The Role of Needs Analysis in Designing a Digital Syllabus for EFL Undergraduate Programs

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Abstract

The present study is entitled “The Role of Needs Analysis in Designing a Digital Syllabus for EFL Undergraduate Programs”. The main aim of this study is to explore the factors that should be considered in designing a digital syllabus for EFL undergraduate programs. Therefore, the study has set up two instruments to investigate the EFL undergraduate students’ views at Mosul University through a questionnaire. According to the outcomes and the interpretation that were made throughout this study, EFL teachers and students ratify the significance of the role of the needs analysis for any trend of new syllabus design. However, an inadequate consideration of the needs of EFL students has been taken. So, there are recommendations raised through this study for the universities around Iraq to guarantee more consideration for the needs of EFL student before designing and developing any new digital syllabuses. In addition, the capacity needed, and the required training for the adaptation of digital should be taken to enhance and to give more readiness to the universities to improve the teaching experience and skills for both teachers and students to allow them to use digital educational platforms more effectively. Finally, the study endorsed the usefulness and the effectiveness of the digital syllabuses that were implemented in Mosul and Duhok universities. The applications of Google Classroom as digital syllabuses were effectively invested for different aspects of the students learning process. On the other hand, this study reveals many challenges that EFL teachers and students are facing while using digital syllabuses. In one word, it can be said that digital syllabuses and digital platforms are effective, but it requires more
consideration of the EFL students’ capacity and skills. Also, the factors that affect the application of such syllabuses should be very carefully taken into the account.

**Keywords:** Needs analysis, digital syllabus, Information technology.

دور تحليل الاحتياجات في تصميم المناهج الرقمية لبرامج البكالوريوس في اللغة الإنجليزية كلغة أجنبية

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الملخص: تهدف هذه الدراسة إلى تحديد العوامل الرئيسية التي يجب أخذها بنظر الاعتبار عند إعداد المقرر الدراسي الرقمي لبرامج البكالوريوس في مجال تعليم اللغة الإنجليزية كلغة أجنبية. ولهذا فقد قامت الدراسة بتصميم أداة لأجل دراسة طلاب البكالوريوس في تخصص اللغة الإنجليزية كلغة أجنبية وبيان وجهات نظرهم في هذا المجال في جامعة الموصل وذلك من خلال الاستمارات الاستبانة. توصلت الدراسة إلى أن الطلبة في تخصص اللغة الإنجليزية كلغة أجنبية يرون أهمية أجراء تقييم الاحتياجات عند إعداد أي مقرر دراسي جديد. بيد أنه لم يتم أخذ كافي من احتياجات طلبة اللغة الإنجليزية كلغة أجنبية بنظر الاعتبار. لذا توصي هذه الدراسة بإعطاء أهمية أكبر باحتجاجات طلاب اللغة الإنجليزية كلغة أجنبية في عموم الجامعات العراقية قبل إعداد أي منهج رقمي جديد. كما يتوجب تطوير القدرات وتقديم التدريبات اللازمة لجعل مراكز الجامعات من الموارد الرئيسية في تحويل المقررات الدراسية إلى الصيغة الرقمية. كما أشارت الدراسة إلى أهمية وفعالية المقررات الدراسية الرقمية المعتمدة في جامعة الموصل. ومن جانب آخر، كشفت هذه الدراسة وجود العديد من التحديات التي تواجه طلاب ومدرسي اللغة الإنجليزية كلغة أجنبية عند استخدام هذه المقررات الدراسية الرقمية. لذا يمكننا القول بأن المقررات الدراسية الرقمية والمنصات الرقمية ينصح باستخدامها فعالية لبحثنا بخصوص الاهتمام بتطوير مهارات الطلبة اللغة الإنجليزية كلغة أجنبية. كما يتوجب الاهتمام بشكل أكبر بالعوامل التي تؤثر على هذه المقررات الدراسية الرقمية.

