

GENDER, AGE, AND INCOME AS DETERMINANTS OF SELECTION OF ONLINE CERTIFICATE PROGRAMS

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ABSTRACT - Online Certificate Programs or Massive Open Online Courses (MOOCs) are receiving increasing attention and interest from several communities involved. In other words, interest in online certificate programs has increased in recent years, and a body of research has emerged regarding this trend. Self-regulated learning (SRL) has recently gotten attention as a crucial factor related to learner behaviours in online certificate programs. Thus, the main objective of this paper is to study the effect of Gender, Age, and Income as determinants of the selection of online certificate programs. The empirical findings not only prioritize the effect of gender, age, and income on the selection of online certificate programs but also provide guidelines to designers and participants of an online certificate program for focusing on important factors that affect the perception of individuals related to the selection of online certificate programs or MOOCs.

Keywords: Online Certificate Programs, Massive Open Online Courses (MOOCs), Gender, Age and Income.

INTRODUCTION

In the current era, digitalization has led to competition in almost every sector. Nowadays, digital technologies impact not only day-to-day activities but also play a significant role in shaping the career of individuals. With the increasing availability of a plethora of massive open online courses (MOOC) by various reputed organizations, like Swayam, Coursera, Udemy, Udacity, etc., to name a few, knowledge gained from most of the courses lead to better career growth. The usage of the digital platform to simplify improved learning and training is gaining motion worldwide as it reduces the time-based problems associated with traditional knowledge. Despite its several benefits, retaining students in the online medium is challenging.

Massive Open Online Courses are a rapidly growing educational provision mode, holding the potential to open up access to world-class teaching and educational resources beyond geographical and social boundaries. In other words, Massive open online courses are a growing element in strategic decision-making in higher education. However, since only a small percentage of enrollees completed the course in online certificate programs, it is essential to understand participants' initial expectations and motivations. The study mainly studied the factors affecting the selection of online certificate programs and the effect of select demographic variables on them. Understanding the aspects of the choice of online certificate programs will not only help designers of online certificate programs but also researchers, and prospective participants who want to join these programs for their skills enrichments.

LITERATURE REVIEW

Nandonde & Malaki (2020) revealed that university students in developing economies need to engage in self-employment. They find the four factors: business education support, compulsory training, resource support, and moral support, loaded significantly. The results showed that university students want their institutions to assist them in becoming entrepreneurs. Fauzi et al. (2020) evaluated Knowledge Sharing (KS) via a virtual community. They discussed several central themes of theories applied in this field on their importance and relevance. The important antecedents are also reviewed on their practicality and implementation in understanding the role of knowledge sharing in the virtual community. They found that this study's implication would benefit stakeholders in maintaining the virtual community's sustainability as the platform for a knowledge-based society.

González et al. (2020) found the motivational factors deciding the application of the E-Proctoring assessment framework in online teaching have been identified, enabling a list of motivational influence factors to be provided when accepting the use of new technological tools (i.e., when the educational system agrees with this tool as a remote supervision method) and deciding which are the most influential or definitive when accepting the use of new technological tools. Lee et al. (2019) showed that Self Regulated Learning (S.R.L.) was an empathetic factor that impacts the learning of MOOCs. S.R.L. systems were distinguished, including persuasive guideline techniques, explicitly self-adequacy, task worth, and objective setting. The various specific intellectual guideline techniques were not recognized, and the correct location was found as a metacognitive guideline system.

Ray et al. (2019) found that in the digitalization and impact of web-based social networking, it is essential for all the firms to recall the intellectual perspectives that impact the student's talent decisions. With specialized online courses getting an equivalent incentive for talent development, instructive establishments and instructive consultancies need to concentrate on focusing on understudies dependent on the apparent advantages and legitimacy of the course contributions. Fianu et al. (2018) analyzed the Unified Theory of Acceptance and Use of Technology (U.T.A.U.T.) to build up an examination model. They examined that MOOCs have excellent instructional quality by utilizing the privileged academic methodologies and guaranteed that the destinations and learning materials are of acceptable quality.

