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THE ROLE OF ENGLISH AND TECHNOLOGY IN THE INTERNATIONALIZATION OF EDUCATION: INSIGHTS FROM THE ANALYSIS OF MOOCS

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Abstract

The paper reflects on the role of additional languages and technology in the internationalization of education in general and in Brazil in particular (for example [1], [2], [3]). Based on the assumption that access to information and technology is necessary to build social capital [4] and that this access requires some knowledge of English and digital literacy [5] the study reflects on the roles of additional languages and technologies in the internationalization of education in general and in the context of Brazil in particular. With that aim the study reviews educational and internationalization policies in Brazil in relation to the role of additional languages and technology. The review of educational policies in Brazil suggests that both the resistance to and the uncritical use of the English language and technology in education may bring negative consequences to the social development in that country, hindering the internationalization process. Based on the assumption that both the internet and the English language are vehicles of social inclusion and access to information and education online [5] and that the access to information can be used to foster the development of a global citizenship and social capital [4] the study analyzes the number Massive Online Open Courses (MOOCS) available per area and per language. The study uses a mixed methods design [6]. Quantitative data includes the number of Massive Online Open Courses (MOOCS) available online per area and per language and qualitative data includes an analysis of possibilities and limitations of the MOOCS found in relation to language and area. Preliminary results of the study suggest that MOOCS represent a relevant tool to socialize education and drive social development fostering internationalization of education but that knowledge of the English language is required to have access to most of the benefits provided by MOOCS in countries such as Brazil. Given these findings the study suggests a change in educational policies in relation to the role of English in Brazil [7] so as to optimize benefits of MOOCS in that country.

Keywords: MOOCS; English; Technology; Education; Internationalization.

1 INTRODUCTION

The globalization and the information era have led to many social, political and economic changes, including the rapid flow of goods, services and information across borders. Digital technology has risen as the infra-structure of the *cyberspace* [8]: a new social, communication, transaction space – also a new information and knowledge space – which fostered the globalization and thus the internationalization of education [3]. The new information and communication technologies (hereafter NICTs), made cheaper and faster flow of information possible, along with new possibilities of interaction within this new global community. Massive Open Online Courses (hereafter MOOCs) offered, mostly in English, by many world-class universities are among the new ways of producing, sharing, and accessing information and knowledge brought about the NICTs. Therefore, in the present information society, both English as an international language and digital literacy are vehicles of information access and social inclusion and as well as formation of social capital aiming to a global citizenship.

According to Levy [8], we should rethink the role of knowledge/information/communication in society – as they are not secondary and merely influenced by politics and economics anymore. The advent of

the internet has put us in a reality where this vision is not as effective as the society begins to make macro-unexplained changes because of the arrival of the network: new companies, new political arrangements, new ways to sell, to buy, to inform, to communicate, to relate. And it is neither the economy nor the political nor the social that are causing these changes, but the macro-changes occurring in the media environment, which involve knowledge, information and communication. Lévy [8] suggests reversing the current conceptual map, showing that knowledge/information/communication, encapsulated in a new media; create a road in which the journey of economy, politics and society will be radically different in the future.

The terms 'nowist culture' and 'hurried culture' [9], coined by Stephen Bertman, depict the way we live in the post-modern society: with the constant re-negotiation of the meaning of time. Even though these transformations have recently occurred, in the past few decades, the pace of learning has also dramatically accelerated, calling both teachers and learners for a discontinuation from conventional educational models, acting upon the post-modern needs of this new social setting [9]. The *cyberspace* [8] creates a ubiquitous and interconnected cultural network where information and knowledge can be shared without barriers. The "collective intelligence" blurs the lines between active and passive users – every interaction is now "active" and contributes to the collective knowledge itself.

The arrival of the 2.0 internet foreshadows a new phase of interactions and learning in the 21st century [3]. Social networks, blogs, wikis, smartphones and their applications can now be used in education as important pedagogical affordances. Hypertexts have changed the way we process information, write and read. All these changes in society and in the ways of communication and knowledge production have not yet reached schools and universities in the same way they reached homes, although their role in the contribution to intellectual capital of the universities might foster their implementation in higher education sooner than in schools.

