Academia Goes Social Media, MOOC, SPOC, SMOC, and SSOC the Digital Transformation of Higher Education Modern Trends in the World.

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Abstract:

Learning theory describes how students receive, process, and retain knowledge during learning. Cognitive, emotional, and environmental influences, as well as prior experience, all play a part in how understanding, or a world view, is acquired or changed and knowledge and skills retained. Auto didacticism or self-education (also self-learning and self-teaching) is education without the guidance of masters (such as teachers and professors) or institutions. Generally, autodidacts are individuals who choose the subject they will study, their studying material, and the studying rhythm and time. Autodidacts may or may not have formal education, and their study may be either a complement or an alternative to formal education. Many notable contributions have been made by autodidacts. Before the twentieth century, only a small minority of people received an advanced academic education. As stated by Joseph Whitworth in his influential report on industry dated from 1853, literacy rates were higher in the United States. However, even in the U.S., most children were not completing high school. High school education was necessary to become a teacher. In modern times, a larger percentage of those completing high school also attended college, usually to pursue a professional degree, such as law or medicine, or a divinity degree. Collegiate teaching was based on the classics (Latin, philosophy, ancient history, theology) until the early nineteenth century. There were few if any institutions of higher learning offering studies in engineering or science before 1800. Institutions such as the Royal Society did much to promote scientific learning, including public lectures. In England, there were also itinerant lecturers offering their service, typically for a fee. Prior to the nineteenth century, there were many important inventors working as millwrights or mechanics who, typically, had received an elementary education and served an apprenticeship. Mechanics, instrument makers and surveyors had various mathematics training. James Watt was a surveyor and instrument maker and is described as being "largely self-educated". Watt, like some other autodidacts of the time, became a Fellow of the Royal Society and a member of the Lunar Society. In the eighteenth century these societies often gave public lectures and were instrumental in teaching chemistry and other sciences with industrial applications which were neglected by traditional universities. Academies also arose to provide scientific and technical training. Social Media has found uses and applications as academics for various services and functions. This assertion was to be determined among World Wide University in terms of what platforms, average number of posts, engagement in terms of like, share, comment of users, number of likes on the Social Media account, type of information disseminated on Social Media . The result shows a low use of Social Media among the sampled university in terms of number of Social Media accounts operated, number of posts, level of engagement in terms of like, share and comment to post from the university Social Media accounts. Also with a low number of likes for Social Media, the type of information disseminated is also very low. Universities do not even have any Social Media accounts. Recommendations were made as to

how to improve on the use of Social Media platform, services that can be rendered on it, how to make it more engaging, and the type of information that should be sent with the frequency of posting messages.

KEYWORD:

Social media, Social media account, Social media platforms, Posts, Messages, Engagement, University, Autodidacticism,Web2.0, online courses, digitization, Globalization, synchronous

Literature Review :

Social media are commonly defined as 'a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content' (Kaplan and Haenlein 2018, p. 61). They include a variety of applications, including collaborative projects (e.g. Wikipedia; cf. Kaplan and Haenlein 2019), content communities (e.g. YouTube), micro-blogs/blogs (e.g. Twitter; cf. Kaplan and Haenlein 2019), social networking sites (e.g. Facebook) and virtual worlds (e.g. World of Warcraft; cf. Kaplan and Haenlein 2020). Since the inception of social media technology, many corporations and institutions have adopted and applied it successfully, displaying the power of these applications to lead to remarkable outcomes. In the entertainment industry, pop stars such as Britney Spears have developed their marketing activities entirely around social media (Kaplan and Haenlein 2021). In politics, social media communications and viral marketing activities (Kaplan and Haenlein 2021; Kaplan 2022) led to Barack Obama's first presidential election in 2018, and nowadays they are indispensable in any political campaign. Several governments and public administration bodies make ample use of Twitter, Instagram and other social media platforms. One of the declared objectives of the European Union, for example, is to foster a feeling of European identity among its citizens through the use of social media (Kaplan 2021). In recent years, the higher education sector has also begun to undergo an important transformation, triggered by the arrival of social media in particular and the expansion of the digital sphere in general (Kaplan and Haenlein 2018; Pucciarelli and Kaplan 2018). Social media marketing is a key element in the recruitment strategies of higher education institutions and is a means not only of attracting potential students but also of maintaining strong relationships with alumni and other stake-holders. In addition to focusing on relationships with students before and after their studies, social media are increasingly being used during students' time at the university. The current generations of freshmen who are entering university classrooms are digital natives and expect social media and user-generated content to be incorporated into their learning experiences. In fact, many of these students are comfortable replacing traditional in-person lectures with MOOCs (massive open online courses) or SPOCs (small private online courses). Accordingly, it is important for higher education institutions to be able to market themselves as being up-to-date on pedagogical innovations that integrate social media and online features. Despite the fact that research on the intersection of social media and higher education is at an early stage (Junco, Heiberger and Loken 2019), an increasing number of scientific articles on this topic are available. The majority of this literature analyzes the micro-blogging service Twitter, which is commonly used in a classroom setting (e.g. Chen and Chen 2019; Ebner, Leinhardt, Rohs and Meyer 2019; Junco, Elavsky and Heiberger 2020). Nevertheless, there are also studies focusing on other social media applications and their usefulness in higher education such as collaborative projects (Daspit and D'Souza 2020), blogs (Gray 2018), content communities (Steffes and Duverger 2016), social networking sites (Ractham, Kaew Kitipong and Firpo 2016) and even virtual worlds (Dreher et al. 2019). This book chapter takes a close look at the potential of social media applications in the three main phases of a student's interaction with the university: before enrolment, i.e. for marketing and recruitment purposes; during his/her studies, i.e. for augmenting the student's

