Opportunities And Challenges of MOOCS: Perspectives From Asia

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Abstract:

The recent growth of Massive Open Online Courses (MOOCs) has led to discussions of technology-based instruction revolutionizing traditional higher-education teaching. Here we analyze the origin of MOOCs, as well as trends in education initiated by these courses, and compare them with OpenCourseWare (OCW), YouTube EDU, iTunes U. Specifically, this paper will discuss the opportunities and challenges presented by MOOCs, from the perspective of Asian countries, with reference to economics, culture, language, and instruction.

Keywords: MOOCs; open learning resources; opportunities and challenges of university; Asia perspectives

1. Introduction

1.1 Academic community sees two important trends: collaboration, and openness.

The exponential growth in complexity and scope of modern sciences has dramatically increased the demand for more collaboration among researchers in different fields and on different levels. Modern research is team-based, interdisciplinary, cross-institutional and cross-border. Another development in the academic community is increasing openness. Openness in sharing knowledge to address achievement gaps and to break academic barriers has gradually been applied in self-archiving, Open Access, Open Educational Resources (OER), Open Scholar, OpenCourseWare (OCW), etc. This collaboration and sharing leads to new models in scholarly communication, and makes it possible for everyone to engage in learning at the university level.
1.2 Open digital learning resources

Digital learning has become an important mode of university instruction. For both synchronous and asynchronous learning, the main target includes registered and fee-paying students. In 2001, when Massachusetts Institute of Technology (MIT) launched OpenCourseWare with the hope of making learning resources freely accessible via Internet, it has become a model followed by global counterparts. Aside from OCW, there are also YouTube EDU, iTunes U, and other platforms such as UdaCity and Coursera. The following is the recent development of these platforms.

a. OCW

This service was first put forth by MIT in April 2001 (Massachusetts Institute of Technology, 2001). As in Oct 2012, MIT offered more than 2,150 online courses, with more than 18.6 million visits to the site in 2011, an average of almost 2 million page requests per day, and a total of 125 million individuals worldwide accessing contents of the site since 2001 (Massachusetts Institute of Technology, 2012).

b. YouTube EDU

YouTube EDU is a section of youtube.com dedicated to educational videos developed by colleges and universities, including University of Cambridge, Yale, Stanford and MIT. Launched in 2009, YouTube EDU includes contents from over 300 institutions, spanning 10 countries and seven languages. What it provides is a sustainable mechanism for access, based on an established identity, which makes it work well in offering free, supplementary multimedia-learning videos (Bujak et al., 2012).

c. iTunes U

iTunes U is a service that lets universities deliver free, downloadable audio and video contents through Apple's iTunes store. Apple has just announced on February 28, 2013 that they have crossed their one billion mark for their iTunes U content downloads since its launch in 2007. The 1 billion total downloads are a result of the participation of more than 1,200 universities and colleges, and 1,200 K-12 schools and districts hosting over 2,500 public and thousands of private courses which encompass the arts, sciences, health and medicine, education, business and others. Leading universities including Duke, Yale, Cambridge, MIT and Oxford continue to extend their reach by enrolling more than 100,000 students in single iTunes U courses, with Stanford University and The Open University each surpassing 60 million content downloads. For University of Oxford, by October 2012 there was more than 20 million downloads from iTunes U, 7% of which was from China (University of Oxford, 2013). There are now also iTunes U courses with more than 250,000 students enrolled in them, a phenomenal shift in ways subjects are traditionally taught to students.

2. What is MOOCs

It is common for students to register for a digital online course. Open and free learning resources are rich and popular. Why then MOOCs are so well received? New Media Horizon (2012) stated that MOOCs is the next big thing in the technological development of higher education. In 2013, its Report places both MOOCs and tablet computing as the most
important technology of higher education. *New York Times* (May 13, 2013) described that MOOCs had taken the world of education by storm, implying a major educational reform.

In its name, MOOCs imply a spirit of open learning, in cooperation with information and communications technology (ICT). MOOCs can be traced back to distance learning when, though underprivileged such as living in the country side or remote area, people can still have a chance to be educated. From radio, television broadcast to the present-day Internet featuring RSS feeds, blog posts, Web application for online courses such as Moodle, getting educated in a flexible way at their own pace is no longer a dream. It is internet technology in cooperation with the spirit of open learning.