Watted and Barak (2018) demonstrated that members from the two gatherings were inspired by broad premiums, i.e., self-awareness and improvement. In any case, when the college students were situated towards improving information and accepting an endorsement, the overall members were arranged toward exploration and expert headway. Milligan and Littlejohn (2017) showed that most students utilize MOOCs to address work environment adapting needs. They may wish to formalize their current information, update their expert information, or react to a job change. Sharpen and El. Said (2016) found that MOOC Course Content was an essential indicator of MOOC maintenance, with the relationship intervened by the substance's impact on the Perceived Effectiveness of the course.

Jordan (2014) examined the factors which influence the students for enrolling in the course and complete the course. They found that the ordinary MOOC course enlisted around 43,000 students, 6.5% who completed the course. The number of enrolment were diminished after some time and were associated with course length. They also examined that the finish rates of the study were stable across time. Clarà and Barbera (2013) enunciated some psychological assumptions that they contended to be another learning hypothesis, called connectivism. These psychological assumptions drove them to propose the teaching method that in 2008 brought forth the first MOOC.

Delialioglu et al. (2010) developed the Hierarchical Linear Model (H.L.M.). They examined that the work status, degree direction, inspiration, age, sex, English proficiency were the variables that affect the start of the program. They also give essential data to building up a system that can direct research and practice in innovation testament programs. Desimone (2009) proposed that ongoing examination information improves the conceptualization, measures, and approach for considering the impacts of educators' expert advancement on instructors and students. She presented the defense that there is an examination agreement to help utilize many center highlights and a typical theoretical system in proficient advancement authority. Kanuka and Nocente (2003) identified the two results firstly; the web-based guidance was turned into a learning mechanism of decision for specific experts who were required to participate in compulsory scheduled events. Secondly, the purpose behind this is that all the assignments of being found on the accommodation of web-based learning.

RESEARCH OBJECTIVE

The changes in the macro-environment have enhanced the need to comprehend the selection of online certificate programs and their attributes that would facilitate the working professionals to frame their ease of doing the course accordingly. Thus, the research objective of the present study is to firstly, identify the important factors which affect the selection of online certificate programs.

Secondly, to analyze the effect of independent variables, namely Gender, Age, and Income on the dependent variable 'Career Enhancement', 'Quality Course Content Delivery', 'Continuous Evaluation Process', 'Affordability', and 'Query Resolution' factors affecting the selection of online certificate programs.

HYPOTHESES

A total of 18 hypotheses were framed for analyzing the effect of three independent variables: Gender, Age, and Income on the six identified factors using the following format.

H₀: There is no significant effect of **gender** on the factor affecting the selection of online certificate programs.

H₀: There is no significant effect of **age** on the factor affecting the selection of online certificate programs.

H₀: There is no significant effect of **income** on the factor affecting the selection of online certificate programs.

Individual hypotheses for gender, age, and income (6x3=18) are given in the Results and Discussion section.

RESEARCH METHODOLOGY

The Study

The study is descriptive and based on the survey method. The survey was conducted among the working professionals of India. The aim was to study the factors which affect the selection of online certificate programs and to analyze the effect of gender, age, and income on the factors namely Career Enhancement, Quality Course Content Delivery, Brand Image, Continuous Evaluation Process, Affordability, and Query Resolution on the selection of online certificate programs.

The Sample

The population under study includes the working professionals of India who were doing or completed some online certificate programs for different purposes. In the absence of a sampling frame, non-probability judgemental sampling has been used in the present study to select the sample from the population. According to Bryman and Cramer (2001), differences between random and non-probability convenience/judgemental models in terms of their representativeness are not as significant as have often been implied. 342 respondents completed the survey successfully out of the 400 targeted respondents. Therefore, the final sample size of the study was 342.