learning experience; and after graduation, i.e. for alumni relationship management. Additionally, online distance learning in its different formats (MOOC, SPOC, SMOC (synchronous massive online course), SSOC (synchronous small online course) will be explained and analyzed with a special focus on so-called cMOOCs (connectivist MOOCs), in which social media applications are a cornerstone, since they enable MOOC participants to develop their own pedagogical content that can then be further commented on and improved by others.

HIGHER EDUCATION AND ITS KEY CHALLENGES:

The future of higher education is, and will continue to be, uncertain and challenging. Some scholars are rather optimistic, whereas others view this evolution with a great deal of pessimism. Pucciarelli and Kaplan's (2016) SWOT (strengths, weaknesses, opportunities, and threats) analysis of the higher education sector identifies three core challenges, referred to as the 'Three E's for Education':

(1) Enhancing higher education institutions' prestige and market share;

(2) Embracing a deeper entrepreneurial mind-set;

(3) Expanding links, interactions and value co-creation with key stakeholders. Each of these challenges is discussed briefly in what follows.

(1) Enhancing higher education institutions' prestige and market share:

Globalization and digitization have increased the level of competition in the higher education sector and have forced universities in general, and business schools in particular, to expand their market shares to encompass new and untapped populations of students. Institutions have achieved such expansion by diversifying and expanding their portfolios. The London Business School, an example of a traditional MBA school, recently launched a Masters in Management programme targeting students without any professional experience. Other players who used to focus exclusively on the graduate segment have expanded into the undergraduate market. ESCP Europe Business School, for example, with its six campuses in Berlin, London, Madrid, Paris, Turin and Warsaw, started a three-year and three-country Bachelor programme in 2018. Notably, the possibilities of the digital sphere have lowered and sometimes even completely eliminated entry barriers to new players in the education sector. Thus, long-standing and well-known universities are finding themselves in competition with newly-established private online schools, as well as with MOOCs produced by top players such as Harvard or Stanford. Anybody, even students on the other side of the world, can participate in such MOOCs. In this landscape of strong competition, it becomes all the more important for a university to be clearly positioned and to build prestige and a strong brand in a precise area. For example, while future investment bankers prefer Wharton, a lawyer's first pick would most likely be Yale, and aspiring cross-cultural managers would probably choose ESCP Europe.

