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A study on awareness and usage of E-resource portals among prospective teachers

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ABSTRACT

Teacher education programs are accountable for preparing the future teachers, so curricula must formulate the teacher for an ever-growing and expanding field of K-12 online learning in all of its forms including literacy and usage of E- resource portal to enhance learning initiated by the government of India to make education accessible and equitable to all. As well as these portals can be used anywhere, anytime for various activities as learning, teaching research work, and for e-content. By successfully completion of courses on the Swayam platform which offer extra credentials to the learner with the comfort of self-pace learning at their comfortable zone. Despite such tremendous assistances, it was found that there is a lack of awareness and knowledge about courses among students and completion rate as compared to registration is not balanced. Therefore, the main objective of this research is to study the awareness and usage of E-resource Portals among Prospective Teacher that includes graduates and postgraduates' students pursuing B.Ed. Course. Also, to explore the attitude among prospective teachers towards the need to access these portals and status of enrolment in MOOC courses among prospective teachers.

Keywords: Prospective Teacher, E–resource portals, Teacher education, Awareness, Usage

Introduction

Quality education is right as well as the need of every people. The teacher is the only one who can provide quality education to one's students according to the need of society and students.(Snoek, 2021) This teacher has to prepare oneself to make competent to accomplish the need of all diverse learners. Hence, the continuous professional development of teachers is required so that they can learn current and innovative practices for making education interesting.(Sharma, 2015) It will help to decrease in dropout of students. As many researchers had investigated the more the education system is compatible with students needless is the dropout rate. Teacher's knowledge and skill also play an important role in engaging students in the classroom and their holistic development. Teacher training institutes are trying to give skills to a budding teacher but due to some factors, they do not succeed fully to do so. Factors like lack of expert educators, transport facilities hindered the attainment of this goal. Nowadays due to the COVID-19 pandemic entire education system is disrupted and causes discontinuity of education.(Kumar & Pande, 2021) E-resources platform development was an immediate and innovative action by governments and partners all over the world to strengthen digital learning with equity and accessibility to all.(Bhalla & Ciences, 2018) This is also supporting education continuity, The Ministry of Education (MoE) and its associated institutions are promoting digital education through online education platform. The Ministry has, over the last few years, developed an affluent variety of E-resource that are available on a range of platforms where students and teachers can access these through their laptops, desktops, and mobile phones, these resources are being reached to learners in remote areas(Bansal, 2018) where internet is not available through Television and Radio.

A brief description is given below about E- Resources portal sponsored by Government:

DIKSHA (Digital Infrastructure for School Education): A National Council of Educational Research and Training took initiative to develop DIKSHA. It was built on the core principles of open architecture, open access, open licensing, diversity, preference, and autonomy. DIKSHA is available to students and teachers all over India, and it currently supports 18+ languages along with various curricula of NCERT, CBSE and SCERTs. The platform is being used and built for K-12 education, foundational learning services, and inclusive learning for underserved and disabled learner and teacher groups.(Lerma & Chen, 2020)

e-Pathshala: The National Council for Educational Research and Training developed and implemented e-PATHSHALA, a web portal and mobile app. It contains 1886 audios, 2000 clips, 696 e-books (e-Pubs), and 504 Flip Books in various languages for grades 1 through 12.

National Repository of Open Educational Resources (NROER): A portal equipped with best quality informational

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content on diverse topics in multiple languages a total of 14527 files including 401 collections, 2779 documents, 1345 interactive, 1664 audios, 2586 images and 6153 videos on different languages.(Khan, 2015)

SWAYAM: This is a national online education platform that hosts 1900 courses in all subjects, including engineering, humanities and social sciences, law, and management, for both school (class IX to XII) and higher education (both UG and PG) students. SWAYAM has a unique aspect in that it is combined with traditional education. The courses are interactive and prepared by the world's best instructors, and they are open to any learner in the country for free. SWAYAM courses can be transferred for credit max 20 percent. Moreover, National Programme on Technology Enhanced Learning (*NPTEL*) is a project of MHRD initiated by seven Indian Institutes of Technology (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati and Roorkee) along with the Indian Institute of Science, Bangalore in 2003, to provide quality education to anyone interested in learning from the IITs. The main goal was to create web and video courses in all major branches of engineering and physical sciences at the undergraduate and postgraduate levels and management courses at the postgraduate level. This programme is running available on SWYAM platform.(Majumder, 2019; Samanta, 2018)