**الكلمات الدالة:** تحليل الاحتياجات، المناهج الرقمية، تكنولوجيا المعلومات.
1. Introduction

English language is the language taught in all universities in the Kurdistan region. English curricula taught in these universities are commonly designed without any consideration of the needs analysis. The goals, objectives, methodology, materials, techniques are not set out according to the analysis of the needs of the students (Aljorani, 2019). Incorporating a needs analysis approach is an important primary step before designing the syllabus (Salager-Meyer, 2002). Needs analysis plays a significant role in foreign language learning programs. It is important because, through needs analysis teachers, students, materials, teaching procedures make a pleasant relationship that improves students’ learning (Haque, 2014).

2. The Problem Statement

Syllabus design is significant in teaching and learning process. This significance gains a special status. Adding to this, the use of digital resources which is also very important to improve teaching and learning system. Digital syllabus has a significant impact on learning and teaching process, due to its ease of accessibility and the fact that it does not consider topography or tight financial interests. The main problem is the lack of the needs assessment and needs analysis before any attempts in designing a digital syllabus. The needs of the EFL students should be considered for the design of a digital syllabus because they have different needs such as their capacity, students’ special needs, and their IT skills. These consequently will reflect negatively on the outcomes and student’s performance. The preparation of the syllabus without data interpretation of the needs of the targeted students will leave gaps and ineffective implementation of a proposed syllabus.

3. The Aims

In this study, the researcher aims to find the factors that should be considered in designing a digital syllabus for EFL undergraduate programs. Accordingly, the study will seek to find out whether the needs of the EFL undergraduate students are being considered before designing a digital syllabus. Also, to what extend the EFL teachers’ views have been taken into the account. Further to that, the study will try to find out the problems that EFL students face with a digital syllabus implementation. To achieve these aims, the study will investigate the EFL undergraduate students’ views at Mosul university

4. The Procedures

The study will start with an introduction to shed the light on the importance of the needs analysis for designing a digital syllabus. The methodology used for this study is a questionnaire for the EFL students from the Mosul universities. It is used to collect the data that can be discussed and analysed to introduce outcomes and interpretation that will support the researcher to achieve the aims of this study.

5. The Scope of the Study

This study tries to retrieve the views of EFL students at Mosul university to check to what extent their needs have been considered before designing a digital syllabus. In addition, the study gathers the perspectives of the EFL teachers from Mosul and Duhok universities through focus group discussions. The tools collect data that show the views of EFL teachers and students about the role of the needs analysis for the design of digital syllabuses. In addition, the study seeks potential contribution of the EFL teachers and students towards digital syllabus development.
6. The Research Questions
   The researcher in this study tries to explore answers to the questions below:
   1. Are the needs of the EFL students considered before designing a new syllabus?
   2. Are the views of the EFL students important for the success of a new syllabus design?
   3. What factors should be considered in designing a digital syllabus?
   4. What are the problems that EFL students face with a digital syllabus?

7. Definition of the Needs Analysis
   Needs analysis has different definitions from different views. Some of the important definitions of needs analysis given by different linguists, can be summarized as below:
   Needs analysis is a procedure for collecting data regarding the students and classroom activities to design a syllabus. It is a technique used for collecting information that supports the design of a syllabus (Nunan, 1988).

8. Previous Related Studies of the Needs Analysis
   Needs Analysis plays a significant role in the history of language teaching. It is initiated by the Council of Europe Modern Language Project group before the 1970s. They design a structurally categorized syllabus through the analysis of the grammatical complexity of sentence structures, but this syllabus was criticized because it did not concern the needs of the students. Later, at the second stage of the communicative approach, the syllabus designers began to concentrate on the identification of the needs of the students (Richards, 1986). Based on a wide-ranging approach to Needs Analysis, Munby developed a Needs Analysis model which was widely accepted by the syllabus designers (R.Fatihi, 2003). In Munby’s model of the Needs Analysis, the language needs and the data related to students’ identity were collected from the participants (Nunan, 1988).