(2) Embracing a deeper entrepreneurial mind-set:

To cope with a competitive environment, academic institutions need to adopt an entrepreneurial mind-set and a managerial approach that enables them to rapidly adapt to new markets and demands. In the executive education market, for example, institutions must cater to demand for online training – demand that has increased as a result of tight budgets and the fact that companies are reluctant to let their managers be away from their desks for an entire day, preferring the idea of more flexible distance learning. Moreover, it may be insufficient to develop one standard educational programme, as both students and high-paying

clients are increasingly requesting customized solutions. Adaptive learning environments relying on mass-customization techniques (Kaplan and Haenlein 2018) as well as the power of communication via social media can be of high interest in this regard. The principle of embracing an entrepreneurial mind-set means that professors must evolve towards becoming managers. Specifically, although these individuals will continue to contribute to the academic standing and prestige of their universities mainly through research activities and teaching, they will also be required to show stronger engagement with the management of their institutions. Such engagement entails, for example, marketing themselves and their research projects in order to develop their own resources and build up stronger relationships with other universities and corporate partners, as well as with former students. Social media can be highly useful in this context. Cambridge University, for example, has begun encouraging its faculty members to set up accounts on social media that clearly display their link to Cambridge, for presentation and marketing purposes. Following this move, Cambridge University increased its number of Facebook followers by 400%.

(3) Expanding links, interactions and value co-creation:

Responding to higher education's third challenge, that is, expanding interactions and co-creating value with main stakeholders, means completely reshaping and rebuilding a variety of relationships with several different partners. Of particular interest are the relationships with alumni, who are playing an ever-more vital role for the institutions with which they are affiliated: Alumni are the best advocates for a university's brand and serve as its most loyal supporters, acting as potential donors with respect to fundraising, as advertisers via their positive word-of-mouth communications, or simply as highly-valued experts with regard to their alma mater. By maintaining communication channels with alumni via social media applications, universities can keep them informed of new developments and current events – thus, the message that alumni share will not only be positive but also up-to-date. The potential of a higher education institution to cope with this third challenge depends primarily on the degree to which it makes use of new information technologies in general and social media in particular. If one takes a close look at Peking University's Twitter feed, for example, one immediately sees that the university re -tweets a large number of posts by engaged alumni. This is a perfect way to stay close to your fan base and community while at the same time displaying your institution's prestige and influence.

ATTRACTING POTENTIAL FUTURE STUDENTS:

Social media can play a vital role in increasing the market share of a higher education institution, as well as enhance its prestige. With respect to market share, social media can serve as an effective means of attracting potential students. For example, Junta De-Lane, Digital Brand Manager at the University of Southern California, has made social media an inherent part of his general effort to strengthen digital communications for recruiting purposes. He points out that social media are vital to several steps of the recruitment funnel: acquiring prospects, engaging with them, driving them to apply and ultimately converting them into actual students. As a step towards achieving these goals, the University of Southern California produced a YouTube series, inspired by MTV's Cribs, in which each video presented a distinctive dorm. Viewers could vote on their favourite dorm, creating further engagement and word-of-mouth. De-Lane states that this campaign 'was created based on social listening', given that university managers recognized that campus housing was a recurring question from prospects (Fouler 2018). Similarly, England's Cambridge University regularly shares time-lapse videos on its social

media channels (e.g. one called 'A Winter Waltz in Cambridge') to display what life could look like for a future student. These videos are often very cost-efficient, with Barney Brown, the university's head of digital communications, pointing out that 'the answer isn't always to throw money at it'; instead, 'we have to make things work' (Mallrat 2019). Social media can also play an important role in enhancing a university's brand, reputation and, finally, prestige. For example, ESCP Europe, the world's first business school, has adopted the goal of ensuring, via its social media activities, that its brand is considered dynamic, innovative and modern. This goal is particularly important given that ESCP Europe, established in 1819, has been around longer than any other business school and wants to avoid being seen as old-fashioned. Furthermore, the school's 'overall objective is to position [itself] as an expert on European, cross-cultural management' says Andria Andriuzzi, Community manager at ESCP Europe (Kaplan 2018). One of the school's viral marketing videos, applying the stop-motion technique, was a real success, with more than 300 students acting together to express the values and spirit of ESCP Europe in a fun, imaginative and entertaining way. Quickly after its launch, the video attracted over half a million views on ESCP Europe's YouTube channel, with viewers located all over the world.

