

A STUDY ON PERCEPTION AND AWARENESS TOWARDS MOOCS AMONG THE PRE-SERVICE TEACHERS

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ABSTRACT

Massive Open Online Courses (MOOCs) are a recent but hugely popular phenomenon in the online learning world. They are hailed by many as a solution for the developing world's lack of access to education because MOOCs can provide learning opportunities to a massive number of learners from anywhere in the world as long as they can access the course through Internet. It reaches a global domain of learners and on the other hand promulgates knowledge in an efficient digital platform, besides intertwining a huge network of scientists, professors, teachers, scholars, students and different stakeholders related to education system. The present study is conducted to assess the perception and awareness towards MOOCs among the pre-service teachers by taking 42 samples from Paschim Medinipur district in West Bengal. A well designed questionnaire has been used to collect the primary data; which was developed by *Sruti Sruba Bharali*. The result revealed that perception and awareness towards MOOCs is little higher among the male category students than the female counterpart. It has also been observed that perception and awareness towards MOOCs is little higher among the students from urban area than the rural counterpart. By using Inferential statistics (t-test); it was found that; these results were not statistically significant. Hopefully these will be helpful to the students, researchers, educationist, policy makers, government, schools, colleges and universities to successfully implement MOOCs in present education system.

Keywords : Perception, Awareness, MOOCs, Pre-service teachers, Gender, Habitat.

INTRODUCTION

Massive Open Online Courses (MOOCs) have emerged as one of the most potential tools in present quality education and worldwide since it's a massive training programme to a huge domain of population. On one hand, the global domain of learners has been using it and on the other hand it promulgates knowledge in an efficient digital platform, besides intertwining a huge network of scientists, professors, teachers, scholars, students and different stakeholders related to education system.

Online learning has taken a new turn with the introduction of Massive Open Online Courses (MOOCs) (Liyanagunawardena, Adams, & Williams, 2013), a recent addition to the range of

online learning options. Massive Open Online Courses (commonly MOOCs) is a path breaking and hopefully the most discussed sector in the digital era of distance education (Chatterjee, P. et al., 2014). Online learning through MOOCs platforms has been considered a revolutionary development in the education system, with scalable, seamless and equitable access to course from universities, anywhere in the world. The ubiquitous penetration of internet and mobile communication technologies has brought about disruptive, but desirable, transformations in the higher education landscape, by making it inclusive. India, after the USA, dominates the global growth in MOOCs' enrolments (Chauhan, 2017). The Government of India (GoI) has been extensively promoting MOOCs, through its SWAYAM platform (GoI, 2020). There is an exponential growth in the number of courses offered through MOOCs platform and the number of universities participating in these platforms, worldwide. As per a report by Shah (2018), over 900 universities around the world had offered 11.4k courses on the various MOOCs platform, by the end of 2018. Several universities in India have entered into strategic partnerships with MOOCs platforms for providing content and certifications to the aspirants.

Different aspects are discussed over the emergence and key factors of MOOCs in India. India is quickly becoming a prime hub for MOOCs in Asia. With the rise of digital learning, India is seeing an increase in the number of enrollment of online courses. The government of India has also taken several steps to promote the use of MOOCs, such as providing free access to online courses and encouraging universities to offer more online courses. Additionally, the Indian government has launched initiatives such as the National Digital Library of India which provides access to a wide range of digital resources, including MOOCs. With the increasing availability of MOOCs in India, more students are taking the advantages of it. There are a few ways that MOOCs can be incorporated into a ULE (Unique Learning Experience). One way is to have a MOOC section on the website or portal where users can find and access various courses. Another way is to have MOOCs integrated into the Learning Management System (LMS) used by the institution. This would allow instructors to create and manage courses using the LMS, and students to access the courses from anywhere. Finally, MOOCs could be made available as part of the institutional repository, which would allow users to search for and access courses in a various format.

