13 Entrepreneurship MOOCs

BizMOOC Discussion paper 13

Identification of existing online learning materials with regards to entrepreneurship
Result

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1. Abstract

The goal of this study was to explore and compare existing online courses such as MOOCs and other forms of online education in the area of entrepreneurship in order to classify the existing offers and different approaches. It is based on desk research provided simultaneously by experts of various fields from different EU countries. The main criteria adapted for the comparative analysis were: focus of the course, format, length, fees and language of the course.
The paper starts with introductory information about entrepreneurship and entrepreneurship education. Next it presents an overview of existing online courses devoted to entrepreneurship education around the world with special attention to European standards. Examples which are provided in the paper were chosen based on rate of popularity measured in number of participants and their academic and didactical value. Finally, the paper provides suggestions as to best practices and recommendations to MOOC users interested in expanding their entrepreneurship knowledge and skills.

2. Introduction: Entrepreneurship and Entrepreneurship Education

Entrepreneurship is a wondrous human activity that cuts across all sectors and aspects of human existence. It is a broad and inclusive term, which serves as an umbrella concept for numerous phenomena (Żur 2014).
Whether at individual or company level, academically

entrepreneurship is typically associated with opportunity. Opportunity is referred to as the dominant thread in current mainstream entrepreneurship research (Shane 2000; Venkataram et al. 2012). According to Stevenson & Jarillo (1990), the pursuit of opportunity defines the ability of the individual, as well as that of the organization, to be entrepreneurial. Contemporary coexisting convictions regarding entrepreneurship are rather completing than competing, all referring to the identification, evaluation and pursuit of opportunity (Stevenson & Jarillo 1990; Jones & Butler 1992; Shane & Venkataram 2000).

At individual level, entrepreneurship is defined as the process of new business creation (Timmons 1985), commonly referred to as start-ups. However, in the last decades entrepreneurship and new venturing has been recognized and supported in numerous other fields of human activity, including social, academic and cultural behaviour.

Company level entrepreneurship encompasses three terms. Entrepreneurial Orientation represents a company's orientation toward entrepreneurship (Dess & Lumpkin 2005), its culture, HR practices and other ways. It creates the predisposition of a company to act in entrepreneurial ways. Corporate Entrepreneurship (CE) refers to actual entrepreneurial behaviour exhibited by the company itself (Zahra & Kuratko 1999). Antonicic & Hisrich (2001: 23) specify that CE is a "process of creation of new businesses, and other innovative activities, such as development of new products, services, technologies, administrative techniques, strategies and competitive postures." The third term intrapreneurship relates to entrepreneurial behaviour of employees (Pinchott 1985, Kanter 1985).

Entrepreneurship in its broad and more popular sense is also conceptualized and perceived as a universal set of skills and attitudes that can be applied in undertakings in every context – new business, company project, social venture or

international cultural exhibition (Di-Masi 2010). Entrepreneurship skills and attitudes are essential at all stages of a professional career and add substantial value to all human activity.

All existing conceptualizations of Entrepreneurship are rather completing than competing, all relying on three leading measures: innovation, risk-taking and pro-activeness (Miller 1983).

Entrepreneurship has received immense academic (and non-academic) attention in the last decades (Stevenson & Lundstrüm 2001). It is an important area of inquiry, especially relevant in times of crisis and economic challenges. Furthermore, the European Union has launched numerous programs aimed at creating and reinforcing the entrepreneurial culture and entrepreneurship education is a fundamental element of its policy. European conceptual frameworks for entrepreneurship education encourage building an "entrepreneurial spirit, development of creativity, initiative and self confidence (European Commission 2010)." The European Union defines as one of the eight key competences for Lifelong Learning "Sense of initiative and entrepreneurship":

It is the ability to turn ideas into action. It involves creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives. The individual is aware of the context of his/her work and is able to seize opportunities that arise. It is the foundation for acquiring more specific skills and knowledge needed by those establishing or contributing to social or commercial activity. This should include awareness of ethical values and promote good governance (European Parliament and Council, 2006).

Therefore, much effort is put into promoting entrepreneurial behaviour across countries. Entrepreneurship education has gained importance given the premise that it may influence the

level of entrepreneurial activity in a given country (Kuratko 2005), positively impacts entrepreneurial intentions or positively influences entrepreneurial traits (Dickson et al. 2008).