   Needs Analysis showed for the purpose of assessing students’ and teachers’ views towards an intended change should have the following framework (Dudley-Evans & John, 1988):
   1. Information about the students related to their determination of continuing a learning programme.
   2. Current situation analysis which can provide information about the efficiency of the main programme and show needs of the students.
   3. Information regarding the desired styles of learning or learning needs.
   The key concepts include the definitions of communication needs (Munby, 1978), and framework for analysing learning needs (Hutchinson & Waters, 1987). Design of instructional materials utilizing authentic materials designed to construct language input, language preparation, and a source of motivation will support learning in definite situations (Nunan, 1988). Currently, different frameworks for Needs Analysis have been developed to identify different types of needs related to language learning programs. Analysis is an important part of designing a syllabus. When a syllabus is designed, the syllabus designer needs to have sufficient information on the needs of the students, teachers, and teaching materials which can reduce gaps in the syllabus (Haque, 2014).
10. The Significance of Needs Analysis

Needs Analysis can contribute a comprehensive insight into the opinions, beliefs and views of the students and instructors and it is important in designing a language program development that is more accommodated to the needs of the students. It also supportive for the establishment of the ownership of the modification and innovation among the educators because it is a response to these requirements of instructors and students, which can determine the agreement or denial of any modification or innovation which consequently leads either to success or failure of this modification or innovation. Needs analysis determines and designates language needs by using analysis outputs of a linguistic use that describes the target situation needs within a discourse community. It is the first step of the language learning vision through a wider notion of the learning development. When the syllabus matter, resources, and teaching methodologies match students’ perception and literal needs, students’ inspiration and success are improved (Thiruvengadam, 2014).

11. Stakeholders of Needs Analysis

The stakeholders involved in needs analysis can be categorized into four main types: the audience, target group, the needs analysis, and the source group. Different needs analysis tools and techniques can be used to gather a wide variety of information and to analyse needs. These can be interviews, questionnaires, observations, tests, and language text and discourse analysis. While the process of needs analysis has been criticized in that its outcomes tend to be affected by the philosophy of analysis unrelatedly of the approach taken in conducting the analysis (Benesch, 1996), the results of needs analysis are still considered fundamental for several factors. (Nation & Macalister, 2010).

12. The Scope of Syllabus Design

Syllabus design has passed through different innovatory transformations. Each syllabus offers routes to another. As a result of the continuous transformations and innovations in modules of language teaching approaches, several types of syllabuses design have emerged, such as the notional-functional syllabus, structural syllabus, the lexical syllabus, the task-based syllabus, the communicative syllabus, the topic-based syllabus, etc. Each of these syllabuses has focusing on certain elements of language ingredients designed in specific quality and quantity to function the main grounds of the module it emphasizes (Sabbah, 2018).

13. Definitions of Syllabus

There are several definitions of the term ‘syllabus’ in language teaching and learning domain. A syllabus is a writing that defines what contents of a language course will be taught and the instruction in which they will be incorporated. The content of a syllabus generally reflects specific views about language teaching and learning. (Council, 2021)

Brumfit considers that one must set out from a predesigned syllabus. But such a syllabus is certainly interpreted and modernized by the teacher; similarly, the student creates his own syllabus.

Widdowson (1079) proposes that a syllabus should be structural and the methodology that can be communicative. There is no such thing as a communicative syllabus but astonishing statement for someone who has written an important book (Widdowson, 1979).
14. Syllabus and Curriculum

There are distinctive views on what it is that distinguishes syllabus design from curriculum development. There is also several differences about the description of the syllabus design. The narrow view proposes a clear difference between syllabus design and curriculum development. Syllabus design is seen as being concerned fundamentally with the selection and classifications of content, while curriculum is concerned with the selection of programs more broadly. Those who assume a broader view enquiry this exact separation, claiming that with the arrival of communicative language teaching the distinction, between content and tasks is hard to maintain (Nunan, 2004).

To summarize above, it can be said that curriculum contains the overall content as stipulated by an education board for a particular course across a specified period. Whereas the syllabus elucidates the summary of different topics covered or units that will be taught in a certain subject under that specific course.

