

The Effectiveness of Functioning Tools of E.Learning 0.2 in Developing Skills of Designing Electronic Courses for Faculty Members and Their Attitudes Towards Them

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Summary of the research :

Starting from the aspects of education technology work and it's function, both the researchers took from " E. Learning 0.2 tools a field for the present study to make faculty members acquire skills of designing of electronic courses and developing their attitudes towards them . To achieve purposes of the study, a method of developmental research followed in designing educational systems and developing them was used to design the suggested site. Both the researchers relied in their study about the experimental design for a single group to study the effectiveness of the suggested site based upon " E. Learning 0.2 tools on dependent variables representing in : achievement of cognitive aspect related with skills of designing electronic courses , skillful performance for designing electronic courses and developing the attitudes towards them for the study group consisting of a group of faculty members at Gazan university , particularly those who teach some of their courses electronically with the method of distance learning .

Introduction :

Educators investigate continually the best methods for providing an interactive educational environment to capture students' attention and stimulate them to exchange opinions and experiences. This doesn't mean necessarily adding new school subjects or courses or adding apparatus and instruments on the existed educational system but this development aimed at good functioning for education technology through coordinated usage

for sources and properties to provide an educational environment helping to achieve the desired goals of education.

With the appearance of technological revolution in information technicality at education field, increasing the need for exchanging experiences with others , providing a rich environment of multi sources for autonomous research and development , hence appeared the concept of internet based E-Learning and became a basic corner of educational process and inseparable part of comprehensive education system and a necessity of learning where it enforces teachers ability to speak to different and varied huge numbers of learners , allowing them to vary types of their teaching , provides much school subjects or courses prepared by professions who contribute in overcoming distance difficulties and the absence of interactive connection and communication with learners . (Abdullah El Mosa , Ahmed Mubark 2005,2) .

Kop (2007) regards that using electronic networks has been developed during past few years from just a method to spread information to a method of communication and conductivity.

The appearance of several new network technicalities and applications led to a change in the behavior of world network . Through a session of brainstorm conducted between Orly institution and World Media Life on the margin of the conference in which Orly company organized on 2005 , the term Web2.0 appeared, accordingly individuals can publish and sharing experiences and information with groups and individuals . It's function in educational field led to the appearance of second generation of electronic learning (E . learning 0.2) .

Karrer (2007,2) illustrates that institution of information technicality and electronic learning , researches subjected for the centre of national researches in Canda is the first that adopts that term and that E. learning 0.2 doesn't mean developing courses designed through traditional electronic learning but it exceeds to use Web tools and technicalities (2,0) allowing modification and

reading by users and to reach live or direct learning that is occurred in the same time , the most important ones are : blogs , Wiki and tools of spreading social media and networks.

Afnan El Mhesen (2009, 3) highlights the importance of using E. learning 0.2 in the following points:

- It is characterized with interaction and flexibility to make education transfer to learning and makes learners or trainers a sender . Interactive and participant not just a negative receiver and acceptor .
- Contributing in making education cooperative and integrated in which all share in editing , publishing , adding and comment .
- Contributing in raising learners or trainers ambition and encouraging them to share education and learning strongly through (Blogs – Web Wiki – Rss – Social book marking - You Tube – Social networks) .

All these imposed on our educational institutions in general and institution of high education in particular to adopt these new methods and options in learning . In this regard , Mohammed Hafez (2008, 15) regards that the new educational system adopts a set of educational characteristics and features concentrating on self – learning , the ability to search and quest the target information , varying students , tools and different teaching methods allowing all , despite their difference , a distinctive good learning , formulating curricula electronically allowing learners access the course in any time and any place and to interact and communicate with the instructional subjects providing new studies and activities such as designing internet sites , graphics , programming on the level of all school stages, exchanging information and researches between educational institutions , supporting scientific and cultural competition spirit for learners .

That requires in return a staff member who is distinctive, on a high level of competency, perfecting in communication skills and self-learning, has the ability to subdue available

technological novelties in organizing and presenting instructional subject in an interesting and useful way, designing electronic units and courses permitting interaction and communication for students and learning through it according to their abilities and needs.

Problem of the research:

From previously mentioned it is shown changing the role of staff member , it is no longer limited on dictation , but it becomes the facilitator for the process of self-learning to reach information and he should seek to develop his cognitive , professional and human competency , developing educational experiences through different training programs , developing student ability on the ideal utilization of information through searching information , collecting , storing and resuming it by using recent education technicalities based upon computer and subduing available technological novelties in organizing and presenting instructional subject in an interesting and useful way.

It is natural assuming not achieving this without sufficient preparation and continuous professional training for faculty members on using these technological technicalities and novelties . In this regard , several studies (*El Sayed Abdel El Mawla ,2013*), (*Mody El Debian, 2011*), (*Rmy Ragheb, 2011*), (*Hassan El Nagar, 2009*), (*Hanan Ahmed Radwan, 2009*), (*Sultan El Mteary, 2008*) indicate the necessity of continuous training for university cadres through their professional life , developing their skills in electronic learning , enriching them with training courses to make them acquire basic sufficiency for designing electronic interactive courses and distances where these educational institutions without the presence of competent faculty members training on using these modern technicalities and have the ability on preparing and communicating school subject for the students that are appropriate for the goals of these institutions and achieving education autonomy, can't achieve it's charged role whatever their apparatus and novelties .