SWAYAM PRABHA: It has 32 DTH TV channels that broadcast educational content 24 hours a day, 7 days a week. These channels can be viewed using a DD free Dish set top box and antenna anywhere in the world. Even private DTH providers are now broadcasting these courses on their outlets. The platforms cover a broad variety of subjects in school education (classes IX to XII) and higher education, including engineering, technical courses, teacher training, performing arts, social sciences and humanities subjects, law, medicine, agriculture, and many others.(Bordoloi, 2018)

NISHTHA (National Initiative for the Holistic Advancement of School Heads and Teachers): In 2109-20, the Department of School Education and Literacy initiated a National Mission called NISHTHA under the Centrally Sponsored Scheme of Samagra Shiksha to enhance learning outcomes at the elementary level through an Integrated Teacher Training Program called NISHTHA. Its aim is to develop competencies in all elementary school teachers and principals. It is the largest teacher-training programme of its kind in the world.

National Digital Library: This is a digital repository with a vast amount of academic content in various formats, with interface support for leading Indian languages for all academic levels, including researchers and life-long learners, all disciplines, and differently able learners.(Thanuskodi, 2019)

e-Journals: Electronic journals provide access to core and peer-reviewed online databases.

National education policy 2020 and other education policymakers show the need to reconstruct the teacher education programmers in terms of an exponential increase in training through online education portals like DIKSH /SWYAM (Section 15.10, pg 43, NEP 2020).(MHRD, 2020) On the other hand, in 2011, nearly two-thirds of all chief academic officers agreed that open educational resources have the potential to reduce costs for their institution and the introduction of new courses effectively. The teacher education programs that consider online education as the need of the hour should approach new learning environments for emerging students.(Adeleke & Olorunsola, 2010) These comprehensive environments require today's teachers to aware of all online educational resources initiated by the government to equity and quality education for all. But in some states like Madhya Pradesh compared with Chhattisgarh usage of such E-resources is comparatively low.(Kashyap, 2016) Tlakula (2016)(Tlakula & Fombad, 2017) also analyzed that the usage of e-resources at the University of Venda by the student community is very low and recommended the need for training and orientation to enhance the usage of resources. One research found that Male students ((57.61%) are more aware than females ((42.38%) to use E-resources in the college library. Research also investigated the purpose of using e-resources and found that majority of 198 (46.47%) respondents using e-resources for research followed by for Publication155 (36.38%), Teaching purpose 69 (16.19%), Entertainment 3(00.73%), and others 1 (00.23%).(Sawai & Chavan, 2020) If prospective teachers may be unfamiliar or uncomfortable with encroachment and want to progressive in the 21st century, this will become a necessity to address this issue.

Hence, it was need of the hour to study awareness and usage of E -platform, the status of enrolment in such training programs offered on such platform for development among prospective teachers.

Statement of Research Problem:

The problem under investigation was “A Study on Awareness and Usage of E-resource Portals among Prospective Teachers”.

Definition of Key Words Used in Research problem:

E-resource portals: E-resources is the distribution of information in any electronic form such as CD-ROM, floppy disk, or magnetic tape or across a computer network like e-journals, e-Books, etc. “Electronic resources consist of data (information representing numbers, text, graphics, images, maps, moving images, music, sounds, etc.), programs (instructions, etc., that process the data for use), or combinations of data and programs. SWAYAM,SWAYAM PRABHA, DIKSHA, e-Pathshala, NISHTHA(National Initiative for School Heads and Teachers Holistic Advancement), Digital National Library, e-Journal, National Repository of Open Educational Resources (NROER) all are E resource Portal sponsored by Government to make education accessible and equitable.

Prospective Teaches: Students who are part of the teacher education program (B.Ed, M.Ed,) before entering into the teaching profession.

Research Questions

1. How much awareness about the usage of E-resources among prospective teachers?
2. What is the attitude towards the need to access the E-resources portal by prospective teachers?
3. What is the status of enrolling in MOOC courses (from SWYAM /DIKSHA portal) by prospective teachers?

Objectives of Study

1. To Study the awareness for usage literacy of E-resources among prospective teachers.

2. To determine the attitude towards access to E-resource portal by prospective teachers.
3. To investigate the status of enrolment in MOOC courses (SWYAM /DIKSHA) by prospective teachers.

Research Methodology

The present study has been done with the help of the survey method. Survey research is distinguished by its reliance upon the selection of persons from large and small populations and the making of observation. So that inference can be applied to the present population.

Type of Research: This was a descriptive survey methodology.

Population: Prospective Teacher of Uttar Pradesh and Haryana.

Sample: Data was collected from 50 prospective teachers from different universities of Uttar Pradesh and Haryana. It was collected online through goggle form.

Sampling technique: Random Sampling was used to collect information.

