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Journal of Research in Curriculum, Instruction and Educational Technology (JRCIET)

Aims and Scope

The *Journal of Research in Curriculum, Instruction and Educational Technology (JRCIET)* is a regional quarterly refereed educational journal. It is one of the publications of the Association of Arab Educators (AAE), Egypt. JRCIET is published in English, French and German in January, April, July and October. It is issued both electronically and in paper forms. It accepts the publication of original high quality papers on both theoretical and empirical research in different areas of educational research related to curriculum, instruction and educational technology. In order for serving as a vehicle of expression for colleagues and/or for meeting university academic standards, or for promotion purpose, JRCIET publishes dissertation abstracts (M.A & PhD) in addition to reports on

symposiums, conferences and meetings held on topics related to its main concerns previously referred to.

JRCIET links everyday concerns of teachers, researchers and practitioners with insights gained from relevant academic disciplines such as applied linguistics, education, psychology and sociology (interdisciplinary research). The scope of JRCIET is deliberately wide to cover research on the teaching and learning in different disciplines. The primary aim of the JRCIET is to encourage research in curriculum planning, design, evaluation and development, teacher education, and approaches , methods, strategies, techniques and styles of teaching in the following disciplines: English, Arabic, French, German, Social studies, Science, Islamic studies, Mathematics, Agricultural sciences, Commercial sciences, Technical sciences, Home economics, Music, Physical education, Kindergarten, Any other related discipline, Educational technology, Special needs, Technical/ vocational education. JRCIET also encourages and dissiminates work which establishes bridges between educational sciences and other disciplines within or outside educational context.

The views , the opinions and attitudes expressed in JRCIET are the contributors' own positions, and not necessarily those of the Editor, Advisory Board, Editorial Panel, or the Publisher.

Contributions

Offers of contributions are welcome from researchers /academics interested in teaching, learning and educational technology. Contributors should consult the online "Instructions for Authors" on the AAE website: http://www.aaeducators.org/ or JRCIET website on http://jrciet. blogspot. com/ for manuscript preparation before submission. Submissions that do not fit with the "Instructions for Authors" will not be considered for publication.

Instructions for authors

Preparation of Manuscripts

JRCIET welcomes manuscripts in English, French and German. Manuscripts should be written in a concise and

straightforward style. Authors are advised to have their manuscript proofread before final submission. A manuscript should not exceed 25 pages following JRCIET's formatting system (see section on formatting the manuscript). Submitted manuscripts should be written according to the APA style (for a brief manual of the APA style, consult the *Association of Arab Educators*' website on http://www.aaeducators. org/)

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The following formats should be followed: Title: Font (Times New Roman), Size 16 + bold, Heading 1: Font (Times New Roman), Size 14 +bold., Heading 2: Font (Times New Roman), Size 14 +bold+ italics, Heading 3: Font (Times New Roman), Size 14 +bold+ italics + indentation., Left margin = 2.5 cm, Right margin = 2.5 cm, Upper margin = 3 cm, Lower margin = 3 cm, Authors should use 1.5 space between lines and a double space between paragraphs.

Components of the research/article manuscript

Three copies of the research/article should be submitted. The manuscript should be typed, double-spaced on a A4 paper, on one side of the paper only. A cover page should contain only the research title, name(s) of author(s) and institutional affiliations on a separate page in order to preserve author anonymity on submission of the research/article to refrees. An abstract not exceeding 200 words should be included on a separate sheet of paper. The main components of the research/article are Introduction, Method, Results, Discussion, Conclusion(s), Acknowledge- ments (if any), and References. Diagrams and Figures if they are considered essential, should be clearly related to the section of the text to which they refer. The original diagrams and figures should be submitted with the manuscript.

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The title should accurately reflect the focus and content of the research. The title should be brief and grammatically correct. Titles do not normally include numbers, acronyms, abbreviations or punctuation. They should include sufficient detail for indexing purposes but be general enough for readers outside the field to appreciate what the paper is about. The title should be no more than 14 words in length.

Authors' names and institutional affiliations

This should include the full authors' names, affiliations (Department, Institution, City, Country), and email addresses for all authors.

Abstract and Keywords

The abstract should be comprehensive and concise and not exceeding 200 words in length followed by 5-7 carefully chosen keywords . It should be structured to give the purpose of the study, main procedures including sample and instruments, main findings of the study, conclusion(s) reached and their significance. Citations and specialist abbreviations are to be avoided..

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Authors should provide a brief literature survey avoiding citing literature over ten years old, unless absolutely necessary, background to the study, hypotheses and the significance of the research.

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Results

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This section should present a comprehensive analysis of the results in light of prior literature. Discussion may also be combined with results.

Conclusion(s)

The conclusion section should bring out the significance of the research paper, show how the author(s) have brought closure to the research problem, and point out some remaining research gaps by suggesting issues for further research.

Acknowledgements (if any)

The author(s) should first acknowledge the source of funding followed by acknowledgement of any support or help.

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References should be written according to the APA style (6th edition). (See AAE website)

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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. learning0.2 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 OReilly (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 :

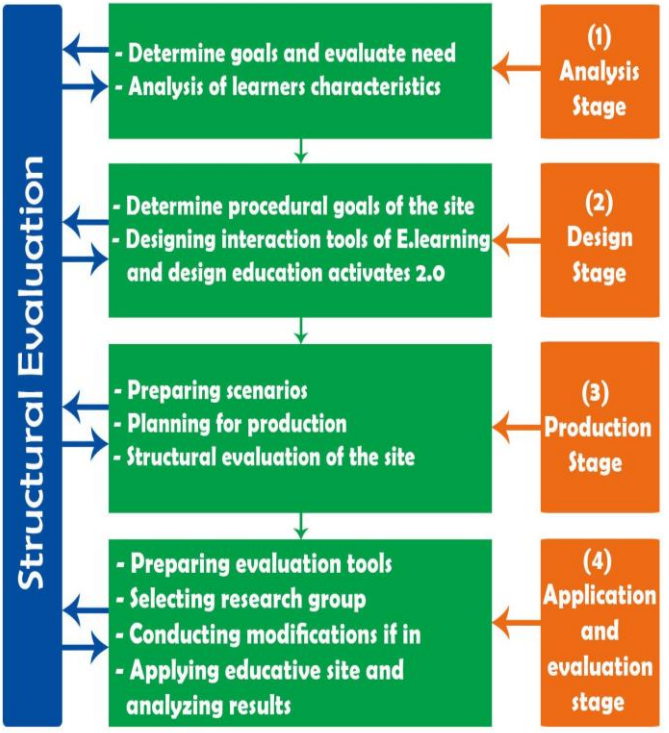

Figure (1) procedures that were followed in preparing educational web

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 content**s : 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

.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 Wever 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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Barriers of Using Jusur Learning Management System in Saudi Arabia Universities

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Abstract

The purpose of this study was to determine the main barriers faced by faculty members from using Jusur LMS in Saudi universities. This study was quantitative in nature and employed a descriptive research design. The sample of this study included 454 faculty members from four public universities in Saudi Arabia who had experience using Jusur LMS for instructional purposes. Data were gathered through the use of a web-questionnaire. Findings indicated that barriers faced by faculty members from using Jusur LMS were considered at a moderate level. Further analysis also revealed that respondents identified numerous administrative and technological barriers such as lack of technical, administrative and financial supports. In the technological domain, they faced obstacles with availability of appropriate hardware, poor internet connectivity, the lack of internet access, unsuitable software and technological resources in the Arabic language. It is suggested that for an improved utilization of Jusur LMS at Saudi universities, barriers such as administrative and technological obstacles must be taken into due consideration.

Keywords: Jusur Learning Management System, Barriers in using Jusur, Jusur LMS Utilization, Saudi Higher Education.

1. Introduction

As a part of its development plan (Afaq), the Saudi Ministry of Higher Education is in the process of adopting e-learning as a major component of its modern integrated education system. It also seeks to ensure that in the process users are provided with the required technological policies and regulations in order to ensure that the public will be able to benefit from such new systems at the maximum level (Ministry of Higher Education, 2010).

At the beginning of 2008, the Saudi Arabian Ministry of Higher Education has designed its own LMS in collaboration with Meteor Group of Companies in Malaysia called Jusur LMS (Al-Khalifa, 2010). Jusur LMS has been developed according to universal standards. It provides six key functions, namely, registering students in the Jusur system, course planning, making a course available to users, following up on students' progress, issuing reports of the students' performance, exchanging information through interactive tools (forums, and file sharing), and testing through quizzes and examinations. According to Hussein (2011), the number of online courses that were offered through the Jusur LMS reached a total of 2336 courses in the academic year 2009/2010.

A great number of the faculty members have been found to be reluctant in offering e-courses using technology (Al-Asmari, 2005; Al-Senaidi, Lin, & Poirot, 2009; Pajo & Wallace, 2001). Research conducted in Saudi universities has identified several barriers that need to be overcome before the faculty members could use technology in their instruction, which include limited infrastructure, lack of policy and administrative support, lack of resources available in Arabic, lack of staff training, lack of users' skills and knowledge in the field of technology, and lack of technical and financial supports (Abahussain, 1998; Al-Balawi, 2007; Al-Gahtani, Hubona, & Wang, 2007; Al-Kahtani, 2006; Al-Saif, 2005; Al-Weshail, 1997; Alnujaidi, 2008). On the other hand, information regarding the barriers in using Jusur LMS is still incomplete. Thus, research into barriers which stand between

the Saudi universities' faculty members and their use of Jusur LMS is needed.

2. Literature Review

According to Al-Balawi (2007) barriers faced by faculty members to use technology can be understood as the factors that prevent or hinder faculty staff from successfully implementation technology in their classrooms. Pajo and Wallace (2001) identify three major barrier groups could impede staff acceptance of Web-based teaching initiatives. These barriers are personal, attitudinal, and organizational barriers. Additionally, Al-Saif (2005) suggests that barriers which prevent the users from benefit a certain system can be categorized into four main factors namely organizational, technological, personal and social factors. Organizational barriers are the absence of organizational arrangement to support technology integration in the learning environment (Zhao, Pugh, Sheldon & Byers, 2002). Accordingly, in the context of using Jusur LMS, a statement such as "the lack of support from the administrators" or "the lack of financial support" is a measure of the shortage of organizational barriers (Betts, 1998). The absence of technological support is defined as "limited access to useful, relevant, and appropriate hardware and software" (Rogers, 1999, p. 9), it includes statements, for example, "poor internet connectivity", "Lack of availability of the suitable software", and "Lack of technological resources in Arabic language". The personal part of barriers is the human components that inhibit acceptance of an innovation (Al-Saif, 2005). Pajo and Wallace (2001) define personal barriers as individual obstacles that lead to avoid the participation in using the technology. While, social barriers mean the degree to which institutional elements support or inhibit the faculty members to use Jusur LMS (Asiri, 2012). Thus, a statement such as "Negative comments made by my colleagues inhibit me to use Jusur LMS", or "Concerns about the seriousness of students inhibit me from using Jusur LMS" is a statement of social obstacles.

A number of barriers consider as a gap between actual and expected use of technology. Some of these barriers to effective

use of technology include the lack of technical support, the lack of recognition for technology use in teaching, the lack of experience using the technology, and the lack of incentives for developing technology-enhanced curricula of the local technical and instructional design support (Baggs, 2000; Spotts & Bowman, 1995). Rogers (1999) listed also factors which have been found to affect the adoption rate of technology, and these included: (a) availability and quality of hardware/software, (b) funding, institutional support, (c) staff development, (d) instructors attitudes, and (e) time to learn to use technology.

It is crucial to note that both technology and human facilities have direct impacts upon increasing faculty attention towards the use of technology (Al-Alwani, 2005; Curbelo-Ruiz, 2003; Ely, 1999; Zhao et al., 2002). In any e-learning environment, the technology facilities play a key role in the decision making of the faculty members to participate in LMS. Some of these are related to logistics (such as the type of equipment that is considered as necessary to deliver instruction), the equipment requisite for students, the computer software that is necessary, and the ways to get access to the Internet. Equally important are the personnel who have the technical skills to develop and employ such instruction, the technical staff who work together with users for facilitating the difficulties faced by users, and the financial resources that are required (Al-Saif, 2005; Sadik, 2007).

In the context of Saudi, instructors in public higher educational institutions have experienced certain organizational, technological, and personal barriers which inhibit their use of different types of technologies (e.g. Computer, Internet, and Web-based Instruction). In particular, staff development, policy and administrative support, as well as professional programmes constituted the organizational barriers (Al-Alwani, 2005; Al-Asmari, 2005). The technological barriers included variables like the available technology access, the strategy for searching information, the place of access, and the availability of resources (Al-Kahtani, 2006; Al-Weshail, 1997). Meanwhile, the personal

barriers were identified as the attitude toward technology, computer and internet experience, as well as the users' skills and knowledge in the field of technology (Abahussain, 1998; Al-Asmari, 2005; Al-Weshail, 1997; Alaugab, 2007).

3. The study

This study is a descriptive research design. The target population for this study counts 18328 faculty members teaching at 11 Saudi Arabian public universities applying Jusur LMS for teaching and learning procedures. The selected universities are geographically located in the central, western, northern, and southern region of Saudi Arabia.

By using the proportional stratified cluster sampling, one university of each region is chosen randomly, and the number of participants from each university determined in proportion to the population size in each location. The data are subsequently subjected to descriptive analysis. Descriptive analysis involves frequencies, percentages, means, and standard deviation. The obtained quantitative data are analyzed by using the Statistical Package for Social Sciences (SPSS) Version 19.0.

3.1 Respondents

The research instrument was in the form of an online questionnaire. In collaboration with the National Centre for E-learning and Distance Learning (NCEL) in Saudi Arabia, a total of 710 faculty members were emailed the link to the survey questionnaire, and out of this 454 responses were valid and analyzed. The response rate amounted to 63.9%.

3.2 Instruments

The purpose of barriers scale was to determine faculty members' perceptions of the major barriers inhibiting them from using Jusur LMS. In order to achieve this aim, a well-documented instrument was adopted in the form of a modified version of Betts's (1998) Barrier Scale. Betts's permission to utilize and modify the instrument was also obtained beforehand. The barrier scale contained four groups, which are organizational barriers (six items), technological barriers (six items), personal

barriers (five items), and social barriers (five items) (see Table 1.1). All the items of the scale were formulated in the form of negative statements. A five-point Likert scale of potential responses ranging from "Strongly Agree" to "Strongly Disagree" was utilized. In terms of reliability, Cronbach's alpha reliability coefficients for the four sub-scales were: organizational barriers = 0.79, technological barriers = 0.79, personal barriers = 0.75 and social barriers = 0.83 .while the Cronbach's alpha value for overall scale was 0.90.

Table 1.1 Barriers to the Use of Jusur LMS

Organizational Barriers: **1. Lack of support from the administrators.** **2. Lack of technical support.** **3. Lack of financial support.** **4. The use of Jusur LMS does not add to my scientific/academic development.** **5. Increased number of students in the classroom.** **6. Fears of increasing teaching load.**	**Personal Barriers:** **1. Lack of computer competence.** **2. Lack of technological background.** **3. Lack of training in using Jusur LMS.** **4. Lack of overall job satisfaction.** **5. Lack of release time.**
Technological Barriers: **1. Lack of internet access.** **2. Poor internet connectivity.** **3. Lack of appropriate hardware.** **4. Fears of low quality of online courses.** **5. Lack of availability of the suitable software.** **6. Lack of technological resources in Arabic language.**	**Social Barriers:** **1. Negative comments made by my colleagues.** **2. Communication difficulties with administrators.** **3. Concerns about the seriousness of students.** **4. My colleagues' negative experiences with Jusur LMS.** **5. My community's doubts concerning the usefulness of Jusur LMS.**

4. Findings

4.1. Respondents' Academic Profiles

Table 1.2 presents the data collected for the distribution of the faculty members based on their gender, specialization, academic position, and nationality. Out of 454 respondents, 272 (59.9%) were males and 182 (40.1%) were females. The descriptive analysis of the data collected on the respondents' academic specialization revealed that many (n = 248 or 54.6%)

of the respondents were from the social sciences, while other (n = 206, 45.4%) were from science background. The different academic positions of the respondents ranged from the positions of professor to teacher, whereby that of Assistant Professor (a full faculty member holding a doctorate's degree) scored the highest frequency value of 195 (43%) and that of professor scored the lowest value of 26 (5.7%). Meanwhile, nationals of Saudi-Arabia represented 281 (61.7%) of the sample group as compared to 174 (38.3%) expatriate respondents.

