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An insight on needs analysis towards the development of animated infographic module in Arabic grammar learning

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Abstract

Arabic grammar learning - which uses textbooks with lengthy details can be translated into creative and innovative forms through the application of technology advancement. Animated infographics is one of the many technological applications aimed to innovate learning information or content into simple, interesting, and easy to understand materials. This study gathered students' perspectives in relation to their needs on form - hence, developing a module for animated infographics in Arabic grammar learning. This research employed Design and Development Research (DDR) methodology and approaches. It involved need analysis data where the first phase used a questionnaire on the use of learning material, issues regarding learning approaches, tendencies to use innovation, and needs of using animated infographics. The questionnaires were distributed conveniently to 248 undergraduate students studying Bachelor of Arabic Language Studies, who took a course entitled 'Ibn Aqil' Syntatical Texts. Quantitative data was then analyzed using Statistical Package for Social Science (SPSS) application to retrieve percentage, mean and standard deviations. Findings revealed a high need to develop a module for animated infographics in the Arabic grammar learning based on students' opinions after taking the course. Innovative technological application on the syllabus of textbook learning, particularly the complex Arabic grammar was much needed in order to enable comprehension and provide focus.

Keywords: needs analysis; instructional module; animated infographics; Arabic grammar; technological application

1. Introduction

Every language has its own specific approach to master in order to avoid from committing fallacy in speech and writing. Similarly, Arabic language in Malaysian educational system is undertaken since primary school to tertiary level. Arabic grammar is taught according to the determined syllabus where

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the topics cover the scope of methodology which will be applied in the four language proficiency; listening, speaking, reading and writing. Jaffar and Sha'ari (2016) highlighted that Arabic grammar is the reference for legislative or regulation in Arabic language. Arabic grammar determines the functionality of proper Arabic language, whether it is effective or otherwise.

When we discuss teaching and learning of Arabic grammar in the educational system, the methodology used is very synonymous with conventional methods involving textbook and lecturer-centered learning. Debate on this matter is extensive and scattered due to the teaching practice, especially to cater to non-native speakers with the tendency to be stagnant and traditional. It slants more towards teacher-centered - leading to fewer discussions. Numerous techniques and methodologies were used to ensure students' interest at learning, besides providing ease at understanding. There are teachers who still use the traditional method in terms of lecturing based on the original book and memorizing without any use of visual aids to teaching nor advanced technology (Ismail, 2008). The teacher-centered learning which focuses on students being the recipient of information, needs to be transformed into a student-centred approach where students are encouraged to explore and discover information on their own (Ab. Halim et al., 2017). In line with today's advances in technology, every academician needs to change in the information delivery methodology to students. Presentation methods require creative, innovative and fun approaches such as the use of multimedia technologies containing audio-visuals with a combination of graphic, animation, color and sound elements that can have a profound and lasting effect on students' memory (Jamel, 2013; Yahaya et al., 2013). It is able to enhance the students' understanding and motivation thus furthering the teaching and learning process.

1.1. Problem statement

The use of module is important at ensuring certain activities of teaching, learning or practices are directed and possess specific guidelines to achieve the outlined objectives. This is not only the requirement needed by schools or learning institutions but also serves as a necessity in any organization that intends on administering a programme. Its use in language learning on the other hand - is quickly gaining interest and becoming a common practice by various learning institutions. The outcome has drawn students' interest and increased their motivation at continuing learning (Yahya et al., 2016). Besides diversifying teaching and learning strategies, it can also nurture a sense of independence among students who seek other alternatives of knowledge besides lectures (Dahaman, 2014).

Arabic language is often regarded as a boring and difficult language to understand, appreciate and master because the resources used in teaching and learning are limited (Che Hat, 2011).

This problem initiated an integration between conventional methodology and the latest technology which can eradicate students' perception towards learning Arabic grammar as difficult. According to Nik Yusoff (2018), teachers ought to be creative in employing teaching approaches to ensure students - especially those who are weak, are not left behind and need guidance at learning the knowledge of Arabic grammar. Teaching through multimedia surroundings, for example - is appropriate to be implemented to students with lower intelligence level (Jamel, 2013). The approach; which initially requires students to focus and think deeply of the lecture, is then simplified and presented in an interesting way. This will allow students to easily understand and remember what was taught in the class. Hence, mastering Arabic grammar ought to appear in an easier and learner-friendly form (Mat Jusuh et al., 2014).