Tool for Data Collection: A well-designed questionnaire is prepared by the researcher with the help of Google form and the link has been sent to prospective teachers. It is collecting basic information like Name, Name of Institute, and eleven questions about awareness of literacy usage of E-resources, need of access, and enrolment status in MOOCs course (SWYAM /DIKSHA) among prospective teachers.

Delimitations of Study:

- The study was delimited to prospective teachers only.
- The study was delimited to prospective teachers of Uttar Pradesh and Haryana
- The study was delimited to 50 Pre-service teachers only.
- The study is delimited to awareness and usage of only these E resource portal sponsored by the government of India: SWAYAM, SWAYAM PRABHA, DIKSHA, e-Pathshala, NISHTHA (National Initiative for School Heads and Teachers Holistic Advancement), Digital National Library, e-Journal, National Repository of Open Educational Resources (NROER).

Data Analysis and Findings:

The first objective was to find out the awareness of various e-resources among B.Ed. students. The following tables and discussions illustrated the results of the awareness for usage literacy of E-resources among prospective teachers. This study also investigated the status of enrolment in MOOC courses (SWYAM /DIKSHA) by pupil teachers.

1. Awareness and usage of E-resource portal

This includes discussion about awareness of various E resources used today Like Swayam, Swayam Prabha, Diksha, E-patshala, Nishtha, Digital National Library, E-Journals, NROER. This E resources portals are verified on basis of awareness and usage and categorised in to Aware and using, aware but not using, Aware but not aware of how to use, totally not aware. The following Table 1 depicted the percentage and number of Pupil teachers about their Awareness and usage of E-resource portals among prospective teachers.

Table 1 Awareness and usage of E-resource portals among prospective teachers

Sr. No	Name of the E-resource Portals	Aware &Using	Aware but Not using	Aware but Don't know how to use	Unaware
1	SWAYAM	26(52%)	12(24%)	4(8%)	8(16%)
2	SWAYAM PRABHA	10(20%)	24(48%)	7(14%)	9(18%)
3	DIKSHA	14(28%)	26(52%)	4(8%)	6(12%)
4	e-Pathshala	27(54%)	15(30%)	5(10%)	3(6%)
5	NISHTHA	2(4%)	29(58%)	6(12%)	13(26%)
6	Digital National Library	13(26%)	26(52%)	5(10%)	6(12%)
7	e-Journal	15(30%)	22(44%)	8(16%)	5(10%)
8	NROER	5(10%)	28(56%)	8(16%)	9(18%)
	Total	112(27%)	184(46%)	47(12%)	59(15%)

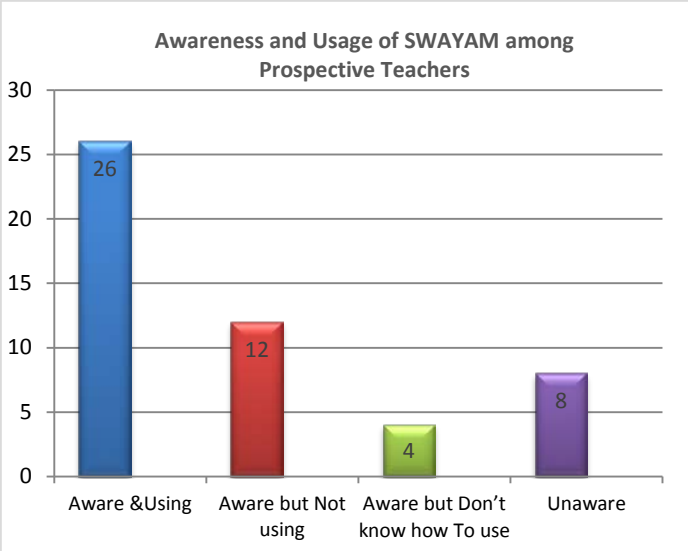


Figure 1.1 Awareness and Usage of SWAYAM among Prospective Teachers

Figure 1.1 showed the responses from the prospective teacher on awareness and usage of SWAYAM portal Fifty-two percent (52%) of prospective teachers said that they were aware as well as using SWAYAM portal. Twenty-four (24%) student teachers expressed that they were aware of SWAYAM

portal but not using it but they knew that how to use SWAYAM portal. Eight percent (8%) of student teachers said that they were aware but did not know how to use it. Sixteen percent (16%) of prospective teachers admitted that they are unaware of such a portal. Study done at Spanish in year 2014 indicates that college degree holders are often take up the majority of MOOC learners.(Despujol et al., 2014).