Table1.2 Summary of Demographic Variables

Characteristics	Frequency	Percentage
Gender		
Male	**272**	**59.9%**
Female	**182**	**40.1%**
Specialization		
Science	**206**	**45.4%**
Social Science	**248**	**54.6%**
Academic position		
Teachers	**56**	**12.3%**
Lecturers	**116**	**25.6%**
Assistant Professors	**195**	**43.0%**
Associate Professors	**61**	**13.4%**
Full Professors	**26**	**5.7%**
Nationality		
Saudi Arabians	**281**	**61.7%**
Non-Saudi Arabians	**174**	**38.3%**
Total number of the respondents	**454**	**100%**

4.2. Level of Barriers to Using Jusur LMS

The Barriers Scale consisting of 22 items with possible scores ranging from 22 to 110 and divided into three levels. The scores ranging from 51 to 78 were considered barriers at a moderate level, while the scores below 51 were considered constituting a low level, and the scores above 78 as a high level. Table 1.3 presents the distribution of the faculty members' perception of the barriers they faced when using Jusur LMS. The collected data suggested that the majority of the faculty members in the sample (58.4%, n=265) perceived that the level of barriers to using Jusur LMS was moderate. The remaining 26.4% (n=120) and 15.2% (n=69) perceived them to lie at a low and high levels, respectively. Further descriptive analysis showed that the

responses resulted in a mean score of 62.1 (S.D = 17.03). Hence, the barrier level to using Jusur LMS observed by the faculty members in Saudi-Arabian universities was considerably moderate.

Table 1.3: Distribution of the faculty member's self-reported perception of barriers to using Jusur LMS.

Levels	Score	Frequency	Percentage
Low	22-50	120	26.4
Moderate	51-78	265	58.4
High	79-110	69	15.2
Mean=62.1	Std. deviation=17.03	Minimum= 32	Maximum=100

4.3. Branches of Barriers

The means and standard deviations for all the subscales are shown in the Table 1.4. According to these data, the Technological Barriers Subscale recorded the highest mean score of 3.20, with a standard deviation of 0.92. On the other hand, the Organizational Barriers Subscale recorded a mean score of 3.01, with a standard deviation of 0.89. The Social Barriers Subscale and the Personal Barriers Subscale recorded the mean scores which were slightly below 3.00, with a standard deviation of 1.01 and 0.91, respectively.

Table 1.4: Means and standard deviations of the Jusur LMS Barrier Sub-Scales

Subscales	Mean	Standard Deviation
Organizational Barriers	3.01	.89
Technological Barriers	3.20	.92
Personal Barriers	2.28	.91
Social Barriers	2.70	1.01

4.4. The Top Barriers limiting from the use of Jusur LMS

The percentage distribution of the faculty members by degree of agreement on 22 statements based on their perception of the barriers to using Jusur LMS was presented in the Table 1.5. The eight leading barriers which were identified as affecting the utilization of Jusur LMS in Saudi universities were ordered into ranks according to their respective mean scores. The strongest barrier identified was the lack of technical support provided by

the institution. The second highest barrier was the lack of support from the administrators, and both poor internet connectivity and lack of appropriate hardware were ranked as third barriers. The fourth barrier identified was the lack of internet access. The fifth barrier was the unavailability of suitable software. The sixth barrier was the lack of financial support, followed by the lack of technological resources in the Arabic language.

Table 1.5: Percentage of the faculty members by degree of agreement on the barriers to using Jusur LMS

Barriers to Using Jusur LMS		Percentage (%)					M	SD
		SD (%)	D (%)	N (%)	A (%)	SA (%)		
1	Lack of support from the administrators.	10.8	12.6	18.1	34.1	24.4	3.49	1.28
2	Lack of technical support provided by the institution.	10.4	11.0	18.7	32.8	27.1	3.55	1.28
3	Lack of financial support.	14.1	16.7	28.6	24.4	16.1	3.12	1.27
4	The use of Jusur LMS does not add to my scientific/academic development.	32.6	22.5	19.2	17.2	8.6	2.47	1.33
5	Increasing student numbers in the classroom.	18.7	20.5	26.7	23.3	10.8	2.87	1.27
6	Fear of increasing teaching loads.	28.6	24.4	16.1	23.1	7.7	2.57	1.32
7	Lack of internet access.	11.0	21.4	21.6	25.6	20.5	3.23	1.29
8	Poor internet connectivity.	11.0	17.0	16.7	28.9	26.4	3.43	1.33
9	Lack of appropriate hardware.	10.8	16.1	16.7	31.7	24.7	3.43	1.30
10	Fear of low quality online courses.	17.2	24.7	23.6	21.8	12.8	2.88	1.29
11	Lack of available suitable software inhibits me from using Jusur LMS.	10.8	22.0	25.3	25.6	16.3	3.15	1.24
12	Lack of technological resources in the Arabic language.	18.7	20.3	18.1	27.3	15.6	3.01	1.36
13	Lack of computer competence.	62.1	18.7	10.1	5.5	3.5	1.70	1.10
14	Lack of technological background.	59.7	17.4	8.6	9.9	4.4	1.82	1.20
15	Lack of training in using Jusur LMS.	27.5	17.0	16.5	26.9	12.1	2.79	1.41
16	Lack of overall job satisfaction.	32.8	20.0	22.5	14.1	10.6	2.50	1.35
17	Lack of release time.	28.4	22.7	20.9	15.0	13.0	2.61	1.37
18	Negative comments made by my colleagues.	35.7	29.1	19.4	9.0	6.8	2.22	1.22
19	Communication difficulties with administrators.	18.5	18.9	22.5	27.3	12.8	2.97	1.31
20	Concerns about the seriousness of students.	10.5	8.1	30.5	21.1	29.8	2.99	1.43
21	My colleagues' negative experiences with Jusur LMS.	26.4	23.6	21.4	20.3	8.4	2.61	1.30
22	My community's doubts concerning the usefulness of Jusur LMS.	24.4	26.9	17.4	20.0	11.2	2.67	1.33

SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree.

5. Discussion and Conclusion

In order to ensure the utilization of Jusur LMS at the specific level envisioned for Saudi- universities, informing the faculty members of the availability of such software could only be regarded as the first step which needed to be followed by many other steps in order to complete the process. The entire instructional environment needs to be restructured accordingly in order to provide a sustainable technological basis for e-learning. The absence of organizational facilities and clear-cut policies is likely to result in a limited use of Jusur LMS and may become an obstacle to its successful implementation. In this study, the barriers faced by faculty members in using Jusur LMS were measured on the Barriers Scale. The result of the descriptive analysis showed that the mean score obtained by the respondents was equivalent to a moderate barrier level. In other words, the faculty members faced serious problems with some of the barriers listed in the scale which hindered them from utilizing Jusur LMS.

Descriptive statistics were also applied to describe the four different aspects of barriers, namely, organizational, technological, personal, and social. The respondents achieved that the technological barriers was the highest mean score in their responses. These findings suggest that the faculty members had to overcome certain technological obstacles before they were able to use Jusur LMS. This was followed by organizational barriers which indicated that the faculty members had identified specific organizational obstacles that prevented them from using Jusur on a more frequent basis. In this respect, van-Braak (2001) noted that the absence of the technological facilities acted as a strong barrier to the use of innovative technology. His observation also mirrors those of others who asserted that technological and organizational factors positively or negatively impact the utilization of technology (Al-Balawi, 2007; Al-Saif, 2005; Pajo & Wallace, 2001; Zhao et al., 2002). In short, organizational and technological supports constitute two sides of

the same coin in the successful implementation of Jusur LMS (Rogers, 1999).

In the course of descriptive analysis, eight organizational and technological barriers were identified. For the organizational barriers, most of the respondents reported that they had difficulties with technical and financial supports, as well as getting support from the administrators. In the technological domain, the majority of the respondents indicated that they faced obstacles with availability of appropriate hardware, poor internet connectivity, a complete lack of internet access, the lack of suitable software and technological resources in the Arabic language.

These findings support those made by Al-Balawi (2007) who admitted that the faculty members were in need of extensive administrative and technical supports and monetary incentives. Rogers (1999) had already noted earlier that academic staff were concerned over the lack of the availability of quality hardware and software, institutional support, staff development, and technical assistance. Limited access to the Internet services was also considered as a main barrier is Saudi higher education (Al-Asmari, 2005; Al-Kahtani, 2006).

The faculty members will use Jusur LMS more effectively when technological, administrative, personal, and social obstacles are diminished. The results demonstrated that an educator who lacks the facilities and necessary background would lose interest in using Jusur LMS by time. Therefore, universities and the national centre are jointly responsible in providing suitable conditions that are necessary for applying the system efficiently. In this regard, the results showed that the technological and administrative obstacles were the most projected problems faced by the faculty members. In addition, the technical and financial supports are hardly available. Decision makers in the national centre should consider this particular issue as crucial. Although the centre is currently providing a distance technical support to the end-users of the

system (Centre – University), this support is still inadequate in terms of the number of universities applying the system and the long distance between the centre and the universities in Saudi. Therefore, establishing centres for technical support at the campuses of universities to urgently support end users is an insistent matter. Meanwhile, the financial support from the universities is also needed for the end users.

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Using a Collaborative-Learning Strategy for Developing English Conversational Skill of Post-graduate Students

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abstract

The research aimed at examining the effect of a using a collaborative learning (CL) strategy on developing English conversational skill for post-graduate students. The study adopted the quasi-experimental design. The sample of the research consisted of a group of Pre-Masters TEFL students. The sample of the research has been assigned to three experimental groups. The research employed Synchronous and Asynchronous applications, namely; team viewer and facebook. Tools of the study included a conversational skill checklist, a pre-post conversational skills test and a conversational skill rating scale. Results revealed that there were statistically significant differences at 0.01 levels for the overall conversational skill and only one sub-skill (namely, using discourse markers effectively) in the favor of the post administration. Results were discussed in relation to several factors that affected the language learning process. Finally, the research provided beneficial contributions in relation to manipulating e-learning technologies in general and CL strategy in particular with respect to language learning.

Keywords :Collaborative-Learning , E-learning,conversational skills , Speaking skills

Introduction

One of the challenges of today's educational process is shifting the emphasis from individuality effort to group work. Yet, the rapid advances in internet technologies seem to increase the choice of tools that can support collaborative interaction. Through such applications, students may have the opportunity to collaborate in live chatting and meetings. As for language learning and teaching, collaborative learners are required to be

more active participants and communicators. Such activity goes in line with the social nature of conversational skills which requires immediate responses and mutual understanding. Hence, the study attempt to develop students' English conversational skill through online collaborative learning.

Terminology and identification

There is no consensus on the definition of collaborative learning (CL). The term collaborative has been used in a wide variety of ways across different fields. CL has been used as an umbrella term for variety of educational approaches involving joint intellectual effort by students or students and teachers together. Recently, different terms have been developed interchangeably such as collaborative e-learning, computer-supported collaborative learning (CSCL), e-collaboration and online collaborative learning (, Chavez & Romero, 2012 ; Coll et.al., 2014 ; Noroozi et.al, 2012; Rasouli&Attaran , 2012) . As for the purposes of the current research, the terms Collaborative Learning, in general, and collaborative language learning (CLL) in particular were to be used. Furthermore, CLL is defined as a set of processes which promote and trigger students' interdependent interaction towards achieving a common goal resulting in learning gains. Whereas , CL strategy identifies the procedures of such processes.

Language and online CL

With regard to language learning, online environments offer new opportunities for communication and interaction. They allow learners to participate effectively in constructing speeches and holding conversations. Adopting a socio-constructivist perspective, Yang (2013:325) asserts that "language learning and acquisition are described as the construction of shared meanings through social interaction among students". Accordingly, CLL practices has been increasingly investigated (e.g., Arroyo, 2012; Dixon & Dixon, 2008; Hagely, 2014; Kohn &Worth, 2008). Despite giving the prominent attention to written language learning (e.g., Bradely et al.,2008 ; Hadjerrout, 2014; Kessler &Bikowski& Boggs, 2013; Li,

2014; Marrone et al.,2012 ; Raitman,et al.,2005; Stickler et.al, 2008; Storch ,2011), oral language development has been also tackled (Chang, 2012; Doi&Peters, 2012; Garcia-Rui, 2008 ; Meksophawannagul&HiranBurana, 2013; Mesh ,2010, Seferoğlu, 2007; Strother, 2005; Zeng &Takatsukab, 2009).

Contributions of CL in the field of language learning and acquisition have been investigated in both types of collaboration; Asynchronous and Synchronous,Tyrou and Mikros (2012:1) state

Second language acquisition research has shown that collaboration facilities language acquisition and related cognitive development. In addition, it changes the structure of communication and social relationships developed in the classroom framework. Moreover, it allows authentic experience in learning environments, and development of students' responsibility for their own learning.

Furthermore, Mesh (2010) emphasizes that online CLL maximizes the time of participation of students. It extends the time of classroom interaction and promotes ongoing conversations. In addition, it induces peer learning, reflection and active learning.

Elements of CLL

With respect to the learning philosophical paradigm, "CL is grounded on the philosophical conceptions of cognitive and social constructivism". Basics of CL emphasize learner's internalization of new knowledge acquired through social interactions. Based on Gruba (2004) , Laal (2013) and Doodly (2008) elements of CLL can be demonstrated in relation to the cognitive and social constructivism as follows :

Social negotiation

Social negotiation is regarded as a key part of CLL. Learners are supposed to learn something together. They should communicate in pairs or within groups. They are obliged to rely on each other to achieve the final common target. Consequences

of a learner's failure may probably affect the whole group. Thus, the whole group dynamics reflect their interdependence and communication.

Multiple modes of representation

Language learners' collaboration could be maximized through varied technological features. Learners can participate actively in written or oral communication. Providing such modes requires implementing varied technological features, for instance, video streaming, video conference, audio streaming, instant messaging etc.

Learners' needs

Since collaboration is a goal directed activity, language learners' needs should be highly considered. Learners' awareness of the goals of their participation should be raised from the beginning. Furthermore, the benefits of achieving such goals should be well demonstrated. Each learner should know the importance of the common goal that the whole group is targeting. As the need arises in relating to the goals, students will probably communicate effectively.

Mental schemas

Being based on collaboration, language learning should take into account the similarity of mental schemas possessed by the learners. The degree of this similarity may affect their engagement within the task. It may also affect their enthusiasm to interact or negotiate. In fact, it may even have impact on their understanding or interpretations resulting in communication breakdowns.

Authenticity and individuality

Surely language learners will primarily differ in certain characteristics as individuals. Yet, such differences should be tolerated in order not to affect learners' behavior as a part of a group. For example, students typing abilities should be nearly equal. In addition, learner's access to the adopted collaborative tools should be authentic. That is, learners' use of these tools

should be a part of his life style. Hence, language learning can take part within a CL framework in relation to its constructive philosophy.

Reflect on practice

Working within groups, language learners are required to assess themselves and others. In order to achieve one target, learners have to work on each others' outcomes such reflection deepens their understanding and foster their learning. On whole, CL demands language learners to use their higher order thinking skills so as to reflect on their progress towards goal achievement.

Benefits of CLL

Benefits of CL have been gathered and categorized in varied ways.With regard to Laal &Ghodsi (2012), CL benefits can be categorized in terms of four main domains, namely; social, psychological, academic and assessment. A brief description for these domains can be demonstrated as follows:

Social benefits

CL enhances social interactional skills among learners. Students' relationships are usually characterized by mutual understanding, interdependence and support(Hwang&Kuo, 2013).

Psychological benefits

CL promotes self-esteem and develops positive attitudes towards the whole learning process including peers, teacher, subject matter and activities(Arroya, 2012).

Academic benefits

CL increases students' active participation of learners. It promotes learners' critical thinking and problem solving skills. With respect to integrating collaborative language learning and problem based tasks, Abdullah &Hoon (2011, 54)mentioned that

It stimulates communication and generates substantial discussion on a variety of topics, resulting in the use of English for academic and social interaction. It raises the students'

awareness of a real audience for the language tasks. They are working on and provide a meaningful context within which language learning, including the exploration of grammatical rules, took place.

Assessment benefits :

CL enhances the use of variety of assessment tools resulting in gathering more comprehensive data and more engagement in the evaluation process. It develops self-evaluation and peer correcting techniques .Bradelyet.al. (2010:247) advocate that some CL assessment applications may have numerous contributions in relation to language learning stating "revising co-constructed text opens up possibilities for the students to evaluate existing contributions and it also provide opportunities for them to suggest constructive changes".

