RESEARCH ARTICLE

ANALYSIS OF FACTORS AFFECTING DROPOUT IN ONLINE EDUCATION

[1,*]Akanksha Sehgal and [2]Dr. Adarsh Garg

[1]Assistant Professor, Galgotias University, Greater Noida
[2]Professor, Galgotias University, Greater Noida

ARTICLE INFO	ABSTRACT
	With the advancement in Information and communication Technology Online education systems and Massive open online course (MOOC) are expanding rapidly. Learners form different backgrounds are joining these courses with different motives. Inspite of massive enrollments the platforms offering these courses are facing many challenges. One of the major challenge that needs attention is dropout. There may be different reason for different learner to dropout from a course. These reasons may be independent or dependent on each other. In this paper existing studies are reviewed to find out the reasons of dropout from online courses. Around 40 factors were identified that can facilitate a learners decision to dropout from course. These factors are grouped in to five main categories Social, family, personal, institutional, Technical

INTRODUCTION

Reputed institutions zand industry by paying minimal fee from MOOC. These courses are helpful in academic and career growth of a learner. Due to such cutting edge advantages MOOCs have attracted large no of participants in recent years and are accepted globally. MOOCs like courseera, edX, udacity provides the courses globally and enrollments in these MOOCs are dominated from India after US (Pratik Agrawa Abhishek Kumar, 2015). After seeing the interest, potential of Indian Learner and to make them competitive according to new market trends initiatives have been taken in India to develop their own MOOC platforms. Govt. of India along with leading institutions has developed platforms NPTEL and SWAYAM. NPTEL started in 2003 with 235 courses and by july 2018 the number was more than 1500 with 36, 00,000 enrollments in different disciplines (https://www.nptel.ac.in)
Inspite of convenience, career growth, academic growth, ample opportunities and huge enrollments in MOOC courses there are certain issues that needs to be addressed. One such major issue is Dropout. Dropout is withdrawal during the tenure or Noncompletion of an online course (Carolyn Hart, 2012). Numbers of learners completing an online course is an important measure to check & validate the success and acceptance of a course (Rahila umer, 2017).

*Corresponding author: **Akanksha Sehgal,**
Assistant Professor, Galgotias University, Greater Noida.

To deal with dropout and to make the online courses a success it is essential to address the factors that facilitate the drop out of a learner from any course. The predictors can be family, personal, career, technological, etc. The focus of this paper is to group the factors that lead to dropout of a learner from a course. The categories in which various factors grouped are Personal, family, social, Institutional and technical.

Objective

- This paper is an effort to find out the factors that cause a learner to dropout from an online course
- Grouping of identified factors in to defined categories.

RESEARCH METHODOLOGY

Searches were made for the research papers related to dropout of a student in online education. Keyword used for the search was online education, MOOC, Dropout, Attrition, Persistence. Including criteria of the paper was paper published after 2000 and address the factors related to dropout of the student and excluding criteria of the paper was paper not written in English and paper not related to online courses. Factors that can lead to dropout of a learner from a course was identified from selected papers and grouped in five categories (social, family, personal, institutional, Technical) in a table. plus(+) sign is used to indicate that factor is present in paper and considered as reason for dropout. Minus (-) sign indicate that factor is not considered a reason for dropout.

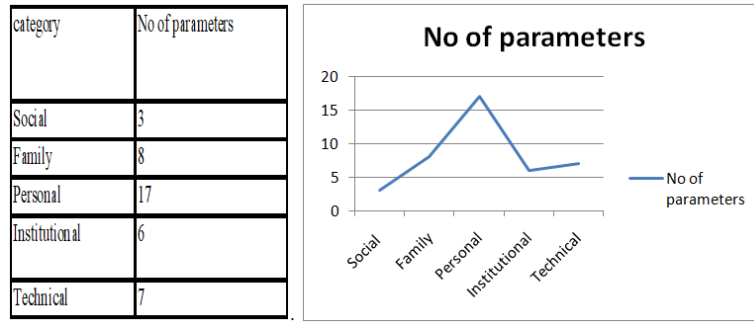| category	No of parameters
Social	3
Family	8
Personal	17
Institutional	6
Technical	7

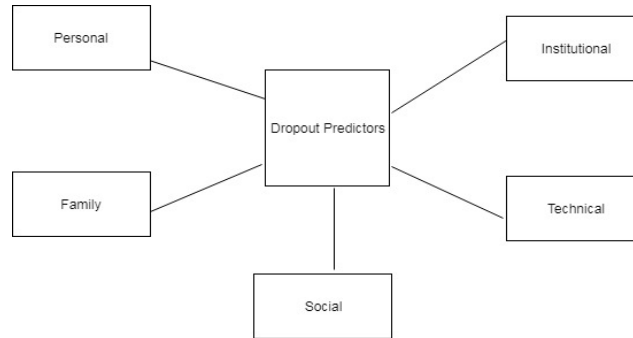**Table 1. Categories and frequency of parameters**