STATEMENT OF THE PROBLEM

MOOCs have its impact on different aspects of education. In West Bengal, a large number of students are involved in Teacher Education programme. MOOCs have brought a revolution in the field of online education. It is important for students to be aware of the advantages and disadvantages of online education so that they can make an informed decision. Students should make sure that they understand the learning environment, resources available, and the technical support available before deciding to pursue online education. So, it is very necessary to find out the

perception and rate of awareness among these students. Many researchers have conducted studies in this domain. But, a few studies have been conducted on assessing the perception and awareness towards MOOCs among the pre-service teachers in West Bengal especially in Paschim Medinipur district.

Therefore, the researcher has identified a researchable knowledge gap regarding the perception and awareness towards MOOCs with the focus on pre-service teachers. So, the problem of the present study was specified and stated as, “**A Study on Perception and Awareness towards MOOCs among the Pre-service teachers**”.

OBJECTIVES OF THE STUDY

To determine the perception and awareness towards MOOCs among the pre-service teachers, the following objectives were identified:

- i. To explore the present status of perception and awareness towards MOOCs among the pre-service teachers in Paschim Medinipur district.
- ii. To explore the differences about the perception and awareness towards MOOCs among the pre-service teachers on the basis Gender.
- iii. To explore the differences about the perception and awareness towards MOOCs among the pre-service teachers on the basis Habitat.

HYPOTHESES OF THE STUDY

On the basis of objectives of the study the following null hypotheses were formulated :

H₀1 : Gender does not play a significant role in variation of the perception and awareness towards MOOCs among the pre-service teachers in Paschim Medinipur district.

H₀2 : There exists no significant difference between rural and urban pre-service teachers on the basis of perception and awareness towards MOOCs in Paschim Medinipur district.

METHODOLOGY OF THE STUDY

The present study followed the quantitative research design. It was conducted based on cross-sectional survey research framework.

Survey type of study were generally conducted to collect details illustration of existing phenomena with the intention of employing data to justify present-day situation and practices or to make more and more relevant design for improving them. Therefore, a survey research design was used for this study because it is realized that survey method is a most suitable technique for collecting raw information in form of qualitative and quantitative data of the respective area, here

as like; perception and awareness towards MOOCs among the pre-service teachers in Paschim Medinipur district and it is also a practice from large population involving respondents of different types of background.

- **The Population:** Pre-service teachers in teacher education institutes of Paschim Medinipur district were considered as population of the study.
- **The study sample:** As the survey research requires a good number of participants which represent the whole population to collect relevant information from the target group. The present study was conducted on total participants of 42 pre-service teachers who were randomly selected from teacher education institute of Paschim Medinipur district in West Bengal. The summary of sample distribution was shown in table no. 1.

Table no. 1 : Distribution of sample according to different socio-economic parameters

Sl. No.	Variables		Total number of students	Percentage
1.	Gender	Male	24	57.14%
		Female	18	42.86%
2.	Habitat	Urban	16	38.10%
		Rural	26	61.90%

RESEARCH INSTRUMENTS

It is much important for any research to gather relevant and appropriate data from the concerned sample to test the research hypothesis. The researcher has used a set of questions in a statement form to collect the required socio-economic information and data. In the present study, the researcher has used a questionnaire which was developed by *Sruti Sruba Bharali*. This questionnaire has 13 questions; those were presented with two response choice. Subject had to put a tick in the appropriate box to say 'Yes' or 'No'.

DATA ANALYSIS AND INTERPRETATION

A. Descriptive statistics: This section deals with the analysis of present status of perception and awareness towards MOOCs among the pre-service teachers on the basis of different variables using descriptive statistics.