Through knowing previous literatures and studies and the researches work as dean of E-Learning and distance education at Gazan university , in addition to meeting some faculty members (40 faculty members of different specializations) and surveying their opinions about their use of electronic learning technicalities in teaching , survey results revealed the following :

1. Participants agreed in survey with a percent of 100% that their professional development in the field of computer was restricted on courses in basic skills of computer such as courses of ICDL.
2. Participants agreed with a percent of 100% that they prefer teaching by using technicalities of electronic learning if there are available trainings for operating these technicalities.
3. Some of them indicated with a percent of 80% that their training on teaching some distance electronic learning courses was restricted on basic skills for handling with the system of used learning management and how to use the suggested class.
4. (36) of them with a percent of 90% indicated that they haven't the necessary sufficiency and skills for designing electronic courses and that the few courses in which they designed electronically are but personal efforts and not of the required competency and lack the bases of good design .
5. They agreed with a percent of 100% that they need trainings on how to design school courses electronically and putting them on programs of learning management to make use of them.

From previously mentioned it was shown for the researchers that there is a deficiency for faculty members in designing electronic school courses according to good design bases , using electronic learning courses and integrating information and communication technology in teaching . The researchers noticed Arabic studies rarity that were conducted in the field of making faculty members acquire skills of preparing

and designing electronic courses by using tools of E. learning 0.2 for electronic learning that giving novelty on the present research .

In the light of previously mentioned, this research came that try to develop the ability of faculty members at Gazan university on integrating and using computer and internet as an assistant device in teaching curricula through their training on how to prepare and design electronic courses in the field of their specialization using tools of second generation of electronic learning and attempting to answer the following basic question :

What is the effectiveness of functioning tools of “E. Learning 0.2 in developing skills of designing electronic courses for faculty members and their attitudes towards them?

The following sub – questions are branched in an attempt to solve this problem:

1. What is the effectiveness of functioning tools of E. Learning 0.2 in faculty members achievement of the cognitive field related with skills of designing electronic courses ?
2. What is the effectiveness of functioning tools of E. Learning 0.2 in developing skills of electronic learning design for faculty members ?
3. What is the effectiveness of functioning tools of E. Learning 0.2 in developing faculty members' attitudes towards them?

Goals of the research:

The present research seeks to treat deficiency in cognitive and performance aspect for faculty members in skills of electronic learning design through:

- Functioning tools of second generation for electronic learning in faculty members achievement of the cognitive field related with skills of designing electronic courses .

- Functioning tools of “ E. Learning 0.2 in developing skillful performance for faculty members for skills of designing electronic courses .
- Functioning tools of “ E. Learning 0.2 in developing faculty members attitudes towards them .

Importance of the research:

- It represents an objective response for what educators call for in the present time for the necessity of re- considering the building of school courses and presenting them in new methods keep pace with scientific and technological developments to achieve the desired goals.
- It is considered as a response for world attitudes that call for the necessity of taking modern educational methods that make faculty members to develop their skills in using technology of electronic learning and adjusting with age requirements .

Limits of the research:

Firstly: human limits: selecting the research group purposively from faculty members at Gazan university who teach their courses in distance through bridges system (different specializations) .

Secondly: objective limits : designing an educative site based upon tools “ E. Learning 0.2 of web (Blogs – Web Wiki – Rss – Social book marking - You Tube – Social networks) for using it to make faculty members at Gazan university acquire skills of preparing and designing electronic courses .

Thirdly: spatial limits : selecting deans of E-Learning and distance education for training the research group for it's preparation and including great numbers of training halls and internet connected apparatus .

Fourthly: temporal limits: the basic research experiment was conducted from 13/4/2014 to 15/5/2014.

Terms of the research:

Effectiveness : it is meant procedurally in this research achieving the site goals based upon technicalities of second generation of web in making faculty members at Gazan university acquire skills of designing an electronic school unit.

Tools of E. learning 2.0 : it is meant procedurally in this research these tools (Blogs – Rss – Web Wiki – You tube – Social communication networks Facebook) that the site by which the researchers designed includes . Members of the research group could interact and communicate with the researchers , with each other and with the provided content to make them acquire skills of designing electronic courses.

Skill: it is meant procedurally in this research a set of electronic school units that are published through internet and through them students interact with each other and with the teacher by using interaction tools through internet where the students can study at any time in the day and in any place in a form appropriate for their needs and abilities.

Attitude: it is meant procedurally in this research a psychological situation and an acquired motive by which it was shown an affective aptitude that has a degree of reliability determining feelings of faculty members at Gazan university and their behaviors towards electronic learning and making them response positively or negatively in dealing with its different applications.

Hypotheses of the research:

1. There is a statistically significant difference between mean scores of the research group members in the pre – post applications for achievement test of the cognitive aspect related with electronic courses design skills on behalf of post application .
2. There is a statistically significant difference between mean scores of the research group members in the pre – post applications for card of observing skilful performance for

designing an electronic course on behalf of post application .

3. There is a statistically significant difference between mean scores of the research group members in the pre – post applications for attitude scale towards tools of second generation for electronic learning on behalf of post application .

Methodology of the research :

The present research uses semi experimental method by applying the site based upon tools of second generation for electronic learning in purpose of recognizing it's effectiveness in making faculty members at Gazan university acquire skills of designing electronic courses .

Theoretical frame and the research literatures:

Firstly : electronic courses :

The idea of electronic courses depends upon creating an electronic site including these educational courses. This site is downloaded on internet where all learners can access it . This idea requires designing these courses with the method of electronic study units and place it in a site on the internet.