MOOCs directly inherit the different characteristics of OCW, namely, MOOCs are not for credit, and classes are generally of open entry, open exit. One thing different is that, for OCW there is no classes, no interaction with an instructor nor peers. The educational institute only provides the learning resources. But MOOCs feature the interaction in the form of teacher-student, peer-to-peer discussion, question and answer activities.

There are at least three main MOOC portals, or platforms, Coursera, edX, and Futurelearn (Liyanagunawardena, Williams & Adams, 2013). Coursera is a for-profit company, founded by Stanford University professors, while edX is non-profit, founded by Harvard University and MIT, and Futurelearn is by Open University in the United Kingdom. Udacity is also an important MOOCs platform which is a private educational organization founded by Sebastian Thrun, David Stavens, and Mike Sokolsky

### 3. Development of open learning and MOOCs in Asian countries

#### 3.1 Asia Students on 3 big MOOCs platforms

Udacity, Coursera and edX are the current big three platforms, representative of and leading the MOOC development. According to Waldrop (2013), a survey shows that the courses provided by the three platforms come from 17 different countries, more than 60 different universities; the registered students come from more than 220 countries. There has been a triple growth of participating students and available courses from 2012 to 2013. It marks a rapid growth of MOOCs. The students coming from Asia is around 21.4%, a high proportion.

<table>
<thead>
<tr>
<th>origin</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>35.2%</td>
</tr>
<tr>
<td>Europe</td>
<td>28.2%</td>
</tr>
<tr>
<td>Asia</td>
<td>21.4%</td>
</tr>
<tr>
<td>South America</td>
<td>8.8%</td>
</tr>
<tr>
<td>Africa</td>
<td>3.6%</td>
</tr>
<tr>
<td>Oceania</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

(source: University UK, 2013)

#### 3.2 Asian universities on developing OCW and MOOCs
Universities in Asia were quick to follow the OCW exemplar. Many of them have developed their own OCW courses and formed alliance. As for MOOCs, Asian universities are also dynamic.

According to a study on the locations of MOOC participants, including MobiMOOC’s, the majority are from North America and Europe, while Asia and Africa have limited participation (Liyanagunawardena, Williams & Adams, 2013). But as can be seen from the following brief descriptions on Asian countries, the number of Asians are growing in participation.

3.2.1 In 2004, Taiwan’s Fantasy Foundation (Foundation of Fantasy Culture and Arts) launched the Opensource OpenCourseware Prototype Systems (OOPS) project which translated MIT’s OCW into Chinese language. Four years later in 2008, Taiwan OpenCourseWare Consortium (TOCWC) was founded, with a membership of 28 universities. In February 2013, Taiwan’s Ministry of Education started a MOOC project to include 15 universities with 100 courses as target. In 2013, the National Taiwan University joins Coursera.

3.2.2 China Open Resources for Education (CORE) is a non-profit organization founded in China, 2003. Now it is a consortium of 26 IET Educational Foundation member universities and 44 China Radio and TV Universities. As for MOOCs, the website glr.cn (‘glr’ stands for guo lai ren, meaning forerunner) is a proponent.

3.2.3 In Japan, as early as September, 2002, Tokyo Institute of Technology (http://www.ocw.titech.ac.jp/index.php?lang=EN) started its OCW pilot project, including 50 courses. The greater Japan OCW Consortium (JOCWC) was founded in 2005, and has 22 member universities.

3.2.4 For South Korea, in 2007, Korea Education and Research Information Service (KERIS) started a pilot OCW project. It now runs KOCW which is a public OCW repository and utilization service. Korea OCW Consortium (KOCWC) was founded in 2008, and has 91 university members. Back in 2010, there was already 1300 OCW courses available.