In the last twenty years, we have witnessed an immense and dynamic growth of entrepreneurship teaching programs all over the world. Entrepreneurship education has become a standard practice at secondary and higher education institutions in countries around the world (Kuratko 2005). This growth in volume and scope has been coupled by a sharp shift from educating about entrepreneurship to educating for entrepreneurship. Education about entrepreneurship is limited to knowledge transfer. Students learn about starting a business, about legal and business frameworks, what does it mean to be entrepreneurial or how to prepare a business plan. The goal of this type of education is to acquaint students with many aspects of entrepreneurial practice and pursue their understanding of them. However, after many years of this standard approach, we now know that educating about entrepreneurship does not necessarily imply that students become more entrepreneurial nor that they wish to act in entrepreneurial ways (Dickson et al., 2008).

Educating *for* entrepreneurship is driven by a different goal. It is to develop real-life entrepreneurial skills and behaviours. Some authors go as far as to say that the goal is to change thinking and behavioural patterns (Rae 2005). Rae (2010:595) defines entrepreneurial learning as "led by creativity, informality, curiosity, emotion and its application to personal and real-world problems and opportunities". It is a holistic process, engaging numerous areas of human activity, primarily intellectual and emotional.

Hence, contemporary education for entrepreneurship includes the promotion and training of personal skills related to entrepreneurship, such as creativity skills, problem-solving skills, communication skills and networking skills.

Repeatedly, these features have been identified in the recent past as the goals of entrepreneurial education. A meta-analysis conducted by Mwasalwiba (2010) of top entrepreneurship education programs identifies the following distribution of goals among goals of the education process:

- to enhance attitudes, values, intentions and behaviours – 36%,
- to improve personal skills – 32%,
- to develop opportunity recognition skills – 14%,
- to develop skills necessary for establishing a new business – 9% and
- to acquire general management and organizational skills – 9%.

The analysis of other publications reveals a very clear hierarchy of goals within entrepreneurship education, consistent with the above meta-analysis (Raposo & Paco 2011). Firstly, all existing conceptualizations include the dominating goal of developing an entrepreneurial drive, spirit and culture among students. In second place comes the goal of generating the ability to recognize and pursue opportunities in various areas, whether business, social and academic. A significant number of authors associate entrepreneurship with the ability to create and operate new companies.

The popularization of entrepreneurship education has accelerated in the last two decades in great part thanks to the new opportunities brought by information technologies. Online learning materials have become abundant and diverse. Online courses facilitate the development of entrepreneurial skills by individuals on their own by means of electronic devices. New technology has made it possible to learn from successful entrepreneurs, share experiences and exchange ideas. Today, thanks to technology, entrepreneurship education is not only easy to access, but it has become more inspirational than ever. Contemporary authors and educators (Pittaway & Cope 2007; Rigg & O’Dwyer 2012) articulate the

role of inspiration as a key factor of effective education for entrepreneurship. There are not many disciplines which, like educating for entrepreneurship, require contact with a mentor, a practitioner who can share their success story and experience and provide inspiration for personal life choices. Online teaching resources make that possible. Massive Open Online Courses (MOOCs) open a new era in entrepreneurship education. Today, entrepreneurship education is not only extremely popular and accessible, but it is diverse, dynamic and exciting.

The existing popular online learning platforms (such as Coursera, edX, Udacity, Openlearning, Openlearn, Futurelearn, iversity, alison, Canvas Network etc.) offer a variety of MOOCs devoted to entrepreneurship, entrepreneurial skills and business start-up. These courses along with others existing on smaller platforms or websites have been analysed in order to identify best practices and most promising models within online entrepreneurship education.

3. International and European entrepreneurship MOOCs

The existing on-line learning materials devoted to entrepreneurship vary greatly in their focus on subject area, audience, content, other features. Various entrepreneurship online courses have already been offered in the 2000s (e.g. MIT OpenCourseWare “Entrepreneurial Marketing” in 2002) and one of the first European MOOCs was devoted to idea creation and creativity (ThinkTank – Ideal City of the 21st Century by Leuphana Digital School in January 2013). However, in recent months we have observed an exponential growth rate of entrepreneurship MOOCs in the global educational landscape. According to Class Central the number of MOOCs relating to business and management in 2015 doubled in comparison to 2014 (from 339 courses to 705 courses). With the vast amount of

offerings and new MOOCs arriving at a constant rate, it is hard to pick and select a few good practice examples. Different online repositories facilitate a search for finding the current offerings, in an appropriate timeframe (or self-paced), language, didactical approach, workload, subtopic, quality, certification options etc.