Tools for Data Collection

The primary data for the study had been collected with the help of a self-administered questionnaire. The questionnaire had two parts. The first part was based on general information about the respondents; in the second part of the questionnaire, 27 statements were framed after a rigorous literature review. These statements were measured on seven points Likert Scale in which 07 means strongly agree, and 01 means strongly disagree. These 27 statements were classified into six factors, namely, Career Enhancement, Quality Course Content Delivery, Brand Image, Continuous Evaluation Process, Affordability, and Query Resolution, which affects the selection of online certificate programs amongst the various working professionals in India. The questionnaire was converted into a google form circulated via the internet to the working professionals.

Tools for Data Analysis

MS Excel (2016) and M. S. Windows-based Statistical Package of Social Sciences (SPSS 21.0) was used to analyze the collected data. Firstly, the Reliability Analysis had done using Cronbach's Alpha Method on all six factors. Secondly, an independent sample t-test and one-way ANOVA were used to test the effect of independent variables on the six dependent variables which affect the selection of online certificate programs among different working professionals of India.

RESULTS AND DISCUSSIONS

The present study qualitatively identified the six factors which affect the selection of online certificate programs among different working professionals of India, based on the literature related to the Technology Acceptance Model (T.A.M.) and other models for providing better criteria for the selection of online certificate programs among different working professionals of India. All the factors are individually discussed in the study. The first factor, entitled Career Enhancement, consists of five items. The mean score of this factor is 5.961 on a seven-point scale. The reliability of the factor was evaluated by assessing the internal consistency of the five items that contributed to this factor using Cronbach's Alpha. The alpha coefficient for this subscale was evaluated to be 0.798 (N = 5). Table 1.1 summarizes the details of this factor.

Table-1.1: Details of Career Enhancement Factor

Item #	Statements	Mean Score	Reliability
1	The online certificate course enables me to pursue my desired learning goals while working/doing a job.	5.961	0.798
2	An online certificate course enhances my professional skills required in official work.		
5	The certificate earned after successful completion of the online course helps me in getting a job promotion.		
6	It only helps me upgrade the additional knowledge about a particular domain, but it is not a concrete addition to my educational qualifications.		
11	The online course offers applied learning, which gives real-world problem-solving capabilities.		

The career Enhancement factor is a relatively strong indicator of selecting online certificate programs in a developing country like India. The acceptable values of online certificate courses enhance the professional skills required in official work and have a significant impact on selecting the online certificate course. Practically, an online certificate course is useful for learners. It upgrades the additional knowledge about a particular domain and offers applied learning, which gives real-world problem-solving capabilities. It gets well integrated into a certificate earned after successful completion of the online course helps in getting a job promotion. Schierz et al. (2010) similarly observed that users are willing to adopt the technologies if they provide unique benefits compared to the existing technologies. Online Certificate programs were one of the best alternatives with a well-designed, clearer, and understandable user interface. The clearer and more coherent interaction with online certificate programs help the learners to accomplish their task quickly and result in the ongoing implementation of an underused innovation.

The second factor, entitled Quality Course Content Delivery, consists of four items. The mean score of this factor is 6.096 on a seven-point scale. The reliability of the factor was calculated using Cronbach's Alpha, which is 0.804 (N=4). Table 1.2 summarizes the details of this factor. Quality Course Content Delivery significantly affects selecting the online certificate course. It is helpful because downloadable / Lifetime access to course materials (videos, handouts, cases) for future references is crucial. The structure of the online course is well organized and,

therefore, trackable. Quality Course Content Delivery seems to draw a lot of importance in technologies involving the course contents are up-to-date and trending with the latest developments in the real world. The instructor's qualifications, experience, and communication style are essential while selecting an online course.

