the mean scores of the experimental group prospective teacher educators Above 30 and Below 30 years of age in their Post-test

**Discussion**

The present investigation shows that the control group and experimental group prospective teacher educators differ significantly in their achievement in the post-test which corroborates with the study of Neema-Abooki, Alfred Kirigha Kitawi (2014), Madhu Sahni, Anju Sharma(2012) and Baig, Muntajeeb Ali, 2011. It is also found out that there is significant difference in the mean scores of the experimental group prospective teachers Above 30 and Below 30 years of age in their Post-test which was supported by the study of Alex van der Merwe (2007).

**EDUCATIONAL IMPLICATIONS OF THE STUDY**

1. The use of the e-content enhances the achievement; it will diminish wastage and stagnation in school.
2. Multimedia Technology can become an effective strategy in the class room teaching at M.Ed and B.Ed level.
3. Multimedia Technology enhances mutual understanding and co-operation among the students at all levels and in all subjects.
4. It provides the chance of learning to the students with the help of Multimedia.
5. The government can arrange training programmes for the teachers and teacher educators to develop e-content and use of online platforms.

**Delimitation of the study**

- In this, researcher used only e-learning materials for online learning.
- The study is carried out only 40 M.Ed students.
- The study carried out with the M.Edc first year students only.
This study is limited to the M.Ed prospective teacher educators of TamilNadu Teachers Education University.

CONCLUSION

The rise of e-learning and an electronic content is a new paradigm for education and training in the knowledge society. It is empowered by technological advancements, which gives the modern instructional technology. The development of e-content in the changing times has become major responsibility of the modern teacher who has to face a new learner in a new environment. The role of qualitative e-learning material like e-content assumes critical necessity and value to boost and spread modern instructional technology. However, the development of e-learning material like e-content is not any easy task. We should keep an eye on the various stages of the e-learning material development to ensure whether the developed content is valid and suits to the needs of the learner.

References