15. Definitions and Associations of Digital Syllabus

The term Digital refers to electronic technology that produces, stocks, and processes data in form of two states: positive and non-positive. Positive is symbolized by number (1) and non-positive by number (0). The digital syllabus design is a sort of visual communication that offers information, a product or service through a digital interface. It is a graphic design made objectively to be used on computers. (Levanier, 2020) Therefore, data transmitted or saved with digital technology is conveyed as a chain of 0's and 1's. All these state digits are indicated to as a bit and a chain of bits that a computer can process as a group is a byte. (Rouse, 2021)

16. The Scope of the Digital Syllabus

The Characteristics and features of digital syllabus developing from looking at the internal and the deliberation of teaching and learning is another aspect of increasing to assign with educators. A few confusions can be noticed is that some educational institutions market classically lands in a sets of Organic educational institutions, where the digital objects can run roughly at the teaching and learning level. Both sets have been keen to know more about the improvements within digital content and programs. Others are very profound into a foreign world of instructional design crossed with encryption development, user interface, high design, and the mechanization of functions like assessments.

17. Research Design

Designing the research institutes a vital phase of the study prior to moving out any practical investigation. It is significant from the time when it produces precision and consistency between different phases of the research. In the interpretive research convention, such as the one embraced in this study, the research design is exceptionally important as it guides the research to achieve its objectives and aims. Hence and therefore, a suitable qualitative research study design is the one that has clearly been described and constructed including consistency between the research questions and research approaches (Mason, 2002).

18. Setting and Participants Selection

This section reviews the participants and the study setting. There are many approaches for selecting the participants. Therefore, the selection of sampling depends on how information will be used. In this study, sampling was carried out in a purposive manner. According to (Patton, 2002), purposive sampling is a method of non-random
sampling selecting people for a study based on non-random criteria. The researcher has selected the participants who have contrasted experiences and involvement with digital syllabus.

19. Data Collection Instrument

This section discusses the method that is used to collect data and views of the targeted population. The study aims to investigate the perceptions and beliefs and some of the challenges faced by EFL students, and EFL teachers with the digital syllabus. Therefore, the researcher has developed multiple tools that can effectively address these issues.

20. Questionnaire

The researcher has developed a questionnaire to include the items that help the study to gather relevant data which are important to contribute the aims of this study. The development of the questionnaire based on the literature review and the research questions.

The questionnaire comprises thirty items with five points Likert-type scales. The scales ranged from; Strongly Disagree (SD), Disagree (D), Neutral (N), Strongly Agree (SA), and Agree (A) (Likert, 1932). The questions are developed by the researcher depending on the literature review and the research questions. The other aspects that were considered for the questions formation included items that can retrieve answers to the research questions of the study. In addition, the items were made in a way to allow the participant to show challenges that EFL undergraduate students face with digital syllabuses.

The questionnaire is sent online through a link of Google form to EFL students at Mosul university. Students filled in the questionnaires through the Google form and submitted them directly.

21. The Questionnaire Validity and Reliability

Validity indicates the degree of a study precise reflection or evaluation of the concept that the researcher is trying to measure (Robson, 1993). The researcher achieves the face validity of the questionnaire by submitting it to several experts and requesting their views on the appropriateness of the questionnaire to contribute to the research aims. The experts’ review panel advised and assisted the researcher. The review revealed that most of the items were met the expectations.

To find out the reliability of the questionnaire results, the researcher randomly selected 67 responses. For finding the internal consistency of the results of the questionnaire Cronbach’s Alpha formula has been applied in Excel program and thus the value recorded (0.84).

The greater the reliability is the closer value to (1). The reliability is based on the value output out of the results. The questionnaire is reliable because the result showed a good similarity among the responses of the participants (George & Mallery, 2022). Table (1) shows that the questionnaire is reliable.

<table>
<thead>
<tr>
<th>Number of the items</th>
<th>Sum of items Variance</th>
<th>Variance of total items’ responses</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>28.6665</td>
<td>154.411590654015</td>
<td>0.84243113569982</td>
</tr>
</tbody>
</table>

Table. 1 Cronbach’s Alpha Reliability
22. Interpretation

It is necessary to incorporate information and data collected into the overall understanding. Individual responses that were retrieved by most of the respondents were directly related both to the research context and the central research questions. Interpreting the information requires investigators’ ideas and beliefs about the syllabus design.