Examples for online repositories are:

- Class central (https://www.class-central.com/subject/entrepreneurship). As of 29 February 2016, they list 128 entrepreneurship MOOCs, of which 18 recently started or will be starting soon, and 29 are self-paced – which means, the majority are still available and open for enrolment. Not all MOOCs listed are MOOCs in its closest definition as some of them ask for tuition fees. When classified by languages, English dominates (88 courses), followed by Spanish (18) and French (11). There are two courses each listed in Chinese, German, Arabic and Japanese. There is a rating system with reviews, however with an unequal distribution of user ratings per course (between 0 and 30), the meaningfulness could be questioned in the current status.
- The MOOC list (https://www.mooc-list.com/tags/entrepreneurship?static=true) provides an overview of 61 entrepreneurship MOOCs (as of 29th February 2016). The majority are the same MOOCs listed by Class central with only slight deviations (e.g. one entrepreneurship MOOC offered in Portuguese language).
- The European database "Open Education Europa" only lists upcoming MOOCs (http://www.openeducationeuropa.eu/en/find/moocs/entrepreneurship) and displays 19 entrepreneurship MOOCs which are about to start (as of 29 February 2016), with a

majority in English (16), and only 3 in other languages (2 German, 1 Spanish) and is dominated by a few universities such as Copenhagen Business School (4 MOOCs). It is a thematically broad selection also integrating English language and culture courses by the British Council (!).

In addition, there are reviews and blogs by MOOC learners on entrepreneurship MOOCs available (such as “The Best MOOC Course For Entrepreneurs”, Feb. 2014, http://poetsandquants.com/2014/02/06/the-best-mooc-for-entrepreneurs/) by Laurie Pickard, which could assist in the tough choice of selecting the appropriate MOOC to meet a person’s individual expectations, but also have to be critically reflected, as they only display a single learner´s perspective and could also potentially be advertising a specific course.

To summarize, there is a large number of distinctive course types, differing in duration. Their design is quite inclusive and they are addressed to university students as well as to the general public. A dominant majority of the courses are in English.

The joint analysis of the above repositories revealed an unequal distribution of entrepreneurship themes in existing online courses. According to Class Central the search words for entrepreneurship courses are alphabetically: entrepreneur, entrepreneurship, futurism, growth hacking, innovation, scaling, social entrepreneurship, start-ups, venture capital, ventures. The figure below presents a graphic overview of the potential most important types of courses relating to entrepreneurship for independent learners. Some of these are plentiful while others very scarce in the existing online offer.