Figure 1. Categorization of Dropout Factors

Table 2. Analysis of factors affecting dropout

	Literature survey on educatinal dropout prediction, Mukesh Kumar	Predicting Dropout Students:An Application of data mining methods in an online education program,Erman Yukseltruk	The Role of Student Characteristics in Predicting Retention in Online Courses,Justin D Cochran	Dropout rates of Massive open Online Courses: Behavioural Patterns,D.F.O.Onah	Examining the Factors Affecting Student Dropout in an Online Learning Environment,Erman YUKSELTURK	Predictors of Retention and achivement in a massive open online course,Jeffrey A Greene	Factors Related to Learner Dropout in Online Learning,Ji-Hye Park
Social							
(i)Social Integration	-	-	-	-	+	-	+
(ii) Social Pressure	-	-	-	-	-	-	-
(iii)Social Isolation	-	-	-	-	-	-	-
Family							
(i)family Position	+	-	-	-	-	-	-
(ii)Family Income	+	-	+	-	-	-	-
(iii)Family Structure	+	-	-	-	-	-	-
(iv) Parents Qualification	+	-	-	-	-	-	-
(v) Parents Occupation	+	-	-	-	-	-	-
(vi) Family Type	-	-	-	-	-	-	-
(vii)Parents Interference	+	-	-	-	-	-	-
(viii) Family Support	-	-	-	-	-	-	+
Personal							
(i)Age	+	+	+	-	-	+	+
(ii) Gender	+	+	+	-	-	+	+
(iii)Race	-	-	+	-	-	-	-
(iv)Occupation	+	+	-	-	-	-	+
(v)Location	+	-	-	-	-	-	+
(vi)Interest	+	-	-	-	-	+	-
(vii)Addiction	+	-	-	-	-	-	-
(viii)Stress	-	-	-	-	-	-	-
(ix)Emotions	-	-	-	-	-	-	-
(x)Degree of Education	-	+	-	-	-	+	+
(xi)Grades	+	-	+	-	-	-	-
(xii)Readiness	-	+	-	-	+	+	-
(xiii) lack of time	-	-	-	+	+	-	-
(xiv) lack of Understanding	-	-	-	+	-	-	-
(xv) Self Efficacy	-	+	-	-	-	+	-
(xvi) Exigency	-	-	-	-	+	-	-
(xvii) change of Goal	-	-	-	+	+	-	-
Institutional							
(i) Teaching Pedagogy	+	-	-	-	-	-	-
(ii) Lack of support from peers and instructors	-	-	-	+	+	-	+
(iii) lack of communication	-	-	-	+	-	-	-
(iv) Mapping with course Curriculam	-	-	-	-	-	+	-
(v) Course Schedule and Pacing	-	-	-	-	+	-	-
(vi)Quality of learning material	-	-	-	+	+	-	-
Technical							
(i) Lack of digital Skills	-	-	-	+	-	+	+
(ii)Career growth	-	-	-	-	-	+	+
(iii) Academic Growth	-	-	-	-	-	+	-
(iv) Multiple platforms	-	-	-	-	-	+	-
(v)Lack of technical proficiency	-	-	-	-	+	-	-
(vi)Lack of IT services	-	-	-	-	+	-	-
(vii) Lack of infrastructure	-	-	-	-	+	-	-

Table 3. Analysis of factors affecting dropout contd.