3.2.5 While Singapore did not have an OCW consortium, the National University of Singapore and Nanyang Technology joined iTunes U. The former also joined Coursera.
Table 2  Major developments of OCW and MOOCs in Asia

<table>
<thead>
<tr>
<th>OCW and MOOCs</th>
<th>Taiwan</th>
<th>China</th>
<th>Japan</th>
<th>South Korea</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning</td>
<td>2004, Taiwan Fantasy Foundation launched OOPS project, translated MIT OCW to Chinese version. 2008 TOCWC was founded.</td>
<td>CORE was founded in 2003.</td>
<td>2002 Sept., Tokyo Institute of Technology had an OCW pilot project that included 50 courses. In 2005 JOCWC was founded.</td>
<td>2007, KERIS started the OCW pilot project. 2008, KOCWC was founded.</td>
<td>There is no OCWC.</td>
</tr>
<tr>
<td>OCWC members</td>
<td>TOCWC has 28 university members.</td>
<td>CORE has 13 university members.</td>
<td>JOCWC has 22 university members.</td>
<td>KOCWC has 91 university members. In 2010, the OCW courses already had 1,300.</td>
<td>The National University of Singapore and Nanyang Technology University joined iTunes U.</td>
</tr>
<tr>
<td>MOOC</td>
<td>Feb. 2013, Ministry of Education started the ‘MOOC’ project. It will include 15 universities and 100 courses. NTU joined Coursera.</td>
<td>‘glr.cn’ (過來人公開課程) is the proponent of MOOC in China.</td>
<td>not available</td>
<td>not available</td>
<td>National University of Singapore joined Coursera.</td>
</tr>
</tbody>
</table>

4. Opportunities and Challenges of MOOC for Asia Countries

Sebastian Thrun, the Stanford professor who co-founded Udacity, once said he was inspired by Salman Khan to bring education to where it currently does not reach (Thrun & Evans, 2012). With Asia’s first MOOC launched in Hong Kong in April 2013, attracting students from North and South America, Europe, Asia and South Africa, alongside other MOOCs to be offered by universities in Japan, Taiwan on the Coursera platform (Sharma, Yojana, 2013), online learning is picking up steam. While some people consider online learning cost-efficient (Meyer, 2006), others refer it to as a kind of disruptive innovation in relation to higher education (Bujak et al., 2012; Christensen, Horn & Caldera, 2011), a recent case being the outsourcing of online lectures in the name of “blended” courses, which resulted in opposition by the concerned faculty members (Houston, 2013). What this implies is the growing influence of MOOCs on the landscape of higher education. Online learning via the MOOC platform creates both opportunities and challenges for people in Asia. Although it will not be an easy task, we can make use of MOOCs to create a better society for future generations.
4.1 Opportunities

4.1.1 To address the need for more universities, and create a level playing ground

It is predicted that the global demand for higher education places is ever-growing. There is a problem of access to higher education in the developing countries in the world, including those in Asia. A case reflecting this scenario is in India where, in addition to the normal growth, 40 million extra university student spots will be needed by the middle of the next decade (Everitt, as cited in Liyanagunawardena, Williams & Adams, 2013). It seems appropriate to say that, for countries like India, in Asia, higher education is taxing, and MOOCs may provide a solution. As aforementioned (section 2), the locations of MOOC participants are concentrated in North America and Europe, with limited participation from Asia and Africa (Liyanagunawardena, Williams & Adams, 2013). Since the MOOC model is relatively new and the related study is limited, the reasons behind the limited Asian participation is not fully known. Given the need for more higher education resources, it seems natural for Asian countries to pursue MOOCs as one solution. Regardless of the country of origin, collectively speaking there is ample room for Asian learners to join MOOCs at their disposal, which is what MOOCs are about.

Higher education is experiencing great changes that some would regard as disruptive forces (Bujak et al., 2012; Christensen, Horn & Caldera, 2011). It is natural to consider change as challenges, but then often as opportunities as well. The restructuring involves approaches, partnerships, and technologies (Bujak et al., 2012).

ICT enables interactions in an always-connected society. With the growing popularity of smartphones and tablets to access online digital resources, we can see that ICT can help MOOC usage. For instance, 15% of Oxford’s iTunes U downloads were via smartphone, iPads, or iPods (University of Oxford, 2013).