However, Zorko (2009) categorized strengths of CLL according to the type of interaction, in particular asynchronous and synchronous. Yet,he noted several prospected outcomes of effective online collaboration that can be summarized as follows:

- Peer to peer interaction usually entails building teamwork on bases of an interdependent relationship, fair distribution of work, mutual understanding, self evaluation and autonomous learning.
- Student-teacher interaction includes consulting, monitory, guiding, and providing feedback and emotional support.
- Student-interaction with resources includes providing students with prompts, handouts, explanations, distribution of tasks, timing and suggestions.
- Students' interaction with interface encompasses the freedom of access to the content and the absence of technical problems.

Task design for CLL

Taking the advantage of opportunities that collaborative tools provide, it is possible to promote language learning creatively. In general, Tereseviciene&Gedviliene (2003:6) set up the following requirements to CL task design.

- The tasks are formed in such a way that the students take care not only of the fact how to execute his/her task, but also of how to execute task requirements for other group members.
- Clear individual responsibility for the work of the whole group. Every students receives feedback about his/her progress (after having assessed individually), and the group has a feedback with each member's progress (the work of the whole group is assessed).
- The students' aims encourage to extend each member's possibilities and keep good work relationships of group members;
- Management, collaboration, trust, and conflict solution are social skills, which are directly taught.
- The teacher observes and analyzes the issues that have arisen during the work process and simply as a lesson summarizes the efficiency of the group work.
- Their friendship is usually of a heterogeneous type.
- All group members share the leader's position.

However, Gruba (2001) andGoulao (2012) mention several aspects of CLL task design, among which is the following:

- The integration of authentic online resources should be professionally prepared in advance by task designers
- Self-assessment should be initiated by model responses managed by task designers.
- The task completion process should be well prepared and required.

Conversational skill and CLL

Learning collaboratively is an active way of learning. The objective of the learners is only achieved through communication and interdependence. According to Zurita and Nussbaum (2004: 290) "CL has been frequently seen as a stimulus for cognitive development, through its capacity to stimulate social interaction and learning among the members of a group". In line with this

social view of the CL process, knowing a language is regarded as a social process that underpins a human construction of knowledge(Laal et al., 2012).

In addition , Doi and Peters (2012:18) state"language is neither an essential given nor a product of individual minds; rather, it is derived from and sustained by our dynamic and ongoing social interactions". That is, language is a means of communication and a tool for building mutual understanding within a community. In particular, the purpose of a conversation is to exchange information, establish and maintain the relationship between people (Zhang, 2008: 60). Such social view of learning that CL underpinsseems to be consistent with teaching conversation which is regarded as a social activity.

The sociality of the conversation can be tackled by several features. Barraja -Rohan (2011: 481-482) highlighted the following :

- The turn-taking system, which involves how and when to take the floor, overlapping, the role of gaze and intonation, etc. The turn-taking system is also linked to the role of participants. Indeed there is a primary speaker (e.g. in story-telling the story teller takes longer turns-at-talk) and a listener (also called secondary speaker who, in the case of story-telling, makes minimal contributions), so these roles have implications on the turn-taking system;
- The sequential organization of utterances, which entails adjacency pairs. Adjacency pairs are connected to the preference organization system, such as preferred response (e.g. granting a request) or unpreferred response (e.g. refusing a request).
- Repairs, i.e. being able to know when and how to initiate and accomplish a repair. Intersubjectivity: how intersubjectivity is achieved, in other words how interactants make meaning to each other and display common understanding and knowledge;

- Paralinguistic activities, which are produced purposefully and are therefore relevant and meaningful to the participants, such as pauses, intonation, gaze, gestures, perturbations (stuttering, hesitation markers, etc.), laughter, and others.
- Context: Context is created by the participants, their utterances and actions, which reflect their relationship, e.g. how they address or greet each other.

In the light of these features, conversational sub-skills have been categorized. Based on Zang (2008) and Marshell (2012), conversational skills can be categorized as follows:

- Topic management skills (opening-shifting-closing)
- Turn taking skills (taking- interrupting-holding-passing)
- The use of adjacency pairs.
- The use of backchannel ques.
- The use of fillers, repetitions and hesitations.

The context of the problem

The present study investigated the development of English conversational skill of Pre-MastersTEFL students through the use of a CL strategy. Taking into account the researchers observation in the Admission interviews, Pre-MastersTEFL students were weak in the conversational skill. To come closer, a conversational sub-skills questionnaire was administered to a group of 10Pre-MastersTEFL students. It was designed by the researchers. It aimed at identifying the pitfalls in the participants' conversational skill. It consisted of nine items that nearly represent the common core of the conversational sub-skills. Participants had to choose from a scale of three items, namely; always, sometimes, rarely. The questionnaire's data analysis revealed that students poorly master English conversational skill as follows:

Accordingly, the problem of the research can be stated as follows: Pre-MastersTEFL students are weak in English conversational skill.

Table (1) Data Analysis of the Conversational Skills Questionnaire

Item	Percentage		
	Rarely	Some.	Alwa.
I can raise any topic easily and smoothly	50%	50%	0%
I can close the conversation politely	50%	50%	0%
I know how to interrupt others politely to ask for clarification	50%	50%	0%
I can easily continue my speech till I make my point clear	66.67%	33.33%	0%
I can mange using repetition naturally	50%	33.33%	16.67%
I can use discourse markers effectively	66.67%	33.33%	0%
I can gain time to think through using fillers (ex: emm-hhh-ahh)	50%	50%	0%
I use phrases like (I know – I see) to avoid communication breakdowns	16.67%	66.67%	16.67%
I can easily engage in a conversation	50%	50%	0%

Furthermore, same sample were asked to answer a computer skills questionnaire (designed by the researchers). It aimed at measuring the participants' usage and familiarity of varied social and educational online activities. It consisted of two sections. In the first section, included six web based activities which are; video conferencing, social networking social networking in English, interactive activities, ESL websites and searching for information. The degree of frequency was determined by a scale of six items, namely; seldom/ once a month/once a weak/once a day/more than once a day. The second section included two open ended questions about their feelings towards the usage of these activities in general, and educational purposes in particular. Results showed their frequent use of varied web-tools as illustrated in the following diagram:

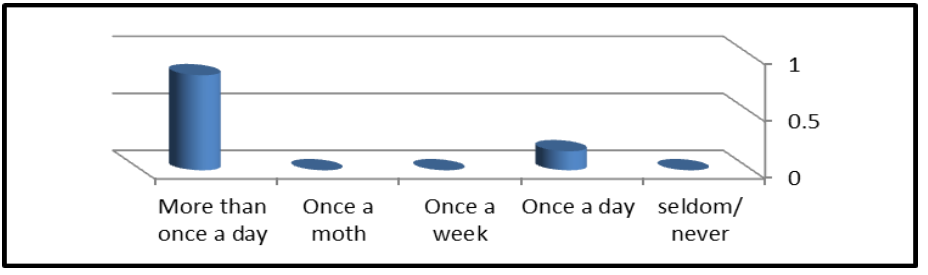

Figure (1) Results of the Computer Skills Questionnaire

Hence, the present study suggests the use of a CL strategy to develop English conversational skill of Pre-Masters TEFL students. Hence, the study was designed to answer the following overall research question: what is the effect of using CL strategy in developing English conversational skill of Pre-Masters TEFL students?

The study's hypothesis

- There is a statistically significant difference at level (0.01) between the pre and post administrations of the conversational skill test in students' overall conversational skill in favour of the post administration in terms of Wilcoxon Sign-rank .
- There is a statistically significant difference at level (0.01) between the pre and post administrations of the conversational skill test in students' conversational sub-skills in favour of the post administration in terms of Wilcoxon Sign-rank .

Method

The participants

The participants of this study were 16 Pre-MastersTEFL students at Institute of Educational studies, Cairo University. Participates' age ranged from 25 to 29 years old. Based on the participants scores on the participants scores on the TOFEL test their language mastery level was high intermediate. The participants were assigned into three groups according to their preferences the instruments.

Conversational sub-skills checklist

A conversational sub-skills checklist was designed by the researcher(See AppendixA). It aimed at identifying the most important conversational sub-skills to the sample of the study. It was administered to three jury members of TEFL specialists (see Appendix B). It included seven skills. Five of which were chosen to be the most important, namely;

- Managing conversational turns smoothly

- Managing topic shifts smoothly
- Using adjacency pairs appropriately
- Using back channel cues effectively
- Using discourse markers effectively.

Conversational skill test

A conversational skill test was designed by the researchers (see Appendix (C). It aimed at assessing the participants' level of mastery of the identified conversational sub-skills. It included two tasks.In the first task, participants had to answer some open ended questions for fifteen minutes. In the second task, participants had to discuss with the interviewer some topics for fifteen minutes.The validity of the test was assured by administrating the test to a panel of TEFL specialists. In order to determine the suitable time, the researchers administrated the test to a sample of 10 students. Time allotted to each task was calculated with regard to average time taken by students. Moreover, test reliability was calculated using Cronbach's Alpha (0.93) after being administrated to a sample of 10 students twice .

Conversational skill rating scale

A rating scale was designed by the researcher in order to assess participants' conversational skill. It consisted of five columns corresponding to targeted conversational sub-skills and five rows including their demonstration according to five levels of descriptions (1-5). Accordingly, each skill could be rated from 1 to 5 whereas the total score of the whole scale is 25 (See Appendix D).

Procedures

The TOEFL test was administered to the three groups of participants in February within three successive days (21-23). Each group attended one hour session during which they completed the TOEFL test. Following this session, each participant attended an individual session. In which the conversational skill test took place .Recording of these

interviews were analyzed and rated by the researcher and two other ratters with reference to the conversational skill rating scale. The inter-ratters reliability was calculated by Cronbach's Alpha (the estimated value was 0.98). The researchers implemented the CL strategy in two stages. In the first stage, the researchers met the 16 participants in the 2nd of March. They conducted an introductory session that included; identifying the steps of the strategy, introducing the videos, introducing team viewer programs, clarifying the tasks and the duration of the implementation. It is important to note that there was no direct instruction about the conversational sub-skills. The indirect approach is used in this study as an instructional approach for teaching conversation (Dornyei&Thurrell, 1994:41). It was thought to be more suitable to the foreign language learners whose English proficiency level is high intermediate. Second stage included the implementation of the strategy itself.

The implementation started by adding the participants to a face book group called conversational skill group. A schedule was announced to each group including fixed time of team viewer sessions. Each group was supposed to meet three times per week for a period of three month. Each session should last for nearly 2 hours. The duration of the treatment received by each group was 36 hours. Team viewer sessions were conducted in consistent with the CL strategy. Each session started by posting the (ID) number of the team viewer room on the wall of the FB group. After checking the group attendance, the sessions undergoes as follows:

a. Warm up (5 min.): Introducing the topic of the video through some simple questions about its topic. It is done by the researchers.
b. Task demonstration (10 min.) : Explaining the required tasks and assigning the roles of students. Task one requires listening to the video and preparing 5 minutes speech about one of 5 items (video –description – video content – view points – relevance – application).Task two requires each participant to present an oral report or

summarization of the whole previous task. It lasts for 30 minutes.

c. Monitoring (15 min): The researcher plays the video and check the participants attendance and attention through the instant messages (chatting). The video includes real conversations about different topic in TEFL field.
d. Discussion and reporting (50 min.) : In this stage students achieve task are and two by their own. The researchers monitor their participation and rarely interfere for help or technical purposes.
e. Consolidation and evaluation (25 min.) : The researchers presented the task sheet to the group through the whiteboard . Participants are asked to freely comment on any item. Different issues were raised as fields of investigation in the TEFL literature. Participants are free to discuss or elaborate any vague information. Answers to any raised questions that needed investigation were posted later on via FB group. They were asked to freely comment on the CL strategy and the whole learning process.
f. The implementation of the collaborative learning strategy started on 4th March and ended on 4th, June. The researchers administered the same conversational skill test to the participants as a pre-post within three successive days, particularly, 6th, 7th , 8th June. Same procedures of the pre-administration of the conversational skill test were employed in the post administration.

Results

The statistical techniques used in this study were ANOVA and Wiklcoxon Sign- ranks. All the data were statistically treated using statistical package for social science (SPSS).

First of all, it was essential to examine if there were any statistically significant differences between the experimental groups and within these groups in relation to the conversational skill test. Such examination took place prior to the implementation of the study. Hence, the results of the pre-

administration of the conversational skill test were subjected to statistical treatment using ANOVA tests.

Table (2) ANOVA test results of the pre-administration of the conversational skills test comparing the mean scores of the students of each group and within the groups themselves in the conversational skill.

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between groups	4.017	2	2.008	.120	.888
Within groups	217.733	13	16.749		
Total	221.750	15			

As shown in table (2) the estimated value is (0.88) which is not statistically significant at 0.01 level because it is less than (1). Therefore, it can be assured that the part three groups and within these groups were approximately at the same level of performance in the overall conversational skill before the implementation of the collaborative strategy.

Verifying the hypothesis : There is a statistically significant difference at level (0.01) between the pre and post administrations of the conversational skill test in students' overall conversational skill in favour of the post administration in terms of Wilcoxon Sign-rank .

To verify this hypothesis, scores of the experimental groups on the pre and post administrations of the conversational skill test were compared using wilcoxon Signed-Ranks. The results of this test proved to be statistical consistent with the hypothesis therefore, the first hypothesis is verified. Table (3) shows this statistical significanceas follows:

Table (3) Results of pre and post administrations of the conversational skill test comparing the experimental group students' scores in terms of Wilcoxon Sign-ranks

Z	3.542-a
A sum p sig. (2 taited)	000

Table (3) above shows that the estimated value was(3.542-a) which is statistically significant at 0.01 level. Hence, it can be safely said that there was a statistically significant difference

between the experimental groups scores on the pre and port administrations of the test in the favour of the post administration in terms of Wilcoxon Sign-ranks. The experimental groups students' significant growth in their conversational skill can be illustrated in the following figure.

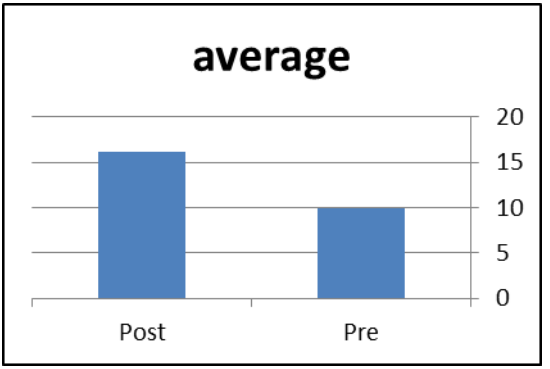

Figure (2) Comparisons of the pre and post test mean scores of the experimental group students in the overall conversational skill.

To further investigate the differences of the experimental groups scores in the pre –post administration of the conversational skills test in relation to each group, ANOVA test was used. Results showed that there were no statistically significant differences at the 0.01 level as shown in the following table

Table (3) Results of pre and post administrations of the conversational skill test comparing the experimental groups scores in terms of ANOVA test

	Sym of Square	df	Mean Square	F	Sig.
Between groups	23.538	2	11.769	.942	.415
Within groups	162.400	13	12.492		
Total	185.938	15			

Verifying the second hypothesis: There is a statistically significant difference at level (0.01) between the pre and post administrations of the conversational skills test in students' conversational sub-skills in favour of the post administration in terms of Wilcoxon Sign-rank .

To verify this hypothesis, scores of the experimental groups on the pre and post administrations of the conversational skill

test were compared using Wilcoxon Sign-ranks in relation to the conversational sub-skills . Results revealed that there were statistically significant differences at 0.01 level for only one skill in the favour of the post administration, as shown in the following table.