Autonomy is another feature of the post-modern education. Besides reaffirming the status of English as an international language, the advent of the web 2.0 has also provided us with new opportunities for greater autonomy and collaborative construction of knowledge, thus transforming the paradigms of teaching and learning [5]. Both English and the internet are essential inclusion and survival tools in the post-modern globalized world we live in. English speakers with internet access can be introduced to a plethora of information, making them thus increasingly socially included as citizens. The access to available information (mostly in English) on the Internet makes the user autonomous in the process of use and transformation of information into knowledge. According to Warschauer [4], foreign language use promotes human and social development of a community, as well as the use of technology. Learners can use the language on the internet to take ownership of a social capital, through access to discourses that circulate internationally in the globalized world and transmitted primarily online and in English.

According to Finardi, Prebianca and Momm [5], living in a world in which English is seen as an international language and information is transmitted online, digital illiteracy and the lack of command of the English language can exclude people from knowledge in many ways. According to Bordieu, "Capital is accumulated labor" [12]: usually achieved over time, through the efforts of its owner, and it can be economic, cultural, and social [11]. Cultural capital could be earned through educational systems and would consist of cultural and language competence, which would influence the individuals' relationships with teachers, and with society in general. This cultural capital emerges in three forms: embodied cultural capital (cultural qualities of an individual, such as language, learned over time from others in society), objectified cultural capital (ownership of objects that are pieces of culture, such as works of art), and institutionalized cultural capital (qualifications granted to the individual by an institution, such as a university degree). Being a competence, embodied cultural capital could also comprise information technology skills (digital literacy), as they would give one an advantage in society. Bordieu's definition of social capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" [12]. Since relationships can be leveraged in the transformation of social capital into economic capital, social capital can be considered as having an important role in harnessing the growth of developing countries. The internet seems to be a natural medium for developing social ties by lowering the cost of social interaction, consequently fostering a ground-breaking growth of social capital [4]. Therefore, digital literacy and the command of English language can be seen as tools to promote cultural and social capital. MOOCs can be used in a way to help developing these assets, thus contributing to this broadening of the aforementioned capitals.

Massive Open Online Courses (MOOCs) are a recent technological innovation in the education sector aimed to deliver free quality education to large numbers of individuals [13]. Popular platforms like Coursera and edX have partnered with world-renowned universities, offering an extensive variety of courses with both asynchronous and interactive components, free to anyone with internet connection. These features seem to present MOOCs as an equalizer that could bring quality education access to a wide range of countries, cultures, and socio-economic backgrounds, providing new opportunities for populations of developing countries with currently limited educational opportunities, bringing students and teachers together in a unique educational environment. Students progress through the course by watching pre-recorded lectures, completing assignments, and interacting with each other and the course staff via the MOOC's discussion forums. Online courses are not new, but the new feature afforded by MOOCs is that fact that previous online courses focused on a specific public and were not open. The challenge of MOOCs is to offer courses for any public throughout the world (Massive), in an open platform (the web).

MOOCs first appeared in 2008, brought by Stephen Downes and George Siemens [14]. But it was in 2011, when more than 160.000 people enrolled on a free distance course offered by professors Sebastian Thrum and Peter Norvig that MOOCs expanded (Udacity and Udemy). Following, other universities in the US and Europe brought platforms such as Coursera, EdX, Futurelearn and Iversity. (INTE) The typical basic characteristics of MOOCs are: large-scale, free and open, online, participatory and distributed. Different from the traditional classroom environment, there is no limit to the number of students at a given time and course. Profit is not the main purpose of most MOOC platforms which are interest-oriented and aimed at resource-sharing. They are also open in the sense that one can have access to all content of the course, and the work generated by both teachers and learners is shared and available publicly – learning is enhanced by voluntary participation and collaboration both in the creation and sharing of personal contributions, high-quality education resources can be accessed for free by anyone on the network. These courses are based on interactive learning supported by the internet, not restricted by regional boundaries, providing students with the flexibility of obtaining credits while conveniently completing online tasks and assessment, with real-time interaction. The first phase of MOOCs, called cMOOCs [16], used a connectivist "peer-learning" approach, in which most activity happened in a social learning environment, through interactions between learners, course materials, and facilitators. The majority of MOOCs today are primarily content-based – xMOOCs – differently from the primary connectivist premise of a MOOC; they are delivered through video lectures and use less interaction, and are based on management platforms of institutions or individual academics.