From the above figures, one may say that it is a matter of personal choice, whether learners are motivated to use MOOCs. It seems to leave the problem to the learners, but instead it should be the government addressing basic issues like Internet access with adequate infrastructure, language, and computer literacy, etc. (Liyanagunawardena, Williams & Adams, 2013). Language as an issue points to the possible mix of using English and the native language of a country, that is, bilingualism or multilingualism. Bilingualism will be mentioned in section 3.2.4. As for computer literacy, it is an integral part of information literacy which will be discussed in the following section.

Beside governments, institutions of higher education need to change to cope with the circumstances.

4.1.2 To cultivate the literacy of people in developing Asian countries

Among the ten most populated countries in the world, China and India, the top two on the list, together with other Asian countries amount to more than one third of the world’s total population (Sharma, R. N., 2013); other related figures being:

- in the world, over 793 million people (age 15 or above) are illiterate
- the rate of illiteracy is relatively higher in Africa, South Asia, and the Arab world
- South & West Asia have the highest rate of illiteracy
of all the illiterate adults in the world, two-thirds are women

Information literacy itself is useful for people to acquire the skill to learn. According to Liyanagunawardena, Williams & Adams (2013), digital literacy, including “critical literacies” to efficiently evaluate large quantities of information (such as peer discussion), along with English language proficiency, structure of learning, among the others, are key to shaping a learner’s MOOC experience. Illiteracy of the above critical topics are challenges to developing nations. According to Caswell et al. (2008), OCW is an approach to realize Article 26 of the Universal Declaration of Human Rights -- “Everyone has the right to education” (United Nations, 1948, quoted in Caswell et al., 2008). We can say MOOCs have a significance part to play along the road to this goal. Therefore, it is helpful to eliminate such illiteracy in the increasingly networked world. Information literacy is a critical priority to address in developing nations.

4.1.3 To realize the dream of lifelong learning

In this modern era of access to vast quantities of information daily, a person should reasonably acquaint oneself with an opportunity to learn. The library is the social institution and powerhouse for this purpose. For traditional distance learning, it is essential for libraries to serve as a focus of academic support.

Sebastian Thrun, co-founder of Udacity, wants to bring education to where it currently does not reach; this brings opportunities to non-traditional learners who pursue lifelong learning (Thrun & Evans, 2012). In the Internet age, a person who is eager to learn should have the opportunity to learn, at least online. It is important to train people competent with information literacy through academic libraries that provide pedagogical support (Sharma, R. N., 2013). MOOCs make sense with digital libraries which can support learning by playing a significant part in blending the MOOC-specific platform with learning resources. Connectivist MOOC (cMOOCs) resources refer to those less institution-oriented resources (Liyanagunawardena, Williams & Adams, 2013). The example of Khan Academy, which provides resources freely to anyone is truly open in the sense of the word and the openness movement (Bujak et al., 2012, p. 16). These resources can be aggregated and remixed so that learners can tailor to their own needs (Parr, 2013). In the age of Linked Data, such resources can be further provided on a common ground with the Semantic Web (Health & Bizer, 2011), and therefore they can be shared even more widely across Asia and the world at large. Resource sharing is for all Asian countries, both the developing and the developed.

4.1.4 To provide a chance for courses discovery by other countries

The Georgia Institute of Technology once explored the option and potential of Massive Open Online Seminar (MOOSe) which would focus on more complex topics, just as an ordinary seminar would do. It aims to broaden the participant list, or make it massive (Bujak et al., 2012). In this way topic-related courses would be triggered for interested parties to explore.

Learners who grew up with the Internet, those of the ‘Net Generation’, feel comfortable with online learning. Moreover, they prefer a blended online learning environment (Arbaugh, 2000; Bujak et al., 2012; Chew, 2011), for example, to blend Blackboard (a virtual learning and course management system) with social media capabilities of Web 2.0 sites such as those of Facebook, Twitter, etc. (Chew, 2011; Power, 2008).
There is a lack of dedicated system for MOOCs. In the age of ICT, dedicated system means a formal footing for the development of MOOCs. For online learners, competence with non-MOOC systems, such as Blackboard’s (Chew, 2011), may not adequately help them address their needs with MOOCs which are connectivist and crowd-sourced.