Clark .A (2004,120) defines the electronic courses as instructional materials representing a basic part in electronic learning environment . It includes varied methods that are used to explain lessons and information that can be restored from the network and supported with elements of interactive multi media.

Fayez El Zofery (2004,89) defines the electronic courses as a set of lessons and electronic study units that are presented through an electronic medium not paper one and they are related and organized in a direct form with computer construct and internet works .

Types of electronic courses: based upon the previous definitions for the electronic courses, types of electronic courses can be determined as follows:

- a. Electronic courses based upon internet : they are courses based upon finding an electronic site that is loaded on internet . In it's composition it depends on components of multi media of different forms from course texts , animation pictures , simulation , sound and visual groups , internal and outside connectors on condition that the content is in conformity with philosophical , psychological and technological bases allowing students to access to these sites to study the instructional material . (Ibrahim El Far , Soad Shahin 2001, 42).
- b. Electronic courses not depend upon network and it the most common types . It is presented on compact disks in which educational lessons are presented to learner directly and it is designed according to target learners dispositions and abilities and interaction between learner and educational programming occurs and it doesn't require but few computer skills from the teacher (Mohammed El Heala 2001, 455) .

Both the researchers will adopt in the present research the electronic courses dependent upon network for it's great importance in educational field and what it achieves of interaction in the process of education and learning.

Educational importance of electronic courses:

Several studies confirmed the importance of using electronic courses in educational field among which are:

Jun Sulu study (2002), where he evaluated the acquired knowledge between two methods of learning that are : electronic courses and conventional education in classes . The study results showed that there are differences between learning groups in cognitive achievement . Post tests revealed that learners through electronic courses benefited more than learners inside classes.

Edward &Fritis study (2001),this study was conducted on Virginia university students in purpose of recognizing their opinions in three teaching methods depend upon information technology . Study results found that students who studied by

using electronic courses achieved the desired educational results where they learned concepts and applied them in a better form . Students also reported that learning results from E-Learning subject were better than conventional educational subjects.

Educational design of electronic courses:

Some believe that electronic courses production is just a page design on web including amounts of information. This is a wrong concept of course design because to get high quality electronic course , one of educational design patterns should be adopted since it emphasizes on student and his needs through determining what the student knows , what he needs to know and prepares conditions that facilitate his learning and translates educational outputs in purposes and goals that can be measured as well as educational design patterns use an organized method of education that conventional educational situation doesn't use .

Patterns of educational design based upon internet are useful if they are designed in a good form because good design guarantees maintenance on students interest continuity , stimulates their motivation to continue learning and poor design causes drop off a great numbers of students , consequently reducing students rate who continue studying the course and hence affects their learning outputs . In this regard Ruffini (2000, 58) regards that considering principles of educational design in electronic courses can help in producing good type of courses and there are several studies emphasized the importance of educational design including:

Hassan El Baae Mohammed study (2006), that presented two designs for a course , one is designed from the structural perspective and the other from the objective perspective where they were prepared to present them on internet . Learning was made with both designs. The result was superiority of the group that studies course through internet from the structural perspective in achievement test and critical thinking.

Seaf El Hegy et.al. study (2003), that aimed at high lightening the entity of educational design and giving a simple

background of educational design as well as knowing Rageleoth expand theory and it's applications in designing the lesson . Then the study provided an educational design on one unit in science by which the researcher applied system of Rageleoth . The result of the study that he preferred adopting this system during preparing science curricula .

Several studies concerned with standards of educational design quality of electronic courses , from these studies are :

Abdullah El Hbess, Abdullah El Kandry study (2000), aimed at recognizing the scientific bases to construct an educational unit through internet and the study found a number of important bases that must be considered during design that are : simplicity of screens design ,linking between the presented subject through internet , not increasing connectors outside the course , presenting texts to capture attention and the necessity of feedback for the course .

Mclachlan study (2002), aimed at finding a list of standards for designing electronic courses on internet . The list included the following standards : browsing easiness , using several methods , browsers conformity , presenting the content , newness and providing

Secondly : E .learning 0.2

Proprieties of web E .learning 0.2 : Tim O'Reilly (2005) shows that web E .learning 0.2 is characterized with several proprieties , the most important ones are :providing a high degree of interaction with user , user share in the content , potential of the content classifying , supporting connection , creative intelligence and sense and systems are developed if they are used too much .

Tools of E. Learning 0.2:

No one study counts tools of the second generation for the web because they are still new and much of them are created as new instructional services or as non conventional ideas and after their success and the need for them they are classified as one tool of web (2,0) . Hence , the process of counting these tools

used in learning is not an easy one and needs an accurate analysis for the researches that dealt with this affair extensively . From these tools in which the researcher indicated and analyzed and will use them in their research:

(Weblog): it is one of electronic content management systems on web and allowing the site owner to publish his essays and writings without a need for a background in programming where the system provides stereotypes in which the site owner puts the essay or sharing.

(RSS): it represents an abbreviation for the term (Rich Site Summary)| and means an intensive summary for the site and this tool aims at informing the learner with the last site news or what is upgraded of information .

(Wiki Web): Joseph Bergin (2005, 15) defines this tool as an interactive web site in which any page can be modified by any visitor or added any new page and called it under any nomination and allowing the learner to communicate learners asynchronously.

(Social communication networks): they are web sites working on linking a set of beneficiaries that have the same dispositions and cognitive interests with each other , consequently , these networks are often classified in an objective way and the logical result of these networks .