Based on this review of MOOCs it can be argued that the offer of this type of online open courses, horizontalized access to and affected education in the world equally. However, as we will see in this paper, given the language (and to a lesser extent the area) in which the MOOCs are offered, it can be said that MOOCs may affect education in some environments more than in others. So as to analyze how MOOCs may be relevant for the education in a particular context, the present study analyzes the role of the English language and MOOCs in Brazil.

1.1 Role of English in Brazil

The Brazilian national law of education regulates national orientations[1] and parameters[2] for foreign language teaching, and stipulates that the mandatory curriculum of schools should include at least one foreign language [7]. According to these documents, the teaching of foreign languages is mandatory after 5th grade (though the language selected to teach is optional) and should focus mainly on the development of students' reading skills. However and according to Lagares [15], there seems to be a general belief in Brazil that nobody learns a foreign language well at school. One consequence is that private language institutes abound in Brazil are not ruled by the national educational law. This also generates a gap between those who can afford to pay for foreign language courses and those who cannot. While the focus of the teaching of foreign languages in schools privileges the reading skills, private language institutes, most of which teach English as a foreign language, focus on the

[1] In Portuguese *Orientações Curriculares Nacionais* (Brasil, 2006).

[2] In Portuguese the *Parametros Curriculares Nacionais* (Brasil, 1998).

development of oral skills, in smaller classes separated by proficiency levels [7].

According to Gimenez [16], Brazilians' proficiency in English is 46th in a ranking of 54 countries and only 5% of Brazilians are fluent in English. However, Brazilians' view of English as an international language, fostered by the globalization and the 2014 World Cup, can be inferred by the number of private language schools that offer English classes in Brazil. Nevertheless, English is still not recognized as an international language there where it has the status of any other foreign language which can (or not) include the mandatory curriculum. Moreover, Brazilian national language policies do not assure this language education in public schools, perpetuating a social gap [7]. Yet, internationalization policies enacted in internationalization programs such as the Science without Borders and the English without Borders programs show that English has a different status than all the other additional languages in Brazil. Investments in English language teaching outweigh investments in all the other foreign/additional languages in internationalization programs. Internationalization programs also show that though Brazil has started to recognize the importance of English language teaching, it has to align this recognition of the status of English throughout all levels of education and not only in higher education where these internationalization programs are targeted.

2 METHODS

As previously stated, the main aim of this study was to analyze the number of MOOCS available per area and per language using a mixed methods design where quantitative data includes the number of MOOCS available online per area and per language and qualitative data includes an analysis of possibilities and limitations of the MOOCS found in relation to language and area. In what follows the quantitative results will be presented before the qualitative results and the ensuing discussion.

3 RESULTS AND DISCUSSION

Upon consultation on websites which aggregate information on MOOCs throughout the world [17], over 2800 courses were found, 2326 (83%) of which are in in English. These data corroborate suggestions to develop English and digital literacy as ways to socially include leaners [5]. The dominance of English-speaking universities which offer MOOCs, can be seen in the ranking of the world's top 20 universities provided each year by the Shanghai Jiao Tong University Institute reported in Graddol [18]. This ranking states that approximately two-thirds of the world's top 100 universities are located in English speaking-countries while the others have implemented English-speaking courses in their curricula. Content and language integrated learning (CLIL) methodologies have been used in universities across Europe as a way to internationalize these institutions, attracting both students and researchers from around the world and encouraging student mobility. The Bologna Process agreement signed in 1999, which involved 45 countries in 2006 with the purpose of standardizing university education within Europe, proposed using a common approach to levels and length of courses, intending both to facilitate greater movement of students and to strengthen the internationalization process of institutions. Although not a requirement, the use of English in teaching has been encouraged as it aids non-language specialists to accomplish all or part of their undergraduate or postgraduate study in another country. Hence, the role of English in Europe is that of a gradually increasing language of instruction as is in most world class universities.

Yet, and as suggested by the analysis of linguistic policies in Brazil [7], English has not reached this status in that country, making access to information online and MOOCs, as we have seen in this study, more difficult and limited.

The qualitative analysis of MOOCs suggests that most courses are in the area of Business and Management, followed by Sciences. The MOOCs offered in Portuguese seem to follow the same pattern per area and are way below the offer in English, losing to Spanish, Chinese, Arabic, German, Russian, Turkish and Japanese. Considering that Portuguese is the fifth most spoken language in the world, by number of native speakers, the offer of MOOCs in Portuguese should not be behind the offer of MOOCs in Turkish, German and Japanese, for example. In what follows the distribution of MOOCs found per language and area are shown in the Table below.