- **Assessment of perception and awareness about MOOCs among the pre-service teachers on the basis of their Gender variable.**

Perception and awareness about MOOCs of the total number of pre-service teachers on the basis of gender variable is shown in table no. 2 :

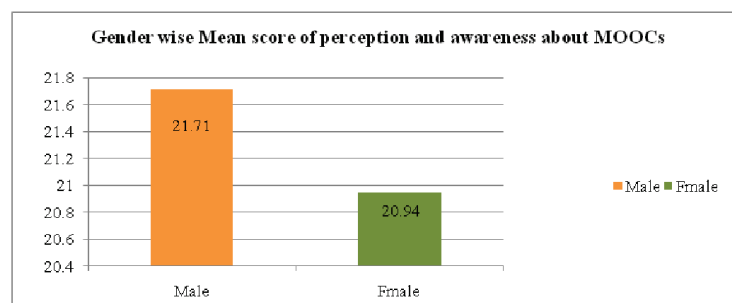
Here, first of all table no. 2 was used to ascertain the mean value, standard deviation and the result revealed that the mean score of perception and awareness about MOOCs of pre-service teachers on the basis of gender variable is given below :

Table no. 2 : Score of perception and awareness about MOOCs among the pre-service teachers on the basis Gender variable.

SCORE OF PERCEPTION AND AWARENESS ABOUT MOOCs					
Score	Category of Gender	N	Mean	Std. Deviation	Std. Error Mean
	Male	24	21.71	2.926	0.597
	Female	18	20.94	2.940	0.693

The mean score of perception and awareness about MOOCs of Male students (Mean-21.71, SD-2.926) is higher than the mean score of Female students (Mean-20.94, SD-2.940). These descriptive statistics shows that there are few differences in mean score of perception and awareness about MOOCs among the male and female students. The illustration is given in figure no. 1.

Figure no. 1 : Mean score of perception and awareness about MOOCs based on Gender.



- **Assessment of perception and awareness about MOOCs among the pre-service teachers on the basis of their Habitat variable.**

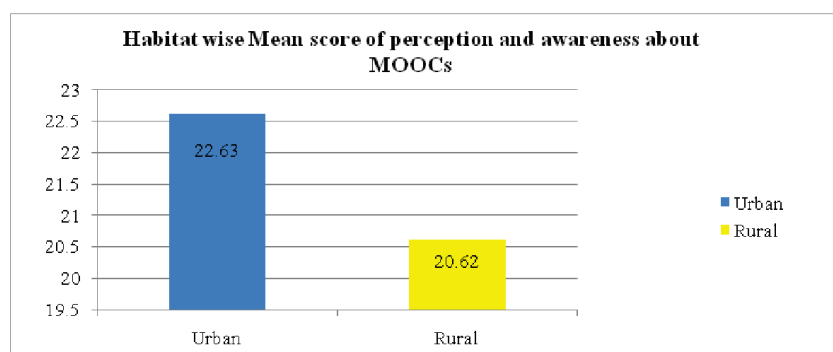
Perception and awareness about MOOCs of the total number of pre-service teachers on the basis of habitat variable is shown in table no. 3:

Here, first of all table no. 3 was used to ascertain the mean value, standard deviation and result revealed that the mean score of perception and awareness about MOOCs of pre-service teachers on the basis of habitat variable is given below:

Table no. 3 : Score of perception and awareness about MOOCs among the pre-service teachers on the basis Habitat variable.

SCORE OF PERCEPTION AND AWARENESS ABOUT MOOCs					
Score	Habitat	N	Mean	Std. Deviation	Std. Error Mean
	Urban	16	22.63	2.754	0.688
	Rural	26	20.62	2.801	0.549

The mean score of perception and awareness about MOOCs of students from urban area (Mean-22.63, SD-2.754) is higher than the mean score of students from rural area (Mean-20.62, SD-2.801). These descriptive statistics shows that there are few differences in mean score of perception and awareness about MOOCs among the rural and urban students. The illustration is given in figure no. 2.

Figure no. 2 : Mean score of perception and awareness about MOOCs based on Habitat.

B. Inferential statistics : Parametric Statistical procedures allow to draw inference about populations based on samples of those populations. To make these inferences, we must be able to make certain assumptions about the shape of the distributions of the population sample.

In the field of Social Science, there are many occasions when we are more interested in knowing about the significance of the different between two sample means drawn from the same populations rather than merely knowing the significance of the computed samples means. The problem is the determination of the significance of the differences between two computed means. One is bond question whether the difference, if any, between the two samples means is the result of the sample fluctuations which have occurred incidentally or indicates some really valid differences which help in drowning some useful interpretations (Mangal, 2017).