Several studies dealt with functioning tools of the second generation for web among which are :

Klamma & Others (2007), study: aiming at training by designing education through web (2,0) among an European common initiative for higher education about applying social programs in web (2,0) at informal learning . Social web tools (2,0) were used in training based upon Blogs , Wiki and Sharing software . A sample of (125) trainers participated in the training. The study results concluded found 99% of participants support for using social tools in web (2,0) in future learning .

Jane P. Currie (2009), study entitled “ for the sake of training and communication in reference services “ aiming at concentrating on Web applications (2,0) that improve training and communications inside reference services division . The results found that using Web tools for coordinating communications and training create an effective and dynamical system for sharing in new procedures , ideas and developments inside reference services division .

Thirdly: developing faculty members performance in electronic learning:

There are several studies that deal with developing faculty members' performance in electronic learning among which are:

Reham Mohammed Ahmed(2012), aiming at recognizing the effectiveness of an electronic training program based upon sharing learning in developing skills of some second generation services of Web for faculty members assistants . The study results found the effectiveness of the suggested training program and recommended the necessity of continuous training for faculty members and their assistants .

Suzan Atya Moustafa (2010), aiming at providing a suggested strategy for functioning the electronic file in developing academic performance for faculty members . The study found the effectiveness of the provided strategy in developing performance and recommended the necessity of training all faculty members on electronic learning technicalities in accordance with the requirements of broad quality and academic accreditation for universities.

Research experimental frame :

Both the researchers depended on Moustafa Gawdat analysis pattern (2003) of Dick and Carri pattern as a basic design pattern in which it is depended upon in designing the educational site based upon “ E. Learning 0.2 tools of Web (under research). Both the researchers conducted some modifications on sub steps in which the pattern includes that can be functioned and used in the present research . In the light

of this , different steps of the modified pattern became in the form that the following figure illustrates :

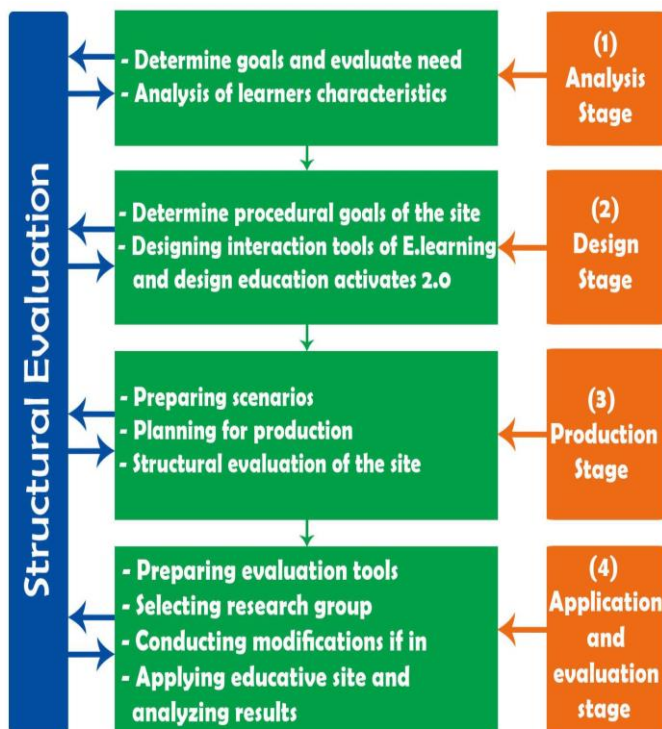


Figure (1) procedures that were followed in preparing educational web

Firstly : analysis stage :

A- Determining goals and estimating needs:

No doubt that learning environments through Web became a tactile reality that can't be ignored but they must be used and functioned in varied educational situations. Because educational web sites were considered one of electronic learning environments that were spread recently and it's effectiveness was validated in several situations, so both the researchers attempted to make use of the huge potentials that these sites provide in creating an educational site based upon second generation technicalities of Web through which faculty members

at Gazan university can acquire skills of designing electronic courses .

B-Analyzing learners characteristics :

Both the researchers analyzed the reality of faculty members (sample of the present study) by preparing their opinions survey in using electronic learning technicalities in teaching their courses , through opinions survey it was shown that there is a deficiency for faculty members at Gazan university in using electronic learning technicalities and integrating information and communications technology in teaching .

Secondly : design stage :

it is the second stage of creating educational Web site and through it the researchers used the following steps:

A-Determining procedural goals of the site:

The general goal of the Web was determined in acquiring faculty members skills of designing electronic courses and in the light of the general goal , educational goals that illustrate the final behavior for the research group members were determined after learning the acquired skills . Both the researchers could derive skills of the present research through knowing researches and studies in the field of electronic courses design skills , among which are studies of (Eman Mahdy Mohammed, 2010), (Rania Ahmed Kassab, 2009) (Omar Salem El Saedy, 1430), (Mohammed Tahy Tony, 2009), and knowing literatures published in this field: (El Ghareab Zaher Ismael, 2009), (Hamdy Ahmed Abdel Aziz, 2008),(Gmeal Ahmed Etmazy, 2006) ,(Mohammed Kamel Abdel Hafez, 2008),(Magdy Mohammed Abou El Ata 2011) .

B- Designing learning environment tools through the site:

This research functions technicalities and tools of “ E. Learning 0.2 in developing electronic courses design skills for faculty members in Gazan university and their attitudes towards them for what they provide of high amount of interaction with users . They also allow users to share in preparing and editing

the content provided through the site. Based upon this the researchers knew several researches and studies in education technology that deal with functioning second generation tools of Web in learning environment , from these studies are (Martin Ebner et a , 2008), (Jard , b, 2008), (Wang Hong ,2008), (Najy m Bigum , 2007).

