



Designing a typical model for producing a static and animated infographic for higher students studies

Dr. Amany El Mor

Curriculum & Teaching Methods, Tanta University,

Faculty of Education, Egypt

E-mail:- amanyna7@gmail.com

Abstract

The present study aimed at designing a typical model for producing a static and animated infographic. In order to test the validity of this model, the study was applied on 14 male and female of higher students at faculty of education, Tanta University of the year 2019/2020. A list of skills concerning designing and producing the static and animated educational infographic besides making a card for evaluating the infographic model have been prepared. The results showed that the quality of the products and models students made according to the steps of the prepared model. That showed the importance of using this typical model when producing the static and animated educational infographic

Keywords: - Infographic, static infographic, Animated infographic, producing and designing skills.

Introduction

Infographic method proves to be effective and attractive in the field of media and marketing as well as education. It is considered one of the most beneficial tools a teacher can use inside or outside classrooms in different ways as follows (1) , (2):

1. Delivering complex information easily and simply.
2. It is useful for those learners who depend on eye Vision.
3. Helping the learners to form an overview about introduced information to be aware of the knowledge.
4. Linking the different kinds of knowledge.
5. Helping teachers and students to focus on understanding and analyzing information not reciting or memorizing it.
6. The cost of the making an infographic is more reasonable and affordable than other methods.
7. It provides excitement and fun inside the educational process .

Educational infographic is considered one of the newest instructional technology tools which depends on web. Meanwhile, we have heard before about clichés such as the photo talks, the photo doesn't tell lies, the photo is better than thousands of words ;that shows the importance and value of visual communication(3). Study (4) shows that infographic is a tool for summarizing a great amount of information and changing it into a series of photos. It must be stated; however, that infographic is not only a set of paintings but it's also a tool for changing the complex information into simple one. Consequently, infographic is used for reinforcing and enhancing the perception of information as well as helping learners to think and understand well. In short, good designing clears trends and defining relationships between the great amounts of information in little space and it doesn't leave any of the important facts without illustration(5).

Study(6) depends on several factors in forming trends towards using infographic in the educational process and how effective it is for learners as follows:

1. Providing a kind of positive encouragement and motivation for using infographic at the side of the learners.
2. Focusing on the great expectations of making use of infographic in teaching.
3. Emphasizing the use of different types of visual learning for acquiring teamwork skills.
4. Learners must show being biased or unbiased towards the information which is shown via infographic.
5. Making communication and teamwork with other individuals to benefit from the educational and scientific material.
6. Developing participation of learners by using infographic as a way of distance communication.

Study (7) shows that students consider infographic a useful tool in learning for many reasons: it makes memorizing and understanding more easier, supports imagination, develops creative thinking and helping in organizing knowledge. In the same aspect, study (8) recommends using infographic as it simplifies and facilitates the educational content in all subjects besides its ability to change the complex lessons into simpler ones via using photos and paintings. It must be added that, there are different kinds of infographic such as static infographic, Animated infographic, interactive infographic and mixed infographic. The present study focuses greatly on Dynamic and static infographic as it is a new and modern technological tool used for developing the educational process.

Study (9) defines the static infographic as static designs revolving about a certain topic presented in different pictures and paintings which are easy to be understood. Meanwhile, the Animated infographic expresses a number of illustrations, information and designs which are adaptable to be moved in a whole shape. That kind of Dynamic infographic requires a kind of creativity and meticulous movements which attract the attention of the learners. The Dynamic infographic is considered one of the most frequently used types of presenting information nowadays. In study (10) and (11), the two researchers notice that information is important to embody the design which is considered the most important item in producing the educational infographic. Whereas we deal with not only design but also with information; consequently, data and information are very important for producing the final shape of infographic. The final step of producing infographic is presenting information accurately and punctually.

Methodology:

Having referred to the previous literatures in this aspect ‘the researcher realized the importance of the necessity of designing and producing the Static and Animated infographic model which has been applied on higher studies students.

First: procedures of designing the suggested model

Referring to the previous literatures and studies in this aspect of the infographic, the researcher studied Mohammed shaloot's model(2016) and noticed that it's not suitable for designing the Animated and static model of infographic because shallot's model is suitable for the interactive infographic only as each kind of infographic has its nature and distinguished properties. Also, the researcher noticed that shaloot's model's steps are not suitable from the educational aspect. Consequently, the researcher designed Animated and static model of infographic including 3 basic steps: Prepration, Editing and Producing and Using and Publishing. Each step has it's own sub-steps which are different in their properties.