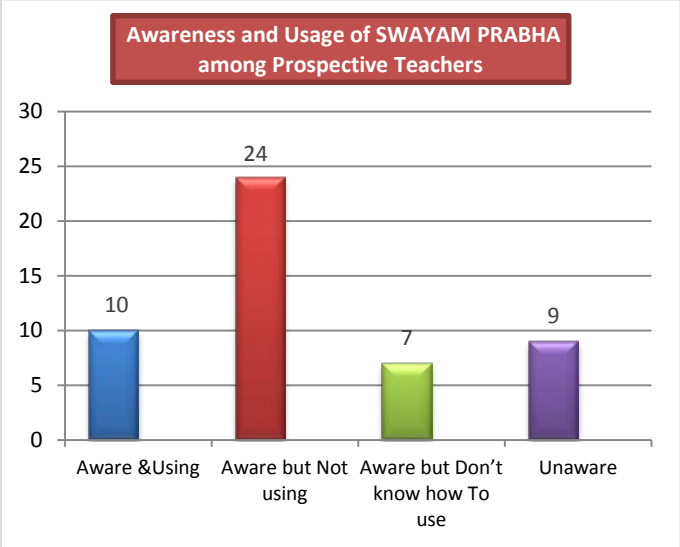


Figure 1.2 Awareness and usage of SWAYAM PRABHA among Prospective Teachers

In figure 1.2 illustrations of percentage of awareness and usage of Swayam Prabha is analysed Twenty percent (20 percent) of prospective teachers said they were aware of the SWAYAM PRABHA portal and were using it. Forty-eight percent (48 percent) of student teachers said they were aware of the SWAYAM PRABHA portal, but they did not use it, but they knew how to use the SWAYAM PRABHA portal. Fourteen percent of student teachers (14 percent) said they were aware of it, but did not know how to use it. Eighteen percent of prospective teachers (18 percent) admitted that they were unaware of such a portal.

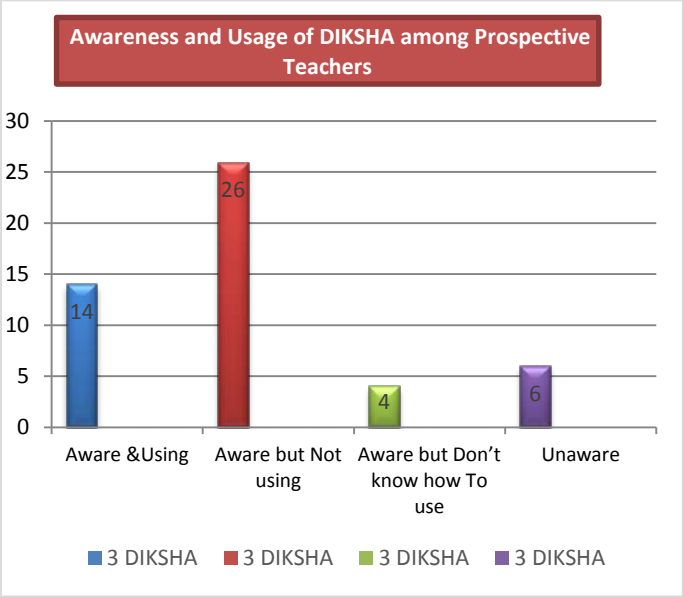


Figure 1.3 Awareness and Usage of DIKSHA among Prospective Teachers

Figure 1.3 showed the responses from the prospective teacher on awareness and usage of DIKSHA portal. Twenty-eight percent (28%) of prospective teachers said they were aware of and were using the DIKSHA portal. Fifty-two percent of student teachers (52 percent) said they were aware of the DIKSHA portal, but they didn't use it, but they knew how to use the DIKSHA portal. Eight percent (8 percent) of student teachers said they were aware of it, but did not know how to use it. Twelve percent (12 percent) of teacher trainees acknowledged they were unaware of such a portal.