The use of infographic application in learning Arabic grammar as an alternative method aimed at drawing students' interest to learn, besides allowing easier comprehension based on its advantage. The method becomes the latest phenomenon despite its long existence. The use of visual and infographic data serves as an important source of information delivery that has the ability to access, manipulate and

use complex statistical information that becomes vital in our daily life (Sweeper, 2016). Infographics has the capacity to present complex information through a holistic way with large images and allows designers to magnify their presentation of knowledge (Kibar & Akkoyunlu, 2015).

Therefore, in line with changes in the method of accessing information that influences the format of presenting information for the 21st-century generation, which is also known as the digital generation, there is a need for a source of visual information with simpler texts, which is preferable by many (Ghode, 2012).

1.2. Literature review

Information which is presented in graphic form is not entirely new. It began with murals and engravings on cave walls, which quickly expanded to visual forms to deliver information. Mankind use graphics or images to translate certain information for easier understanding.

Infographics has long existed since the end of the Paleolithic age. Initial paintings and engravements were done by our ancestors on cave walls in Indonesia, France and Spain for more than 40,000 years ago (Smiciklas, 2012). There are at least several theories suggesting painted images of animals and hunting scenes are not only decorations nor religious related but also serve as a medium of communication. This is the concept of infographics, which functions as a medium of information delivery.

Infographics can be divided into three types (Afify, 2018; Hassan, 2016), which are:

i. Static Infographic

Static Infographic is information with graphics, delivered in the form of static or immobile visual. It is also known as non-interactive infographic. Information are designed in the form of graphic for printing use such as posters, newspapers, advertisements, etc. Digital displays for websites and social media also uses infographics without any moving images.

ii. Animated Infographic

This categorization refers to static images which are mobilized in the form of animation for screen display such as television, YouTube, Vimeo, information kiosk, etc. Animated infographics usually contain similar content as static infographic and has the capacity to produce continuous displayed data. This animated information is produced by computer applications such as Adobe After Effects and online applications such as Go Animate and Powtoon.

iii. Interactive Infographic

This infographic is presented interactively through the use of two-way interactive element such as button and menus that can be clicked to display information. In general, it is the same information as static and animated information but with an advantage in the way of delivering information that allows users to choose and access information according to their choices. This feature allows the information to be provided in a comprehensive manner and meets additional information requirements. Infographics are widely used in various applications and medium of information dissemination. Its concept which incorporates text, images, and graphics facilitates understanding and interest for reading or viewing. These factors provide its unlimited use in certain fields, which in fact becomes a phenomenon in today's manner of presenting information. Education is also not exceptional since teaching and learning activities are always in demand and continuously look for techniques to facilitate understanding.

At present, the 21st century education is closely linked to the use of technology (Ali et al., 2018). The application of infographics in education is one of the ways to practise PAK21 (21st Century Learning) where visual information is used to enhance the retention of learning and knowledge processes. For example, visually presented data uses graphical illustrations to communicate in an effective way - linking ideas and facts (Cleveland, 1985). In this context, infographics is the most current and popular form of visual information that can support learning activities. It is designed to convey information to a specific target by turning complex and abstract concepts into intuitive knowledge (Smiciklas, 2012). Infographics is one of the most effective materials in teaching. Humans are visual beings where half of their brains functions visually. When images are displayed, they process these images 60,000 times faster than their capacity to process texts (Hamad, 2018).

Static infographics which is made animated by text movement and visual graphics, along with the inclusion of audio elements makes this kind of infographic more appealing for information retrieval. Animated infographics has the same functions as other animations yet not all animations include information as those of infographics. An information presented in infographics provides a clear picture of a piece of information. According to Lankow et al. (2012), animated infographics is capable of capturing the audience's emotion through the use of music audio or voice as the background to the animated movement of the information. In return, viewers have the opportunity to communicate the message they want to convey effectively.