Hypotheses Testing :

H₀1 : Gender does not play a significant role in variation of the perception and awareness towards MOOCs among the pre-service teachers in Paschim Medinipur district.

Table no. 4 : t-test showing the Gender-wise Comparison the perception and awareness towards MOOCs.

Independent Samples t-test Gender wise different dimension of the perception and awareness towards MOOCs

Gender	N	Mean	SD	SE _M	t	df	MD	p (sig. at 2-tailed)	Std. Error Difference	Remarks
Male	24	21.71	2.926	0.597	0.836	40	0.764	0.408	0.914	*NS (p>0.05)
Female	18	20.94	2.940	0.693						

(*NS- Not Significant)

This independent sample t-test analysis indicates that the 24 male students have a mean of 21.71 and SD of 2.926 and the 18 female students has a mean of 20.94 and SD of 2.940. Here, the mean score of male students (i.e. 21.71) is higher than that of female students (i.e. 20.94). It signifies that the initial descriptive statistics revealed the perception and awareness towards MOOCs of male pre-service teachers is just higher than the female counterpart. But to ascertain whether this difference is statistically significant or not significant, the researcher further applied the t-test. The compute 't-value' i.e. 0.836 is smaller than the critical 't-value' i.e. 1.96 at 5% level. The critical value required to reach 5% level of significance and the $p > 0.05$ as $P = 0.408$. Hence, the 't-value' is not significant at 0.05 level which indicates that it does not differ significantly at 0.05 level. Consequently, **the null hypothesis can't be rejected at 5% level of significance.**

H₀₂ : There exists no significant difference between rural and urban pre-service teachers on the basis of perception and awareness towards MOOCs in Paschim Medinipur district.

Table no. 5 : t-test showing the Habitat-wise Comparison the perception and awareness towards MOOCs.

Independent Samples t-test Habitat wise different dimension of the perception and awareness towards MOOCs

Habitat	N	Mean	SD	SE _M	t	df	MD	p (sig. at 2-tailed)	Std. Error Difference	Remarks
Urban	16	22.63	2.754	0.688	2.272	40	2.010	0.029	0.884	*NS (p>0.01)
Rural	26	20.62	2.801	0.549						

(*NS- Not Significant)

This independent sample t-test analysis indicates that the 16 students from urban area have a mean of 22.63 and SD of 2.754 and the 26 students from rural area has a mean of 20.62 and SD of 2.801. Here, the mean score of students from urban area (i.e. 22.63) is higher than that of students from rural area (i.e. 20.62). That means the initial descriptive statistics revealed that the perception and awareness towards MOOCs of pre-service teachers from urban area is just higher than the rural counterpart. But to ascertain whether these difference is statistically significant or not significant. So, the researcher further applied the t-test. The compute 't-value' i.e. 2.272 is smaller than the critical 't-value' i.e. 2.58 at 1% level. The critical value required to reach 1% level of significance and $p > 0.01$ as $p = 0.029$. Hence, the 't-value' is not significant at 0.01 level which indicates do not differ significantly at 0.01 level. Consequently, **the null hypothesis can't be rejected at 1% level of significance.**

FINDINGS OF THE STUDY

On the basis of gender variable, out of total 42 pre-service teachers of teacher education institutes, the mean score of the perception and awareness towards MOOCs is little higher among the male (Mean-21.71, SD-2.926) category students than the female counterpart (Mean-20.94, SD-2.940); which did not stand statistically significant as $p > 0.05$.

On the basis of habitat variable, out of total 42 pre-service teachers of teacher education institutes, the mean score of the perception and awareness towards MOOCs is little higher among the students from urban area (Mean-22.63, SD-2.754) than the rural counterpart (Mean-20.62, SD-2.801); which did not stand statistically significant as $p > 0.01$.