The static infographic



Figure (1) Amany Nabeeh El Mor's model of designing the static infographic

The model consists of three basic steps: preparation, Editing and producing then Using and Publishing. Each step is divided into sub-groups as follows:

1. Preparation: in this step, it is a must to identify the general aim of the desired infographic, identify the wanted age group, analyze the characteristics of the wanted age group, identify the educational needs, identify the practical goals, collect information about the chosen topic, identify the information sources, analyze information and choose a genuine idea to deliver the aim of the infographic. Furthermore, it is a must to identify the initial design of the infographic (scratching on paper) including the seen items of the written text, used lines, shapes, paintings, icons, photos and suitable colors.
2. Editing and producing: this stage is considered the important step of producing the static infographic through choosing the suitable programs or websites, evaluating the designed infographic by a group of experts to be judged, applying it initially on a group of students and finally amending the designed infographic according to the opinions and suggestions of experts.
3. Using and Publishing: in this step, students are shown the designed infographic in a printed or digital way. Teachers evaluate the designed infographic by measuring students' achievement by using measurement tools. Also, students are asked to give their evaluation of the designed infographic to test their motivation for learning and making sure of their satisfaction about the infographic model. It must be added; however, that the step of publication and use is not the end of the model because we should take into consideration the strength and weakness aspects while designing the static infographic. In addition, we should bear in mind the feedback to amend and change the infographic model from time to time.

The Animated infographic:

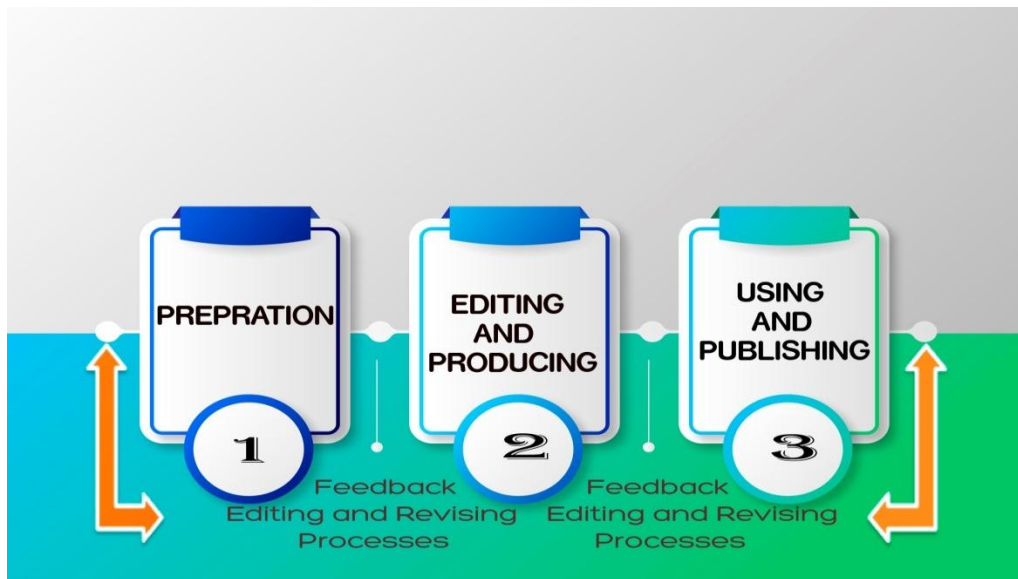


Figure (2) Amany Nabeeh El Mor's model of designing the Animated infographic

The model consists of three basic steps: preparation, Editing and producing then Using and Publishing. Each step is divided into sub-groups as follows:

1. Preparation :in this step, it is a must to identify the general aim of the desired infographic, identify the wanted age group, analyze the characteristics of the wanted age group, identify the educational needs, identify the practical goals, collect information about the chosen topic, identify the information sources, analyze information and choose a genuine idea to deliver the aim of the infographic, write the scenario or the text, record the text, make storyboard for the visual items including the written text, the used lines, paintings, photos and the suitable colors. Besides, the sounds of the infographic include a voice comment, music and sound effects. Finally, movement effects, the period of the project and the number of views must be involved in preparing the Animated infographic model.
2. Editing and producing: this stage is considered the important step of producing the static infographic through choosing the suitable programs or websites, evaluating the designed infographic by a group of experts to be judged, applying it initially on a group of students and finally amending the designed infographic according to the opinions and suggestions of experts.
3. Using and Publishing: in this step, students are shown the designed infographic in a printed or digital way. Teachers evaluate the designed infographic by measuring students’ achievement by using measurement

tools. Also, students are asked to give their evaluation of the designed infographic to test their motivation for learning and making sure of their satisfaction about the infographic model. It must be added; however, that the step of publication and use is not the end of the model because we should take into consideration the strength and weakness aspects while designing the static infographic. In addition, we should bear in mind the feedback to amend and change the infographic model from time to time.