Table (4) Results of pre and post administrations of the conversational skill test comparing the experimental group students' scores in relation to conversational sub-skills

No.	Conversational sub-skills	Value
1	Managing conversational turns smoothly	2.121 .034[a]
2	Managing topic shits smoothly	2.754 .006[a]
3	Using adjacency pairs appropriately	2.887 .004[a]
4	Using back channel cues effectively	2.345 .019[a]
5	Using discourse markers effectively	3.585 .000

The experimental group students' performance in each conversational sub-skill in both pre and post administration of the conversational skill test can be illustrated in the following figure :

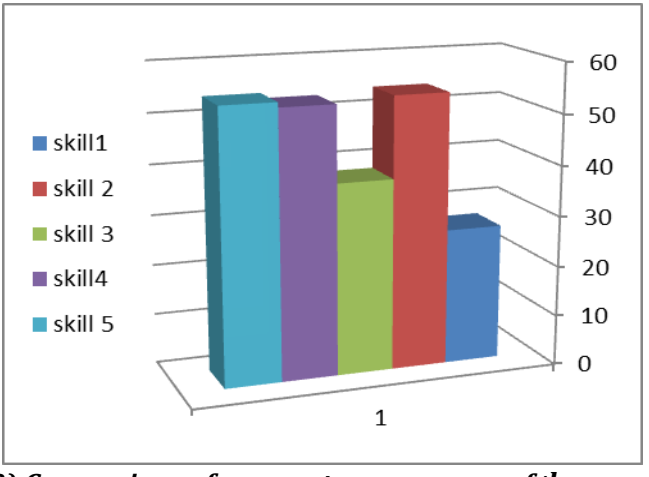

Figure (3) Comparison of pre-post mean scores of the experimental groups in each conversational skill

To sum up, the two hypothesis were supported. The experimental group students achieved triangle progress in their overall conversational skill in general and the fifth sub-skill in particular

Discussion

In the light of the previously presented statistical analysis, it can be concluded that the CL strategy had an effect on developing the experimental group students' overall conversational skill(3.542-a)and fifth sub-skill (i.e.Using discourse markers effectively) (3.585). This is proved by comparing scores of the experimental groups on the pre and post administrations of the conversational skill test using Wilcoxon Sign-ranks. This is consistent with the results of studies which proved the effective role of CL applications on enhancing students' languages skills which indicated the ineffective role of CL in developing language skills (e.g., Bradely et al.,2008 ; Chang, 2012; Garcia-Rui, 2008 ; Hadjerrout,2014;Li,2014;Marrone etal.,2012,Meksophawannagul & HiranBurana, 2013; Mesh ,2010 ; Stickler et.al, 2008, Strother, 2005).With respect to 1st ,2nd ,3rd and 4thconversational sub-skills, results did not show any significant statistical difference between scores of experimental group students in the pre-post administrations of the conversational skill test in relation to Wilicoxon Sign-rank as shown in table (4).Such results is consistent with some studies (Arnold,2009 ; Kessler & Bikowski & Boggs, 2013; Raitman,et al.,2005;Seferoğlu, 2007; Storch,2011; Wang & Chen ,2012, Zeng &Takatsukab, 2009; Zorko,2010)

In general, the students' progress in the overall conversational skill and the conversational fifth sub-skill can be ascribed to several factors. Firstly, the CL strategy was based on building team working and promoting engagement in small groups. According to Arnold et.al.(2009) and Luzan (2006) the success of such collaborative interaction depends mainly on the group members in relation to number and eagerness to participation. It is worth noting that the all group members were at the pre-Master TEFL program which means they were eager to learn and ready to participate. In addition, Chang (2012) has

assured that the variation of tasks may induce students to participate. With respect to the employed tasks, students had to actively interact, explore opinions, exchange ideas and investigate questions. Therefore , their use of oral language was real and goal driven. Accordingly, real conversations took place throughout the whole implementation resulting in such progress in the overall conversational skill.

Secondly, the environment of CL strategy was supportive to free participation. The use of varied collaborative tools (i.e face book -team viewer) provided students with wide range of choices in relation to type of interaction. Students were allowed to listen to each other, upload presentations, listen to a video and send instant texts. Such flexibility fosters students' real conversation (Bradely et.al.,2010; Mesh ,2010) .

Thirdly, students' use of discourse markers was developed as they frequently practiced giving individual speeches throughout the sessions. In addition, technical problems didn't affect their ongoing in such individual practice. That is consistent with Lozan's study (2006:1) stating " computer mediated communications help learners develop interactive competence through practice and give them the sense of having audience".

However, there are four conversational sub-skills which were not developed through using the CL strategy, namely; managing conversational turns smoothly, managing topic shits smoothly, using adjacency pairs appropriately, using back channel ques effectively. That can be mainly ascribed to three factors.

Firstly, the indirect approach for teaching conversational skill was employed in the study. Hence, no direct instructions were implemented. There weren't any demonstrations or explanations about conversational sub-skills or features of spoken language. The use of a (15 minute) video including real native conversation was the only resource about conversation skills. Students were supposed to watch and pick up how conversations go on effectively and smoothly. In fact, students

while watching the videos paid attention to the content rather than the routines of the conversation.

Such factors affected students' progress in their conversational sub-skills. In other words, students' engagement was not fruitful as they missed the real learning purpose of participation. Similar to the current study's results, Kessler &Bikowski& Boggs's study (2013) attributed the students' hindered progress in writing skills to using the collaborative tool for another learning purpose. They stated (p.91) " findings suggest that students focused more on meaning than form, that their grammatical changes were overall more accurate than inaccurate that they participated with varying frequency , and that they used the tool for simultaneous varied purposes" .

Secondly, students' level of English mastery, in general, and in the conversational skill in particular were almost equal. Hence, students' communication easily resulted in mutual understanding and shared agreements. Students established a relation based on interdependence rather than compulsory. That is, students had a very little chance to pick up conversational routines from each other. According to Storch (2011), language proficiency level is one of the main factors that may affect language learning gains.

Thirdly, there were some technical problems in relation to the collective network environments, in general, and individual network connection, in particular. Despite the flexibility of choosing the suitable time, network connections constituted a huge challenge for most of students. Several tools were deployed to overcome this obstacle such as (using USB, increasing download rate of wireless connections). However, communication hanging on or break downs took place. It is worth noting that, any technical problem a member of the group faces affects the whole CL process since it was build on bases of interdependence. That is students' conversations were subjected to regular interruptions,for example:

- A students' voice became too slow (weak connection)

- Echoes of students' voice appeared regularly (weak connection)
- Videos pause regularly while playing (weak connection)
- Video took too long time to load before playing (weak connection)
- Either the sound or screen of the video stop working suddenly
- Video conferencing stopped working immediately

Such problems affected the quality of group discussion. Usually, students suffered from waiting for feedback or clarification. As a result, the process of group discussion didn't lead to a satisfying amount of vivid ongoing conversations. Such hindering factors had been highlighted also by different studies which suggested the use of CL applications to develop oral language skills such as Seferoglu (2007), Wang & Chen (2012) and Zeng &Takatsukab (2009) who stated (p.442) " most importantly , the unstable network and busy schedule might have affected learner's effective participation"

Conclusion and pedagogical implications

The study aimed at developing conversational skill for Pre-Master TEFL program at Institute of Educational Studies, Cairo University. For the purpose of the study, the use of the CL strategy had been investigated for a period of three months. The results reported here suggested that students' overall conversational skill had been developed with respect to Wilicoxon Sign-rank. Several factors had contributed to the students'progress, particularly; variety of tasks, ongoing interaction and size of group. However, other factors hindered their progress in relation to some conversational sub-skills, such as language proficiency and internet connection problems. In order to maximize the benefits of CLL, it is worth considering the following aspects to support a more suitable e-learning environment to language development, in general, and conversational skill in particular:

- Incorporating varied and challenging collaborative tasks.
- Designing tasks in terms of students' linguistic needs and language proficiency.
- Introducing the employed CL strategies in details.
- Assigning students into group according to their proficiency level on bases of heterogeneity.
- Providing students with technical facilities and support.
- Employing variety of collaborative tools so as to create rich e-learning environment.
- Adding facilities of face to face interactions and live meetings.
- Enabling audio and video recordings for formative evaluation.

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The Effectiveness of Two Writing Workshops — Paper-Based Versus Computer-Based — in Developing Preparatory School Pupils' Writing Performance

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Abstract

The present study aimed to compare the effect of applying the paper-based writing workshop to the computer-based one in teaching writing to second-year preparatory school pupils in Suez Governorate. Participants of the study included two 2nd year intact classes (n=50), from Old Suez Prep School for Girls divided into two equivalent groups: Experimental one (the paper-based, n=25), and experimental two (the computer-based, n=25). The two groups were tested using the pre and post writing performance tests before and after the experiment. The experiment lasted for three months during the second term of 2014-1015 academic year. During this period, the paper-based group was exposed to the paper-based writing workshop program while the computer-based one was exposed to the computer-based writing workshop program. Differences between the pupils' means of scores on pre-test and post test were calculated for each group separately using Paired Samples T-Test. Significant differences were found between the pre-test and posttest of writing performance of the paper-based group whereas no significant differences were found between the pre-test and posttest of writing performance of the computer-based group. Independent Samples T-Test was used to calculate the differences between the mean gain scores of the paper-based group and that of the computer-based one on the pre test and the post test of writing performance. Significant differences existed between the students' mean gain scores of the paper-based group and those of the computer-based one on the pre and post tests in favor of the paper-based group.

Key Words: Paper-based writing workshop, computer-based writing workshop, writing performance.

Introduction

Writing is an integral part of daily life. It is a form of expression that allows ideas, thoughts, feelings, and sense

making of the world to be communicated (Mester, 2011). To Kiuhara, Graham, and Hawken (2009) it is not an optional skill for students; it is essential. EFL students— Egloff (2013) states— need writing to become successful in school and beyond. It is the medium through which all subjects are assessed as it is considered a required element of standardized testing. Also, Hudson, Lane and Mercer (2005:473) believe that "writing about a topic helps people to understand it better, thus writing is the primary way through which students are asked to display their knowledge in school". Therefore, Hamp-Lyons (2002) assures that command of good writing is necessary for success in the 21st century as "the written word remains a principal medium of communication which can create understanding between people" (p.5).

Writing is not an easy skill to be mastered. It is a means of communication that must be consciously learned. It is an intellectual activity that should be taught according to its complex nature because the more it is studied and practiced, the more perfect it becomes (Herffernan, Linclon, & Atwrill, 2001). Consequently, Reid (2002) said that teaching English writing is different from teaching other language skills because writing is used as a support skill in language learning. Despite its importance, writing instruction has been neglected as teachers have sought to meet other curricular demands. The lack of a research-based instructional framework has caused ambiguous and inconsistent writing instruction across the schools. Therefore, both Graham and Perin (2007) assure that little attention was given to writing instruction. Accordingly, writing instruction is an area that needs more attention, specifically in the preparatory grades.

It is clear that computers, mobile technologies, and the Internet are changing the way people write and produce text, and this influence is quickly spreading. Yet writing is a complicated, recursive, and ever-changing process. With the addition of technology, that process changes even more (Hicks, 2006). Ramsay (2011) assures that integrating technology into

writing classrooms often motivates even the most intractable struggling writers. With computers — Yancey (2009) believes — the act of writing becomes more and more an act of composition using text, images, and sound to interact and collaborate with the reader—and this requires us to rethink how we use and create text in our classrooms. However, striking a balance between focusing on the writer and the writing on the one hand and using technology on the other is a challenge that needs to be solved.

Research conducted by Calkins (1986) and Graves (1983) has greatly impacted writing instruction. The strategies introduced by these pioneers shifted writing instruction from a product approach to a process approach similar to that found in the writing workshop that emphasizes on the stages of writing (Knudsen, 1990). Since then, writing workshop has become a respected method for teaching writing to all age groups in general (Eitelgeorge, & Barrett, 2004) and it is one of the dominant strategies of writing instruction in middle school in particular (Harris, Graham, & Mason, 2006). Yet, recently, many paper-based instructional modes – Noyes and Garland (2008) states – have been transferred directly into computers with little regard for any implications. Endres (2012) believes that the creation of electronic text is starting to become a more normalized medium for writing. Accordingly, the debate concerning the equivalence of computer- and paper-based instruction continues, especially with the growing interest in online instruction. Consequently, more researchers and scholars will have to research the complicated implications and effects that would come with the implementation of this significant change in modes of writing workshop. The way in which writing workshop is implemented (either paper-based or computer-based) may have a great impact on pupils' writing performance.

In spite of writing importance for preparatory school pupils and the various modes used in writing instruction in most preparatory schools, the researcher believes that the low levels of writing performance is one of the serious problems facing EFL preparatory school pupils in general and Old Suez Prep School's

Pupils in particular. Surveying a number of studies that investigated writing performance at the preparatory stage (e.g., Abdel-Fattah, 2012; Sahakian, Abdel-Moneim and El Hadidy, 2012; Al-Sagheer, 2013; and Ebrahem, 2015), the researcher revealed that preparatory school pupils encounter different problems in their writing performance. For example, Abdel-Fattah (2012) found that preparatory pupils (either in the first or the second year) have inadequate writing skills. They lack organization as well as mechanics skills. In 2012, Sahakian, Abdel-Moneim and El Hadidy found that students in prep stage encounter several difficulties in their writing performance. They tend to feel frustrated when facing a writing task either a paragraph,or a letter. Also, experimental prep school pupils –Al-Sagheer (2013) found– encounter different problems in their writing performance as they lack writing accuracy. In Suez Governorate, Ebrahim (2015) found that second year preparatory school pupils suffer from many problems in their writing performance such as inability to provide supporting details, inability to write relevant ideas, weak position statements, repition of lexical and structural items, problems with spelling, grammar, punctuation, and mechanics.

To ensure that EFL preparatory school pupils in Suez encounter similar problems in their writing, the researcher conducted a pilot study on 30 second-year EFL preparatory school pupils at El Sadat Prep School for Girls. She administered a writing performance test. The results of the test revealed that the majority of pupils (80%) encountered difficulties in most writing skills such as: providing supporting details, writing relevant clear ideas, showing poor spelling and punctuation marks, writing conclusion, ……. etc.

To the knowledge of the researcher, several studies have been conducted on the effect of either computer-based writing workshop or paper-based writing workshop. Yet, studies comparing the two kinds of writing workshop are limited. Therefore, the purpose of this study is to investigate the effect of

paper-based versus computer-based writing workshop on the preparatory school pupils' writing performance.

Statement of the problem

The problem of the present study is stated as follows:

There was a low level of writing performance among second- year preparatory stage students at Old Suez Prep School for Girls. In an attempt to find a solution for this problem, the present study would use the writing workshop to develop preparatory school pupils' writing performance. Also, it would investigate the effectiveness of two modes of writing workshops ─paper-based versus computer-based─ in developing preparatory school pupils' writing performance.

Therefore, the present study will answer the following questions:

1. Which is more effective on developing preparatory school pupils' writing performance: paper-based or computer-based writing workshop?
2. What is the effect of paper-based writing workshop on preparatory school pupils' writing performance?
3. What is the effect of computer-based writing workshop on preparatory school pupils' writing performance

Hypotheses of the study

The present study included three hypotheses as follows:

1. There would be no statistically significant difference in the mean scores of the paper-based group exposed to the paper-based writing workshop, on the pre/post tests of writing performance.
2. There would be no statistically significant difference in the mean scores of the computer-based group exposed to the computer-based writing workshop, on the pre/post tests of writing performance.
3. There would be no statistically significant difference in the mean gain scores of the paper-based group and those of

the computer-based group on the post test of writing performance.

Significance of the study

The significance of this study lies in the following points:

1. It may resolve the debate concerning the effectiveness of computer- and paper-based instruction.
2. EFL teachers would know more about specific practices of computer-based writing workshop as well as the paper-based writing workshop.
3. It would show the feasibility of integrating technology in language teaching, thereby helping EFL teachers teach writing skills effectively.
4. It would add to the growing body of research on the effect of the computer-based as well as the paper-based methods and strategies of teaching on developing various language skills.

Delimitations of the Study

The present study is delimited to:

1. Two 2nd year intact classes from Old Suez Prep School for Girls.
2. The second term of 2014-2015 academic year.

Definition of Terms

1-Paper-based writing Workshop

Paper-based writing workshop is operationally defined as a method of teaching writing using a workshop approach in which pupils write self selected topics. It starts with a mini lesson introducing the writing topic and modeling it by the researcher. Then, paper-based free writing time is given to pupils to write their paragraphs while the researcher is conferring with them, discussing their writing problems and introducing suggestions. Finally, the pupils share their paragraphs with peers or the whole class to receive feedback from the teacher as well as from their peers.

2-Computer-based writing workshop

It is operationally defined as a method of teaching writing using a workshop approach in which pupils write self selected topics. It starts with a mini lesson introducing the writing topic and modeling it by the researcher. Then, in the computer lab pupils are given time to type their paragraphs using Microsoft Word while the researcher is conferring with them, discussing their writing problems and introducing suggestions. Finally, the pupils share their paragraphs with teacher and peers by sending their paragraphs via e-mails. Pupils receive feedback from the teacher as well as the peers via e-mail also.

3-Writing performance

In the present study, writing performance is operationally defined as the ability of second year preparatory school pupils at Old Suez Prep School for Girls to produce written English paragraphs with sufficient content (unity and relevance), accurate language (grammar and word choice) as well as perfect organization and mechanics ((main idea, supporting details, concluding sentence, spelling and punctuation).