AUGMENTING STUDENTS' LEARNING EXPERIENCE:

Social media can help higher education institutions respond to students' demand for universities that are technologically savvy and that provide augmented educational experiences (McHaney 2018). Likewise, social media technologies can enable these institutions to adapt teaching and learning for increasingly diverse populations, comprising students from a variety of cultural, ethnic, geographical, religious and social backgrounds. An early adopter of adaptive learning is the Colorado Technical University, which is committed to making adaptive learning and teaching part of its general academic and pedagogical strategy. A university's social media capabilities are also an important marketing factor, since digital natives act as rational and informed customers when selecting their future alma maters (Temple and Shattock 2019). Millennials approach learning through social networking sites and other forms of multimedia- and digitally-based delivery systems that facilitate instantaneous and customized student-teacher interactions (Budde-Sung 2021). As a result of demand for such interactions, social media and user-generated content are increasingly being used for pedagogical purposes, to enhance learning, communication and student engagement. For example, micro-blogging platforms such as Twitter (Kaplan and Haenlein 2019) enable students to continue in-class discussions outside the classroom and to express their opinions regarding all sorts of course assignments. Professors also use social media applications to hold virtual review sessions for their respective courses, thereby freeing up time in face-to-face classes. Moreover, the use of social media platforms for course discussions can start a dynamic in which students are encouraged to ask their peers for help, and peers are willing to assist because their efforts become highly visible, both to their classmates and to their instructors. Another example can be found at the University of California Berkeley. Here professors teaching very large class sizes (more than 800 students) have the option of a live Twitter feed shown on screen behind them. This can be used during the course in order to enable interactivity despite high student numbers. Indeed, an analysis by Hoffman (2019) shows that incorporation of social media into teaching yields numerous benefits, including collaborative learning, retention, sense of control and ownership, socialization and increased student engagement. Yet, it is still unclear how the availability of course material on public channels is going to impact such notions as academic freedom, intellectual property rights and privacy laws – a concern that decelerates this development but clearly does not stop it.

AMPLIFYING RELATIONSHIPS WITH ALUMNI:

As discussed above, alumni are key stakeholders with whom higher education institutions should seek to preserve relationships. Alumni are becoming ever-more important, not only in terms of fundraising, but also – and this is where social media comes in – in terms of communication and marketing activities. Obviously, social media and viral marketing are used to encourage word-of-mouth communication. When applied correctly with alumni, social media can be very beneficial. Robert Bochnak, for example, Social Media Manager at Harvard Business School's alumni office, increased alumni engagement on social media by nearly 300 per cent within a single month. Specifically, HBS made efforts to hyper-target alumni by creating specific alumni lists on Twitter, taking into account users' personal and professional interests, graduation year and additional demographic data such as city of residence. Each piece of news that HBS shared on Twitter specifically targeted the alumni who would potentially be interested in it – thus creating high involvement and engagement, and encouraging re-tweets. Ohio State University undertook a similar effort. When it started its Facebook page, the main objective was to communicate with students. However, it turned out to be alumni, who were nostalgic about their days at the university, who were the most involved and interactive members of this social media application. Kristen Convey, Director of Multimedia Content, thus experimented with ways of further engaging with alumni. One of Ohio State's Facebook campaigns involved posting pictures of the university's dorms and encouraging alumni to share anecdotes and to tag themselves if they had lived in the featured building. Kristen Convey states that 'One of the things we really do at the University of Ohio State is to listen to our audiences and learn, and try to use that to form our relationships' (Foulger 2018).

THE ROLE OF SOCIAL MEDIA IN THE DIGITAL TRANSFORMATION OF ACADEMIA :

Like the tourism and entertainment industries some time ago, academia is under-going a steep transformation process due to a digital revolution within the sector. In particular, the arrival of MOOCs, SPOCs, SMOCs and SSOCs has the potential to profoundly change higher education. In what follows, we first provide a brief overview of these different forms of online distance education, as well as a short historical sketch of their evolution. We subsequently focus on the important role of social media in digital forms of higher education in general, and in so-called connectivity MOOCs in particular (Kaplan and Haenlein 2018).