Table-1.2: Details of Quality Course Content Delivery Factor

Item #	Statements	Mean Score	Reliability
9	The course contents are up-to-date and trending with the latest developments in the real world.	6.096	0.804
3	The instructor's qualifications, experience, and communication style are essential for me while selecting an online course.		
22	The downloadable / Lifetime access to course materials (videos, handouts, cases) for future references is essential.		
12	The structure of my online course is well organized and, therefore, trackable.		

The third factor, titled Brand Image, consists of four items. The mean score of this factor is 6.055 on a seven-point scale. The reliability value of this factor is 0.825 (N=4). Table 1.3 summarizes the details of the Brand Image factor. Brand image towards using the technology is considered the primary mediator between various other influential variables and the intention to use any technology. It is deemed to be the degree to which a person has a favorable or unfavorable evaluation of the behavior in question (Grandon et al., 2011). The brand image of learners while selecting the online certificate course not only fits well with self-image but also improves esteem, among others. The notion that brand image influences behavioral intention has been researched extensively over the past few years and have been well established in the literature regarding the adoption of technology (Dabholkar, 1996; Kuo and Yen, 2009).

The possible explanation for this is that advice of colleagues/friends/relatives and other experts for online certificate courses helps to build a positive attitude among the learners, and at the same time, their intention to do the online course increases. However, learners' experience with a thorough comparison of available online certificate courses helps select the best one to lessen the anxiety if the likelihood of a new system is similar to the old system. When the learner gets familiar with its experience, he/she will take it, then recommend it to others.

Table-1.3: Details of Brand Image Factor

Item #	Statements	Mean Score	Reliability
27	My experience with the online certificate course is good, and I recommend it to others.	6.055	0.825
23	The advice of colleagues/friends/relatives and other experts for an online certificate course helps me select it.		
21	A thorough comparison of available online certificate courses helps me to select the best one.		
25	The online certificate program not only fits well with my self-image but also improves my esteem, among others.		

The fourth factor, named the Continuous Evaluation Process, consists of six items. The mean score of the element is 6.026 on a seven-point scale. The reliability of this factor is 0.894

(N=6). Table 1.4 summarizes the details of the Continuous Evaluation Process factor. Continuous Evaluation Process is another essential factor that studies the evaluation process of learners and their working with the innovation. It is considered to be a significant factor as it is one of the convenient ways for self-assessment and development without any botherations of others/colleagues. It is useful as the entire student's evaluation process in an online course is matching to its learning objectives.

The Examination process is transparent and adequately controlled by the online platform in a given second. Thus this has a noticeable impact on performing online, which will ultimately affect the learner's learning process. Continuous evaluation via properly designed tests, projects, and quizzes during the online course is essential. It is considered a necessary element in encouraging the selection of an online certificate program as projects/assignments of online courses are clearly explained, interesting, stimulating, and not dull, so it becomes convenient for learners to get things managed without going anywhere.

Table-1.4: Details of Continuous Evaluation Process Factor

Item #	Statements	Mean Score	Reliability
4	My continuous evaluation via properly designed tests, projects, and quizzes during the online course is essential.	6.026	0.894
7	The assignments of this course generally are interesting, stimulating, and not dull.		
8	The projects/assignments of my online course are clearly explained.		
10	The entire student evaluation process in my online course is matching to its learning objectives.		
16	The examination process is transparent and adequately controlled by the online platform.		
13	It is one of the convenient ways for my self-assessment and development without any botherations of others/colleagues.		

The fifth factor, i.e., Affordability, consisted of five items. The mean score of this factor is 6.073 on a seven-point scale. The reliability of this factor is 0.862 (N=5). Table 1.5 summarizes the details of the Affordability factor. Affordability is also considered an essential factor while selecting the online certificate course in terms of price, time, and infrastructure. It seems reasonably priced and affordable for working professionals. It is useful in the sense that it can be accessed from anywhere and at any time, smoothly runs on the standard internet infrastructure available with participants. The total duration required to complete the online course and the time required per week for effectively pursuing an online course affects the decision of participants to select the online certificate course.