Review of Related Literature

Writing Workshop is a method of writing instruction that developed from the early work of Donald Graves, Donald Murray, and other teachers/researchers who found that coaching students to write for a variety of audiences and purposes was more effective than traditional writing instruction (Calkins, 2006). This approach has been popularized by Lucy Calkins and educators involved in the Reading and Writing Project at Columbia University in New York City, New York.

Definition

Mester (2011) defines writing workshop as an interdisciplinary instructional strategy that incorporates the process approach of writing instruction. In other words, both Dorn and Soffos (2001) define it as a method where students learn and practice the processes of how to write effectively. Jasmine and Weiner (2007) and Carroll (2010) agree that writing

workshop is an interactive approach to teaching writing in which students learn and practice rehearsal, drafting/revising, and editing work that is personal to them.

Both Calkins and Mermelstein (2005) define writing workshop as a non-traditional approach to writing where students are developed through a variety of interactive experiences, starting with a mini-lesson that is followed by independent writing, conferring, and group sharing. They agree that writing workshop is an instructional context in which the teacher guides the students through the writing process. Therefore, in writing workshops, students engage in the creation of a variety of written products with instructional assistance from the teacher.

Theoretical perspectives of writing workshop

The theoretical underpinnings of this approach are provided by three related theories of learning, namely, the constructivist theory of Bruner (1981), the social development theory of Vygotsky (1978), and the social learning theory of Bandura (1986).

The constructivist theory is not new. It is derived from the work of Dewey, Bruner, Piaget, and Vygotsky, among others. Constructivism is a theory of learning based on the principle that learners construct meaning from what they experience. Accordingly, learning is an active, meaning-making process, not a passive, receptive process (Cornelius-White, 2007). Thus, the basic premise of the writing workshop strategy is the interaction between teacher and student. Writing workshop emphasizes the teaching-learning relationship of social interaction rather than teaching materials because writing is by nature a social process (Dorn and Soffos, 2001). Therefore, they added that students learn how to become writers through meaningful interactions with knowledgeable adults. According to Bomer and Laman (2004), the interactions among students are equally important to interactions between teacher and students because they allow students to exchange ideas that may impact their learning and achievement.

According to Bandura's (1986) beliefs of observing, modeling, and imitating, learning occurs when individuals observe the desired behavior being modeled by others and then adopt the behavior themselves to achieve a learning goal. In the writing workshop, the mini-lesson focuses on strengthening students' area of need by modeling effective writing techniques. Students not only observe and model the teacher but also can do the same with their peers to acquire the desired behavior. Consequently, this strategy is in line with Bandura's (1986) social learning theory, which emphasizes the importance of observing and modeling behaviors necessary to learning new skills.

Regarding the social development theory of Vygotsky and Vygotsky's concept of the zone of proximal development (ZPD), learning is influenced by learner's development (McCombs, 2003). Learners move through identifiable stages of physical, intellectual, emotional, and social growth that affect what can be learned and in what depth of understanding. Therefore, learners do best when the learning is at their proximal stage of development, challenging enough to require them to stretch, but attainable with effort. Peer and teacher conferencing supports Vygotsky's (1978) ZPD theory, which is supported by the writer's workshop approach. In this model of learning, the "zone" is the difference between what students can write alone and what they can write with assistance. The focus is on acquiring more knowledge, and according to Vygotsky, the ability to achieve higher levels of knowledge depends on the learners' interactions with others. This social interaction is the foundation for cognitive development and growth.

Principles of the writing workshop

Writing workshop relies on a core set of principles that center on students as writers; where teachers teach the writer, not the writing (Calkins 1994). Thus, it is based upon four main principles summarized by Calkins (2006) as follows:

1. **Students will write about their own lives:** students are not given writing prompts but choose their own topic that is meaningful to them.
2. **Students will use the writing process**. They brainstorm, draft, and revise work that is personal to them.
3. **Students write in authentic way**. Instead of spending the majority of class time on spelling tests, grammar drills, handwriting practices and other isolated sub-skills of writing, writer's workshop is designed to emphasize the act of writing itself. Students spend most of their time practice writing, not just learning about it
4. **Students develop as independent writers**. Overtime, students learn to choose their own topics and to autonomously manage their own development as they work through a wide variety of writing tasks.

Importance

Writing workshop incorporates not only the freedom to choose what you write, but it provides the length of time students need in order to get ideas down on paper (Eitelgeorge, & Barrett, 2004). Students notably improve so much because they spend much time on writing and because the workshop atmosphere is more conductive to personal expression and growth than the traditional classroom (Serag, 2011).

Moore (2011) argues that implementing a writing workshop into different educational levels can lead to a notable enhancement of writers' motivational level. Jong and Harper (2005) and Feinberg (2007) agree that writing instruction that is process oriented and student focused, such as writing workshop, will develop students' confidence. They stated that writing workshop allows students' voice to be heard and thus giving them more confidence in their written product. To Mester (2011) writing workshop improves the feelings and attitudes of students about writing, as well as how they feel about themselves. Mester continues that students who learn the writing process through the workshop approach are more comfortable sharing their

writing and taking risks as they write. As a result, the classroom becomes a community where students develop the ability to reflect and grow as writers and people.

Behymer (2003) adds that writing workshop improves the literacy of students. When incorporating writing workshop in students' daily schedule, teachers are working on students' reading skills as well as writing skills. Reading and writing, both of which derive meaning from print, are closely related. The more the students read, the better they become at writing and vice-versa.

In view of above, Hicks (2009) summarizes the importance of writing workshop as it:

1. encourages independence,
2. gives the student writer a high degree of choice,
3. structures the environment to encourage writers to take risks and learn their craft,
4. provides a scaffolding support system to all writers,
5. gives students frequent response to their writing,
6. has a regular and predictable time to write and amount of time, and finally
7. gives students direct instruction in writing by different methods; whole class, small group, individual.

Steps of writing workshop

There is not a general consensus around every single element of what is or is not a part of the writing workshop approach (Hicks, 2009). The basic structure never changes, but there is still a lot of flexibility. For example, all sections except the writing time are optional.

Several educators and researchers (e.g., Calkins, 1994; Peha, 1995-2003; Hicks, 2009; Mester, 2011; Smith, 2012; and Serag, 2014) agree that among the different components of the writing workshop, the following are the most common:

1. **A Mini-Lesson (5-15 minutes)**: the mini-lesson is a short, teacher-led discussion focusing on a single topic that

students need help with. The teacher doesn't need to give a mini-lesson each day; 2-3 times a week is usually just fine. There are three guiding principles to the mini-lesson approach: brevity (usually 10-15 minutes, rarely more than 20), authenticity (is related to the real things that real writers really need to know and targeted to address, in a timely way, and the specific challenges writers face as they explore new writing tasks and genres), and focus (covers a single, narrowly defined topic).

2. **Writing Time** (**20-45 minutes or more**). Students try to write their own paragraphs. During writing time there are two activities: Writing with the students and conferring with them. As soon as the students start to write, the teacher usually starts to write, too. S/he tries to write in front of the students on the overhead or on the board. It is not necessary for the teacher to do that activity every time, but it is recommended doing it at least once a week, if not more often. Writing with students is a wonderful thing as they get so excited when they feel the teacher writes with them, and struggles with the same issues. The teacher usually writes for about 5-10 minutes, after which time s/he begins to conference with individual writers. During conferences, the teacher moves through the classroom helping students who have problems with their writing or witnessing the progress of students while writing. A mini-conference should last about 2-3 minutes, no more than 5. The teacher begins the conference by asking probing, open-ended questions to ascertain the student's current focus in his/her writing work. Conferencing enables students to analyze problems in their writing and discuss ways to solve them. The focus of conferencing must be how to help students to improve as writers rather than how to improve a particular piece of writing.Once the teacher has identified an area of need, the teaching can begin.
3. **Sharing time (5-15 minutes):** Sharing is one of the most instructionally valuable part of the class in a writer's

workshop. Through this stage, students have time to share their written work with their peers and the teacher. Students read what they have written and seek feedback from their peers and the teacher. Therefore, the teacher should teach students how to make constructive comments to their peers by modeling how to make such comments.

Kinds of Writing Workshop

There are two main kinds of writing workshop, paper-based writing workshop and computer-based one.

Paper-Based Writing Workshop

The returning to use the paper-based mode of writing in comparison to computer-based one continues to attract research interest. In this kind of writing workshop (paper-based), the teacher shifts his attention from technology back to the writer (Hicks, 2009). This kind of writing workshop follows the following steps:

1. **The mini-lesson**: It is a short explicit illustration (usually 10-20 minutes) given by the teacher on board. In this step, the teacher starts by activating prior knowledge of students. S/he may show them a model text about a specific topic and try to model how to brainstorm ideas about that topic. The teacher pretends to be thinking, as a student would, about what they were going to write. For example if the teacher finds the first ides about the topic, then s/he will be modeling how to write this sentence on board.
2. **The Paper-Based Writing Time (20-40 minutes):** This step is the most important step in the paper-based writing workshop**.** The student is given the chance to apply what the teacher has just illustrated and modeled in writing topics of their own. On their notebooks, students will start to write as much as possible following the process writing steps: pre-writing, drafting, editing, re-writing and publishing.

3. **Conferencing:** during the paper-based writing time, the teacher goes round the class conferencing with students, helping them in their writing problems and trying to introduce suggestions.
4. **Sharing time**: the teacher asks some of the students to share what they have written with the whole class. The teacher gives students feedback forms in order to evaluate their peers' paragraphs. The teacher explains to the class how to give feedback to their peers and how to respond to the feedback they have received either from their teacher or from their peers.

Advantage of paper-based writing workshop

Gayomali (2015) summarized the most important advatges of paper-based writing as follows:

1. **It is better for learning**. One of the most effective ways to study and retain new information is to rewrite your notes by hand. That's because putting ink to paper stimulates a part of the brain called the Reticular Activating System, or the RAS.
2. **It makes students better writers.** Writing on paper makes students more concentrated to the writing conventions and grammar. A 2009 study from the University of Washington seems to support proponents' preference for writing by hand: Elementary school students who wrote essays with a pen not only wrote more than their keyboard-tapping peers, but they also wrote faster and in more complete sentences. Brain imaging studies with adults have shown an advantage for forming letters over selecting or viewing letters.
3. **It will prevent students from being distracted.** Writing longhand is a workout, not necessarily for wrist, but for brain. Writing by hand engages students' motor-skills, memory, and more. Thus, this mode of writing workshop is good cognitive exercise to keep students' minds sharp and concentrated.

Computer-Based writing workshop

The computer-based writing has significantly altered traditional conceptions of writing. While this change in writing mode may not be new, it is clear that computers, mobile technologies, and the Internet are changing the way people write and produce text, and this influence is quickly spreading. The creation of electronic text is starting to become a more normalized medium for writing (Endres, 2012).

This mode of writing workshop will be held in the school lab. It follows the following procedures:

1. **The Mini lesson** – A brief focused teacher generated lesson, focusing on a particular skill.
2. **Computer-based writing time**–using Microsoft word program, the students are asked to write paragraphs on topics of their choice.
3. **Conferences** – The teacher circulates around the lab and meets individually with students to discuss their writing problems and offer solutions.
4. **Computer-based sharing Time** – students send their paragraphs to their teacher as well as peers via e-mail. Also, they receive feedback from their teacher as well as their peers on their paragraphs

Advantages of computer-based writing workshop

Ramsay (2011) believes that integrating technology into writing workshops often motivates even most struggling writers. Yancey (2009) believes that using text, images, and sound to interact and collaborate with the reader make the written work of the students more interactive. One thing that teachers appreciate about integrating technology is that it has such potential for engaging students (Scherer, 2011). Additionally, the feature that allows students to copy and paste or cut and paste - Ooastendorp and De Mul (1996) said- is a further advantage of the computer-based writing workshop.

Research on writing Workshop

To the researcher's knowledge, there are three studies that dealt with effect of writing workshop on writing performance. These studies are conducted by Jasmine and Weiner (2007), Mester (2011), and Serag (2014).

Jasmine and Weiner (2007) investigated the effect of the writing workshop model on the writing of the first graders. The participants were 12 boys and 9 girls. They were taught using the writing workshop model. The writing workshop was found to increase enjoyment of writing in first graders. This model has proven to be an effective instructional method to support first graders in learning the writing process by choosing a topic, revising and editing drafts, and sharing their work.

Mester (2011) compared the impact of two types of instructional strategies, namely, writer's workshop and traditional approaches, on the writing achievement of Kindergarten students. Data were collected from 90 students. During the 9-week study, three classroom teachers provided writing instruction to 45 students in the control group by using writing strategies that did not incorporate daily structured writing activities. Over the same period, three classroom teachers implemented writer's workshop strategies daily for 45 minutes to 45 students in the experimental group. The results showed that students in the experimental group, who were taught through writer's workshop achieved higher scores than those students in the control group, who were taught through the county's writing curriculum.

In 2014, Serag examined the effect of writing workshop on enhancing the paraphrasing skills of graduate students. This study was conducted on 57 graduate students. Pre and post paraphrasing writing tests were administered to the study sample. The results revealed that the writing workshop model had a remarkable positive effect on graduate students paraphrasing skills. This finding is consistent with a large body of previous research (Calkins, 2011; and Moore, 2011).

Methodology

Design

The present study is a pre-post quasi-experimental study. The researcher used two experimental groups (paper-based group and computer-based one). The experiment lasted for 3 months during the second term of 2014-2015 academic year. During the experiment the paper-based group was taught using the paper-based writing workshop while the computer-based group was taught using the computer-based writing workshop.

Participants

The participants of this study were two 2nd year intact classes (totaling 62) from Old Suez Prep School for Girls. Only 50 pupils participated in the study after excluding those who did not attend regularly or take the pre or the post tests. Those pupils were assigned at random to experimental one group (paper-based, n=25) and experimental two one (computer-based, n=25). All participants spent at least 8 years learning EFL. They also studied computer for 4 years at both the primary stage and the preparatory stage.

Instruments

Two writing performance tests (pre and post) were developed by the researcher to measure the participants' level of writing performance before and after the experiment. Each test consists of a composition-writing task which required students to write two paragraphs on two assigned topics. The topics were chosen to suit what the pupils would practice during the semester. Each paragraph should contain at least eight complete sentences. For each paragraph, pupils were given guiding words to help them in composition writing. To achieve tests' validity, a jury of 8 TEFL experts validated the tests and their suggestions and recommendations were put into consideration.

A writing performance rubric was developed by the researcher to evaluate pupils' paragraphs in the pre and post writing performance tests. In this rubric a total of 15 points was assigned to each paragraph. The 15 points were equally divided among three main components: content (unity and relevance),

language (grammar and word choice), and organization as well as mechanics (main idea, supporting details, concluding sentence, spelling and punctuation). Each component has three levels: strong (5 scores), adequate (3 scores) and weak (1 score). For the validity of the marking scale, six specialists in the field of TEFL were asked to judge it. Reviewers' suggestions and recommendations were taken into consideration.

Materials of the study

Two proposed teaching guides were designed by the researcher to be used as the main materials of the study. The Paper-based Writing Workshop guide and the Computer-based Writing Workshop guide. The two teaching guides use the writing process and the steps of the writing workshop strategy in order to teach writing to second-year preparatory stage pupils. The programs consist of 22 sessions distributed along eleven weeks, two sessions per week during the second term of 2014-2015 school year.