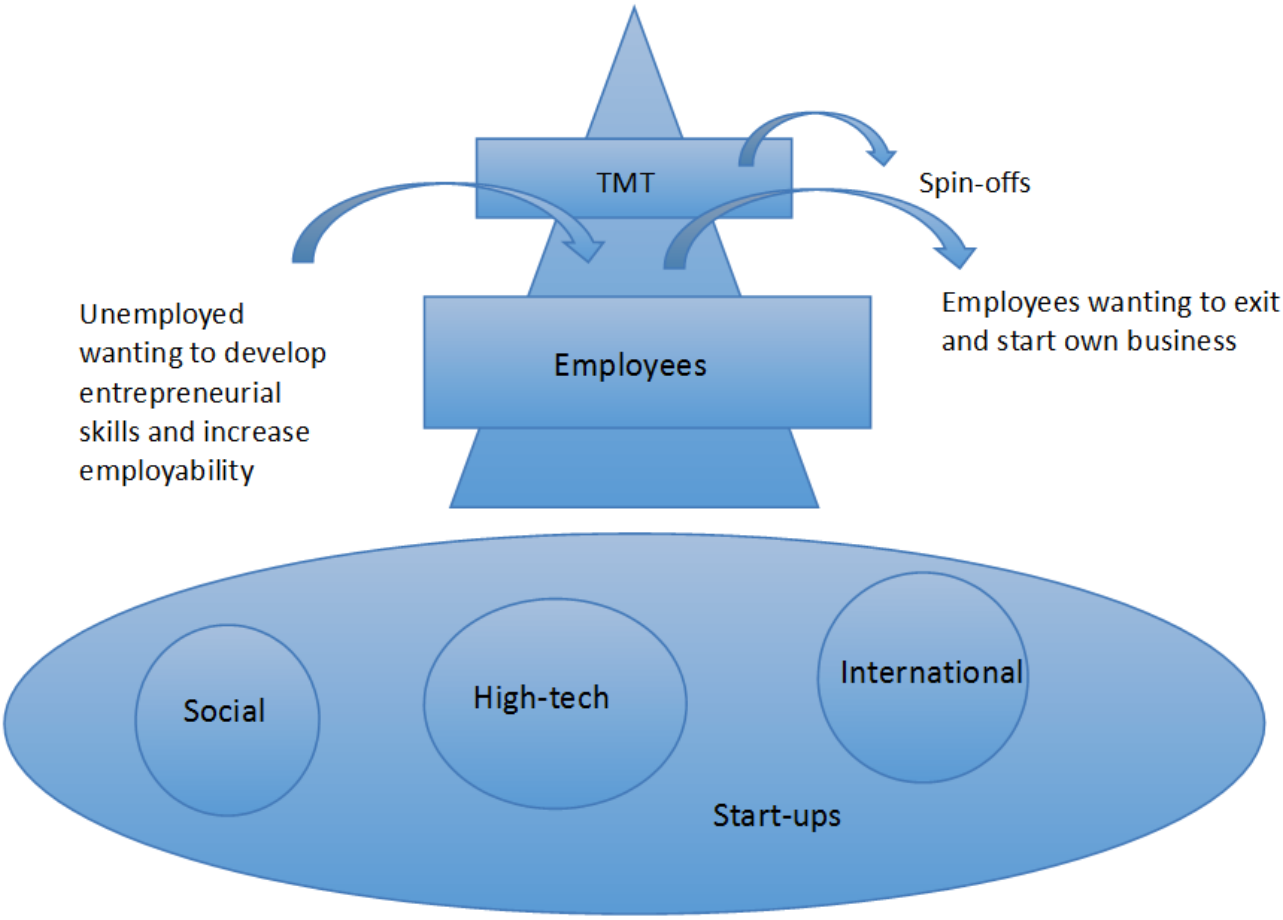


Figure 1. Types of online entrepreneurship courses. (TMT = Top Management Team)

a) The existing offer of online entrepreneurship courses is greatly dominated by courses on start-ups (bottom of the figure). Within this vast group of courses, most concentrate on universal start-up skills and processes necessary to successfully launch a business. Several thematic subgroups of courses have been identified relating to start-ups in a specific context. Among these a small number of courses focus on international new ventures (born-globals) and develop knowledge and skills typical for international entrepreneurship, others refer to social entrepreneurship and still others to high-tech new business start-ups.

Examples are:

- Developing Innovative Ideas for New Companies: The 1st Step in Entrepreneurship by University of Maryland,

platform: Coursera

- The DO School Start-Up Lab by The DO School, platform: iVersity
- Startup success by MIT, platform: edX (not a MOOC by our definition as it has a $149 subscription fee)
- Starting a business, by University of Leeds, platform: Futurlearn
- CBVE – Master Class on Entrepreneurship by UNINETTUNO OpenupEd, own platform
- Healthcare Innovation and Entrepreneurship, platform: Coursera
- Beyond Silicon Valley: Growing Entrepreneurship in Transitioning Economies Case by Western Reserve University, platform: Coursera
- Entrepreneurship MOOC, by Taylor's University, platform: Openlearning
- Global entrepreneurship, by Taylor's University, platform: Openlearning
- Innovation in education starts here: Your opportunity to develop, strengthen and fund your start-up, by Open Education Challenge, own platform
- Changemaker MOOC – Social Entrepreneurship by Universität Kiel, platform: iVersity
- Social Entrepreneurship by Copenhagen Business School, platform: Coursera
- Entrepreneurship and business planning by Carnegie Mellon University, platform: Talk Shoe
- Business Model Canvas: A Tool for Entrepreneurs and Innovators (Project-Centered Course), platform: Coursera
- and many more…

Entrepreneurship MOOCs (both time-set and self-paced) come in all varieties (cMOOC/xMOOCs), from different continents, but predominantly in English language. Some examples are presented below in greater detail which the authors of this paper acknowledged to be of interest because of their topic, thematic focus and/or methodological approach.