Table-1.5: Details of the Affordability Factor

Item #	Statements	Mean Score	Reliability
17	The online certificate course is reasonably priced and affordable for working professionals like me.	6.073	.862
14	The total duration required to complete the online course affects my decision to select it.		
15	The time required per week for effectively pursuing an online course is crucial for me.		
18	It can be accessed from anywhere and at any time.		
26	It smoothly runs on the standard internet infrastructure available with participants like me.		

The sixth factor, named Query Resolution, consists of three items having a mean score of 5.970 on a seven-point scale with a reliability of 0.753 (N=3). Table 1.6 summarizes the details of the Query Resolution factor. Query Resolution also plays a vital role, which affects the selection of the online certificate course. It provides a transparent system for resolving the queries of participants, as it allows for the availability of an online discussion forum/support for clearing doubts. The ads of online certificate courses on various social media and advertisement platforms help in resolving the queries of the participants before joining an online course. The guidelines disclosed the course expectations from the candidates.

Table-1.6: Details of Query Resolution Factor

Item #	Statements	Mean Score	Reliability
19	The availability of an online discussion forum/support for clearing doubts is essential for me.	5.970	0.753
20	Before joining an online course, its guidelines disclosed course expectations from the candidates.		
24	The ads of online certificate courses on various social media and advertisement platforms influence me to select it.		

Effect of Gender on the Identified Factors

A total of six hypotheses were framed and tested to find out the effect of Gender on the six factors. These hypotheses and their testing results are discussed below.

H₀₁: There is no significant effect of **gender** on the **career enhancement factor** affecting the selection of online certificate programs.

Table-1.7: Details of showing the effect of Gender on Career Enhancement factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Career Enhancement Factor	Male – 30.0936	4.52867	.051	.822	Not Rejected
	Female -29.3333	4.93249			

Hypothesis H_{01} was not rejected at a 5% level of significance with Sig. value 0.822. The mean for the males and females are 30.0936 and 29.3333. The standard deviation for the male and female respondents are 4.52867 and 4.93249. There was no significant difference found for gender on the selection of online certificate programs of career enhancement factor.

H_{02} : There is no significant effect of **gender** on the **quality course content delivery factor** affecting the selection of online certificate programs.

Table-1.8:Details of showing the effect of Gender on Quality Course Content Deliveryfactor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Quality Course Content Delivery	Male – 24.2632	3.54563	.553	.458	Not Rejected
	Female – 24.1754	3.80150			

Hypothesis H_{02} was not rejected at a 5% level of significance with Sig. value 0.458. The mean for the males and females are 24.2632 and 24.1754. The standard deviation for the male and female respondents are 3.54563 and 3.80150. There was no significant difference found for gender on the selection of online certificate programs of quality course content delivery factor.

H_{03} : There is no significant effect of **gender** on the **brand image factor** affecting the selection of online certificate programs.

Table-1.9: Details of showing the effect of Gender on Brand Image Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Brand Image	Male -24.0585	3.71120	.007	.931	Not Rejected
	Female -23.8713	3.86475			

Hypothesis H_{03} was not rejected at a 5% level of significance with Sig. value 0.931. The mean for the males and females are 24.0585 and 23.8713. The standard deviation for the male and female respondents are 3.71120 and 3.86745. There was no significant difference found for gender on the selection of online certificate program of Brand Image factor.

H_{04} : There is no significant effect of **gender** on the **continuous evaluation process factor** affecting the selection of online certificate programs.

Table-1.10:Details of showing the effect of Gender on Continuous Evaluation Process Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Continuous Evaluation Process	Male -36.0234	5.51144	.107	.743	Not Rejected
	Female -35.6959	5.81185			

Hypothesis H_{04} was not rejected at a 5% level of significance with Sig. value 0.743. The mean for the male and females are 36.0234 and 35.6959 and the Standard deviation for the male and female respondents are 5.51144 and 5.81185. There was no significant difference found for gender on the selection of online certificate programs of the Continuous Evaluation Process factor.