Presently, some major American MOOC players like Stanford University, Harvard University, and MIT (via edX) are joining hands to develop software platforms to deliver MOOCs (Young, 2013). When the software system is available, others can make use of it since the system is open source. With the provision of MOOC-specific platforms, some features considered helpful in higher education, such as curation, second screen learning, near field communication (NFC), spatial operating environments, learner developed apps, and augmented reality (AR), may be implementable (diFilipo, 2011). Other related issues like time zone differences, or functions like self-paced, calendar-based learning schedule (asynchronous) may also be provided; the latter allows learners to start a course at any time and have flexibility in matching learning resources with their needs.

With commercial e-learning companies started to localizing content targeting Asia-based clients who use tablets and mobile phones (Liau, 2012), the capacity for expanding online learning is even greater. According to Sharma, R. N. (2013), China would have a leap of smart phones in use (500 million) by the end of 2013, and so would some other Asian countries, like India. Inclusion of mobile phone platform into MOOC system would benefit potential online learners and encourage enrollment.

4.1.5 To allow learners a better world view and less cultural misunderstanding, as a result from a popular global educational system

MOOCs can be looked at in various ways. Cultural differences of Asian online learners is reflected in issues like language, communication tool use, plagiarism, time zone differences, and multicultural content in relation to learning performances (Liu et al., 2010; Xu & Jaggars, 2013). For Wang (2006), Chinese students participating in online learning at American universities encounter socio-cultural factors like instructional style, school norms, language, and cultural values. For similar studies of online learning at tertiary settings outside Asia, Chew (2011) places an emphasis on Malaysian students, while Eun (2009) covers Korean students.
Mediated on the Internet, it is the very nature of MOOCs to be transnational and cross-cultural. Technology brings learners and instructors together, meaning a greater chance for people of different cultures to interact. It is a situation reflecting a diversified learning scenario, the same as traditional learning environments such as schools, if not even more diversified.

<table>
<thead>
<tr>
<th>dimensions</th>
<th>cultural differences</th>
<th>suggestions for course design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>exam-oriented vs. process-oriented; memorization vs. application</td>
<td>multiple assessment strategies; structured &amp; flexible assignment schedule</td>
</tr>
<tr>
<td>Instruction/Interaction</td>
<td>lecture vs. conversation; structured vs. less structured; deductive vs. inductive (case-based learning)</td>
<td>incorporate features that accommodate different cultural pedagogy</td>
</tr>
<tr>
<td>Asynchronous/Synchronous</td>
<td>lack of visual cues caused communication barriers in asynchronous communication; scheduling issue for cross-cultural collaboration in synchronous communication; time zone differences</td>
<td>balanced use of asynchronous and synchronous communication</td>
</tr>
<tr>
<td>Collaboration</td>
<td>collectivism &amp; masculinity vs. individualism &amp; femininity; culture differences visible, but did not negatively affect collaboration</td>
<td>appropriate cultural differences</td>
</tr>
<tr>
<td>Case learning</td>
<td>lack of global cases; lack of a relationship between U.S. case discussion &amp; analysis &amp; local issues of international students; lack of international experience in regard to the online instructors</td>
<td>balance the use of local and global cases; provide more context for culturally specific examples or cases</td>
</tr>
<tr>
<td>Academic conduct</td>
<td>discrepancies between U.S. &amp; other countries’ rules of academic conduct</td>
<td>more education and understanding, rather than pure punishment</td>
</tr>
<tr>
<td>Language</td>
<td>language barriers in reading, writing &amp; communication</td>
<td>more planning and preparation; more audio/visual aids</td>
</tr>
</tbody>
</table>

(adapted from Table 3, Liu et al., 2010)
For example, to avoid uncertainty, Chinese students and instructors were motivated to form online community, in which the collectivist-femininity attribute of Chinese culture is said to be reflected (Ku & Lohr, 2003). Similarly for Korean learners, they showed a tendency of social interaction, a sign of emphasizing relationships rather than work tasks (Bonk and Kim, 2007, quoted in Liu et al., 2010).

Pedagogical culture in the East is group-based, teacher-dominated, and centrally organized. Examination is an important way to assess performance, through which learner is honored and to gain social status (Zhang, 2007).