The researchers knew also several researches and studies that dealt with standards of designing learning environment on Web(Shaimaa Yossef Sofy,2009), (Marwa Zaky Twfeak ,2008), (Bahaa Khayry Fareg ,2005) . Both the researchers depended on these standards according to the research requirements. Tools that were designed by the researchers can be summarized in the following:

- **Authentication:** represents the part of accessing to the educational environment specialized for the study It is considered one of the unavailable sites for the public but both the researcher devoted for the sample (under study only).
- **News bar:** this tool informs faculty members (the study sample) varied news in which both the researches desires to communicate , these news are about meeting times in discussion room or gives general warnings .
- **The site map:** both the researchers ,through site map page , connected most connectors by which any page or portion inside the site can be reached.
- **Instructions screen:** both the researches intended that the site includes a screen for instructions showing for faculty members rules and instructions of work inside the site to achieve it's desired goals.
- **A list of site basic contents :** it is considered the tool or the connector of educational appendix and through it the content of electronic courses design skills is provided and it is presented through (4) basic classifications that are : designing an electronic study unit by using Dream Weaver program , packing the content by using Reload Editor 2.0) , spreading study unit by Moodle system , fundamentals

and standards of electronic courses design quality and each stage includes varied lessons and each one includes a set of structural contents and educational activities in which the research group members are asked to implement . Educational environment for these lessons was enriched with a number of multi media files representing in files that were prepared with Macromedia Flash PhotoshopCS4 Adobe and some other educational pictures and videos .



Figure (2) a list of site basic contents

- **Personal blogs:** Both the researchers provided blogs service through connecting it with one free servers that provide blogs with Arabic language (Word Press). Both the researchers provided in the home page of the site a direct connector that makes the research group members able to create their blogs. Both the researchers adhered to conduct continuous monitoring processes for these blogs to make sure that it's goals are not changed.
- **Rich Site Summary (RSS):** both the researches interested in this tool as one of the most important new tools of the second generation of web in news systems and attracting the research group members for the site in the case of existing new news , so the site has the ability to restore and attract them continuously .

- **Web Wiki:** both the researchers concerned with incorporating a connector inside the site allowing the research group members to move to Web Wiki to create a cooperative content allowing participants to write collectively, modify and add easily and without any limits. Both the researchers used the site Wikispaces .<http://www.wikispaces.com>.
- **You tube :** both the researchers concerned that the site includes You Tube containing video explanation for all skills related with designing electronic courses in the light of the educational content of the site allowing after viewing video to add any comments or suggestions related with video subject.



Figure (3) You Tube of electronic courses design

- **The site of social networks:** both the researchers adhered that the site includes a link for Facebook as one of the most important sites of social networks. Both the researchers selected Facebook from several sites of social networks because it occupies the first place among different social networks that is the highest visitation with a percent of 29% by internet users all over the world .

- **Self-assessing:** a tool of self assessing that the researchers constructed inside the site and through it some short evaluations are placed for each school unit available in the site.



Figure (4) one of self assessing screens in the site

- **Educational activities:** Both the researchers put into consideration a link existence of educational activities after ending studying each unit separately. Both the researchers adhered that these adaptations allow (for the research group) using tools of “ E. Learning 0.2 from web available in the site from blogs , Wiki , face book and you tube consequently there is sharing and interaction between the research group members in their performance for these activities and the researchers can follow these adaptations performance and comment them .

Thirdly : stage of development and production :

- a. preparing scenarios.
- b. Planning for production : after finishing writing the scenario of the educational site , both the researchers planned for the production according to Deck and Kerry pattern . Stage of planning for production passed several stages that are : (determining the educational product – determining requirements of material production – developing time schedule for production – then the stage of preparing production).
- c. Structural evaluation of the site : in this step both the researchers experiment the site on a sample of faculty

members at Gazan university and from outside of the original research sample for confirming the safety and validity of the final application on the sample and to know weakness and strength points , and make the necessary modifications .Pilot sample members indicated some observations resulting from their use of the site representing in the existence of some broken connectors outside the site . Both the researches reviewed all and excluded those that aren't available , the presence of some language faults in which they indicated inside the content and they were corrected , the existence of some important questions about the site and educational content in which the researchers added on questions that are more frequent . After finishing the process of structural evaluation and conducting the required modification , a final version was prepared for publishing on the Web through the site : www.4designlearn.com

Fourthly :the stage of application and evaluation :

In this stage both the researchers dealt with two parts that are :

The first part: developing measurement tools test of cognitive achievement – observation card of skillful performance – scale of attitude).

- Preparing an electronic achievement test in the cognitive aspect related with electronic courses design skills :

The test was prepared electronically, The test aimed at measuring faculty members achievement for the cognitive aspect related with electronic courses design skills through the educational site that is prepared for the study .It must put into consideration that test goals are formulated behaviorally (procedurally) .

Statistical constants of the test:

- **Validity of internal consistency:** correlation coefficients between the score of each question of the test and total score of the test were calculated where correlation

coefficients ranged between (0.53 :0.93) and they are statistically significant correlation indicating the validity of test internal consistency .