H_{05} : There is no significant effect of **gender** on the **affordability factor** affecting the selection of online certificate programs.

Table-1.11: Details of showing the effect of Gender on Affordability Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Affordability	Male-29.5673	5.06196	.066	.797	Not Rejected
	Female -29.4035	5.05217			

Hypotheses H_{05} were not rejected at a 5% level of significance with Sig. value 0.797. The mean for the males and females are 29.5673 and 29.4035. The standard deviation for the male and female respondents are 5.06196 and 5.05217. There was no significant difference found for gender on the selection of online certificate programs of the Affordability factor.

H_{06} : There is no significant effect of **gender** on the **query resolution factor** affecting the selection of online certificate programs of query resolution factor.

Table-1.12: Details of showing the effect of Gender on Query Resolution Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Query Resolution	Male- 17.7193	2.99659	.149	.699	Not Rejected
	Female– 17.5029	2.89091			

Hypothesis H_{06} was not rejected at a 5% level of significance with Sig. value 0.699. The mean for the males and females are 17.7193 and 17.5029. The standard deviation for the male and female respondents are 2.99659 and 2.89091. There was no significant difference found for gender on the selection of online certificate program of Query Resolution factor.

H_{07} : There is no significant effect of **age** on the **career enhancement factor** affecting the selection of online certificate programs.

Table-1.13:Details of showing the effect of Age on Career Enhancement Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Career Enhancement factor	21 to 30- 29.7456	5.22894	1.736	.178	Not Rejected
	31 to 40- 30.2807	4.58066			
	40 and above- 29.1140	4.34519			

Hypothesis H₀₇ was not rejected at a 5% level of significance with Sig. value 0.178. Mean for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above are 29.7456, 30.2807 and 29.1140 and Standard deviation for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above respondents are 5.22894, 4.58066 and 4.34519. There was no significant difference found for age on the selection of online certificate program of Career Enhancement factor.

H₀₈: There is no significant effect of **age** on the **quality course content delivery factor** affecting the selection of online certificate programs.

Table 1.14 - Details of showing the effect of Age on Quality Course Content Delivery Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Quality Course Content Delivery	21 to 30 -24.2982	4.12617	1.162	.314	Not Rejected
	31 to 40 -24.5439	3.39479			
	40 & Ab.- 23.8158	3.43992			

Hypothesis H₀₈ was not rejected at a 5% level of significance with Sig. value 0.314. Mean for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above are 24.2982, 24.5439 and 23.8158 and Standard deviation for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above respondents are 4.12617, 3.39479 and 3.43992. There was no significant difference found for age on the selection of online certificate program of Quality Course Content Delivery factor.

H₀₉: There is no significant effect of **age** on the **brand image factor** affecting the selection of online certificate programs.

Table-1.15:Details of showing the effect of Age on Brand Image Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Brand Image	21 to 30- 24.1316	4.07998	3.526	.030	Rejected
	31 to 40- 24.5263	3.33713			
	40&Ab.- 23.2368	3.81497			

Hypothesis H_{09} was rejected at a 5% level of significance with Sig. value 0.030. Mean for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above are 24.1316, 24.5263 and 23.2368 and Standard deviation for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above respondents are 4.07998, 3.33713 and 3.81497. There was a significant difference found for age on the selection of online certificate program of Brand Image factor.

H_{10} : There is no significant effect of **age** on the **Continuous Evaluation Process** affecting the selection of online certificate programs.