Another approach to understand cultural characteristics is the Power-distance dimension, which points to an unequal distribution of power and wealth in a society where people are inclined to accept it as a norm. Hofstede (1986) found that the Asian countries, China and India, both rank high in this Power-Distance relation. In later studies, Asian culture is considered to have a collectivism culture (Hofstede, 2001). In Hofstede & Hofstede (2005), East Asian countries are compared with the U.S.A. in respect of the Power-Distance Index, shown in the following table:

<table>
<thead>
<tr>
<th>Country</th>
<th>PDI values and Ranking among 74 Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>80 (Rank 12-14)</td>
</tr>
<tr>
<td>South Korea</td>
<td>60 (Rank 41-42)</td>
</tr>
<tr>
<td>Japan</td>
<td>54 (Rank 49-50)</td>
</tr>
<tr>
<td>USA</td>
<td>40 (Rank 57-59)</td>
</tr>
</tbody>
</table>

Nisbett et al. (2001) finds that East Asian learners (Chinese, including Taiwanese, Korean, and/or Japanese) are more inclined to pay attention to the whole, while Westerners are, on the contrary, more analytic and focus more on minutiae.

4.2 Challenges

4.2.1 Decrease in enrollment at Asian universities

Liyanagunawardena, Williams & Adams (2013) reports that MOOC participants are mainly from North America and Europe, with limited participation from Asia and Africa. While it does not necessarily point to a situation that Asian learners remain with Asian universities in studying, it is likely that, for the very nature of MOOCs (open and online), Asian learners would soon be readily attracted, while staying at home, to study MOOCs provided by name brands such as MIT, Stanford University, University of Oxford. As a result, there may be a probable loss of students for Asian universities, in the wake of challenges from name brand counterparts in the West.

4.2.2 Increasing burden of running universities

According to Houston (2013), university administrative spending per pupil nearly doubled which is representative of the national pattern (state university systems) in the United States.
Administrative cost has risen, presumably not only in the West, but in Asia as well, because we are living in the global village, affecting each other.

As for the learner, a recent study finds that some students perform well regardless of use of traditional print matter or digital resources (Sicking, 2013). It may suggest that digital resources is a trend not to be missed. The experience with MIT is that OCW materials need time and money to produce, as they are different from the formal and fee-based curricular materials (Caswell et al., 2008). There may be similar initial costs for MOOCs, but the good news is that once the materials are created, the reproduction cost are quite low. It means that the cost structure of online learning differs from the standard curriculum.

4.2.3 Need for teachers to acquire competence of digital instruction and technologies

In pedagogical consideration, teaching staff face a challenge of adapting to the MOOC ‘ecosystem’, as illustrated by the practice that university administration would rather replace faculties with outsourced online courses taught by famous academics, while allowing administration personnel to expand and thus the relative administrative cost rising (Houston, 2013). In this sense, it is a matter of professional jurisdiction for faculties.

As for the courses, a characteristic of MOOCs is the low completion rates -- most of them have less than 10% of students completing the course, so learner retention is important (Liyanagunawardena, Williams & Adams, 2013). Another characteristic of the MOOC model is the blended online learning environments, as found with both on-campus physical classroom/ curriculum and online virtual classroom/lectures (Arbaugh, 2000; Houston, 2013); it is blended in the sense of combining both traditional face-to-face and the new computer-mediated learning model.

In section 4.1.4, MOOSe (MOO Seminar) is mentioned, which would bring interested parties on a certain topic to discover subject-related courses. Such aspiration would need a committed teacher who acts as a social network facilitator, information aggregator, and instructor as well (Bujak et al., 2012). To cope with the relatively novel MOOCs scenario of online learning, instructors need on-the-job learning to explore and define exemplary teaching practices. Some attributes to be considered for professional development of online teaching include (Capper, 2002):

- access to teaching-learning resources (rural-urban, 24-7)
- uniform quality in content
- online teacher control & interactivity
- sustained, ongoing professional development
- visual images [ recorded footage ] of teaching

For online learners, they need to have initiative and positive attitudes during the learning process in order to learn successfully (Chew, 2011, p. 198). Feedback and enlightenment from the teachers have always been crucial. To do so, teachers have to acquaint themselves with the necessary and latest knowledge of online learning skills and related technologies.