Table 1: A sample session of the paper-based writing workshop

Duration	Activity	Teacher Role	Student Role
5-15 Minutes	**Mini-lesson**	**Direct instruction in whole group about strategies and skills related to EFL writing. Modelling of paragraph writing in front of the class.**	**Participating in whole group instruction.**
5 Minutes	**Group rehearsal for writing**	**Brainstorming and topic discussion**	**Suggesting writing topics of their own.**
15-45 Minutes	**Paper-based individual writing and informal peer discussion**	**Holding conferences with pupils discussing their writing problems and monitoring their writing progress.**	**Starting new writings or continuing with past work.**
5-20 Minutes	**Sharing of writing**	**Allowing pupils to share their work. Giving feedback on pupils ' paragraphs and encouraging peers to give feedback .**	**Sharing work in a predetermined rotation. Reading his/her paragraph in front of the class and the teacher.**

As for the computer-based writing workshop's sample session, The first two steps were similar to the paper-based one. While, the third and fourth steps are different in the mode used in performing tasks as they depend on computer. See Table 2 below:

Table 2: A sample session of the computer-based writing workshop

Duration	Activity	Teacher Role	Student Role
5-15 Minutes	**Mini-lesson**	**Direct instructions in whole group about strategies and skills related to EFL writing. Modelling of paragraph writing in front of the class.**	**participating in whole group instruction.**
5 Minutes	**Group rehearsal for writing**	**Brainstorming and topic discussion**	**Suggesting and generating writing topics of their own choice.**
15-45 Minutes	**Computer-based individual writing and computer-based peer discussion**	**Going round the lab and holding conferences with pupils discussing their writing problems and monitoring their writing progress.**	**On computers, starting writing about their self-selected topics. begining new writings or continuing with past work.**
5-20 Minutes	**Computer-based Sharing of writing by e-mails**	**allowing pupils to share. giving feedback on pupils ' paragraphs and encouraging peers to give feedback via e-mails .**	**Sending their paragraphs to the teacher and their peers via e-mails. Reading their peers' written work and sending feedback to each others via-emails.**

Procedures

pretesting

Prior to the experimentation of this study, the researcher administered the writing performance pre-test. The independent sample t-test was used to test the differences in the mean scores of the two groups in the pre test. No statistically significant difference existed between the mean scores of the two groups (**t=0.201**, P>0.05) as shown in Table 3 below.

Table 3: Independent samples t-test for the differences between the means of scores of the paper-based and computer-based groups on the pretest of writing performance.

Group	N	M	S.D.	t-value	Sig.
Paper-based	25	7.568	1.80	0.201	0.675*
Computer-based	25	7.428	1.77		

*p>0.05 (Not Significant)

2. Treatment

After making sure that the two groups were equivalent in writing performance, paper-based pupils were exposed to the Paper-based Writing Workshop while the computer-based pupils were exposed to the computer-based writing workshop. During the period of the study, the researcher met with the participants of the two groups for two sessions weekly. Each session lasted for 90 minutes. As for the paper-based writing workshop program, each session started with a 10-15 minute mini lesson on a particular writing strategy or a writing problem. The researcher explicitly teaches the strategy and models it in front of the class. Then, the teacher gives pupils time to generate topics of their own. After that, pupils are given the time to write about their topics in their notebooks. During that time, the researcher goes round the class and holds conferences with the pupils. Finally, pupils share their writing with the whole class and receive feedback from the researcher as well as peers.

As for the computer-based writing workshop program, it consists of 24 sessions. The first two sessions were allocated to explaining how to write using Microsoft word program, how to make e-mails, how to send and receive messages through e-mails. The sessions of the computer-based writing workshop program is held in school lab. Then, the researcher starts the sessions by explicitly teaching the writing strategy and modeling it in front of the class. They are given the time to write their topics on the Ms Word program. During that time the researcher goes round the lab and holds conferences with the pupils. After that, the participants were asked to share their topics with the

teacher as well as the peers by sending them to their teacher and their peers via e-mail. Finally, pupils receive feedback concerning their paragraphs from their teacher as well as their peers via e-mails.

Posttesting

Having taught all the instructional sessions, the post test of writing performance was administered to the participants of the two groups. The researcher calculated the differences in the mean scores of the pre and post test of writing performance for each group separately in order to determine whether there was improvement in the dependent variable for each of the two groups. For this purpose, she employed the paired samples t-test. Furthermore, she calculated the effect size for such differences to determine the size of the practical effect caused by the interventions.

Furthermore, in order to determine which program is more effective, the researcher computed the differences in the gain score between the post test of writing performance of the paper-based group and that of the computer-based group. For this purpose, the researcher used independent samples t-test between the two groups, employing a gain score for each of the participants in the study.

Results and discussion

The paired samples t-test was used to investigate the first hypothesis of the study which stated that "There would be no statistically significant difference in the mean scores of the paper-based group exposed to the paper-based writing workshop, on the pre/post tests of writing performance." The result of the paired samples t-test is shown in the following table:

Table 4: Paired samples T-test for the differences in the mean of scores of the paper-based group on the pre and post tests of writing performance

Test	N	M	SD	DF	T-Value	Sig.
Pre	25	6.608	1.301			
Post	25	15.171	2.617	24	27.628*	0.00*

*$p \leq 0.05$(Significant)

As shown in table 4, the paired sample t-test revealed that there existed a significant difference in the paper-based group mean scores between the pre and post test of writing performance ($t=27.628$, $p\leq0.05$). Additionally, using Eta Square, a large effect-size was found ($d = 8.40$, $d < 0.8$). This result reveals that participants in the paper-based group have achieved significant improvement in writing performance during the period of the experiment. Therefore, it was concluded that the paper-based writing workshop significantly improved the writing performance of participants. In light of this statistical result, the first hypothesis was completely rejected.

This significant finding might be due to different reasons. Firstly, the nature of the paper-based writing workshop which suits the nature of the Egyptian pupils might be a possible explanation for this result. Egyptian pupils are accustomed to the paper-based assignments as well as the paper-based assessment and testing. They are not accustomed to performing their tasks especially the written ones on computer. Another explanation may be attributed to the large amount of time allocated to student's writing. The more the students write, the better their performance will be. This finding found empirical support in Mayer's study (2007) as well as Kohler's (2015). They found that providing many opportunities for writing creates a strong writing foundation. They maintained that when the writing opportunities are abundant, writing success is ensured. A more possible explanation is related to the explicit instruction and modeling of writing strategies given by teacher. When pupils see the teacher write and model the writing processes in front of their eyes, this make learning more retainable. Pupils start imitating their teacher's good practices and avoiding mistakes. Consequently, their writing performance improves. The sense of ownership felt by the students who write about topics of their own choice may be a more possible explanation for this finding.

Paired-samples t-test was used to investigate the second hypothesis of the study which stated that "There would be no statistically significant difference in the mean scores of the

computer-based group exposed to the computer-based writing workshop, on the pre/post tests of writing performance." The findings of the paired-samples t-test was presented in the following table:

Table 5: Paired samples T-test for the differences in the means of scores of the Computer-based group between the pre and post tests of writing performance

Test	N	M	SD	DF	T-Value	Sig.
Pre	25	6.608	.901			
Post	25	8.171	1.617	24	1.628*	0.00*

*p>0.05(Insignificant)

As shown in table 5, the paired samples t-test revealed that no statistically significant differences existed in the mean scores of the computer-based group pupils between the pre and post tests of writing performance (t=1.628, p>0.05). Though there existed differences between the mean scores of the pre test (6.608) and the post test (8.171), yet this difference was statistically insignificant. Therefore, it was concluded that the computer-based writing workshop did not significantly improve the writing performance of the pupils. Accordingly, the second hypothesis was accepted. A possible explanation of this finding may be attributed to the relative brevity of the study. Twenty two sessions may not be enough period to improve the writing performance. Another possible explanation is attributed to the challenges facing the computer-based writing workshop. One of these challenges is the need for computer proficiency and typing skills (Wang and Kolen 2001, Gallagher et al. 2002). As a result, some participants may not feel comfortable with the computer medium; therefore some pupils do often need to have some technological aspects explicitly taught to them. Some pupils do not know how to download pictures from a camera and save them to a computer. Because the researcher wanted them to be able to do that independently, she took time to demonstrate the process. Time given to the explicit instruction on how to use computers and how to send e-mails may have affected the time

allocated to the writing process itself. Athird explanation is that the two different modes of writing between what is being taught and how it was assessed may have confused the pupils and thus affecting their writing performance. It is not logical to teach pupils to write on computers and to test them on paper. Nonetheless, Harrington, Shermis, and Rollins (2000) believe that implementation of this type of change requires a great deal of preparation and consideration in order for it to be integrated successfully into programmatic curricula. A fourth explanation is lack of motivation. Some pupils faced problems during writing on computer or even during sharing their work on the internet. These problems make students lack interest and motivation in the writing process as a whole. Afurther possible explanation is the nature of computer-based tasks. Egyptian students, especially juniors, consider computer time as fun and enjoyment. Thus, they look at computer-based writing time as a time to use computer for enjoyment, and they do not pay much attention to their mechanics of writing and grammar. They write using net language as if they were chatting with friends on the internet or sharing on the facebook. Consequently, they lacked motivation in writing the academic paragraphs. A final possible explanation is plagiarism. Plagiarism is a serious academic concern started to appear as an eduring problem on the internet, especially with the big amount writing tasks. Some learners started to copy and paste their paragraphs from the internet and send them as if the paragraphs are theirs. This problem affected their writing performance because they did not give themselves the chance to write by themselves.

In an attempt to determine whether any change in writing performance from pre to post test was greater for one group rather than the other, the researcher used independent samples t-test between the two groups, employing a gain score in writing performance for each of the participants in the study. The results of the independent samples t-test was shown in the following table.

Table 6. Independent Samples t-test for the Difference in the Mean Gain Scores of the Paper-based and Computer-based Groups' pupils Between the Pre and Post tests of Writing Performance

Group	N	Mean Gain Score	S D	DF	t-value	Sig
Paper-based	25	16.820	1.785	48	20.328	0.00*
Computer-based	25	0.8132	1.617			

*p≤0.05(Significant)

As shown in table 6, a statistically significant difference existed between the pupils' mean gain scores in the paper-based group and that of the pupils in the computer-based group ($t = 20.328$, $p < 0.05$) in favor of the paper-based group. Accordingly, the third hypothesis was rejected. This finding indicates that the paper-based writing workshop was more effective than the computer-based writing workshop in developing the writing performance of preparatory stage pupils. This finding is attributed to the beneficial effects of the paper-based writing workshop in the discussion of the result related to the first hypothesis and the challenging nature of the computer-based writing workshop mentioned in the second finding. Such a finding found empirical evidence in a comprehensive review by Ziefle (1998) which reached the conclusion that paper is superior to computer, because of the display screen qualities whereby the eyes tire more quickly. Also, this result agrees with Kohler's study (2015). Kohler found that paper-based writing is more effective than computer-based writing.

Based on the previous statistical analyses performed on the data, the following results were found:

1. A statistically significant difference existed in the mean scores of paper-based group pupils on the pre and post tests of writing performance, in favor of post test.
2. No statistically significant difference existed in the mean scores of the computer-based group pupils on the pre and post tests of writing performance, in favor of post test.
3. A statistically significant difference existed between the mean gain scores of the paper-based and that of the

computer-based groups on the post tests of writing performance, in favor of the paper-based group.

Conclusion

Within the delimitations of the study as well as the findings, the researcher could conclude that:

1. The paper-based writing workshop was effective on developing the writing performance of prep school pupils.
2. The computer-based writing workshop was not effective on developing the writing performance of prep school pupils.
3. The paper-based writing workshop was more effective than the computer-based writing workshop on developing the writing performance of prep school pupils.

Recommendations:

In light of the findings of the study, the following recommendations have been formulated:

1. Preparatory stage instructors should reconsider their methods of teaching writing and should be familiarized with new methods in teaching writing performance.
2. Writing workshops should be used in teaching EFL writing.
3. Enough time should be allocated to developing prep stage pupils' writing.
4. Egyptian EFL pupils should develop their technological skills to be able to use innovative computer-assisted methods.

Suggestions for further research

During the course of the study, the need for further studies in the following areas becomes apparent:

1. The effect of using workshop model on the writing performance of university pupils.
2. A comparative study between the effect of writing workshop and self regulated strategy development on the writing performance of university students is needed.

3. Research is needed on the effect of writing workshop on the critical reading of EFL university students.
4. The effect of using reading-writing workshop on the critical reading of EFL prospective teachers.

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Attitudes of Faculty Staff towards Using the Blackboard E-Learning Management System in Teaching the Courses

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Abstract

This study aimed at identifying the faculty staff abilities for using the Blackboard E-Learning Management System (LMS) in teaching the courses. It also aimed at identifying their attitudes towards it and the differences in attitudes according to academic degree (professor, associate professor, assistant professor, assistant lecturer and demonstrator), experience in using the computer (one, two, five, and more than five -years -experience), and the level of utilizing e-learning in teaching the courses (complete, blended and supportive e-learning). The sample of the study consisted of female faculty staff (n= 60) teaching at the Faculty of Arts and the Faculty of Education, King Khalid University. Their ages ranged from 23 to 55 from different nationalities and specializations. Frequencies, percentages and good fit (Chi-square) in addition to relative weight for each statement in addition to importance of each statement were estimated to assess the agreement and disagreement in attitudes among the members of the sample concerning their responses to the items of the scale. Analysis of variance was calculated to identify the differences in attitudes towards using the Blackboard LMS according to academic degree, experience in using the computer and the level of utilizing e-learning in teaching the courses. The results of the study revealed that the faculty staff utilized most of the techniques of using the Blackboard LMS in teaching the courses. In addition, they had most of the teaching skills using the Blackboard LMS. They had no prior experience in using the Blackboard LMS except for participating as a learner in the virtual classroom training sessions. Concerning faculty staff attitudes towards using the

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Blackboard LMS in teaching the courses, there were no statistical significant differences in attitudes due to academic degree (professor, associate professor, assistant professor, assistant lecturer and demonstrator). Besides, there were no statistical significant differences due to experience in using the computer (one, two, five, and more than five -years -experience), or the level of utilizing e-learning in teaching the courses (complete e-learning, blended e-learning and supportive e-learning).

Introduction

Science brought about new technology in communication and information which had the greatest effect in scientific application of the theories in the educational system to cope with the development in communication and speed of information transfer. Learning Management Systems (LMSs) through the internet appeared as a result of introducing educational courses and the increased enrollment in e- and distant learning.

LMSs allow introducing learner-centered learning through the interactive learning environments anywhere and anytime using the internet and the digital technology. Electronic learning technology services can change the learner from a passive to an active one who participates in the learning process through the internet and controls the learning resources (Olatokun and Mala, 2006, 127). LMSs are an integrative system responsible for managing the electronic educational process through the internet. This includes admission and registration, enrollment in courses and managing them, assignments, monitoring students, supervising synchronous and asynchronous communication tools, test management, and issuing final certificates (Salem, 2004, 301-302). This is because they are software applications that allow automatic registration, management, monitoring of e-learning courses and training programs, scoring tests, logging in a course through the interaction interface, synchronous and asynchronous communication through forums, discussion boards, blogs, e-mails, RSS, uploading and downloading files, participating in building the content and the cooperative projects using wikis, teacher and peer assessment, grouping and

organizing students, scoring and participating in questionnaires, tests or assessments, etc…

LMSs are considered a web-based technology used in planning, implementing and evaluating the learning processes through a way in which the teacher presents the content and monitors the students' participation and evaluates their performance. At the same time, they enable the learner to use interactive tools such as discussion boards, video- conferencing, forums and distant learning groups. These systems are evaluated and monitored according to Sharable Content Object Reference Model (SCORM) standards.

There are many electronic LMSs and the higher education institutes increased the introduction of open-source LMSs such as Moodle and commercial ones such as the Blackboard because of their advantages which are reflected on the quality of the educational performance at these institutions.

Electronic LMSs may be rejected by some faculty staff due to the following reasons (Rouse, 2015:1):

Physical constraints which include the infrastructure that may not support the e-learning processes, the students' lack of computers and internet access, high cost of accessing the internet and absence of online technical supports for the faculty staff and the students before and while using the system.

Personal constraints which include faculty staff and the students' perception of technology, faculty staff's feeling of danger that someone who is knowledgeable about technology is robbing him of his job, society's hesitation to use and utilize e-learning, considering e-learning a luxury and fun not learning, lack of awareness among heads of departments at the universities concerning the importance of electronic LMSs, refusal of heads of departments at universities to activate LMSs and lack of the faculty staff's perception of e-learning and considering it a fashion.

Administrative constraints which include lack of support through practical training on using LMSs and transferring faculty staff to other faculties at the academic departments.

The Blackboard LMS allows the educational institutions to introduce electronic courses on the internet as a complement to the traditional learning (Coetzee, 2013: 1) and allows the universities to add electronic educational resources on the internet such as power-point files, videos, sound, animation and other applications that can be added to support the courses, enhances teaching and increases the efficiency of learning. It also introduces a list of the available courses for study to the students, information about each course, a list of lectures, asynchronous communication through RSS and participation in forums among the students themselves or between them and the teacher, whatever the level of utilizing e-learning in the course they study is. The system makes electronic resources for supporting what students study available in addition to an item bank for training, and evaluation using performance records, and open and limited discussions. All of this needs technological preparation for the faculty staff as well as students. It requires the students' mastery of the skills of using the internet, using the internet explorer, writing and file managing skills. It does not require mastery of any programming language or HTML (Coetzee, 2013: 1).