Table-1.16:Details of showing the effect of Age on Continuous Evaluation Process Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Continuous Evaluation Process	21to30-35.9211	6.33873	.948	.389	Not Rejected
	31to40-36.3421	5.11605			
	40&Ab.-35.3158	5.45020			

Hypothesis H_{10} was not rejected at a 5% level of significance with Sig. value 0.389. Mean for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above are 35.9211, 36.3421 and 35.3158 and Standard deviation for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above respondents are 4.33873, 5.11605 and 5.45020. There was no significant difference found for age on the selection of online certificate program of Continuous Evaluation Process factor.

H_{11} : There is no significant effect of **age** on the **affordability factor** affecting the selection of online certificate programs.

Table-1.17: Details of showing the effect of Age on Affordability Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Affordability	21to30-29.5000	6.33873	1.817	.164	Not Rejected
	31to40-30.1140	5.11605			
	40&Ab.-28.8421	5.45020			

Hypothesis H_{11} was not rejected at a 5% level of significance with Sig. value 0.164. Mean for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above are 29.5000, 30.1140 and 28.8421 and Standard deviation for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above respondents are 6.33873, 5.11605 and 5.45020. There was no significant difference found for age on the selection of online certificate programs of the Affordability factor.

H_{12} : There is no significant effect of **age** on the **query resolution factor** affecting the selection of online certificate programs.

Table-1.18:Details of showing the effect of Age on Query Resolution Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Query Resolution	21to30-17.5614	3.31271	1.163	.314	Not Rejected
	31to40-17.9298	2.61622			
	40&Ab.-17.3421	2.84971			

Hypothesis H₁₂ was not rejected at a 5% level of significance with Sig. value 0.314. Mean for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above are 17.5614, 17.9298 and 17.3421 and Standard deviation for the age group of 21 to 30 yrs, 31 to 40 yrs and 40 and above respondents are 3.31271, 2.61622 and 2.84971. There was no significant difference found for age on the selection of online certificate program of Query Resolution factor.

H₁₃: There is no significant effect of **income** on the **career enhancement factor** affecting the selection of online certificate programs.

Table-1.19:Details of showing the effect of Income on Career Enhancement Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Career Enhancement	Up to 6 Lacs-29.6667	5.17767	.040	.961	Not Rejected
	6Lacs-10Lacs-29.6579	4.77239			
	10 Lacs & Ab.-29.8158	4.27706			

Hypothesis H₁₃ was not rejected at a 5% level of significance with Sig. value 0.961. Mean for the income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above are 29.6667, 29.6579, and 29.8158, and Standard deviation for income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above respondents are 5.17767, 4.77239 and 4.27706. There was no significant difference found for income on the selection of online certificate program of Career Enhancement factor.

H₁₄: There is no significant effect of **income** on the **quality course content delivery factor** affecting the selection of online certificate programs.

Table-1.20:Details of showing the effect of Income on Quality Course Content Delivery Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Quality Course Content Delivery	Up to 6 Lacs-24.0789	4.26790	.312	.732	Not Rejected
	6 Lacs-10Lacs24.1404	3.73189			
	10 Lacs & Ab.24.4386	2.90570			

Hypothesis H₁₄ was not rejected at a 5% level of significance with Sig. value 0.732. Mean for the income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above are 24.0789, 24.1404, and 24.4386, and Standard deviation for income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above respondents are 4.26790, 3.73189 and 2.90570. There was no significant difference found for income on the selection of online certificate program of Quality Course Content Delivery factor.

H₁₅: There is no significant effect of **income** on the **brand image factor** affecting the selection of online certificate programs.

Table-1.21:Details of showing the effect of Income on Brand Image Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Brand Image	Up to 6 Lacs24.0439	4.10566	.037	.964	Not Rejected
	6 Lacs10Lacs23.9211	4.01137			
	10 Lacs & Ab.23.9298	3.20320			

Hypothesis H₁₅ was not rejected at a 5% level of significance with Sig. value 0.964. Mean for the income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above are 24.0439, 23.9211, and 23.9298. The standard deviation for the income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs, and above respondents are 4.10566, 4.01137, and 3.20320. There was no significant difference found for income on the selection of the online certificate program of Brand Image Factor.

