

# Foreign Language Open Online Courses (FLOOC): A Pedagogical Design and Development Framework

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*Abstract:* - This study attempts to analyze and evaluate theories and design principles for design and development of Foreign Language Open Online Courses (FLOOC). The researchers mentioned about the research tools and steps which are related to the design and development process. The study proposes the implementation of connectivism theory proposed by Downes and Siemens (2005), theory of second language acquisition by Krashen (1984), theory of multimedia learning by Mayer (2001) and Gagne's 9 events of instruction by Gagne (1985). Various subjects matter experts in foreign language, syllabus design and instructional design (ID) have participated in the study. The outcome from this research will later be used by the researcher in the design and development processes.

*Key-Words:* - Design and development, theories and design principles, foreign language, open online courses, non-native students.

## 1 Introduction

The Internet has long been utilized to facilitate language teaching and learning process due to its capabilities, particularly its abilities to provide a one-stop source of information and opportunities for language learners to communicate among themselves either synchronously through chat and online messenger or asynchronously through bulletin board and email. There are many benefits mentioned by researchers from the use of the Internet in education. It serves the objectives of strengthening self-learning and attracting the students' attraction is an interesting way as students can reduce their learning time and increase their achievement [1]. Technology in general and the Internet in particular have invaded all areas of modern life, the economy and the media, politics, and communications, as the Internet today has become a way of prominent communications means [2].

The teaching of foreign language such as Arabic, Korean, Italian, Russian, Japanese, Mandarin and

some other foreign languages can no longer rely solely on traditional methods of learning, such as note taking and lecturing, which are still largely preferred among foreign language lecturers as mentioned by Nurkhamimi [3]. The researchers' early analysis and observation entail that the lack of use of instructional technologies in teaching and learning foreign language has hindered the memorization process of vocabularies taught in the classroom.

Hence, Universiti Sains Islam Malaysia (USIM) has been utilizing its role in foreign language teaching and learning for students at the university level. In order to achieve the philosophy of the university, viz; integration of *Naqli* (revealed) and *Aqli* (human) knowledge, USIM used a number of teaching aids and modern learning tools such as e-books and advanced web 2.0 tools like Facebook, YouTube and Moodle [4]. The university believes that these learning tools can provide lecturers and students with new experiences in the process of

foreign language teaching and learning. The primary goal of USIM is continuous improvement to reach students' proficiency for most of the skills and achieve educational goals. It is necessary to keep up with the technological development, live with it and use it in teaching and learning.

This study was conducted to explore the potential of open online courses in foreign language teaching and learning by designing a foreign language open online courses (FLOOC) prototype to be used not just in USIM, but to others higher learning institutions that offer the foreign language study. Initially, the multimedia functions as a tool in e-learning, integrated in the learning process to enable a more meaningful and enjoyable learning experience for the students. In ensuring the effectiveness in design and execution of this learning tool, its implementation should be handled by experienced educators and trainers, with extensive knowledge and understanding on non-native speakers' intrinsic and extrinsic motivations thus producing a successful edutainment environment [5].

Foreign language open online courses have recently burst onto the scene of Asian countries and may well prove to be a good platform to learn foreign languages. These courses were designed so that absolute beginners could quickly learn the meanings of the thousand most frequent foreign languages such as Arabic, Korean, Italian, Russian, Japanese, Mandarin and many other foreign languages. These open online courses acts as platforms, viz; have many capabilities provided that they are used in their fullness. For example, connectivity, interaction, feedback, conversation and networking are some of the possible actions in using these learning platforms. Furthermore, they provide a lot of opportunities to explore new methods of teaching and learning.

## 2 Problem Formulation

One of the new teaching elements in higher education is increasingly focused on a format that meets three basic requirements: openness, massiveness and ubiquitous [6]. These principles are emerging particularly in courses called Massive Open Online Courses (MOOCs). As a phenomenon, MOOCs have had a huge impact in the media, particularly when some of the most prestigious universities in the United States began offering courses freely delivered by distance learning systems with the aim of reaching a large audience of students

thanks to their open, participatory and free registration model.

MOOCs can be defined as online courses that aim to have a wide appeal to people who are interested in learning about a specific subject on a course guided by subject experts as learning facilitators [7]. These courses are by definition both open and online to allow the largest possible number of participants – with the option of free and open registration, an openly shared curriculum, and facilitated by professionals who are leaders in their subject fields [8].