- **Calculating reliability of the test :** the present test reliability coefficient was calculated through it's application on a pilot group of (10) faculty members from the research community (and not from it's basic community) , then applies test – retest with a temporal difference .Test reliability coefficient was equivalent (0.97) and it is a significant value indicating it's high degree of reliability and it's validity as a measurement tool .
- **Coefficient of easiness , difficulty and distinctive :** easiness coefficient of the present test was restricted between (0.30 , 0.70) and difficulty coefficient extended between (0.30 : 0.70) and distinctive coefficient extended for the test vocabularies between (0.21 – 0.25) indicating that test questions of an appropriate distinctive power allowing it's use as a measurement tool for measuring the cognitive achievement .
- **The final picture of the test:**after finishing the previous stages , the test was in it's final picture and ready for pre-post application on the research sample consisting of (3) part, (8) vocabularies and it's maximum is 105.

- Card of performance observation for electronic courses design skills :

The card observation aimed at measuring faculty members performance at Gazan university for electronic courses design skills to recognize the level of their performance pre- post the suggested site . The card was developed in the light of the list for electronic courses production and design skills that were achieved

Statistical reliabilities for card of skillful performance observation :

- **Calculating card reliability:** by application and re – application on a pilot sample of (10) faculty members from

the research community (and not from it's basic community) with a temporal difference . Reliability coefficients for observation card skills ranged between (0.72 : 0.97) and reliability coefficient for card total score was (0.97) and they are statistically significant coefficients indicating it's appropriateness as a measurement tool .

- **Calculating card validity** : correlation coefficients between a score of each basic skill and total score for it's belonged stage were calculated where these coefficients ranged between (0.61 : 0.78) and correlation coefficients between a score of each basic skill and card total score were calculated where these coefficients ranged between (0.58 : 0.85) .Correlation coefficients between a score of each stage of designing an electronic study unit and card total score where these coefficients ranged between (0.88: 0.99) and they are all statistically significant correlation coefficients indicating validity of card internal consistency.

-Attitude scale towards electronic learning :

The scale aimed at measuring faculty members attitudes towards using electronic learning technicalities in teaching before and after exposing to the presented site .Specialized educational references were acknowledged to know bases that must put into consideration in developing attitudes scales so that the scale becomes in an accepted and suitable form , among them are :the studies of (Marwa Zaky Tawfek, 2008), (Hassan El Baae Mohammed, 2006), (Eman Mohammed Mkram, 2006), (Mohammed Gaber Khalef, 2006), (Aly El Wardany Omer 2001), Both the researchers formulated the scale statements in the light of two basic axes that are : the desire in using electronic learning technicalities in teaching and the desire to know more about electronic learning tools and it's applications . The scale consists of (38) statements , half of them are positive and the other half are negative . When they are formulated , it is considered that statements that can be explained with more than

one way are excluded .The statements are free from ambiguity and include attitude subject clearly or implicitly .

Statistical constants of Attitude scale:

- **Calculating Attitude reliability:**the scale constant coefficient was calculated through it's application on a pilot group of (10) faculty members from the research community (and outside the basic sample) then re – applied it with a temporal difference . Constants coefficients of the scale axes were (0.82, 0.81) respectively . Constant coefficient of the scale total score was (0.86) and they are statistically significant indicating it's validity as a measurement instrument .
- **Validity of internal consistency :** correlation coefficients were calculated between each statement of the scale and total score of it's axis where these coefficients ranged between (0.55 : 0.87) and correlation coefficients between the score of each statement and total score of the scale where these coefficients ranged between (0.55: 0.80) . Coefficients correlation between the score of each axis of the scale and total score of the scale was also calculated where these coefficients were (0.99: 0.91) respectively and they are all statistically significant indicating validity of card internal consistency

Second part : applying the site and conducting the basic research experiment :

The present research used semi – experimental design for the single group and the pre – post application for the research instruments . The final research group was determined of (30) faculty members at Gazan university . When selecting them it must put into consideration that they represent most different study majors observing that individuals who participated in the pilot experiment were excluded . Both the researchers applied the experiment as follows :

- Conducting a meeting with the research group individuals to give them the link of internet site : [www.4designlearn](http://www.4designlearn.com)

.com , clarifying the site purpose and how to deal with interaction interface and the available instruments . Each of them was given access name and password, and both the researches experiment the site access before them to know the interaction interface and its instruments.

- The pre-measurement instruments were applied (electronic achievement test- an observation card of skillful performance – attitude scale) and after ending the pre – measurement for the study tools , both the researchers agreed with the research group to initiate in the study by using the site and an appointment was determined for conducting post measurement .

during application :

- Both the researchers directed the research group members continuously towards implementing educational activities available on the site and follow up their progress.
- Both the researchers concerned with analyzing and monitoring group use for different instruments provided in the site (discussion forum – follow up their comments on face book - You Tube – personal blogs and Wiki space) where these contributions are always saved on data base of the site allowing the researchers to analyze their responses and redirecting them .
- Both the researchers continually access users management and follow up times and hours of the research group sharing on the site and communicate with persons who have problems in access regularly to know reasons and redirect them .
- Both the researchers interested in checking participants inquiries continually and answer them as soon as possible providing quick feedback and encouraging them to interact with the site contents .
- After the research group members finished the site study , both the researchers applied post study instruments ,

collected scores of pre- post measurements to make statistical treatments .