Animated infographics that incorporates graphics and moving words are becoming increasingly popular as they attract viewers to see such combination rather than just seeing words (Rahim, 2017). In addition, this medium, as according to Soyluçiçek (2015), also delivers more information with its continuous image movement rather than a static image. Infographics is also one of the most useful techniques for communicating information to viewers (Rahim, 2018). Animation is able to convey more meaning which allows complex concepts to be presented in a very simple visual (Lievemaa, 2017).

Unlike static images or texts, animation also has an advantage that attracts audience's attention. Motion pictures and texts are capable of leaving a long-lasting impression to their minds despite its least appealing content (Vilkko-Riihelä, 1999). According to Lievemaa (2017), movement is a powerful visual element. In the process of Teaching and Learning, animation offers students more than they need when learning complex cognitive content or scientific processes (Peters, 2014).

According to Hassan (2016), animation gives a brief overview of visual presentation. This is an important component of graphic-based education. This visual supports learning activities, and if a concept is best presented in a moving form, then digital platforms should take advantage of this. Animation can also explain complex things in the simplest way. Viewers may not be able to imagine the visuals described in the material based on textual form but infographics can help to understand them while animation makes understanding clearer and deeper. In addition, very complex infographics become easier to understand if the information is moved in the form of animations that have timelines for its storytelling movement.

Based on an observation over the advantages of animated infographics in presenting complex information which is interesting and concise, it has led to this study to identify students' need for the application of animated infographic in Arabic grammar learning. As mentioned by Abdul Hamid et al. (2020), this phase is carried out to identify needs in developing an infographic module which is related to Arabic grammar. This is the initial phase of gathering information on the importance of developing an animated infographic module for Arabic grammar learning.

1.3. Needs Analysis

Needs analysis is a process that involves gathering information or data on specific needs of a group of customers in industry or education. In the field of research, student learning needs is the main focus of needs analysis. This is the first phase in the DDR research approach. This phase is one of the important phases because this phase proposed research questions which will be identified and used to develop the module (Jamil et al., 2014).

The needs analysis phase involves the phase of identifying and evaluating the needs to be studied and then deciding expectations. The process of identifying and analyzing needs is also known as the process of identifying existing problems within the target population (McKillip, 1987). This process also involves identifying the best method to solve an issue in the study.

According to McKillip (1987), the needs analysis phase can be based on several models:

i. Discrepancy Model: This model is a model used by researchers mainly in education. This model emphasizes several expectations, namely the process of setting goals and setting what should be done. Secondly, the process of performance measurement that involves identifying what should be done. Thirdly, it is the process of identifying discrepancy identification of what ought to be and what the real problem is

ii. Marketing Model: This model emphasizes the process of analyzing the needs and feedback used by an institution or organization to evaluate what customers need. In the process of analyzing the requirements in this model, it will involve three important things:
   - The process of selecting a target population that involves a target with a high probability of using a provided service and thus making the necessary changes to the customer or user.
   - Choice of Competition position: This process involves the analysis of competencies and challenges of other agencies affecting the organization.
   - Development of an effective marketing mix: this phase involves the process of choosing the accuracy and quality of services that can have the greatest impact on the expected user population.

iii. Model Decision Making. (Decision making model): This model is adapted from Multi-attribute Utility Analysis (MAUA). This model has three levels:
   - Problem Modeling: at this stage, the identifying phase needs to be done. Once the problem is identified, an action must be formulated to resolve it.
   - Quantifications: This phase involves the process of measuring and estimating the requirements that need to be addressed by policy makers and the requirements of a particular matter.
   - Synthesis: This phase involves the preparation of an index of requirements that must be met by the organization's coordinator.

However, based on these three models, the researcher has taken the approach of using Discrepancy Model as a support model in the phase of needs analysis.

Therefore, this study was conducted to identify the need to build an animated infographic module in Arabic grammar learning at UniSZA.

1.4. Research objectives

To obtain data that can be used to produce modules that meet students' needs, the objectives of the study for the phase of needs analysis are as follows:

i. To identify the need for the use of animated infographic modules in learning Arabic grammar based on students' views.