- **Innovation in education starts here: Your opportunity to develop, strengthen and fund your start-up, by Open Education Challenge**
  http://openeducationchallenge.eu/
  Aspiring entrepreneurs of existing start-ups in the first stage of development may apply. Projects that apply must contribute to transformation of education. They can tackle topics such as learning contents, devices, tools and connectivity, learning assessment and analytics, etc. Twenty finalists will get a chance to go to Barcelona to pitch their idea in front of a European jury. Out of these, ten most promising finalists will be selected to join an incubator for 14 weeks for a unique immersion in European educative realities. The start-ups will embark on a tour of European capitals to get acquainted with different realities, meet education practitioners and experts from all fields and all cultures.

- **Developing Innovative Ideas for New Companies: The 1st Step in Entrepreneurship by University of Maryland, platform: Coursera**
  https://www.coursera.org/learn/innovative-ideas
  Throughout this course participants can develop their entrepreneurial mindset and skill sets, learn how to bring innovations to market, and craft a business model to successfully launch their new business. In a four week course they will master Introduction to Innovation and Entrepreneurship, Entrepreneurial Mindset, Motivations, and Behaviours, Industry Understanding and Customer Understanding and Business Modelling. Each week includes Introduction, Video Lessons, Slides from Video Lessons, Challenge Activity, Further Readings and Resources (Optional) and Quiz. This was the most popular course on Class Central in 2014.

- **Starting a business: realise your vision, by University of Leeds, platform: Futurelearn**
  https://www.futurelearn.com/courses/starting-a-business
  This interactive two-week course will provide the wide outlook into the numerous challenges and decisions that entrepreneurs face as they go through the process of starting a business. Enterprising students and graduates who have successfully started their own business will share their experience using video case studies, real life business plans and plenty of discussion. The course will help to see a good business opportunity and then take the participants through the steps of how to turn it into a successful business.

b) Some courses have been identified on up-scaling general entrepreneurial skills. These are addressed to the general public and focus on developing creativity skills, opportunity recognition skills, time management skills, organizational skills and general management skills. These skills serve to reinforce entrepreneurial postures, enhance career development or to increase the employability of the unemployed.

Examples are:

- Visual Thinking for Business – Make Your Point, by iversity
- Entrepreneurial Marketing, by MIT, platform: OCW MIT
- Fundamentals of economics, by MESSI
- ThinkTank – Ideal City of the 21st Century by Leuphana Digital School, own platform
- Business management and entrepreneurship, by Alison
- Critical & Creative Thinking, platform: Openlearning
- Cracking the Creativity Code: Discovering Ideas, Technion by Israel Institute of Technology, platform: Futurelearn
- Grow to Greatness: Smart Growth for Private Businesses, Part I & II by University of Virginia, platform:

Coursera
- Strategic Planning and Execution by University of Virginia, platform: Coursera
- Managing Responsibly: Practicing Sustainability, Responsibility and Ethics by University of Manchester, platform: Coursera
- Valuing Projects and Companies by University of Michigan, platform: Coursera
- and many more…

The most popular formats/forms are also MOOCs, some of them offered by professional educational providers instead of higher education institutions. Some examples are presented below in greater detail which the authors of this paper acknowledged to be of interest because of their topic, thematic focus and/or methodological approach.

- **Entrepreneurial Strategic Management, platform: Coursera**
  https://www.coursera.org/learn/entrepreneurial-strategic-management/
  The course provided by University of New Mexico via the platform Coursera utilizes an inquiry-based approach with the aim of understanding sources of competitive advantages in companies and other organizations. Either a free of charge course without a certificate or a course with a certification that costs 43 € can be chosen. The course sessions take place from March 7th until April 25th, in that period distinctive modules need to be completed. Video material as well as transcripts are available on the platform. After each model a quiz needs to be done and all graded assignments must be passed to finish the course.

- **Critical & Creative Thinking, platform: Openlearning**
  https://www.openlearning.com/courses/creativecriticalthinking#jointhecourse
  This course by Universiti Teknikal Malaysia Melaka

provides students with the principles of regarding critical and creative thinking. By means of student-centred learning (SCL) and problem-based learning (PBL) students learn to apply methods as well as tools of critical thinking and creative problem solving. The course requires students to identify and solve a number of contemporary issues through the development of creative and innovative ideas in the final assignment. Several teachers as well as a large number of students are involved in the 5-week self-paced course. Interesting lecture videos from experts need to be watched. Moreover, quick interactive quizzes must be answered as well as fun activities need to be done in order to successfully complete the course.