MOOCs in English – 2336					
Computer	Health &	Mathematics	Business &	Humanities	Engineering

Science 6	Medicine 224	91	Management 324	231	115
Science 315	Education & Teaching 265	Social Sciences 260	Art & Design 138	Programming 151	

MOOCs in Spanish – 224					
Computer Science 10	Health & Medicine 10	Mathematics 22	Business & Management 51	Humanities 18	Engineering 17
Science 21	Education & Teaching 24	Social Sciences 27	Art & Design 11	Programming 13	

MOOCs in French – 111					
Computer Science 4	Health & Medicine 6	Mathematics 5	Business & Management 25	Humanities 10	Engineering 16
Science 7	Education & Teaching 0	Social Sciences 21	Art & Design 7	Programming 10	

MOOCs in Chinese – 105					
Computer Science 20	Health & Medicine 10	Mathematics 3	Business & Management 5	Humanities 14	Engineering 12
Science 12	Education & Teaching 0	Social Sciences 11	Art & Design 7	Programming 11	

MOOCs in Arabic – 79					
Computer Science 5	Health & Medicine 18	Mathematics 0	Business & Management 19	Humanities 9	Engineering 6
Science 4	Education & Teaching 6	Social Sciences 11	Art & Design 6	Programming 5	

MOOCs in German – 41					
Computer Science	Health & Medicine	Mathematics 3	Business & Management	Humanities 2	Engineering 0

6	2		9		
Science 3	Education & Teaching 3	Social Sciences 2	Art & Design 1	Programming 10	
MOOCs in Russian – 23					
Computer Science 0	Health & Medicine 0	Mathematics 2	Business & Management 3	Humanities 1	Engineering 0
Science 5	Education & Teaching 0	Social Sciences 11	Art & Design 0	Programming 1	

MOOCs in Turkish – 17					
Computer Science 2	Health & Medicine 1	Mathematics 2	Business & Management 5	Humanities 0	Engineering 0
Science 0	Education & Teaching 1	Social Sciences 0	Art & Design 4	Programming 2	

MOOCs in Japanese – 17					
Computer Science 2	Health & Medicine 0	Mathematics 0	Business & Management 3	Humanities 4	Engineering 0
Science 0	Education & Teaching 2	Social Sciences 2	Art & Design 3	Programming 0	

MOOCs in Portuguese – 11					
Computer Science 0	Health & Medicine 0	Mathematics 0	Business & Management 5	Humanities 0	Engineering 1
Science 1	Education & Teaching 1	Social Sciences 3	Art & Design 0	Programming 0	

MOOCs in Italian – 06					
Computer Science	Health & Medicine	Mathematics	Business & Management	Humanities	Engineering

0	0	0	2	0	0
Science 3	Education & Teaching 1	Social Sciences 0	Art & Design 0	Programming 0	
MOOCs in Hebrew – 03					
Computer Science 0	Health & Medicine 0	Mathematics 1	Business & Management 0	Humanities 1	Engineering 1
Science 0	Education & Teaching 0	Social Sciences 0	Art & Design 0	Programming 0	

MOOCs in Dutch – 01					
Computer Science 0	Health & Medicine 0	Mathematics 0	Business & Management 0	Humanities 1	Engineering 0
Science 0	Education & Teaching 0	Social Sciences 0	Art & Design 0	Programming 0	

Conclusion

This paper aimed at reflecting on the role of English and technology in the internationalization of education in general and in Brazil in particular. With that aim the study reviewed educational and internationalization policies in Brazil in relation to the role of additional languages and technology. The review of educational policies in Brazil suggests that both the resistance to and the uncritical use of the English language and technology in education may bring negative consequences to the social development in that country, hindering the internationalization process. The study analyzed the number Massive Online Open Courses (MOOCS) available per area and per language using a mixed methods design. Quantitative data showed that the number of MOOCs per language and area are concentrated in English and in the Business and Management areas. Results of the study suggest that MOOCS represent a relevant tool to socialize education and drive social development fostering internationalization of education but that knowledge of the English language is required to have access to most of the benefits provided by MOOCS in countries such as Brazil. Given these findings the study suggests a review of educational policies and internationalization policies in Brazil so as to optimize benefits of MOOCS in that country.

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