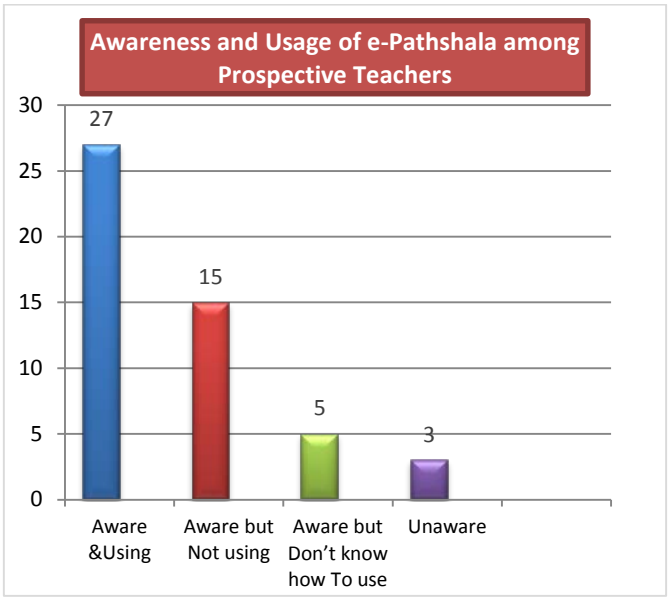


Figure 1.4 Awareness and Usage of e-Pathshala among Prospective Teachers

Figure 1.4 showed the responses from the prospective teacher on awareness and usage of the e-Pathshalaportal. Fifty-four percent (54%) of prospective teachers said they were mindful of and were utilizing the E-PATHSHALA entry. Thirty percent of prospective teachers (30 percent) said they were mindful of the E-PATHSHALA entry, but they didn't utilize it, but they knew how to utilize the E-PATHSHALA entrance. Ten percent (10percent) of prospective teachers said

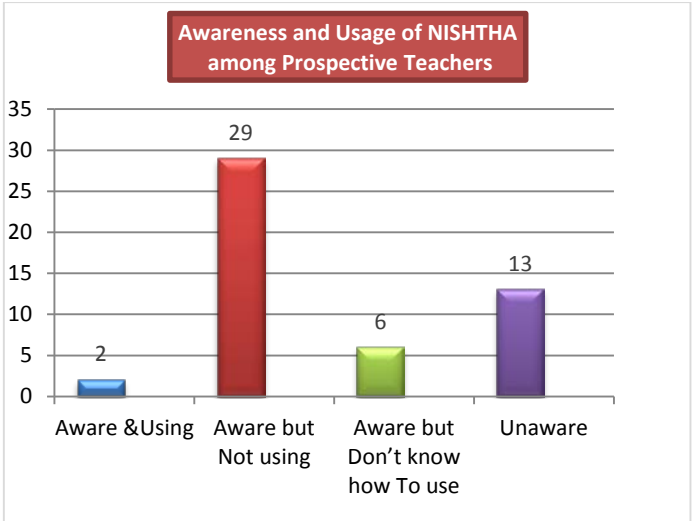


Figure 1.5 Awareness and Usage of NISHTHA among Prospective Teachers

they were mindful of it, but did not know how to utilize it. Six percent (6 percent) of prospective teachers recognized they were uninformed of such an entry.(Garg et al., 2020)

Figure 1.5 showed the responses from the prospective teacher on awareness and usage of NISHTHA portal**.** Just four percent (4 percent) of prospective teachers said they were aware of the NISHTHA portal and were using it. Fifty-eight percent (58 percent) of student teachers said they knew about the NISHTHA portal, but they didn't use it, but they knew how to use it. Twelve percent of student teachers (12 percent) said they knew about it, but did not know how to use it. Twenty-six percent of teacher trainees (26 percent) admitted that they were unaware of such a portal.

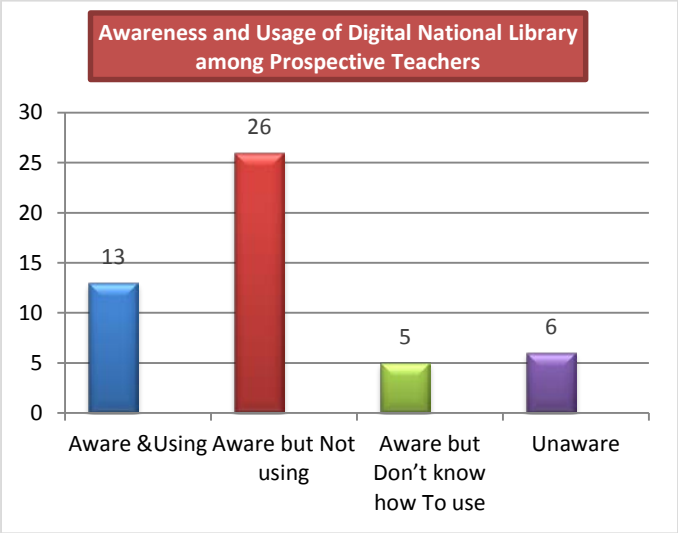


Figure 1.6 Awareness and Usage of DIGITAL NATIONAL LIBRARY among Prospective Teachers

Figure 1.6 shows the responses from the prospective teacher on awareness and usage of Digital National LibraryTwenty-six percent (26%) of prospective teachers said they were aware of and were using the DIGITAL NATIONAL LIBRARY platform. Fifty-two percent of student teachers (52 percent) said they knew about the DIGITAL NATIONAL LIBRARY platform, but they did not use it, but they knew