Based on these objectives, this study was also conducted to find answers to the following questions:

i. What are the needs to practise animated infographic modules in learning Arabic grammar based on students' views?

2. Method

The details of employed research methodology in this study are presented as below:

2.1. Need analysis:

The needs analysis for this study was the first phase in the module development study based on the Design and Development (DDR) approach (Richey & Klein, 2007) before the administration of the module design phase. This study used questionnaires as the research instrument in the phase of need analysis to observe the need to develop an animated infographic module by looking at the students' perspectives. This study focused on the course of *'Ibn 'Aqil'* Syntactical Text Studies, which is a compulsory course for ISM Arabic Studies students, UniSZA. This course is offered in the third semester of the program of study.

2.2. Sampling procedure:

This study focused on Ibn 'Aqil Syntax Text Study Course, which is a compulsory course for undergraduate students studying Arabic language at Universiti Sultan Zainal Abidin (UniSZA). This course is offered in the third semester of the study program.

The sampling in this study was in the form of convenience sampling. This method was consistent with the study conducted on the basis of readiness and accessibility in obtaining feedback from the participants. Respondents were made up of a total of 248 students who had taken '*Ibn 'Aqil*' Syntactical Text Studies at UniSZA. The number represented all students from various cohorts of Bachelor of Arabic Studies where the data was collected to get their perspectives on the need to develop this module.

The respondents involved in this analysis phase are as shown in the table below:

Table 1. Respondents for the Needs Analysis Phase

Respondents	No.
1st batch of Bachelor of Arabic Studies	20 students
2nd batch of Bachelor of Arabic Studies	70 students
3rd batch of Bachelor of Arabic Studies	100 students
4th batch of Bachelor of Arabic Studies	30 students
5th batch of Bachelor of Arabic Studies	28 students
Total	**248 students**

2.3. Research instrument:

The instrument used in the first phase of this study was a questionnaire. This questionnaire was adapted from the study by Ishak et. al (2016) and Norasyikin (2017). The questionnaire on need analysis was distributed to obtain feedback and students' perspectives on the need to develop an infographic module for the study of Arabic grammar at UniSZA. The questionnaire used was structured and modified based on the needs analysis instrument. There were five areas of focus in the questionnaire, namely the demographics of the respondents, the use of learning materials, issues of learning approach, the tendency to use innovation, and the needs of animated infographic.

2.4. Data analysis and interpretation:

Data analysis for the phase of need analysis used Statistical Package for Social Science (SPSS) software. The analysis performed was descriptive in terms of percentage, mean and standard deviation. Descriptive analysis results were used to determine the level of need for animated infographic modules in learning Arabic grammar according to students' perceptions. The mean scores and standard deviations were analyzed to obtain the students' consent level. The mean interpretation scales were obtained from Nunnally and Bernstein, (1994) as shown in Table 2:

Table 2. Mean interpretation value

Mean score	Interpretations
1.00 – 2.00	Low
2.01 – 3.00	Average
3.01 – 4.00	High average
4.01 – 5.00	High

Source: Nunnally and Bernstein (1994)

3. Results

The results and findings of this study are presented as below:

3.1. Use of Learning Materials

This section is an analysis of items on respondents' feedback regarding the use of learning materials. Table 3 shows the score of mean and derivative standards for each item in the aspect.

Table 3. Use of Learning materials

	B: The use of learning materials	Mean	SD	Interpretations
B1	I used the main reference book	3.99	.877	High average
B2	I used the additional reference book	3.51	.939	High average
B3	I used materials from the library	3.32	1.010	High average
B4	I used materials from the internet	4.40	.647	High
B5	I used simple notes that I personally compiled myself	3.97	.933	High average
B6	I used computer software to learn	3.58	.982	High average
B7	I used simple graphic notes	3.56	1.074	High average

B8	I used the notes shared by the lecturer	4.48	.629	High
	Average	**3.851**	**.532**	**High average**

Based on Table 3 above, the interpretation of the data showed that the aspect of learning material used among the students was at a very high level, with an overall mean value of 3.851 and a standard deviation of .532. This showed that students used learning materials that supported their learning at a moderate level. The use of learning materials with the highest mean scores was the use of notes shared by the lecturers (M = 4.48, SP = .629) followed by the use of internet materials (M = 4.40, SP = .647).