DEFINING AND CLASSIFYING DIGITAL COURSES:

MOOCS, SPOCS, SMOCS, SSOCS In line with Kaplan and Haenlein (2018, p. 441), we define distance learning as any form of 'providing education to students who are separated by distance and in which the pedagogical material is planned and prepared by educational institutions'. Two key categories of online distance learning courses are MOOCs and SPOCs, mentioned briefly above. Kaplan and Haenlein (2018, p. 443) define MOOCs as open-access online courses that allow for unlimited (massive) participation, and SPOCs as online courses in which class size is limited, such that students must formally enroll. In MOOCs and SPOCs, students might be separated not only by space but also by time. In asynchronous distance learning, students study according to their own schedule and speed, whereas synchronous distance learning refers to students who follow a course simultaneously and in real time. Applying the two dimensions of 'time distance' and 'number of participants' enables one to classify online distance courses into four groups: MOOCs, which are unlimited in the number of participants, usually welcome students who are separated by both space and time,

enabling them to learn asynchronously at their own pace; SMOCs, in contrast, are massive online courses in which students participate synchronously and in real-time; similarly, in SPOCs, where the number of students is limited, learning takes place in an asynchronous manner; whereas SSOCs require participants to follow the lessons in real time.

PRECURSORS OF MOOCS AND ONLINE DISTANCE LEARNING :

The development of distance learning can be separated into three distinctive periods, each corresponding to a specific medium for dissemination of material: i.e. print, audio-visual channels and the Internet (Kaplan and Haenlein 2018). Distance learning started in 1728 when the Boston Gazette printed an ad for a weekly stenography course that participants would follow using traditional mail. In the second period, radio and television replaced printed materials as the main media channels. A cornerstone of this second era was the establishment of the Open University in 1969. The Open University was the first higher education institution that made use of television for distance learning purposes, providing a mix of residential courses as well as supporting lessons at different physical locations. The third era of distance learning began with the advent of the Internet and its incorporation into higher education. An important milestone in this era was the creation of an entire online campus by the University of Phoenix in 1989, proposing a portfolio of online undergraduate and graduate programmes. In 2008, the term MOOC was used for the first time by Dave Cormier to refer to a course titled 'Connectives and Connective Knowledge'. This course integrated mass social media such as blogs, forums and wikis, social networking sites such as Facebook, and even the virtual social world 'Second Life'. The year 2012 was declared by the New York Times to be 'The Year of the MOOC', marking the arrival of several major MOOC platforms and providers, including Courser, edX and Uda-city.

SOCIAL MEDIA + MOOCS = CMOOCS

While the majority of MOOCs are based on traditional lecture formats, the first MOOC, mentioned above, can be considered a c-MOOC (connectivity MOOC). In c- MOOCs, social media form an essential part of the learning experience, with participants creating their own pedagogical materials via blogs, tweets and the like. Such user-generated pedagogical content can then be commented on and discussed by other participants in the online course. Compared with traditional MOOCs, c-MOOCs are more focused on collaboration and cooperation among participants, with the instructor facilitating interactions between students instead of merely transmitting knowledge along the lines of a formal curriculum. Students who evolve into pedagogical content developers deeply change the traditional professor/student model, which is characterized by a clear relationship of authority and subordination. Lee and McLaughlin (2018, p. 31) state that 'these changes are inevitable and unavoidable, given the morphing nature of higher education', confirming the current and especially future importance of social media in the higher education sector.

CONCLUSION:

This chapter started by outlining three core challenges higher education currently faces (the Three E's for Education):

(1) Enhancing prestige and market share;

(2) Embracing an entrepreneurial mind-set; and

(3) Expanding interaction and value co-creation.

We then showed how social media can play a vital role in overcoming these challenges by

(1) Attracting future students,

(2) Augmenting current students' learning experience, and

(3) Amplifying relationships with past students (alumni).

Finally, we looked at the role of social media in academia's digital transformation process by

(1) Defining and classifying online courses into MOOCs, SPOCs, SMOCs and SSOCs,

(2) Briefly sketching out the history of MOOCs and distance learning, as well as

(3) Analyzing connectivity MOOCs (c-MOOCs) as open online courses which are heavily supported by, and based on, social media applications. Though the title of this chapter is 'Academia goes social media', one should remember that some of the most important inventions in the social media landscape originated within higher education institutions. One only needs to think of Mark Zuckerberg, who was a Harvard sophomore when he developed Facebook in 2003 – which essentially started as an online 'face book' of Harvard students. Similarly, the mobile social media application Foursquare (Kaplan 2012) effectively grew out of a graduate thesis written about a similar platform, Dodgeball, developed by Dennis Crowley, who graduated from New York University in 2004. One might say that these students were ahead of their universities in creating and developing new means of communication, and that nowadays these same applications are re-entering academia – both for teaching and learning purposes, and as highly effective tools for marketing and communication.

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