	Moocs Completion Rates and possible methods to improve Retention,Hanan Khalil	Comparing Faculty and Student Perceptions regarding Factors that affect student retention in online education,Jorge Gaytan	A review of online course dropout research: implications for practice and future research,youngju Lee	Factors Associated With Student Persistence in an Online Program of Study: A Review of the Literature,Carolyn Hart	Factors Affecting Student Retention in Online Courses: Overcoming this Critical Problem,jorge Gaytan	Factors Related to E-learner Dropout: Case Study of IUST Elearning Center ,Rostaminezhad, M.A	Understanding Student Motivation, Behaviors, and Perceptions in MOOCs,Saijing Zheng	Students' characteristics, selfregulated learning, technology selfefficacy, and course outcomes in online learning,Chih-Hsuan Wang
Social								
(i)Social Integration	-	-	+	-	-	-	+	-
(ii) Social pressure	-	-	-	-	-	+	-	-
(ii)Social Isolation	+	-	-	-	-	-	-	-
Family								
(i)family Position	-	-	+	-	-	-	-	-
(ii)Family Income	-	-	+	-	-	-	-	-
(iii)Family Structure	-	-	+	-	-	-	-	-
(iv) Parents Qualification	-	-	-	-	-	-	-	-
(v) Parents Occupation	-	-	-	-	-	-	-	-
(vi) Family Type	-	-	+	-	-	-	-	-
(vii)Parents Interference	-	-	-	-	-	-	-	-
(viii) Family Support	-	+	-	-	-	-	-	-
Personal								
(i)Age	-	+	-	-	-	-	-	-
(ii) Gender	-	+	-	-	-	-	-	-
(iii)Race	-	-	-	-	-	-	-	-
(iii)Occupation	-	-	-	-	-	-	-	-
(iv)Location	-	-	-	-	-	-	-	-
(v)Interest	-	-	-	-	-	-	-	-
(vi)Addiction	-	-	-	-	-	-	-	-
(vii)Stress	-	-	-	-	-	-	-	-
(viii)Emotions	-	-	-	-	-	-	-	-
(ix)Degree of Education	-	-	-	+	-	-	-	-
(x)Grades	-	+	-	-	-	-	-	-
(xi)Readiness	+	+	+	-	-	+	-	-
(xii) lack of time	+	-	-	-	-	-	+	-
(xiii) lack of Understanding	-	-	-	-	-	-	+	-
(xiv) Self Efficacy	-	+	-	-	-	+	-	+
(xv) Exigency	-	-	-	+	-	-	-	-
(xvi) change of Goal	-	-	-	-	-	-	-	-
Institutional								
(i) Teaching Pedagogy	-	-	-	-	+	+	+	+
(ii) support from peers and instructors	+	+	-	-	+	-	-	+
(iii) lack of communication	-	-	-	+	-	-	-	-
(iv) Mapping with course Curriculam	-	+	-	-	+	-	-	-
(v) Course Schedule and Pacing	-	-	-	-	-	-	+	-
(vi)Quality of learning material	-	-	-	-	-	-	-	-
Technical								
(i) Lack of digital Skills	+	-	-	-	+	-	-	+
(ii)Career growth	-	-	-	-	-	-	-	-
(iii) Academic Growth	-	-	-	-	-	-	-	-
(iv) Multiple platforms	-	-	-	-	-	-	-	-
(v)Lack of technical proficiency	+	-	-	-	+	-	-	+
(vi)IT services	-	+	-	-	-	-	-	-
(vii) infrastructure	-	+	-	-	-	-	-	-

Microsoft excel functions are used to find the dominating category of dropout among all the categories.

Literature review and analysis: Low completion rates are a serious concern in online education and MOOC environment. Dropout is one of the reasons of low completion rate of a course. Dropout is when a learner is not able to complete a course and leaves it in between. Dropout is a common problem of both traditional and online education system but dropout in an online course is higher than face to face course

(Justin, 2013). There may be several reasons because of which a learner is not able to complete a course. These reasons can be independent or may be interrelated with each other. Different authors has defined different factors Age, gender, race, family condition, career growth, academic growth, Motivation, engagement are that can lead to non completion of a course . in this paper we have defined five categories Social, family, personal, institutional and Technical and organized all these factors in these categories.

Social: If a learner is able to interact in social circles then definitely he will be able to interact with peers and instructors effectively which will increase his chance to dropout from a course. Pressure of society on learner to complete a course is another factor that reduces the chances of dropout of a learner from course. Family: support, financial aid and structure of family has been considered as supportive factors for a learner to complete a course (Youngju Lee and Jaeho Choi, 2011). Qualification of parents and their involvement is another important factor that pushes a learner to complete the course. Personal: Personal traits and circumstances play an important role in making decision regarding completion of a course. Age, Gender, location, employability status, Lack of time ,interest in a course, motivation, awareness, self efficacy are some of the factors that has been used by different authors.

Institutional: academic support by faculty and peer support are the important factors in terms of Institutional support. Academic support includes teaching pedagogy, learning material, communication regarding course schedule etc. this kind of support will definitely develop learner's interest in the course which will reduce his chances to dropout from a course.

Technical: knowledge of technical and digital skills plays a significant role in online education. Lack of infrastructure, lack of technical and digital skills and dropout are positively related. Gain of technical knowledge for academic and career growth is another aspect. If a learner is able to get new job or growth in existing career on basis of the course then chances that a learner will dropout from a course is less. In this study we have identified 41 parameters that can be reasons for a learner to dropout from an online course. These factors were then classified into five main categories Social, Family, Personal, Institutional and Technical depending upon their relevance to particular category. In the analysis it has been found that personal category which includes parameters Age, gender, race, occupation, location, interest, addiction, stress, emotions, degree of education grades, readiness, lack of time , lack of understanding, self efficacy, exigency and change of.

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