There were some items that showed a high level of moderation, namely, the use of the main reference book with values (M = 3.99, SP = .877), followed by the use of short, personal notes with values (M = 3.97, SP = .933). Subsequent use of computer software for learning recorded values (M = 3.58, SP = .982), followed by the use of graphical note summaries with values (M = 3.56, SP = 1.074). Additional reference books recorded values (M = 3.51, SP = .939) and use of library materials recorded values (M = 3.32, SP = 1.010). All items recorded mean values at only high and medium high.

3.2. Issues on Learning Approaches

This section analyzed items to retrieve respondents' feedback on issues regarding learning approaches. Table 4 showed the score for mean and standard deviations for each related items.

Table 4. Issues on Learning Approaches

	C: Issues on Learning approaches	**Mean**	**SD**	**Interpretations**
C1	Traditional teaching (total explanation by lecturer) was not sufficient to understand the course content	3.48	1.120	High average
C2	Difficulty to reach lecturer and classmates outside classroom	2.96	1.122	Average
C3	Limited time to understand current topic in classroom	3.79	.988	High average
C4	Multiple topic syllabus	3.90	.945	High average
C5	Complex information and teaching notes	3.88	.823	High average
C6	Limited electronic materials in the internet	3.30	1.127	High average
C7	High cost for additional reference materials	3.29	1.127	High average
C8	Incomplete teaching aid	3.14	1.158	High average
	Average	**3.851**	**.669**	**High average**

Table 4 showed the interpretation of data on the issues of students' learning approach. The issues of overall approach to learning were at a moderate level with a mean score of 3.851 and a standard deviation of .669. All items had a mean average score at medium to high level, except for one item at the moderate level, the "difficulty in lecturing with lecturers and friends outside college" with a mean value of 2.96 and a standard deviation of 1.122. The item with the highest mean score was the "multiple topic syllabus", which was 3.90 with a standard deviation of .945. This was followed by the "complex

information and teaching notes" item with a mean score of 3.88 and a standard deviation of .823. Other items in the medium to high level were "limited time to explore topics in college" with values (M = 3.79, SP = .988), "traditional teaching (teacher's full explanation) inadequate to understand course content "With values (M = 3.48, 1,120)," lack of electronics on the internet "with values (M = 3.30, SP = 1,127)," high cost of additional reference materials "with value (M = 3.29, SP = 1.127) , "Incomplete teaching aids" with values (M = 3.14, SP = 1.158).

3.3. Tendencies to Use Innovation

This section analyzed items to retrieve feedbacks on the tendencies to use innovation in the course learnt. Table 5 showed scores for mean and standard deviations for each item in the aspect.

Table 5. Tendencies to use Innovation

	D: Tendencies to use Innovation	**Mean**	**SD**	**Interpretations**
D1	I like learning that applies technology	4.29	.746	High
D2	I like learning materials that are interactive	4.40	.629	High
D3	I like pictorial notes in the course learning	4.48	.720	High
D4	I like colourful notes in the course learning	4.47	.696	High
D5	I like reading information with interesting graphics	4.51	.679	High
D6	I like information with interesting fonts	4.54	.641	High
D7	I like information presented with moving animation	4.29	.828	High
D8	I like information included with audio explanation	4.44	.750	High
	Average	**4.428**	**.554**	**High**

Based on Table 5 above, the interpretation of data showed the students' tendency to use innovation in learning courses are at a high level with an overall mean score of 4.428 and a standard deviation of .554. This showed that students tend to use innovation in learning at a high level. All items recorded high mean scores. Items with the highest mean values were "information with interesting text" with values (M = 4.54, SP = .641) followed by items with "interesting graph information" with values (M = 4.54, SP = .641). Next items were "pictorial notes in course learning" with values (M = 4.48, SP = .720), "colored notes in course learning" with values (M = 4.47, SP = .696), "like information included with audio explanation" with values (M = 4.44, SP = .750), "interactive learning materials" with values (M = 4.40, SP = .629), "information presented in animation (moving)" with values (M = 4.29, SP = .828) and "learning that applies technology" with values (M = 4.29, SP = .746).