Since 2011, a review of the literature reveals that few studies have been conducted to explore the growth in open online courses such as Massive Distributed Online Collaborative Courses (DOCC), Big Open Online Courses (BOOC), Synchronous Massive Online Courses (SMOC), Small Private Online Courses (SPOC) which have been so enormous that, according to the Economist magazine, “the ivory towers of academia have been shaken to their foundations” [9]. However, to the best of authors' knowledge, no report has been found so far using open online courses to cater the needs of foreign language learners in terms of pedagogy, technicality and orthography. Foreign language learners with a transparent orthography, such as Italian, Spanish, Turkish, Greek and German, face fewer difficulties than readers in languages with non-transparent orthography such as English [10]. Foreign language learners with a non-transparent orthography often depend on the lexical method, whereas this is unnecessary for readers in languages with transparent orthography [11]. On the other hand, in languages with both types of orthography, such as Arabic and Hebrew, readers would behave depending on the type of orthography encountered.

Since there is a gap in literature on this matter, this study would like to propose a Foreign Language Open Online Course (FLOOC) that will be useful to develop and support the foreign languages blended learning especially in non-native learners' context. In light of these prospects, this study will analyze and determine the appropriate design principles for FLOOC design and development. This would substantially benefit foreign language learners and could help them obtain literacy skills and attain their potential.

### 2.1 Research Question

This study will find out:

1. What are the suitable learning theories involved in FLOOC design and development?
2. What are the appropriate design principles used for FLOOC design and development?

## 2.2 Methodology

This study utilizes the qualitative data collection and analysis within design and development research methodology. The rationale for utilizing methods and approaches of design and development research [12], was to emphasis on both research and practice when producing a valid, practical and effective foreign language open online course based on the well-defined and theoretically sound design principles. Iverson for instance suggests the process of design and development of multimedia courseware as a combination of research and practice [13].

Data is collected using interviews with various subjects matter experts in foreign language teaching and learning, syllabus design, open and distance learning, computer assisted instruction and instructional design. These subject matter experts' opinions and suggestions are very important in order to sustain the validity of FLOOC learning contents among non-native learners.

Creswell describes an interview survey as a form on which the researcher records answers supplied by the participants in the study [14]. It also can be used to describe trends to help in identifying important beliefs, attitudes, opinion, behaviors and characteristics of a population. These interviews involved surveys whereby the researcher used a structured or semi-structured interview consisting of mostly close-ended questions with optional response for interviewees and also through qualitative surveys consisting of open-ended questions without options. Table 1 describes the demographic data of subject matter experts who contributed in this survey.

TABLE I. LIST OF EXPERTS

No	Field of Expertise	Academic Position
1	-Teaching Arabic as a Foreign Language -Syllabus design	Asst. Professor
2	- Open and Distance Learning - Instructional Technology and Technogogy	Professor
3	- Instructional design (ID)	Assoc.

	-Foreign Language and Information Technology -Computer Assisted Language Learning	Professor
4	- Instructional design (ID) -Computer Assisted Language Learning -Second Language Acquisition -Teachers' Training -Multimedia Design and Development	Assoc. Professor
5	-Teaching Arabic as a Foreign Language -Linguistics -Curriculum Development	Assoc. Professor

A survey consists of open-ended and close-ended question was utilized in this study to investigate the validity of theories and design principles for multimedia design and development in teaching and learning foreign language. The outcome from this research will later be used by the researchers in the design and development processes. The questions used in this survey are as stated in Table 2.

TABLE II. SURVEY'S QUESTIONS

No	Questions
1	Please describe your thought or opinion for designing an exemplary or suitable design and development theory for FLOOC.
2	What are the main factors in the design of appropriate teaching and learning theories in FLOOC?
3	How would you determine suitable e-activities in FLOOC?
4	Which approaches do you prefer FLOOC?
5	What are your opinions in the implementation of FLOOC in order to improve students' problem in foreign language vocabulary memorization?
6	Do you have any additional suggestion to make FLOOC more pedagogically articulated?

## 3 Problem Solution

The front end-analysis provides information that can direct the design and development of FLOOC. The summary of experts' detailed responses to the analysis survey will be used in the design and development phases. Table 3 presents the design and development theories as proposed by the experts:

TABLE III. DESIGN AND DEVELOPMENT THEORY

<b>Expert 1</b>	Use vocabularies which are related to foreign language learners' daily life.
<b>Expert 2</b>	21 <sup>st</sup> century foreign language open online courses need to adapt the concept of Connectivism as proposed by Downes and Siemens (2005). Therefore, learning community is first element to be created in FLOOC.
<b>Expert 3</b>	The designer should provide its own model and the contents must consist of: a) Education contents based on syllabus b) Instructional design (ID) model c) Devices or means to develop and deploy applications.
<b>Expert 4</b>	Nowadays more instructional designers implement second language acquisition theory proposed by Krashen (1984). Gagne's 9 events of instruction by Gagne (1985) is also relevant as a backbone for FLOOC.
<b>Expert 5</b>	Kindly consider the Multimedia learning theory proposed by Mayer (2001) and.