Research results and it's interpretation:

The first hypothesis: *there is a statistical significant difference between mean scores of the research group in pre- post applications of achievement test for the cognitive aspect related with skills of electronic courses design on behalf of the post application.*

Table (1) " t " significance for the difference between mean scores of the research group members in pre – post applications for cognitive achievement test (n= 30) (test maximum = 105 scores)

| Variables | Mean of pre measurement | Mean of post measurement | Means difference | Standard error | Calculated t value | Significance level |
|-------------------------|-------------------------|--------------------------|------------------|----------------|--------------------|--------------------|
| Achievement test | 42.67 | 100,87 | 58.20 | 1.28 | 25.51 | 0.000 |

** Significance at level (0.01)

It is shown from this that there is a statistically significant difference at level (0.01) between mean scores of the research group members in the pre – post applications of cognitive achievement test on behalf of post application .

Both the researchers attribute this to :

1. The site includes several Web E. learning 0.2 allowing interaction the research group with the content and their interaction with each other and with the site managers (the researchers).
2. The site contains attraction elements for the research group making them concern with and concentrate on the educational content and increasing their motivation to acquire educational experiences .
3. The site provides immediate feed back for the learner which he receives through his interaction with site manager across direct dialogue rooms or forums or blogs that clearly contributed in increasing learning effectiveness .

4. The site contains an instrument for self assessment including some short evaluations for each study units available on the site and the results are announced immediately .
5. The site includes a link of Wiki Web allowing the research group to write collectively , modify the content and pages and add easily without any limits allowing varying information sources and fruitful cooperation for the research group .
6. Supporting each skill with it's related concepts and the standards that work on it's implementation and application quality leading that the research group can completely know cognitive aspects related with skills components included in the site .

This result accords with the results of (Fawzya Abdullah El Madhony, 2010) (Churchill ,2009), (Namwar and Rastgoo , 2008), (Akbulut and Kiyici,2007) studies where it found the effectiveness of using E. learning 0.2 for Web in developing school achievement . The results of the present study differed with the study of (Rayan ,2007), (Vise ,C, 2007), that found that there are no statistical significant differences in achievement between groups that used E. learning 0.2 of Web and the group that didn't use it.

The second hypothesis : *there is a statistical significant difference between mean scores of the research group members in pre- post application for the observation card of skilful performance for designing electronic courses on behalf of post application.*

It is shown from this that there is a statistically significant difference for all skills as well as total score at at level (0.01) between mean scores of the research group members in the pre – post applications of observation card on behalf of post application except the skill of “ saving site pages “ it is non significant .

**Table (2) “ t “ significance for the difference between mean scores of the research group members in pre – post applications for the observation card of skilful performance (n= 30)
(card maximum = 114 scores)**

| Variables | Maximum score | Mean of pre measurement | Mean of post measurement | Means difference | Standard error | Calculated t value | Significance level |
|---|---------------|-------------------------|--------------------------|------------------|----------------|--------------------|--------------------|
| The first stage : designing course pages by using Dream Weaver program | | | | | | | |
| Opening new site | 4 | 1.73 | 3.93 | 2.20 | 0.11 | 19.75** | 0.000 |
| Add pages on the site | 3 | 1.50 | 2.97 | 1.47 | 0.15 | 9.80** | 0.000 |
| Handling with texts | 11 | 6.13 | 10.77 | 4.63 | 0.36 | 12.97** | 0.000 |
| Creating paintings | 9 | 1.73 | 8.70 | 6.97 | 0.14 | 49.89** | 0.000 |
| Inserting sound files | 2 | 0.50 | 1.93 | 1.43 | 0.12 | 11.56** | 0.000 |
| Inserting flash components | 3 | 0.10 | 2.80 | 2.70 | 0.09 | 31.73** | 0.000 |
| Inserting video files | 5 | 1.03 | 4.93 | 3.90 | 0.06 | 70.01** | 0.000 |
| Creating hyper links | 7 | 0.23 | 6.60 | 6.37 | 0.14 | 45.59** | 0.000 |
| Saving site pages | 1 | 0.70 | 0.93 | 0.23 | 0.10 | 2.25** | 0.032 |
| Close and publish | 6 | 3.57 | 6.00 | 2.43 | 0.26 | 9.32** | 0.000 |
| Total score of the first stage | 51 | 17.23 | 49.57 | 32.33 | 0.71 | 45.74** | 0.000 |
| The second stage : packing the content by using program of Reload Editor 2.0 | | | | | | | |
| Preparing course books for packing | 4 | 1.80 | 3.93 | 2.13 | 0.12 | 17.15** | 0.000 |
| Set up of educational package | 7 | 0.30 | 6.70 | 6.40 | 0.14 | 45.52** | 0.000 |
| Organizing educational content | 7 | 0.13 | 6.43 | 6.30 | 0.15 | 43.44** | 0.000 |
| Organizing educational content | 2 | 0.13 | 2.00 | 1.87 | 0.06 | 29.57** | 0.000 |
| Total score of the second stage | 20 | 2.37 | 19.07 | 16.70 | 0.25 | 68.11** | 0.000 |
| Third stage : publishing and managing an electronic course by Moodle2.1 | | | | | | | |
| Treating with Moodle program | 7 | 0.43 | 6.47 | 6.03 | 0.21 | 28.51** | 0.000 |
| Creating the course | 7 | 0.20 | 6.47 | 6.27 | 0.17 | 37.84** | 0.000 |
| Adding lessons for the course | 7 | 0.17 | 6.50 | 6.33 | 0.15 | 41.09** | 0.000 |
| Treating with activities | 10 | 0.33 | 9.37 | 9.03 | 0.21 | 42.68** | 0.000 |
| Treating with users | 4 | 0.30 | 3.93 | 3.63 | 0.10 | 35.79** | 0.000 |
| An evaluation for the unit | 8 | 0.27 | 7.57 | 7.30 | 0.15 | 50.33** | 0.000 |
| Total score of the third stage | 43 | 1.70 | 40.30 | 38.60 | 0.43 | 89.67** | 0.000 |
| Total score of the card | 114 | 21.30 | 108.93 | 87.63 | 0.87 | 100.69** | 0.000 |