3.4. The Need to Use Infographics

This section analyzes items to retrieve respondents' feedback on the need to use animated infographics. Table 6 shows the scores for mean and standard deviation for each related items.

Table 6. Need to develop the use of Animated Infographics

	E: Need to use Animated Infographics	**Mean**	**SD**	**Interpretation**
E1	I believe animated infographics enables easy comprehension on specific information	4.57	.638	High
E2	I believe animated infographics enables the delivery of concise information	4.56	.601	High
E3	I believe animated infographics increases creative thinking	4.58	.625	High
E4	I believe animated infographics reinforces understanding in learning	4.60	.537	High
E5	I believe animated infographics helps students to remember concepts easily	4.62	.526	High
E6	I believe animated infographics add focus to learning	4.56	.608	High
E7	I believe animated infographics makes learning faster	4.58	.563	High
E8	I believe animated infographics motivates students to study harder	4.41	.720	High
E9	I believe animated infographics makes learning more enjoyable	4.67	.511	High
E10	I believe learning using animated infographics is more effective	4.51	.655	High
	Average	**4.567**	**.500**	**High**

Based on Table 6 above, data interpretation showed that students' perceptions on the need for animated infographics in learning were at a high level with an overall mean score of 4.567 and a standard deviation of .500. This result showed that students believed animated infographics should be used as learning materials at a high level. All items recorded high mean scores. The items with the highest mean scores were “animated infographics making learning more enjoyable” with values (M = 4.67, SP = .511) followed by “infographic animated items helping students remember concepts easily” with values (M = 4.62, SP = .526). Next items were “animated infographics reinforces understanding in learning” with values (M = 4.60, SP = .537), “animated infographics can enhance thinking creativity” with values (M = 4.58, SP = .625), “animated infographics make learning faster” with values (M = 4.58, SP = .563),“ animated infographics make information more understandable ”with values (M = 4.57, SP = .638), “animated infographics add focus to learning” with values (M = 4.56, SP = .608), “animated infographics make information simpler” with values (M = 4.56, SP = .601), “learning through animated infographics is more effective” with values (M = 4.51, SP = .655), “animated infographics motivate students to study harder” with values (M = 4.41, SP = .720).

4. Discussions

i) Frequency of using learning materials

As a result of this descriptive analysis, the data indicated that students' frequency of using learning materials was at a moderate level. The most common use of learning materials by students was notes shared by lecturers. Students usually rely on notes prepared specifically by the lecturers as they covered topics that have been summarized. The use of internet also recorded a high mean score. Students used internet materials more often because they were easier to access and more focused. According to a study done by Mohammad Najib and Aiman (2016), online learning support materials could help students understand better and accustomed to learning technology as the internet was accessible. Both of these items have high mean scores, and this provided a basis for the need to develop a learning module that helps students and the faculty to access simple and easy information.

ii) Affected factors to module design

Besides that, the issues that arose in the learning approach also became a factor in developing this module. The findings showed that most students agreed that a wide range of topics as well as complex teaching information and notes made it difficult for them to have a focused and deep understanding on a particular subject. Multiple syllables - when combined with complex presentations would make students feel bored and become unwilling to learn. Special features of infographics that summarized complex information were also combined with interesting texts and colour to help solve the problem. According to Dur (2014), the purpose of generating information through graphs was to convey content with overwhelming and complex data visually and thus facilitate understanding of the information. Issues involving limited teaching time, traditional teaching, lack of electronic resources on the internet, high costs of additional referrals, and incomplete resources were initiating points for the production of an innovative, simple, accessible, and attractive learning supportive materials.

iii) Innovation in content and syllabus content

As a result of the analysis on the tendency to use innovation, the data showed that the students were interested in using innovation in content and syllabus content. For most textbooks, the content and manner of presentation were less appealing, often tied to longer sentences without focusing on important content. The findings suggested that students were more interested in information with text, graphics, pictorial notes, coloured notes as well as additional features such as interactive audio explanations, animation and technology application. These features were available in animated infographics. According to Lankow et al. (2012), animated infographics were able to emotionally capture the audience through music audio or voice as the background to the animated movement of the information. Viewers have the opportunity to communicate the message they want to convey effectively.