Table 4 shows the main factors in the design of appropriate teaching and learning theories in FLOOC:

TABLE IV. MAIN FACTORS

<b>Expert 1</b>	Educational materials must contain a good pedagogy and learning activities.
<b>Expert 2</b>	The contents must be accurate and up-to-date knowledge.
<b>Expert 3</b>	The contents must contains Higher Order Thinking skills.
<b>Expert 4</b>	At least one native speaker (subject matter expert) must be in the design and development team to cater the validation process.
<b>Expert 5</b>	Use all types of multimedia (words, images, sounds and video).

Table 5 describes the suitable learning activities in FLOOC:

TABLE V. E-ACTIVITIES

<b>Expert 1</b> <b>Expert 2</b> <b>Expert 3</b> <b>Expert 4</b> <b>Expert 5</b>	<ul style="list-style-type: none"> <li>- Based on multimedia used by the educators.</li> <li>- Based on creativity of lecturers</li> <li>- Based on amount of vocabularies taught.</li> <li>- Based on students' needs.</li> <li>- Should focus more on connectivity and learning community.</li> </ul>
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Table 6 demonstrates the preferable approaches in FLOOC:

TABLE VI. APPROACHES

<b>Expert 1</b> <b>Expert 2</b> <b>Expert 3</b> <b>Expert 4</b> <b>Expert 5</b>	<ul style="list-style-type: none"> <li>- Flipped classroom approach</li> <li>- Learner-centered approach</li> <li>- Group learning-centered approach</li> <li>- Personalized learning-centered approach</li> <li>- Guided learning approach</li> </ul>
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Table 7 presents experts' opinions in the implementation of FLOOC in order to improve foreign students' motivation and learning attainment:

TABLE VII. EXPERTS' OPINIONS

<b>Expert 1</b>	<ol style="list-style-type: none"> <li>1. Preparation of advanced educational tools</li> <li>2. Use language games to promote the conservation vocabulary</li> <li>3. Organize linguistic competitions</li> </ol>
<b>Expert 2</b>	Connectivism continues to play an important role in the development and emergence of new pedagogies, where control is shifting from the tutor to an increasingly more autonomous learner.
<b>Expert 3</b>	The use of multimedia has many purposes, including addressing the weakness of the students in the study of vocabulary and memories in new ways. Of course, through educational programs which include multimedia, students will show interaction with the computer which shows the features and capabilities of the students in the present era.
<b>Expert 4</b>	<ol style="list-style-type: none"> <li>1. To include a discussion forum or interactive forum in the multimedia program</li> <li>2. To include instructional design model from experts such as: Dick &amp; Carey and Alessi &amp; Trollip in the course.</li> <li>3. To include glossaries or important terminologies or difficult vocabularies in every topic of FLOOC.</li> </ol>
<b>Expert 5</b>	Train instructors on how to implement FLOOC through training and workshops.

Table 8 presents experts' additional suggestions related to FLOOC design and development.

TABLE VIII. EXPERTS' SUGGESTIONS

<b>Expert 1</b>	Don't rely on a single approach for foreign language vocabulary teaching
<b>Expert 2</b>	A key feature of a great foreign language open online course is that much learning can happen across peer networks that take place online. A lecturer will guide students to information and answer key questions. Students are also encouraged to seek out information on their own online and express what they find.
<b>Expert 3</b>	In my opinion, the programs which provide multimedia design process need creativity to ensure the effectiveness of the program to its users. Theories may not help program designers, but more in some stages of development.
<b>Expert 4</b>	To apply the theory of learning using multimedia proposed by Mayer (2001) on the basis of students needs
<b>Expert 5</b>	Provide extra storage in the courseware to help students store their materials such as writings, images, sound recording, video, and graphs as well as their profiles

#### 4 Conclusion

This study encompasses the theories and design principles for design and development of FLOOC. This kind of information is important to produce a foreign language open online course based on foreign language learners' needs. Moreover FLOOC can offer some potential solutions for learning obstacles as mentioned in the problem statement.

The theoretical contribution of this study can be concluded in the formulation of the design principles which are selected and adapted from reviews by the subject matter experts'. The subject matter experts propose the implementation of connectivism theory [15], theory of second language acquisition [16] and theory of multimedia learning [17]. The research framework using a modified ADDIE model of instructional design and research process strategies used and adapted in this study are also part and parcel of cyclic and iterative methods of design and development of future learning model that can be adapted by next research efforts.

The practical contribution of this study is the production of FLOOC which will be developed based on related educational theories, design and development research methods, learning and contextual analysis of needs. This study mainly adopts a method of qualitative

research exemplifying an in depth and breadth phenomenon and explanation on theories and characteristics of a valid, practical and effective foreign language learning as perceived by users. Thus the findings can be generalized and some of the design and development principles may be applied in a similar setting and to be emulated by other institutions as well based on their situational learning problems and issues.

However the different set of design principles may appear in the other settings because this study focuses only on foreign language learners at elementary level with a specific course outline of syllabus. This study puts forward a set of design and development principles for FLOOC specifically for non-native speakers in general.

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