** Significance at level (0.01)

Both the researchers attribute this to :

1. Most group members learned the skills in which the site included through providing them an opportunity for practical training on these skills through practical activities after studying each skill where the site includes (20) activities and each one includes a number of charges .
2. The site allows the research group to use E . learning 2.0 of Web , blogs , Wiki , face book and You Tube in raising activities and trainings through them leading to their interaction and participation in their performing for these activities .
3. The site includes You Tube providing a practical explanation for skills included in the site interestingly and appropriate for the research group characteristics and had a great effect in stimulating them for actual practice for these skills .
4. Graduating in presenting skills in which the site includes from simple to complex providing the opportunity for the research group to learn perfectly where each skill includes the fundamental of the sub skill and it's related concepts and educational and structural standards that are necessary for adjusting quality during it's implementation .
5. There is a system for managing the site that allows both the researchers to monitor users performance in terms of their access and exit hours and total calculated time in learning through the site that provided an indicator for the researcher of the extent of the research group members advancement in their learning of skills included in the site.

This study accorded with study results of (Najy ,Bigun ,2007),(Ebner ,Martin ,et al,2008) where these studies found the effectiveness of E. learning 2.0 of Web in developing and advancing performance in applying electronic learning in class .

Third hypothesis: *stating that there is a statistical significance difference between mean scores of the research group members in*

the pre- post applications on attitude scale towards electronic learning on behalf of post application .

Table (3) “ t ” significance for the difference between mean scores of the research group members in pre – post applications for attitude scale (n= 30) (test maximum = 190 scores)

| Variables | Maximum score | Mean of pre measurement | Mean of post measurement | Means difference | Standard error | Calculated t value | Significance level |
|--------------------------|---------------|-------------------------|--------------------------|------------------|----------------|--------------------|--------------------|
| First axis | 150 | 112.00 | 133.40 | 21.40 | 0.69 | 30.89** | 0.000 |
| Second axis | 40 | 33.53 | 36.60 | 3.07 | 0.25 | 12.10** | 0.000 |
| Total score of the scale | 190 | 145.53 | 170.00 | 24.47 | 0.74 | 33.17** | 0.000 |

It is shown from this that there is a statistically significant difference for both axes of attitude scale as well as total score of the scale at level (1.01) between mean scores of the research group members in the pre – post applications for the attitude scale on behalf of post application .

Both the researchers attribute this to :

1. Easiness of using the site with it's available tools in learning contributed in diminishing feelings of fear and anxiety of the research group leading to developing their attitudes towards electronic learning .
2. What the site included of presenting skills explanation interestingly supported with using multi media (texts - sounds – pictures – video) and the existence of this site all over week days and the hour and learning easiness through it m all these contribute in developing the research group attitudes towards electronic learning .
3. E . learning 2.0 of Web included in the site helped in developing social relations , the ability to criticize and respect others opinions of the research group members by their interaction through these tools that helped in developing their attitudes towards electronic learning .
4. The research group acquisition of electronic courses design skills ,each in it's major and in the light of educational standards and technicality after their study through the site contributed considerably in developing

their attitudes towards the potential of acquiring and learning skills through electronic learning environment and it's different applications .

5. Synchronous and asynchronous interactive tools included in the site allowed both the researchers (the site managers) communicate with the research group and provide technical and academic support for them and answering their inquiries in terms of learning subject leading to their feelings of learning easiness and this reflected on their attitudes development positively towards electronic learning .
6. This result accorded with the results of (Hüseyin Bicen ,2010) ,(Fawzya Abdullah El Mdhony ,2010) , (Marwa Zaky Tawfek ,2008) , (Namwar and Rastgoo , 2008) study.

Recommendations:

The present research in the light of the achieved results suggests the following :

1. Providing professional development sources and continuous training for faculty members and encouraging them to participate in designing the electronic courses in the field of their major and teaching them through environments of electronic learning .
2. Holding several symposiums and conferences that show for faculty members and students together the importance and necessity of keeping pace with age in using technological novelties in education and learning .
3. Stimulating and encouraging faculty members at high education institutions on using different electronic learning applications in teaching .
4. The necessity of existing centers for producing electronic content in each institution of education in the light of quality standards , educational design , theories of education and learning and educational strategies under specialists supervision .

5. Continuing in recognizing modern attitudes in the field of electronic learning to solve educational problems that the society confronts according to the concept of broad quality.
6. Both the researchers recommend using the suggested educational site based upon technicalities of E. learning 2.0 in training all faculty members with their different majors on skills of designing electronic courses.

The suggested researches :

In the light of the present research results, the following researches and studies can be suggested :

1. Conducting similar researches dealing with other dependent variables than achievement, skillful performance , attitude , creative thinking and achievement motivation .
2. Conducting researches in using smart Web 2.0 tools in developing environment of electronic learning in the light of world standards for broad quality.
3. Conducting researches about smart Web 3.0 tools and using them in electronic learning environment.
4. Conducting studies based upon comparing education through systems of managing electronic learning and learning through Web tools 2.0.

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