23. Research Limitations

The study is limited in its inability to collect data about the process of digital syllabus development. Therefore, exploring students’ attitudes in this study could have helped in gaining a deeper understanding on whether students’ needs in process of digital syllabus development bring tangible benefits in students’ engagement and achievement or not.

24. Presentation and Discussions of the Questionnaire Results

The questionnaire targeted 1650 EFL students from the university of Mosul. There were 134 responses received from the total number of the students who received the link of the google form that was shared with them. The responses have been inserted into the results where each of the questions responses presented in an appropriate theme.

The results of the item “Any needs analysis must include the impact of the syllabus on students’ learning”, revealed that most of the students strongly agreed that the analysis of needs must include the impact of the syllabus on their learning. While the results of the item “I have been part of the needs assessment to determine the needs analysis for a new syllabus design.”, most of the students showed their agreement and their participation of needs assessment, while a good number of the students showed their neutral. As for the results of the item “Undergraduate students’ involvement is not important to contribute to the needs analysis process.”, majority of the students showed their disagreement on this statement of this item, which means they consider the importance of the involvement of the undergraduate students to contribute to the needs analysis process. Meanwhile, the results to the item “The rational of analysing students’ needs is to discover its role for the most suitable syllabus.”, revealed that majority of the students agree that the role of needs analysis is to determine the suitability of the syllabus. As for the results to the item “I advise that the needs of the students to be considered for syllabus development in all the universities in Iraq.”, showed that many of the students strongly encourage the universities in Iraq to consider the needs of the student for syllabus development.

So, it clearly noticeable that the majority of the EFL students endorse the importance of the role of the needs of the EFL student for syllabus development. Accordingly, the majority of the EFL students at Mosul university confirmed the non-consideration of their needs before designing or applying new syllabuses. Therefore, they advise the universities around Iraq to take into consideration the needs of the student for the development of the syllabuses. This result answers the first research question of the study which says, “Are the needs of the EFL students considered before designing a new syllabus?”. The result gives a negative statement for the consideration of the needs of EFL students for the design of the new syllabuses by the universities, syllabus designer, and other related stockholders. The results of the item “Considering the needs of the students is important for the design of a syllabus.”, revealed that most of the students have stated that the needs of the
students are very important, and it should be considered as a significant factor of the syllabus design. While the results of the item “The needs of the EFL undergraduate students should be considered before designing any new syllabus.”, revealed that most of the students demand that their needs should be considered before designing any new syllabus. Similarly, the results of the item, “Taking the needs of the EFL undergraduate students will add value to any new syllabus development.”, almost over all the students confirmed the value that the needs analysis and the consideration of the needs of EFL students. Also, the results of the item “EFL undergraduate students can contribute to developing the syllabus.”, many of the students said that their contribution for the syllabus development is possible and valuable.

These results answer the third research question of the study which says, “Are the views of the EFL students important for the success of a new syllabus design?”. The results state that attitudes EFL students for the value of the needs analysis for the syllabus design is very important.

The results of the item “The needs of EFL undergraduate students to use digital educational platforms should be considered.”, revealed that most of the students have said that the needs of EFL undergraduate students should be considered for the use of digital platforms. While the results of the item “The EFL undergraduate students know the concept of digital syllabus and what the term is referring to.”, revealed the many of EFL undergraduate students are aware of the concept of the digital syllabus and its references. Meantime, over all the students confirmed their satisfaction of the use of digital resources and materials which is stated in the item “I am satisfied in using digital resources and materials in my learning space.”. Similarly, the results to the item “The online or electronic availability of digital resources and materials makes it easier than getting them from libraries.”, showed agreement towards the easiness of obtaining the digital materials from online.

As for the suitability of the used digital syllabus in accordance with capacity of the student, “The digital syllabuses that we study match my technical capacity and skills.”, significant number of the students confirmed the suitability of these materials. More specifically, as the item “The applied digital syllabuses in Mosul University takes the capacity and skills of the students into consideration.”, the results showed that no major agreement noticed by the respondent, while many of them stayed neutral.