E-learning and ELMSs may not receive enough concern from some faculty staff and students. University administrations may face challenges such as the absence of a positive attitude towards using e-learning or accepting the LMSs that make them use them slightly or not use them. With the increasing of information and the necessity of introducing it through the e-learning environment, it is a must to identify the factors that affect the acceptance of this technology since most universities continue to introduce the courses through electronic, blended or supportive learning system. In spite of the growth of e-learning, there is a need to evaluate it at faculties and universities since e-

learning developers need to understand faculty staff's and students' attitudes in order to enhance teaching and learning, make using e-learning easy, and help designing systems that attract faculty staff to the learning environment. The traditional courses may use LMSs for enriching learning. Recently, the educational institutions spend millions of dollars in buildings and educational constructions and invest some of this money in developing the different courses to be delivered electronically through these systems at schools in which some students cannot attend regularly. They introduce them alternative courses specially developed through LMSs where the best teachers prepare and deliver them at distance through the internet (Azmy, 2008:271).

The Saudi universities introduce a step in developing the area of LMSs, open-source or closed, in collaboration with international experts to avoid the common problems in these systems. E-learning and distant learning centers started to train faculty staff at the Saudi Universities on using and activating it.

King Khalid University is at the south of Kingdom of Saudi Arabia. It is one of the universities that use e-learning since 2003 at three levels: supportive, blended and complete. The number of the faculty staff using the system is 1593 and the number of courses using e-learning is 3139 out of 7152 (43.89%). There are 48 complete electronic courses and 341 blended (King Khalid University, 2013). These statistics reflect the exerted effort by those responsible for e-learning but they do not show the extent of interaction with the LMS and to what extent it can be considered an active system since a message indicating the faculty staff's uploading or creation of a part of the course on the system is considered an indicator and clear evidence of the system's activation. Some faculty staff are still hesitant to use e-learning. Some of them have a negative attitude towards using the Blackboard LMS and some prefer face-to-face learning. The researcher conducted interviews with the study sample during administering the instruments of the study in which the Islamic Studies faculty staff assured her their conviction of the necessity

of face-to-face teaching especially when the matter is related to doctrine to found it among the students. This makes them not use the system in their teaching. Based on the aforementioned information, it is clear that the number of teaching opportunities introduced by higher education institutes at Kingdom of Saudi Arabia is increasing as well as the opportunities to use the LMSs. This calls for controlling and monitoring them through the users, faculty staff as well as students. Accepting the LMS is affected by different factors among them is the faculty staff's attitudes towards using the system. This study aims at identifying the faculty staff's attitudes towards using the Blackboard LMS in teaching.

Problem of the study

In spite of the technical support introduced by the e-learning and distant learning systems to the faculty staff at the universities to activate LMSs, it was noticed that teaching using the Blackboard LMS is not activated by most faculty staff at King Khalid University although this university is a leading one in using the system. Forty-eight courses were introduced electronically, 341 were blended and 1876 electronic tests were conducted. The average of the students registering in the system is 8998 and the number of the course pages in the system is 254035. The deanship of e-learning was established in 1426 H. (King Khalid University, 2013).

This urged the researcher to attempt identifying the faculty staff's abilities for dealing with the system, their previous experiences and teaching skills. This is because, perhaps, lack of abilities is the reason of the reluctance among some of them to use the Blackboard LMS, which in turn would affect their attitudes towards using it. Some courses were not linked to the system due to the arrival of new faculty staff. Some Islamic Studies faculty staff assured the necessity of face-to-face communication with the students especially in the formation of doctrine. In addition, some studies indicated the need of faculty staff to be trained on using the system especially content management, file sharing, forums and item banks regardless of

the kind of the faculty (Hussein, 2011). Karawany (2010) recommended the necessity of supporting the e-learning environment, paying attention to the infrastructure of the internet services, conducting more research on distant learning and supporting the efforts of creativity to help professional development among the faculty staff (Furco and Moely, 2012). Thus, this study aims at answering the following research questions:

1. What are the current abilities of the faculty staff concerning using the Blackboard LMS in teaching courses?
2. What are the faculty staff's attitudes towards using the Blackboard LMS in teaching courses?
3. Do faculty staff's attitudes differ according to academic degree (professor – associate professor – assistant professor – assistant lecturer – demonstrator)?
4. Do faculty staff's attitudes differ according to experience in using the computer (one, two, five years and more than five years)?
5. Do faculty staff's attitudes differ according to the level of utilizing e-learning (complete, blended or supportive e-learning)?

Method of the study

Due to the nature of the study, the researcher used the descriptive method for studying the abilities of the faculty staff in using the Blackboard LMS in teaching courses. The experimental method was used for studying the faculty staff's attitudes towards using the Blackboard LMS in teaching courses.

Aims of the study

This study aimed at:

1. Identifying the current abilities of the faculty staff concerning using the Blackboard LMS in teaching courses.
2. Identifying the faculty staff's attitudes towards using the Blackboard LMS.
3. Finding out if there are differences in faculty staff's attitudes according to academic degree (professor –

associate professor – assistant professor –assistant lecturer – demonstrator).

4. Finding out if there are differences in faculty staff's attitudes according to experience in using the computer (one, two, five years and more than five years).
5. Finding out if there are differences in faculty staff's attitudes according to the level of utilizing e-learning (complete, blended or supportive e-learning).

Importance of the study

The importance of this study lies in:

1. Urging the faculty staff to use the LMSs in teaching courses.
2. Enhancing the faculty staff's performance in teaching the courses using LMSs.
3. Calling the attention of those responsible for e-training to include LMSs in their training sessions.

Hypotheses of the study

This study sought verifying the validity of the following hypotheses:

1. There are no statistical significant differences at the 0.05 level between the mean scores of the faculty staff on the scale of attitudes towards using the Blackboard LMS in teaching the courses due to academic degree (professor – associate professor – assistant professor – assistant lecturer – demonstrator).
2. There are no statistical significant differences at the 0.05 level between the mean scores of the faculty staff on the scale of attitudes towards using the Blackboard LMS in teaching the courses due to experience in using the computer (one, two, five years and more than five years).
3. There are no statistical significant differences at the 0.05 level between the mean scores of the faculty staff on the scale of attitudes towards using the Blackboard LMS in teaching the courses due to level of utilizing e-learning (complete, blended and supportive e-learning).

Delimitations of the study

Topic delimitation: This study is limited to identifying the current abilities of the faculty staff in using the Blackboard LMS in teaching courses and their attitudes towards it.

Institutional delimitation: King Khalid University, faculties of Arts and Education in Abha.

Place delimitation: This study was conducted on the faculty staff teaching at the Faculty of Arts and the Faculty of Education at Abha (departments of Curriculum and Methods of Teaching, Kindergarten, Psychology, the Arabic Language, the English Language, Islamic Studies, Geography and History).

Time delimitation: The study was conducted during the academic year 2012/2013.

Human delimitation: The faculty staff at the faculties of Education and Arts, King Khalid University, Abha from different nationalities (Egyptian, Saudi, Yemeni, Syrian, Jordanian and Sudanese) in different specializations (Kindergarten, the English Language, Computer, Geography, Psychology, English Literature, Fundamentals of Education, History, Natural Geography, Management and Educational Planning, Guidance and Counseling, Educational Technology, the Arabic Language, Curricula and Methods of Teaching English, Social Studies, Science and Arabic, and Islamic Studies (Interpretation and Quraan Sciences, Hadith and its Sciences, Jurisprudence and its Fundamentals, Doctrine and Current Ideologies).

Terms of the study

Ability

Ability is a hypothetical construction we derive or deduce from measurable performance techniques. It is a phenomenon whose existence is deduced from the directly and indirectly observable facts (Abou Hatab, 1990: 113). The researcher defines it operationally as the ability of performing a specific activity or a group of performances that a person reaches

through training in case of availability of the external needed conditions.

Learning Management System

Learning Management System (LMS) is a tool for introducing information and learning resources for the students at distance along the 24 hours (Trayek & Hassan, 2013) through tools that allow them to interact with their peers such as e-mail, the announcement board, discussion board, etc. It introduces the content in different file formats, and samples of tests. It saves their scores and allows its retrieval at any time.

The Blackboard Learning Management System

It is defined by the formal site for the Blackboard Company (WWW.Blackboard.com) as one of the software applications used for supporting the virtual learning environments to integrate with traditional teaching and the distant teaching programs to achieve the learning aims, communication and assessment through the potentials of the course management, managing the discussion board, composing content, building tests, and supporting cooperative learning and teaching using virtual classrooms, introducing cooperative projects and assessment through tests and questionnaires … etc.

The researcher defines it operationally as an LMS that makes available information about the course, the electronic content using text, sound, picture, animation and images that suit the students' cognitive styles, cooperative learning through the discussion board, assessment through assignments, tests and questionnaires, and monitoring through the students' grading center.

Attitudes towards the Blackboard LMS

They are the person's relatively stable general feeling that identifies his/ her responses towards a specific subject by acceptance, refusal, supporting or rejecting (Zaitoon, 2004:401). Operationally defined, they are the sum of the faculty staff's responses by accepting or rejecting the Blackboard LMS in

teaching their courses, which is measured by a scale of attitude towards using the Blackboard LMS in teaching the courses.

Method

Designing the instruments of the study

Questionnaire of the Faculty Staff Abilities in using the Blackboard LMS in Teaching the Courses

To answer the first question of the study "What are the current abilities of the faculty staff concerning using the Blackboard LMS in teaching?", a questionnaire was designed for this purpose. The questionnaire included general information presented in six items to get descriptive information about the sample. This included name (optional), academic specialization, years of experience in teaching, academic degree (professor, associate professor, assistant professor, assistant lecturer, demonstrator), experience in using the computer (one, two, five years and more than five years), the level of utilizing e-learning in teaching (complete, blended, supportive e-learning).

The first section of the questionnaire "Techniques of dealing with the Blackboard LMS" consisted of 14 items. The second part "Teaching skills using the Blackboard LMS" consisted of 12 items. The third section "Previous experience in using the Blackboard LMS" included eight items. The participants had to choose "yes", "sometimes" or "no" for each item.

The questionnaire was designed in the light of the interviews with the faculty staff at the Faculty of Arts and the Faculty of Education, King Khalid University and making use of the Arabic and English references, previous studies and research papers in the area of e-learning and the Blackboard LMS. The researcher took into consideration that the items of the questionnaire, in their first draft, be clear, specific and that each represents only one objective.

Identifying the dimensions of the questionnaire

The items were classified into three dimensions presented in the following table.

Table 1: The distribution of the items of the Questionnaire of the Faculty Staff Abilities in using the Blackboard LMS in Teaching the Courses

No.	Main dimension	Number of items
1	Techniques of using the Blackboard LMS	14
2	Skills of teaching using the Blackboard LMS	12
3	Previous experience in using LMS	8

The questionnaire was submitted to jury members for face validity of the items. Their agreement was 100% on 97% of the items which means a high percentage of agreement on the questionnaire, in general. The phrasing of some items was modified in the light of their opinion.

Scoring the questionnaire

The questionnaire was scored on a scale from 3 to 1 according to the faculty staff's response. The following table shows the boundaries of the questionnaire's dimensions.

Table 2: The boundaries of the dimensions of Questionnaire of the Faculty Staff Abilities in Using the Blackboard LMS in Teaching the Courses

Dimension	Number of items	Weight	Boundaries	Percentage
Yes	34	3	102	199
Sometimes		2	68	66
No		1	34	33

It is clear from table 2 that 102 , which is the number of items multiplied by the highest response which is "3", was considered the highest score of using the Blackboard LMS while ≥ 68 (i.e. 60% of the total score) was considered the separating score between the existence of the ability among the faculty staff to use the Blackboard LMS.

Standardization of the questionnaire

Reliability of the questionnaire

To check the reliability of the questionnaire, SPSS was used to identify the internal consistence of the dimensions with each other as explained in the following table.

Table 3: The values of alpha coefficients for the dimensions of the Questionnaire of the Faculty Staff Abilities in Using the Blackboard LMS in Teaching the Courses

Dimensions of the questionnaire	Number of items	Alpha coefficient
Techniques of dealing with the Blackboard LMS	**14**	**0.0883**
Teaching skills of using the Blackboard LMS	**12**	**0.892**
Previous experience in using the LMS	**8**	**0.743**
Total "using the Blackboard LMS in teaching the courses"	**34**	**0.882**

Table 3 shows that alpha Cronback for the first dimension "Techniques of dealing with the Blackboard LMS" was 0.883, for the second "Teaching skills of using the Blackboard LMS" was 0.892, the third "Previous experience in using the LMS" was 0.743 and the questionnaire as a whole "Using the Blackboard LMS in teaching the courses" was 0.882 which are high values. This indicates reliability of the questionnaire and that it is reliable and usable in scientific research.

Duration of the questionnaire

In the light of the pilot study of the questionnaire, the time spent by the faculty staff answering all of the questionnaire items was estimated as 13 minutes.

Validity of the questionnaire

The questionnaire in its initial form was submitted to a panel of jury members specialized in Educational Technology, Curricula and Methods of Teaching and Fundamentals of Education at King Khalid University for face and content validity. They were asked to judge comprehensiveness of the questionnaire, phrasing of the different statements and appropriateness of the statements to the aim of the study. They also had the freedom to add, modify or delete whatever they see appropriate for validating the questionnaire. The statements approved by 75% of the panel of jurors were used; other statements were modified in the light of the jury members' opinions. The final version of the questionnaire included 34 items. The researcher used internal consistency by estimating the correlation coefficient between the item and the total score of

the dimension it belongs to. This reached 0.882 at the 0.01 level. In addition, the correlation coefficient between the total score of the dimension and the total score of the questionnaire after taking out the score of the dimension concerned (internal consistency of the dimension) as indicated in the following table.

Table 4: Coefficient of the internal consistency validity for the "Scale of the Faculty Staff Attitudes towards Using the Blackboard LMS in Teaching the Courses"

Item number	Correlation coefficient	Item number	Correlation coefficient
1 first	0.440 **	18	0.471 **
2	0.450 **	19	0.535 **
3	0.230	20	0.347 **
4	0.446 **	21	0.465 **
5	0.362	22	0.699 **
6	0.055	23 third	0.380 **
7	0.326 *	24	0.296 *
8	0.445 **	25	0.311 **
9	0.488 **	26	0.336 **
10	0.245	27	0.516 **
11	0.459 **	28	0.314 **
12	0.396 **	29	0.214
13	0.272 *	30	0.039
14	0.592 **	31	0.309 *
15 second	0.476 **	32	0.191
16	0.617 **	33	0.380 **
17	0.276 *	34	0.515 **

** Significant at 0.01 * Significant at 0.05

Since validity of the questionnaire means that it measures what it is supposed to measure, internal validity of the questionnaire was estimated as indicated in the previous table.

Administration of the questionnaire

The questionnaire was administered during the second term of the academic year 2012/ 2013 to a random sample of the faculty staff at the Faculty of Education and that of Arts, King Khalid University.

Scale of Faculty Staff's Attitude towards Using the Blackboard LMS in Teaching the Courses

To answer the second question of the study concerning the attitudes of the faculty staff towards using the Blackboard LMS in

teaching the courses, a scale was prepared through the following steps:

Aim of the scale: The scale aims at assessing the attitudes of faculty staff towards using the Blackboard LMS in teaching the courses.

Sources of preparing the scale: The scale was prepared in the light of some previous studies and references which dealt with how to design scales of attitudes towards e-learning.

Designing the scale: The scale included, in its first form, 32 items. The following conditions were taken into consideration when designing the scale:

1. The items should have clear and understandable meaning.
2. The number of negative and positive statements should be balanced as possible.
3. They should not include complex statements that include more than one meaning so that they do not confuse the reader.

Identifying the dimensions of the scale: The items were classified into dimensions, each of which includes statements that deal with it aiming at diagnosing the aspects of acceptance or rejection among the faculty staff, the population of the study, or identifying them. The following table shows the dimensions and the items they include.

Table 5: The distribution of the items of the "Scale of the Faculty Staff Attitudes towards Using the Blackboard LMS in Teaching the Courses"

No.	Main dimension	Positive statements	Negative statements	Total No. of statements
1	Attitude towards trust in the Blackboard LMS	4	3	7
2	Attitude towards anxiety in using the Blackboard LMS	2	3	5
3	Attitude towards using the Blackboard LMS in teaching	4	3	7
4	Attitude towards the importance of using the Blackboard LMS	6	7	13

The scale was submitted to a panel of jury members to get their opinion. The percentage of their agreement on 97% of the items was 100%. This means a high agreement on the scale, in general. The phrasing of some statements was modified according to the panel of jury members' opinion.

