

From tutored to self-paced MOOCs: reflections and perspectives

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1 Theoretical framework

Literature highlights the existence of different pedagogical formats of MOOCs dealing with two broad categories: instructor-paced and self-paced.

Generally, the former are characterized by a course path designed by the teacher, gradual release of contents, a set calendar and deadlines for learner completion of course components [1], fixed-schedule retention and work-load and tutor support.

In self-paced MOOCs, students can proceed at their own pace [2] not least because all the contents are available from the beginning. Other features include maximum user flexibility, personalization in that learners have control over when they access and complete course materials [3] and a lack of direct learner-instructor interactions.

A common issue deals with the low retention value, reaching 5-10% [4]; an increasing trend of studies on this topic among 2016-2021 lead to map the factors that affect retention, distinguishing them into external (motivation, perceived usefulness, social influence) and internal (covering content, perceived enjoyment, infrastructure) [5]. Ihantola et al. recognized a better overall retention rate (45%) in instructor-paced than its self-paced counterpart (13%) [6]. The other common feature is to require individual learners to be able to self-regulate their learning, determining when and how to engage. Indeed, weakness of self-regulation skills is one of the key factors that contribute to dropout in a MOOC [7]. Course design factors influence learners' self-directed learning and commitment above all in self-paced MOOCs [8].

2 Contexts, objectives and methodology

Since 2014 seven different MOOCs have been released by CREMIT and ILAB of Catholic University. In this contribution we will focus on three MOOCs shifted from "tutored" to "self-paced" modality over the years. The design of the tutored MOOCs [9] changed specifically with respect to timing (content availability, duration), role of the tutor, e-tivities, discussion board (Table 1). The purpose of the exploratory study is to understand whether and what design elements of self-paced MOOCs need to be strengthened to ensure an effective learning experience. From the universe of reference (17 editions of three MOOCs: "Virtually", "3-6-9-12: growing up with digital screens", "Community tutor"), the study focuses on a sample of 6 editions, 3 tutored and 3 self-paced, released in the last three years.

Table 1. Elements of design

	Content availability	Duration	E-tutor's role	E-tivities	Discussion board
Tutored	weekly release	2/3 months	subject matter expert, e-moderator, community manager, help desk	clear structure, posted in forum, reviewed by e-tutor and commented by peers (not mandatory)	strongly moderated, linked to specific modules and e-tivities
Self-paced	all available at the beginning	1 year	subject matter expert, help desk	suggested material	weakly moderated, linked to contents

A web-based survey, composed of 16 multiple-choice items organized in several areas (personal information, customer satisfaction, role acted in the course, perception of other participants), was made available to all subscribers. In the survey of self-paced MOOCs, a specific question was added to assess the perceived influence of the elements of the design on the learning process. A descriptive analysis of the items was carried out. An overview of the tracking data of the MOOCs is shown in Table 2. The completion rate is high in both modalities and differs from the literature.

Table 2. Overview of the tracking data

	No. Participants		No. Attendance certificates		% Attendance certificates		No. Collected responses (final survey)		% Collected responses (final survey)	
	<i>universe</i>	<i>sample</i>	<i>universe</i>	<i>sample</i>	<i>universe</i>	<i>sample</i>	<i>universe</i>	<i>sample</i>	<i>universe</i>	<i>sample</i>
Tutored	8020	1245	4774	534	59,53%	42,89%	3082	501	38,43%	40,24%
Self-paced	2613	1663	890	559	34,06%	33,61%	720	525	27,55%	31,57%
Total	10633	2908	5664	1093	-	-	3802	1026	-	-

3 Results and perspectives

Overall satisfaction between tutored and self-paced MOOCs maintains high average values (“totally satisfied/very satisfied” 83,30% and 77,47%). Values are also high with respect to several design elements. In this scenario four elements are unexpected in self-paced MOOCs, compared to tutored MOOCs:

- with respect to the average time spent consulting each module, a significant increase is evident in those spending more than 4 hours (18,22%, compared to 5% of MOOCs tutored);
- changes in self-perception of role acted in the course: data show a shift toward a more participatory behavior (-8,59% silent student; +5,27% entrepreneurial student; +4,57% altruist student);
- a significant increase of involvement in a learning community (+12,67% reports feeling “fully involved”);
- openness of the MOOC seems to be not understood (“autonomy in using of the materials” is not a decisive factor for those who have completed the course -31,22%; “lack of time” is considered the main cause of non-completion +34,23%).

In perspective, in the re-design process we will focus on supporting users to build awareness about the meaning of the attendance of a self-paced MOOC and on “educating for participation”, through delivering propaedeutic module, testing a chatbot to run an informative function, developing HTML-based contents and soft tutoring, in order to foster involvement through interactivity and feed-back.

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