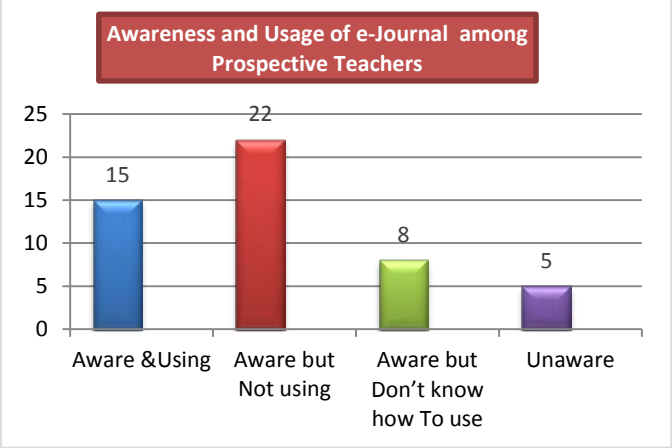


Figure 1.7 Awareness and Usage of E-JOURNAL among Prospective Teachers

how to use it. Ten percent (10 percent) of student teachers said they knew about it but did not know how to use it. Twelve percent (12 per cent) of teacher trainees reported they were unaware of such a portal.

Figure 1.7 shows the responses from the prospective teacher on awareness and usage of e-Journal. Thirty percent (30%) of prospective teachers said they were aware of and were using the E-JOURNAL platform. Forty-four percent of student teachers (44percent) said they knew about the E-JOURNAL platform,(Brar et al., 2019) but they did not use it, but they knew how to use it. Sixteen percent (16 percent) of student teachers said they knew about it but did not know how to use it. Ten percent (10 percent) of teacher trainees reported they were unaware of such a portal. It concludes that maximum number of teacher trainees are found to be well aware of E-Journal portal.

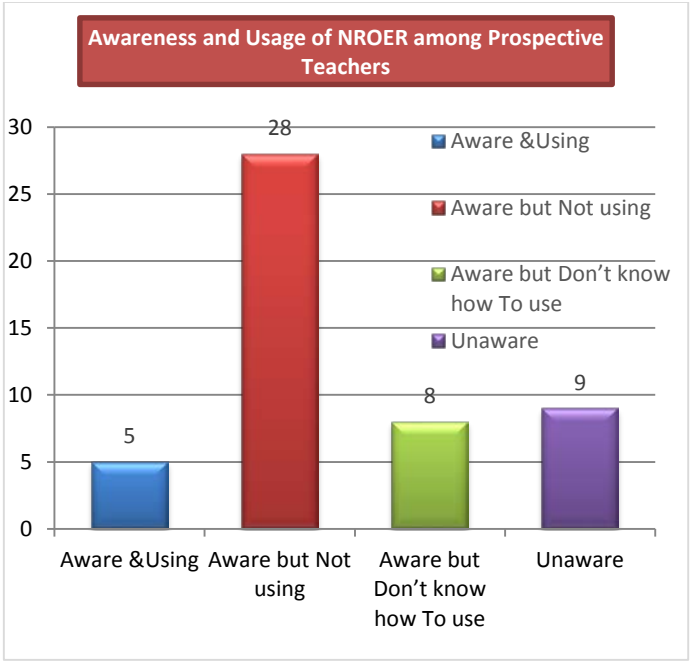
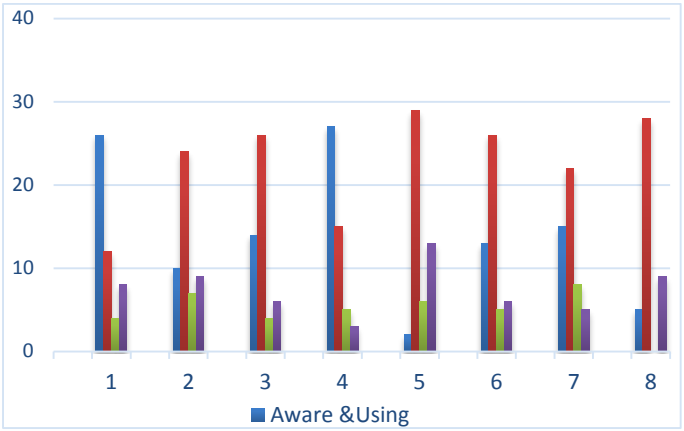


Figure 1.8 Awareness and Usage of NROER among Prospective Teachers

Figure 1.8 shows the responses from the prospective teacher on awareness and usage of NROER portal. Ten percent (10%) of prospective teachers said they were aware of and were using the NROER platform. Fifty Six percent of student teachers (56percent) said they knew about the NROER platform, but they did not use it, but they knew how to use it. Sixteen percent (16percent) of student teachers said they knew about it but did not know how to use it. Eighteen percent (18 percent) of teacher trainees reported they were unaware of such a portal. This figure also depicts that students are well versed with NROER.