iv) Animated infographics in learning Arabic grammar

The results of the need analysis for animated infographics in learning Arabic grammar showed that students believed that the application of animated infographics in developing Arabic grammar modules was a necessity. They believed that animated infographics made learning more interesting and enjoyable. This is in line with a study by Rahim (2017) which stated that a combination of graphs and moving words could attract viewers to enjoy watching than just words. Students also believed that animated infographics could help students remember concepts easily. According to Lievemaa (2017), animation was able to convey meaning better that made it possible to present complex concepts in very simple visuals. In addition, students also believed that animated infographics could reinforce their understanding in learning. The use of infographics could help to understand text while animations

provided greater clarity and depth (Hassan, 2016). They also believed that animated infographics could enhance creative thinking, make learning faster, present information easier to understand, add focus to learning, concise, focused, and made it more effective for motivating students to study harder.

Based on the findings and discussion above, a module will be developed based on animated infographic features that emphasize simple, concise, interesting and fast concepts. This module starts with storyboard content of a specific topic in static infographic, then applied in animated or moving form, along with explanatory audio.

5. Conclusion

In conclusion, the need for developing an animated infographic module in Arabic language grammar learning is justified based on the results of the analysis of needs from the students' point of view. The developed module will incorporate topics in the syllabus for the course entitled Ibn Aqil Syntactical Text Analysis Modul and convert them into animated infographics. Each syllable text is simplified and focused on important issues so that the intended information is not missed. Module construction emphasizes objectives, content, elements and components of infographics, learning and assessment activities. This module is presented in the form of a video and uploaded to a special YouTube channel for easy access to students.

6. Ethics Committee Approval

The author(s) confirm(s) that the study does not need ethics committee approval according to the research integrity rules in their country (Date of Confirmation: August 18, 2020).

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Arapça dilbilgisi öğreniminde animasyonlu infografik modülünün geliştirilmesine yönelik ihtiyaç analizi hakkında bir fikir

Öz

Uzun ayrıntılara sahip ders kitaplarını kullanan Arapça dilbilgisi öğrenimi, teknolojideki ilerlemenin uygulanmasıyla yaratıcı ve yenilikçi biçimlere çevrilebilir. Animasyonlu infografikler, öğrenim bilgilerini veya içeriğini basit, ilginç ve anlaşılması kolay materyallere dönüştürmeyi amaçlayan birçok teknolojik uygulamadan biridir. Bu çalışma, öğrencilerin form ihtiyaçları ile ilgili bakış açılarını bir araya getirdi - dolayısıyla Arapça dilbilgisi öğreniminde animasyonlu infografikler için bir modül geliştirdi. Bu araştırmada Tasarım ve Geliştirme Araştırması metodolojisi ve yaklaşımları kullanılmıştır. İlk aşamada öğrenme materyallerinin kullanımı, öğrenme yaklaşımları ile ilgili sorunlar, yenilik kullanma eğilimleri ve animasyonlu infografik kullanma ihtiyaçları hakkında bir anket kullanılmıştır. Anketler, Arapça Dili Çalışmaları Lisansı okuyan ve "İbn Aqil" Sözdizimsel Metinleri başlıklı bir ders alan 248 lisans öğrencisine uygun bir şekilde dağıtıldı. Daha sonra nicel veriler, yüzde, ortalama ve standart sapmaları elde etmek için SPSS uygulaması kullanılarak analiz edildi. Bulgular, dersi aldıktan sonra öğrencilerin görüşlerine dayalı olarak Arapça dilbilgisi öğreniminde animasyonlu infografikler için bir modül geliştirme ihtiyacının yüksek olduğunu ortaya koydu. Ders kitabı öğreniminin müfredatında yenilikçi teknolojik uygulama, özellikle karmaşık Arapça dilbilgisi, anlama ve odaklanma sağlamak için çok gerekliydi.

Anahtar sözcükler: ihtiyaç analizi; öğretim modülü; animasyonlu infografikler; Arapça gramer; teknolojik uygulama

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