Secondly: procedures of applying the suggested model

The two researchers has chosen the study sample from the students of the special diploma in the instructional technology section, Faculty Of Education, Tanta University, who have the study requirements. Hence, there are some properties to be available in the used computer as follows:

1. The screen card must be highly accurate.
2. RAMs should be more than 4 Mega.
3. Operation system is preferred to 64 bites.
4. Operation system should be Windows 7 at least.

On the other hand, there are some properties to be related to the teachers as follows:

1. It is preferable for teachers to be aware of the basic principles of operation system.
2. Teachers should be aware of the different kinds of file extension.
3. Teachers who have good knowledge of Office, Word and the PowerPoint programmes are preferable.

The researcher has chosen the study sample from a group of students who are aware of the necessary requirements and who are ready to study the technological innovation (infographic); those students are the would-be teachers in different specializations. Furthermore, a list of skills related to designing and producing the Animated and static model of infographic has been prepared by the researcher. In addition, programs such as Adobe Illustrator, Adobe after Effects and Adobe Audition have been used. Finally, the researcher has prepared a card for evaluating the final product of the Animated and the static infographic model separately to judge the quality of the product concerning every student - each in his specialization. It must be added that the present research has been applied through the period of 15th October 2019 until 17th May 2020 during covid-19. So, face to face interviews had been postponed. Consequently, students have been trained on how to use the three above mentioned programs. Then, the researcher started explaining the model for the students from the research sample through the following steps:

1. Recording the lectures through the programme of the Camatsia Studio 6, making a YouTube channel called educational infographic to upload the related videos and providing the students with the channel link.

2. A WhatsApp group has been made by the leader of the group under the name of infographic to make a kind of communication between the researcher and the students from the research sample in order to make discussions and interviews between them.

At the end of the research, the researcher asked the students of the research sample to introduce infographic with the Animated and static models according to the own model of each student. An evaluating card has been used to judge the quality of the products. After application, results and degrees of the students have been collected and analyzed statistically by using the programme SPSS.

RESULTS:

Depending on the previous methodology, the researcher used the Binomial Test to check the validity of the following assumption "there is no statistically significant differences at (0,05) between the means of the students' degrees in the post products related to the skills of the designing and producing the infographic with the Animated and static model". In order to test the validity of that assumption, the researcher compared the arithmetic means of the experimental group individuals' degrees in the post product related to the skills of designing and producing the Animated and static infographic with an assumptional mean with (70, 80) degrees. The results were shown as follows:

Table (1) The value of (Z) and the significance level of the difference between the experimental group students' degree in the post product related to the skills of designing and producing the static infographic.

Group	Taxonomy	Number	Noted ratios	Optional ratios	Significance level
First	≤70,8	0	0%	0.50	0.01
Second	>70,8	14	100%		
Total		14	100%		

Table (2) The value of (Z) and the significance level of the difference between the experimental group students' degrees in the post product related to the skills of designing and producing the Animated infographic.

Group	Taxonomy	Number	Noted ratios	Optional ratios	Significance level
First	≤70,8	0	0%	0.50	0.01
Second	>70,8	14	100%		
Total		14	100%		

Discussion:

- The value of (Z) between the means of students' degrees in the pre and the post measures is 0.01 in the post product related to the skills of designing and producing the Animated and static infographic model. So, the zero assumption is refused and the alternative assumption is accepted.
- There is a statistically significant difference at the level of 0.01 between the means of the experimental group students' degrees in the assumptional mean. Their degree means in the Post application of the evaluation card related to the Post product of the skills of the designing and producing the Animated and static infographic model is in the favor of the post measure.

Referring to the previous results, both of the static and mobile infographic are suitable for all the educational stages, but it is a must to analyze the desired age group, the content and the educational outputs.

Recommendations:

- It is important for infographic method to be employed and included in the different educational steps and curricula.
- It is important for all teachers in different stages to be trained on how to design and produce the Animated and Static infographic according to the designed model.

Conclusion:

Referring to the previous results, We notice that the researcher do their best to produce the educational infographic with the Animated and static model which passes through several steps starting from the Preparation, then the Editing and producing, to the Using and Publishing . also both of the static and Animated infographic are suitable for all the educational stages, but it is a must to analyze the desired age group, the content and the educational outputs.

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