Figure 1.9 showed the responses from the prospective teacher about Awareness and Usage of different E-resource Portals. By analyzing this graph, researchers found that e-Pathshala is the most aware and used portal among all the above-mentioned E resource portals. This portal is used by 54% of student teachers, followed by the SWYAM portal, used by 52% of students. NISHTHA (National School Heads and Teachers Holistic Initiative) is the most unknown portal among student teachers. This portal is not known to 26 percent of student teachers. Moreover this, the researcher found that



1	SWAYAM
2	SWAYAM PRABHA
3	DIKSHA
4	e-Pathshala
5	NISHTHA
6	Digital National Library
7	e-Journal
8	NROER

Figure 1.9 Overall Status of Awareness and Usage of different E-resource Portals among Prospective Teachers

maximum student teachers (46%) are aware of the E resources portal sponsored by the Government of India but not using this portal. Only twenty-seven percent of student teachers (27%) used these portals for various purposes. Twelve Percent of student teachers (12%) among all sampled student teachers admitted that they are aware but don't know how to use these portals. And fifteen percent (15%) of student teachers acknowledged that they are unaware of these portals.

2. Attitude toward the need of E-resource portal of prospective teacher

In this objective, Researcher tried to find out Information on which parameters e resources are used by the students. It is divided among parameters like research work, teaching and learning process, to create E-content to be used as TLM in their classroom professional development of the prospective teacher.

Table 2 Attitude toward the need of E-resource portal of prospective teacher

S. No	Parameters	Respondent	Percentage
1.	Research Work	28	54.9
2.	Teaching Process	40	78.4
3.	Learning Process	29	56.9
4.	E content	22	43.1
5.	Entertainment	10	19.6

Table 2 discovered that teaching purpose ranked highest with 78.4% followed by 56.9 % the Learning Process and 54.9 % students use this portal for Research Work, 43.1% for the E-content purpose and 19.6.6% prospective teacher used these portals for Entertainment. It indicates that all subscribed E-resource portals are in high demand among student-teacher. But the study conducted by Habiba and Chowdhury(2012)(Habiba & Chowdhury, 2012) shows that E-resource were exclusively used for learning followed by current information and less importance is given to research and teaching.

3. Status of enrolling in MOOC courses (from SWYAM /DIKSHA portal)

The objective is to find the status of enrolments of budding teachers in various MOOCS.(Nemer & O'Neill, 2019; Pant et al., 2021)

Courses like swayam and Diksha Portal and various others. Data was collected on the basis of three parameters. First was to find out whether enrolment is course followed by its completion with certificates by students. Second whether students have just enrolled and not completed course with certification Third one includes students are not enrolled in any of the course.

Table 3 Status of enrolling in MOOC courses (from SWYAM /DIKSHA portal)

S. No.	Parameters	Respondent	Percentage
1.	Complete course with certification	17	33.3
2.	Only enrolled in course but not attended	19	37.3
3.	Not Enrolled in any course	14	27.5

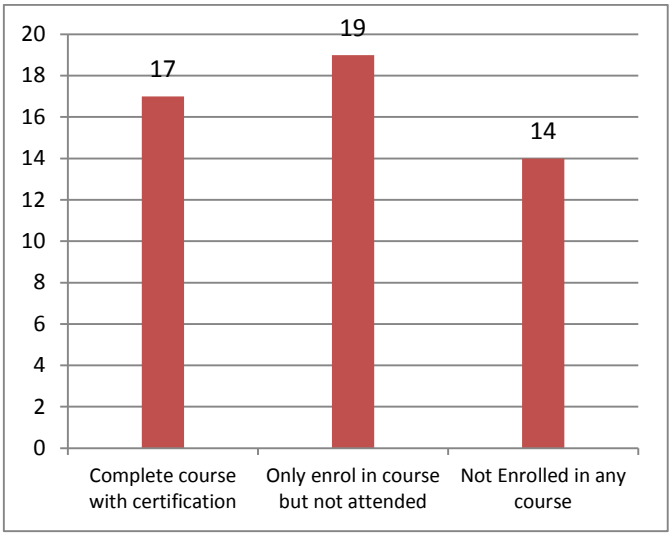


Figure 1.10 the responses from the prospective teacher on the status of enrolling in MOOC courses (from SWYAM /DIKSHA portal)