- **Diploma in Business management & Entrepreneurship Course, platform: ALISON**
  https://alison.com/courses/Diploma-in-Business-Management-Entrepreneurship
  ALISON is a private provider of online courses and was founded in Ireland. The platform has more than 5 million learners, making the online education provider one of the biggest MOOCs outside of the US. This free of charge course is divided into different modules and provides the opportunity to obtain comprehensive knowledge as well as understanding concerning entrepreneurial and major business management subjects. Additionally, a certificate can be acquired for free. Thus, all modules must be completed with a score of 80% or more in each of the course assessments. The course is characterized by a duration of 15-20 hours and involves audio and video materials as well as assessments.

c) The upper part of Figure 1, relating to **firm-level entrepreneurship**, remains to date largely unaddressed by online education. Courses dedicated to enhancing general

entrepreneurial skills fall into this category to some extent, although we have not encountered courses dedicated to creating an entrepreneurship friendly environment or an entrepreneurial orientation of companies, nor courses dedicated to facilitating entrepreneurial behaviour of companies in the form of radical innovation, spin-offs or high-risk investments in our research. Finally, no free courses have been identified dedicated to enhancing employee entrepreneurship (intrapreneurship). There is one fee-required intrapreneurship MOOC offer by TechChange ("Social Intrapreneurship – Innovation Within Institutions"), one course with an intrapreneurship module (Entrepreneurship and Family Business by Open2Study) and a free text-based good practice example by Virtual Advisor Productions "3M – Fostering Intrapreneurial Ideas".

4. Conclusions

Entrepreneurship courses themselves are a strong current trend in the global MOOC movement (see chapter 3). There is already a competition going on between providers to attract learners and will be reinforced by the great number of entrepreneurship MOOCs which are about to start. The question will be how these offerings differentiate from each other and if the areas of company-level entrepreneurship, intrapreneurship and enlarging/furthering existing entrepreneurial skills will be tackled as well by MOOCs soon. In general, a shift can already be recognized towards self-paced courses and there are also tendencies to apply the original definition of MOOCs as free courses towards fee-required courses (for most courses, it is around € 400 per course).

The research has identified the main topics of existing online courses devoted to entrepreneurship, which are: start-ups and universal entrepreneurial skills. Company-level entrepreneurship remains a gap in the existing offer of open online courses. In detail, this means that courses that facilitate the creation of an entrepreneurship-friendly

environment must be developed. This implies fostering the entrepreneurial orientation of companies. Hence, an increasing number of high-quality courses in the context of firm-level entrepreneurship could contribute positively to radical innovation activeness, a growing number of spin-offs as well as a boost in terms of high-risk investments, due to the resulting change of the entrepreneurial behaviour of firms.

Several good practices which impact the quality of the courses have been identified. These are:

- clear description of the course, its modules, learning goals and outcomes
- other incentives (idea pitch, competition, mentoring)
- high quality video/audio content (Stanford, MIT)
- e-books and high quality materials to download
- possibility to work in groups not only individually (SE course)
- interactions with instructor
- interactions with other participants to exchange ideas and experience (numerous tools available)
- multiple and diverse methods of evaluation,
- continuous feedback and tracking progress tools
- certificate or statement of participation.

Additionally, the research revealed that there a multitude of entrepreneurship courses exist and many new ones are emerging, catering to different individual needs, requirements and contexts. Suggested criteria for evaluating and choosing the right entrepreneurship course for one’s own needs are:

- Type of thematic content: learners should specify their needs regarding the course; whether acquiring start-up skills, general entrepreneurial skills or firm-level entrepreneurial practices and look for a course that will provide the best fit. The study revealed a wide choice of existing courses on various MOOC platforms, which suggests that learners need to be persistent in

their search and not settle for second best.

- Provider: it is suggested to consider a high-ranked university, well-renowned professor, experienced private educational provider when choosing the course
- Language: study revealed that English language offers the widest choice of courses, followed by Spanish
- Length of course and workload necessary in order to complete the course
- Possibility to gain certification
- Costs: completely free of charge, partially free of charge or costly depending on the learner's preferences
- Possibility of submitting user feedback to the course
- Option to only choose certain modules / contents
- Moderated or not
- Possibility to work and interact with other learners
- xMOOC/cMOOC, Hybrid MOOC, SPOC, etc. or other format
- Mode of assessment
- etc.

Note

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