DISCUSSION

The study investigated the overall perception and awareness towards MOOCs with respect to different socio-economic variables viz.- Gender and Habitat of the students and also estimated the prevalence rate of perception and awareness towards MOOCs among the pre-service teachers at teacher education institute, which are very important for student teacher in Paschim Medinipur district as well as all over the West Bengal for enhancing their psycho-social competencies for the adaption to the changing environment in the modern era of education system.

In present study, the result revealed that the mean score of perception and awareness towards MOOCs is little higher among the male category students than the female counterpart, Inferential statistically it was not significant ($p > 0.05$). The reason for the outcome of such result was that using new technologies like MOOCs to improve and change the education system shows little more interest among male students than female students. Male users are found to have a greater tendency towards novelty seeking (Chau and Hui, 1998). This is particularly applicable when the technology is new. Venkatesh et al. (2012) found that the impact of hedonic motivation is higher among young male users during the early use off new technology. But on the other hand F. A.

Alshehri (2018) said that *females indicated higher motivation levels than males* on the context of MOOCs.

From the statistical analysis of the present study it revealed that, the mean score of perception and awareness towards MOOCs is little higher among the students from urban area than the rural counterpart, Inferential statistically the difference was found to be not significant ($p>0.01$). The causes behind this type of result were, internet system and technology services are not available or sufficient in rural area and also the students from rural part are not too good experienced about MOOCs. The IT infrastructure has improved a lot in the urban areas, the basic infrastructure needed to implement MOOCs is still absent in the rural areas (Chatterjee, et al., 2014). ‘Access’ to digital technologies in parts of developing countries (for example, other than the capital and metropolitan areas) are still insufficient to support online learning (Liyanagunawardena, 2012).

The educational policy framers, administrator, teachers and teacher educators may adopt some realistic measures or strategies in the light of the present study. All of us have a common mission to develop the perception and awareness towards MOOCs at teacher education institute for pre-service teachers. We have to achieve that as early as possible.

POLICY SUGGESTIONS

Following are some suggestions for overcoming the obstacles of the way of MOOCs in education system :—

- i. To develop an adequate infrastructure.
- ii. To make suitable curriculum for Various of MOOC courses.
- iii. To provide internet connection to the student for free or at low cost.
- iv. To arrange more and more seminars, workshops and symposiums about MOOCs.
- v. Government should take more responsibility to spread MOOCs all over the India; especially in rural areas.

SUGGESTIONS FOR FURTHER RESEARCH

Further studies can address the following issues to have more insights on the subject. The present study is not an end in itself rather than it is an on-going journey to reveal the scenario of the perception and awareness towards MOOCs at teacher education institutes for pre-service teachers. This study opens up new grounds for further researches. Looking to the overall research study, it can be observed that there is still further scope for research in the following areas:

- i. The present study is restricted to pre-service teachers only. A similar study may be conducted on Secondary or Higher secondary school students, Undergraduate students and Post-graduate students also.

- ii. The present study is restricted to only Paschim Medinipur district. A similar research may also be conducted in other districts of West Bengal.
- iii. A similar study may be conducted on students with special needs and gifted children.
- iv. In this study the researcher has used only two socio-economic variables (Gender & Habitat). But in future such as age, education, occupation, income, religion, caste, etc. these variables can be used to analyze the data more accurately and to get more in-depth insights.
- v. Here, the researcher used 42 samples. Sampling size can be enhanced while doing this type of research in future.

Further studies may also concentrate on explaining the underlying processes through which MOOCs create value to the learners, as well as investigating the effectiveness of MOOCs in enhancing the learning experiences and improving the academic performance of the learners. In addition, research may be conducted on various approaches and strategies to optimize the learning experiences in MOOCs. For example, how to design and implement effective incentives for learning and how to tailor the learning experience for different learners, taking into account their different backgrounds, objectives and levels of knowledge. Furthermore, further studies may be conducted to understand better the effects of MOOC pedagogy and methods on the learning outcomes and impact on students, as well as the ability of MOOCs to foster collaboration and dialogue among learners. Additionally, research may be conducted to identify the best approaches and strategies to evaluate and assess the knowledge and skills acquired by the learners in MOOCs.

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