In Figure 1.10 the researcher found that maximum Student teachers i.e. 37.3% only enrol in MOOCs courses offered at SWYAM /DIKSHA portal but not attended this course seriously and do not complete them to get the certificate. On the other side, 33.3% of Student teachers complete courses with certification. But 27.5%of Student teachers never enrolled in any such courses. There could be many reasons not to complete and even enrol in such courses by student teachers like course was irrelevant for them; course was too

demanding in terms of time; the assignments/ quizzes were difficult the provision of credit transfer is not applicable with their university; the exam fee is high; or many other reasons.

Discussion

E-resource portals for teachers and students (with Digital Credentials) contains learning material using a mix of videos, interactive content, practice questions, and reading material as well as an assessment to evaluate learning.(Maxwell Peprah Opoku, Wisdom Kwadwo Mprah, Isaac Owusu, Eric Badu, 2016) The users can be recognized for completing the course help in Skill-building - anytime, anywhere. Nowadays e-resources are considered as mines of information. At present time, it is becoming an increasing reality and necessity to have literacy(Arora & Sahu, 2015) and usage of E-resource portals among teachers as well as students.(Wadhwa nee Dabas & Kaur, 2017) The researcher discovered that a maximum number of students (46% students) was aware of E-resource portal sponsored by Government of India but not using this portal. Only 27% of students used these portals for various activities. 12% of students among all sampled students aware but don't know how to use these portals. And 15% of students are unaware of these portals. The researcher also found that among all E-resource portals mentioned above, the most aware and used portal is e-Pathshala. 54% of student teachers use this portal followed by the SWYAM portal that is used by 52 % of the student. NISHTHA (National Initiative for School Heads and Teachers Holistic) is the most unaware portal among student-teacher. Twenty six percent (26%) of student teachers are not aware of this portal.

Moreover this, these portals are used for various purposes by student teachers. It was found that the most of student teachers i.e. 31% use these portals for the teaching process. Twenty percent of students acknowledge that they use these portals for learning. This result is very contrary to a study conducted by Habiba and Chowdhury in 2012 showed that e-resources are exclusively used for learning followed by current information and less importance is given to research and teaching.(Habiba & Chowdhury, 2012) Moreover, these maximum student teachers neither attended a course offered at SWYAM /DIKSHA portal seriously nor complete any certification in MOOCs course offered at SWYAM /DIKSHA portal. These figures demand the need of training and orientation of E resource portal among prospective teacher to enhance the usage of resources. Teacher education programs are responsible for preparing the future generations of teachers,(Castillo et al., 2019) programs must have some such training that prepares future teachers for an ever-growing and expanding field of K-12 online learning in all of its forms(Shukla, 2015) and also facilitate professional development during service.(Edusei et al., 2015) The government also test out the E-resource portals that fulfil the need of learner or not. Because research investigated that the least aware and used portal among prospective teachers is NISHTHA. Therefore, it is a responsibility as well requirement to check regularly all portal and ensure that they fully address the need of learners and teachers and timely orientation should be given to learner for how to use these portals and how they will help in their development(Lerma & Chen, 2020; Sridevi et al., 2015) so that maximum number of students get benefits of these initiatives of the government for equity and quality of education in 21st century world. This study is also an eye opener for various national bodies to spread the awareness of these e -portals as the way we learn and teach is changing in the present scenario. Bayeck Y R (2016)(Bayeck, 2016) suggested various motivation factors to involve students in MOOCS Courses like motivation through friends and other people in contact to complete a course on such plat form, Motivation to achieve skills to acquire extra credits or Personal development to get a good job and third one to get inspired by MOOC's benefits from professors and finding proper reputation among professors.

Scope for Future Study

This research helped to know awareness and usage of E-resource portals among prospective teachers. But this study can be done on teacher and student of schools and college at both graduate and post graduate level. The same study has a scope with a large sample size so which gives fruitful results that help to generalize the results. This in turn help administrators and stake holders to take decision about distribution of credits through MOOC's and learn to use e-resources as the future of online learning and teaching has turned to be on after pandemic period. This study is delimited to a few teacher training institutes of Haryana and Uttar Pradesh. Therefore, Study can be repeated to compare the awareness of the E-resource portal among different state prospective teacher and in-service teacher. This study requires to be repeated to find out various reasons for not completing/ not enrolling for MOOC courses by prospective teachers. These reasons will help in identifying the causes of non-popularity of MOOC courses. Hence, this study has wide scope for further research.

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