Accreditation of online learning touches on different aspects, the course structure and design, course materials, faculty, to name a few. At present, most OCWs do not confer a degree. Academic performance in MOOCs should also include assessment before awarding a formal academic qualification. It is part of the responsibilities of teaching staff to help in assessing learner performance. A consideration would be which assessment system to adopt, those of
western countries or learner’s home country’s (such as Asian countries), which may be quite different (Liu et al., 2010).

4.2.4 Language proficiency and cultural background that impact learning

In North America, online learning is not limited to grown-ups; there have been studies on K-12 classes (senior secondary education) showing that online learning is a promising model for education, which can be said as a foothold paving way towards higher education in the same direction (Patrick & Powell, 2009).

Language, according to Liu et al. (2010), mediates a learner’s way of thinking and speaking. Language proficiency is an important cross-cultural factor especially for non-native speakers. On the other hand, the language barrier can be decreased with asynchronous online learning (Ku & Lohr, 2003).

Today, the English language is considered a global language. It is common for many around the world to use English and one’s mother tongue together. While bilinguals are believed to be better learners, non-English speakers may have a more difficult time using English to learn. This is probably a major concern for MOOCs providers.

Bilingualism is a growing trend in that people believe in using two languages is better than one. It seems logical for people who deal with different language systems capable of identifying acoustic properties of a language, hearing and speaking more sound vibrations; experiments have shown that such people can become better in their executive function, as the result of a better auditory system which can in turn enhance attention and working memory (Krizman et al., 2012).

While language is an important tool to express culture, the latter is an invisible force that drives human behaviors. For example, public universities are considered better than private institutes in some Asian countries, such as Malaysia, affecting the role of the private sector in the country’s education system (Wilkinson & Yussof, 2005). This creates the name brand effect. Culture as a factor has been mentioned in part in section 4.1.5 of this paper, and will be discussed more in the following section.

4.2.5 Possible loss of native culture

It is a concern for a country to conserve the native culture, and it has to do with adjusting between learning foreign or global cultures and retaining the domestic. Culture is dynamic in the sense that it is constantly changing and reshaping. It makes sense for cultural interaction, bearing in mind that a people’s culture is what makes that group unique, contributing to the fabric of humanity.

The role of cultural values in shaping learning behaviors and experience is reaffirmed in Wang’s (2006) study, for instance, Chinese students’ online learning is a process of cultural negotiation and construction (p. 193). On the other hand, learners may experience unnecessary anxiety if cultural factors are ignored (Dunn & Marinetti, 2006). Henderson (1996) tried to integrate cultural perspectives into the design of interactive multimedia. In understanding the MOOCs context, personnel working with MOOCs should be culturally sensitive.
For international students, the medium of instruction is not necessarily English language, at least not the only choice. People who want to learn Chinese culture would like to use Mandarin Chinese or together with their home languages. There are efforts made to develop Chinese language platforms to target Chinese learners (Sharma, Yojana, 2013). Interaction between instructor and learner is not just verbal. It has to be in language(s) accessible to both sides, and it concerns cultural matters. Different cultural backgrounds may cause misunderstandings, and miscommunications would be due to improper language use (Chew, 2011). In addition to oral communication, written text can help solve the differences, such as in watching videos, subtitles in different languages would be a good way to help learners get over the language gap, for example, several Coursera MOOCs already have Mandarin or Russian subtitles, or even Mandarin voice-overs for Chinese students (Sharma, Yojana, 2013).

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Joyce Chao-chen Chen is a professor of the Graduate Institute of Library and Information Studies, and also as the University Librarian of National Taiwan Normal University. She received Ph.D. degree in Department of Library and Information Science from National Taiwan University in 1994. Porf. Chen was the organizer of IASL 2007 Annual Conference in Taipei and the member of the Research Team, IASL Research SIG. She is the former president of Library Association of Taiwan and now is the President of Interlibrary Cooperation Association. She is also as the standing committee of Academic and Research Libraries Section of IFLA, 2011-2015. Prof. Chen’s research area includes digital libraries, information organization, e-publishing, reading studies.