H₁₆: There is no significant effect of **income** on the **continuous evaluation process factor** affecting the selection of online certificate programs.

Table 1.22 - Details of showing the effect of Income on Continuous Evaluation Process Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Continuous Evaluation Process	Up to 6 Lacs35.5526	6.34285	.300	.741	Not Rejected
	6 Lacs10Lacs35.8947	5.67305			
	10 Lacs & Ab.36.1316	4.89991			

Hypothesis H₁₆ was not rejected at a 5% level of significance with Sig. value 0.741. Mean for the income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above are 35.5526, 35.8947, and 23.1316. The standard deviation for the income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs, and above respondents are 6.34285, 5.67305, and 4.89991. There was no significant difference found for income on the selection of the online certificate program of Continuous Evaluation Process Factor.

H₁₇: There is no significant effect of **income** on the **affordability factor** affecting the selection of online certificate programs.

Table 1.23 - Details of showing the effect of Income on Affordability Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Affordability	Upto 6 Lacs	29.2456	.316	.730	Not Rejected
	6 Lacs-10Lacs	29.4386			
	10 Lacs & Ab.	29.7719			

Hypothesis H₁₇ was not rejected at a 5% level of significance with Sig. value 0.730. Mean for the income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above are 29.2456, 29.4386, and 29.7719. The standard deviation for income groups of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs, and above respondents are 5.64364, 4.67915, and 4.80419. There was no significant difference found for income on the selection of online certificate program of Affordability Factor.

H₁₈: There is no significant effect of **income** on the **query resolution factor** affecting the selection of online certificate programs.

Table 1.24 - Details of showing the effect of Income on Query Resolution Factor

Dependent Variable	Mean	Standard Deviation	F	Sig Value	Rejected or Not Rejected
Query Resolution	Upto 6 Lacs	17.5526	.179	.836	Not Rejected
	6Lacs-10Lacs	17.5351			
	10 Lacs & Ab.-	17.6111			

Hypothesis H₁₈ was not rejected at a 5% level of significance with Sig. value 0.836. Mean for the income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above are 17.5526, 17.5351, and 17.6111, and Standard deviation for income group of up to 6 lakhs, 6 lakhs to 10 lakhs, 10 lakhs and above respondents are 3.35533, 2.93644 and 2.94190. There was no significant difference found for income on the selection of the online certificate program of Query Resolution Factor.

CONCLUSION AND IMPLICATIONS

The results of the present study strongly support the findings of the earlier studies that designers of the online course have to focus on various aspects of resolving queries, the contents of the system, their Affordability in terms of price, time, and infrastructure to enhance their innovativeness and brand image of their online certificate programs. It implies that

providers of online certificate programs need to provide a climate that is conducive for learning, mainly offering the best possible facilities to its learners and thereby increasing their absorptive capacity. Besides, they should initiate measures that are aimed at reviewing the past online courses of success and failure so that new instructions can be learned and also mistakes can be avoided.

However, all the variables that affect the selection of online certificate programs are not found to influence the gender, age, and income to select online certificate programs significantly. The possible reason is, unlike learning (culture), which directly results in acquiring new knowledge and skills to do certain things (innovation), these variables were more useful in facilitating the process of learning than resulting directly in creation. For example, career enhancement would lead to increased opportunities in the enhancement of their career. Again, the Continuous evaluation process is meant to encourage learners to evaluate their knowledge while doing online certificate programs continuously. This also results in learning. Therefore, it is clear that it is the learning ability that significantly influences brand image to select online certificate programs. All other variables of online certificate programs can support the learning process, thereby enhancing the innovativeness of the learners and participants. The outcomes of the present study will help the designers of online certificate programs, learners of online certificate programs, and the academicians and professionals who want to be working in this field for further research.

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