Regarding the item “The digital syllabuses enable me to be up to date with the educational development trends.”, the students feel that they can keep themselves updated by using digital syllabuses. Accordingly, the students showed their agreement for the item, “The digital syllabus is to be understood as a way that digital teaching materials used in the educational institutions are giving the students the opportunity to extend and enhance their cognitive skills.”, as the digital syllabus provides the EFL students opportunities to enhance their cognitive skills.

Similarly, as the items were interrelated and chronologically arrangement, the EFL students agreed on the item “EFL undergraduate students have positive attitudes towards new modalities and advancement of syllabus formation.”, and they said they feel comfortable with the advancement of the syllabus design. Many of respondent agreed on the item “EFL undergraduate students can take benefits from digital syllabuses.” and said that they are getting benefits from digital syllabus. On the other hand, as the item, “EFL students encounter barriers while using digital syllabuses.”, states the negative side of the use of digital syllabus, half of the respondent agreed that they are facing barriers, while the rest kept neutral. Consequently, over all the students agreed on the item, “The use of the digital syllabus should be constructed in a way as to be beneficial both in the present and in the future.”, which states that the syllabus
designer must have strategic plan that consider the present and the future for the development of the digital syllabuses. According to the above items, this item, “EFL students have taken initiative training on the use of new digital syllabus beforehand.”, inquired any capacity building for the EFL students, which a satisfied number of the respondent said that they have taken such a training. As a result, the item, “EFL undergraduate students in Mosul University have the capacity and experience to adapt digital educational platforms.”, which more specifically inquired the skills and experience of the EFL student in Mosul university to use the digital platforms, many of the students said they have such capacity to use digital educational platforms. On the other side, as the item, “The teaching experiences that are in close connection with the adaptation of technology are important to use digital resources.”, has sought the experience of the teaching to use digital educational platforms from the views of the students, most of the respondent confirmed such capacity to be existed.

In summary, it becomes clear that there is a great agreement on the usefulness and effectiveness of the digital syllabuses, including the availability of resources, the capacity needed, and the required training for the adaptation of digital syllabuses. On the other hand, many of the students said that they still face barriers and challenges to use digital syllabuses.

In summary, it can be said that digital syllabuses and digital platforms are effective, but it requires more consideration of the EFL students’ capacity and skills. Also, the factors that affect the implementation of such syllabuses should be very carefully to be taken into account.

The rest of the items of the questionnaire, “EFL undergraduate students have the opportunity to take benefit from Google Classroom platforms.”, “Google Classroom offers EFL undergraduate students the services that are necessary for their study.”, “EFL students confront challenges while using Google Classroom platforms.”, “EFL students in Mosul University have the technical skills to use Google Classroom.”, “The Google Classroom create significant difference in communication and interaction with the teachers.”, and “I feel comfortable towards the use of Google Classroom in my learning programs.”, considered the use of Google classroom as an example of digital syllabus. There was general agreement on the usefulness, effectiveness, and significant communication and interaction with the teachers. They also, feel comfortable to use Google Classroom for their learning.

In other word, the results of this study are mostly compatible with previously related studies. Thus, this study reveals new obstacles, specifically, the challenges that the EFL students face while using Google Classroom.

25. Conclusions

According to the outcomes and the interpretation that have been conducted throughout this study, EFL teachers and students ratify the significance of the role of the needs analysis for any trend of new syllabus design and syllabus development. Although, inadequate consideration of the needs of EFL students have been taken, there are recommendations raised for the universities around Iraq to guarantee more consideration for the needs of the student before designing and developing any new syllabuses.

In addition, the study endorsed the usefulness and the effectiveness of the digital syllabuses. Accordingly, the application of Google Classroom in Mosul university and Moodle in Duhok university and their interactive learning tools are effectively invested for different aspects of the EFL students learning process. However, the capacity
needed, and the required training for the adaptation of digital syllabuses should be improved in order to give more readiness to the universities to improve the teaching experience and skills for both teachers and students to allow them to use digital educational platforms more effectively.

In summary, it can be said that digital syllabuses and digital platforms are effective, but it requires more consideration for the EFL students’ capacity and skills. Also, the factors that affect the application of such syllabuses should be very carefully taken into the account.

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