Scoring the scale: The responses ranged from 5 to 1 for the positive statements and from 1 to 5 for the negative ones. The following explains the range of the negative, neutral or positive values of the faculty staff's attitudes towards using the Blackboard LMS in teaching the courses.

Table 6: The range of the negative, neutral or positive values of the faculty staff's attitudes towards using the Blackboard LMS in teaching the courses

Borders	No. of items	Weight	Range	Percentage
Maximum value for positivity	32	5	160	100
Minimum value for positivity		4	128	80
Not sure (neutral)		3	96	60
Minimum value for negativity		2	64	40
Maximum value for negativity		1	32	20

Table 6 shows that the score 160, i.e. the number of questions multiplied by the maximum response which is five represents the highest positive attitude. The score ≥96 , i.e. 60% of the total score, is the dividing score between the negative and positive attitudes of the faculty staff, i.e. if the faculty staff's score was higher than 96, he would be considered to have a positive attitude towards using the Blackboard LMS in teaching the courses. Analyzing the sample's responses to the scale, a positive attitude towards using the Blackboard LMS in teaching the courses was found among 55 faculty staff out of 60. However, five had a negative attitude towards using the Blackboard LMS in teaching the courses.

Standardization of the study instruments

Psychometric coefficients of the scale

Reliability of the scale: Reliability of the scale was estimated using Alpha Kronback formula as it is one of the best methods of estimating reliability coefficient according to the nature and characteristics of the scale. Alpha Kronback coefficient reached 0.979 which makes the scale acceptable and applicable.

Table 7: Alpha Kronback coefficients for the dimensions of the scale of faculty staff's attitudes towards using the Blackboard LMS in teaching the courses

Dimension No.	No. of items	Alpha Kronback
First: Attitude towards trust in the Blackboard LMS	7	0.959
Second: Attitude towards anxiety of using the Blackboard LMS	5	0.690
Third: Attitude towards using the Blackboard LMS in teaching	7	0.687
Fourth: Attitude towards the importance of using the Blackboard LMS	13	0.900

Duration of the scale

In the light of the results of piloting the scale, the suitable time for responding to the scale was estimated by calculating the average of the time the faculty staff spent responding to all the items. This did not exceed 15 minutes.

Validity of the scale and its reliability

The scale in its first form consisted of 35 items. A group of the faculty staff working at the Faculty of Education, King Khalid University, was selected and was asked to judge the validity of each item of the scale of faculty staff's attitudes towards using the Blackboard LMS in teaching the courses. They were asked to judge whether each item belongs to the dimension under which it was classified. The items approved by 75% of the panel of jurors were considered suitable for measuring attitudes. Other items were modified in the light of the panel of jurors' opinions. The final version of the scale included 32 items. The researcher used internal consistency coefficients for assessing validity of the

scale of faculty staff's attitude towards using the Blackboard LMS in teaching the courses as presented in table 8.

Table8: Internal consistency coefficient for the scale of faculty staff's attitude towards using the Blackboard LMS in teaching the courses

Item No.	Correlation coefficient	Item No.	Correlation coefficient
First: 1	0.136	17	0.345
2	0.075	18	0.338
3	1.000	19	0.200
4	1.000	20 Fourth	0.816 **
5	0.214	21	0.583
6	0.364	22	0.583
7	0.841 **	23	0.102
8 Second	0.553	24	0.612 *
9	0.603	25	0.408
10	0.273	26	0.704 *
11	0.477	27	0.081
12	0.095	28	0.112
13 Third	0.064	29	0.416 **
14	0.134	30	0.688 **
15	0.218	31	1.000
16	0.535	32	0.151

** Significant at 0.01 * Significant at 0.05

Since validity of the scale means that it measures what it is supposed to measure, internal validity was calculated as indicated in the previous table.

Administering the study instruments to the population of the study

The population of the study consisted of 60 female faculty staff whose age ranged from 25 to 55. They were of different nationalities (Egyptian – Saudi - Yemini – Syrian – Jordanian – Sudanese) and different specializations (Kindergarten – the English Language – Computer – Geography – Psychology – English Literature – Fundamentals of Education – History – Natural Geography – Management and Educational Planning – Counseling and Guidance – Educational technology – the Arabic Language – Methods of Teaching English, Social studies, Science and Arabic – Islamic Studies (interpretation and Al-Quran Sciences – Hadith and its Sciences – Jurisprudence – Doctrine and

Current Ideologies – Jurisprudence and its Bases). The following table shows the distribution of the faculty staff according to their academic degree.

Table 9: Distribution of the sample according to academic degree

Academic degree	demonstrator	Assistant lecturer	Assistant professor	Associate professor	Professor[2]	Total
No.	11	3	37	9	0	60
%	18.3 %	5%	61.7 %	15%	0	100%

It is clear from table 9 that the highest ratio of the faculty staff participating in the study was assistant professors (61.7 %), followed by the demonstrator (18.3%), associate professors (15%), and finally assistant lecturers (5%).

Table 10: Distribution of the sample according to experience in using the computer

Experience in using the computer	0ne year	Two years	Five years	More than five years	Total
No.	8	13	7	32	60
%	13.3%	21.7%	11.7%	53.35%	100%

Table 10 shows that the highest ration of faculty staff participating in the study (53.3%) had more than five years of experience in using the computer, followed by those with two years of experience (21.7%), five years (11.7%) and finally those with one year experience (13.3%). This indicates that the participants of the study were highly experienced in using the computer.

Table 11: Distribution of the sample according to the level of utilizing e-learning in teaching the courses

Level of utilizing e-learning	Doesn't use e-learning (the traditional method)	Complete e-learning	Blended learning	Supportive e-learning	Utilizes the complete, blended and supportive)	Total
No.	6	4	6	33	11	60
%	105	6.75	105	55%	18.3%	100%

[2] There were no professors in the faculty.

Table 11 shows that the highest ration of the level of utilizing e-learning in teaching the courses was for the faculty staff who used the supportive e-learning (55%) followed by those who used the supportive, blended and complete (18.3%), and those who used blended learning (10%) and who did not use e-learning at all -the traditional method- (10%) and finally those who used complete e-learning in teaching the courses (6.7%).

Statistical treatment

The researcher used frequencies, percentages, Chi-square (X^2) in addition to relative weight for each statement and estimating its importance, in order to show the similarities and differences in the sample's responses on the items of the scale of the faculty staff's abilities in using the Blackboard LMS in teaching the courses. Besides, One Way ANOVA was used to identify the differences in attitudes among the faculty staff according to academic degree, experience in using the computer and level of utilizing e-learning.

Previous studies

Many studies that dealt with attitudes towards using the LMSs in teaching the courses were conducted. The following is some of them arranged chronologically.

Trayek and Hassan (2013) aimed at identifying the students' attitudes towards using an LMS and its importance, effectiveness and ease of use. It also aimed at finding out the differences in the students' attitudes towards using the LMS in distant learning and in full time learning. The study recommended that the universities continue in using the LMS because it is useful for all the students. It suggested updating the LMS in a way to suit teaching the gifted students.

Hussein (2011) aimed at investigating the Saudi faculty staff towards using Jusur LMS by electronically administering a questionnaire to a sample of 90 faculty staff at some Saudi universities. The questionnaire was distributed through e-mails. The results revealed that the faculty staff at the Saudi universities had positive attitudes towards using Jusur LMS in

spite of not adequately activating it. The participants expressed their need for training on using the system specially content of learning management, file sharing, forums and item banks. The results also revealed the absence of differences in attitudes towards using the system among the faculty staff due to type of faculty (humanistic, scientific or health).

Alkahtany (2010) aimed at identifying the opinions of the faculty staff concerning using virtual classrooms as one of the components of the Blackboard LMS in the distant learning program. It also aimed at investigating the difficulties that hinder using the virtual classrooms in the distant learning program, and identifying the differences among the members of the sample due to type of faculty, years of service, and knowledge of the computer and the internet). A questionnaire that consisted of three dimensions was prepared. The first dimension dealt with the opinion of the faculty staff concerning using virtual classrooms, the second dealt with the importance of using the virtual classrooms and the third the difficulties of using virtual classrooms. The sample consisted of 120 faculty staff member. The results showed the absence of statistical differences concerning using the virtual classrooms in distant learning due to experience in using the computer and the internet.

Farouk's (2010) study aimed at measuring the faculty staff's and students' attitudes towards using e-learning in teaching the Social Studies' course at Alfayum University. The results of the study revealed that the students were more positive towards using e-learning than the faculty staff. However, there were no differences in attitudes towards e-learning due to the academic department, the educational level or level of mastering the computer.

Bin Douhy (2010) aimed at investigating the teachers' and students' attitudes towards using e-learning in teaching Science. The sample consisted of 82 Physics teachers and 811 students distributed to five groups at three secondary schools in Alkarak Governorate. Four groups of them learnt using the internet, CDs, the internet and CDs, and the teacher with the projector. The fifth

group, the control group, learnt using the traditional method. A scale of attitudes towards e-learning, for teachers and students, was administered. The results indicated positive attitudes towards using e-learning among the teachers and negative ones among the students.

Alkarawany (2010) investigated and analyzed the attitudes of the Mathematics and Computer students at Al-Quds Open University, Selfeit Educational Directorate, towards using e-learning with all its different types, in teaching Mathematics. The questionnaire was administered to a sample of 50 students specialized in Mathematics and Computer during the first term of the academic year 2009/ 2010. The results showed that the students' attitudes towards e-learning were poor since the total response reached 95.58%. In addition, the Mathematics' students' attitudes towards using the different types of e-learning were more positive and stronger than the Computer students. However, there were no differences attributed to gender.

Lal (2009) conducted a study to find out the attitudes towards teaching among the secondary schools' students in the light of the academic specialization, experience in the field of work, and attending symposiums in the area of technology variables. The questionnaire of attitude towards e-learning was administered to the sample which included 462 secondary schools' students in Jeddah. The results revealed that the attitudes of the teachers with scientific academic specialization, experience lower than five years and attendance of symposia in the area of technology had more positive attitudes towards e-teaching.

The aim of Mohammad and Almatary (2009) was twofold: analyzing the attitudes towards e-learning applications among the graduate students at the Faculty of Science in Hashemite University, and identifying the effect of GPA and experience in e-courses. The sample of the study consisted of 70 randomly selected M.A. students at the Faculty of Educational Sciences. The study revealed positive attitudes among the students but there

were no statistical significant differences in the sample's attitudes due to GPA or experience in e-courses.

Mohammed (2007) evaluated the use of the internet in scientific research among faculty staff at the Hashemite University. She also aimed at finding out the effect of academic degree, gender and experience in teaching on attitudes. The sample of the study consisted of 161 randomly selected faculty staff. A questionnaire including three dimensions: percentage of use, its degree and extent of its diversity was used. The results revealed a high percentage use and a moderate degree of use. Besides, there were significant statistical differences for the degree of use according to the academic degree and experience in teaching variables. Yet, there were no statistical significant differences attributed to gender.

Alkhashab (2007) investigated the Kuwaiti's society towards e-learning. The participants were 276 volunteers. Data was collected through a questionnaire based on developing e-learning. The study was applied to the non-Arab courses. The results indicated a negative attitude towards e-learning. They showed no significant statistical differences in attitudes towards e-learning attributed to gender but significant statistical differences were found due to the students' academic level.

Cavus, Uzunboylu, and Ibrahim (2006) aimed at investigating the effectiveness of LMSs and the cooperative tools in web-based language teaching. The results indicated the effectiveness of using LMSs integrated with cooperative learning tools and the success of the programming languages in achieving their aims through LMSs and the cooperative learning tools.

Sadeque (2005) explored the extent to which the academic universities utilized e-learning and teaching technologies. The questionnaires were administered to 259 faculty staff, most of them are females with their experience in teaching ranging from 5 to 10 years. The results revealed a relationship between the academic competencies, experience and attitudes towards e-learning. This indicates that experience in e-learning and its

skills is a basic and influential factor in accepting and utilizing e-learning at the universities.

Commentary on the previous studies

1. The studies were conducted in different periods. The most recent was Trayek and Hassan (2013) and the oldest was Sadque (2005).
2. All samples in the studies included males and females.
3. The educational stages of the samples varied. Some studies were administered to the secondary stage students (Bin Douhy, 2010), university students (Trayek and Hassan, 2013; Faroque, 2010; Hussein, 2011 and Alkarawany, 2010) and postgraduate students (Mohammed and Almatary, 2009). Some studies were administered to in-service teachers (Lal, 2009) while others focused on faculty staff (Mohammed, 2007; Faroque, 2010; Alkahtany, 2010; Hussein, 2011; Sadeque, 2005).

Theoretical background

This study is based on some theoretical bases related to theories of teaching and learning. Attitudes towards using the Blackboard LMS in teaching the courses is related to the Cognitive Dissonance Theory (Festinger,1957) which is based on persuasive communication, and its different premises which are based on persuasion and its role in changing attitudes or forming new one in the learner. It studies the effect of presenting rewards or postponing them on changing attitudes and modifying the behavior, and the effect of social communication.

The study is also based on Social Learning Theory (Bandura, 1989: 275) which entails that people learn from each other through observation, modeling and imitation. The Social Development Theory (Collaborative) is related to the learning situations which assert the importance of collaborative learning (Learning theories.com, 2014: 1).

LMSs emerged from Integration Learning Systems (ILSs) which introduce supplementary activities beside the educational content to introduce a more specialized learning. They introduce

a free content that is separate from the course and include management and monitoring. They are a basis through which the content of teaching is managed, the aims and the people inside the educational system evaluated, the progress occurring in achieving the aims monitored, and data collected and the learning processes in the whole institution supervised. LMSs do not only present content but also allow registration in courses, course management, analyzing follow ups and presenting reports. Most LMSs allow easy log in to the content and management of learning. LMSs can be used by educational institutions to enhance and support teaching inside the classroom (Rouse, 2015: 1).

Content Management Systems (CMSs) are computer applications that enhance self- pacing of learning inside the course, organization of students, monitoring their performance, storing their activities and facilitating the communication process among them and between them and the teacher. These functions can be also seen in LMSs. Therefore, they are usually confused but a CMS is one of the LMSs' functions.

LMSs introduce the courses online to learners, manage the students and monitors their progress in performing all the presented training activities. It is connected to a programming technology that introduces varied environments to the users, developers, composers, course designers and experts in the educational subjects concerned with design, storage, management, introducing digital technology and the e-learning content to the Central Object Repository center. On the other hand, CMSs focus on developing, and publishing content through LMSs and reusing content. In this way, they lessen the efforts repeated in developing the courses and adjusting them to suit many users through modifying the course and re-publishing and introducing it to other users, allowing quick collection of good content (Rouse, 2015:1).

LMSs functions

1. Introducing content of learning.

2. Registration.
3. Managing training.
4. Managing curricula.
5. Managing skills and competencies.
6. Managing records of training.
7. Analyzing weaknesses.
8. Introducing individual development plans.
9. Introducing reports.
10. Managing resources.
11. Applying virtual systems.
12. Integration of performance management systems (Rouse, 2015:1).

LCMSs functions

1. Developing cooperative content.
2. Controlling content templates.
3. Making content management such as indexing and reusing easy.
4. Publishing.
5. Integration among workflow steps.
6. Organizing automatic interaction interfaces (Rouse, 2015).

Both LMSs and LCMSs work together for developing the course content introduced to the students. They are often confused as course management systems. The Blackboard is a program that includes the contributions of these systems (Rouse, 2015).

Instructors' roles and responsibilities in dealing with the Blackboard LMS

1. Mastering the skills of designing instructional situations, their planning and implementation, and all what this requires concerning sub-skills, and introducing active learning models.
2. Introducing curative programs that suit each learner.

3. Designing enrichment programs that challenge the excellent learners.
4. Evaluating the curricular and enrichment educational programs and encyclopedias according to total quality standards.
5. Selecting the programs suitable for each category of learners.
6. Conducting discussions, giving examples and answering inquiries.
7. Introducing lists of references that the learners make use of.
8. Using e-mails and file transfer (Mohammad, 2001: 252-253).

The instructor has to be a developer of the e-content and utilizes it using learning and teaching strategies and all the communication tools available for communication with the students, the specialists and parents in order to develop creativity and innovation among the students. This is because the e-content is distinguished by the density and integration of multimedia and links with sources of information on the internet (Algazzar, 2001:324).

Results

The aforementioned descriptive and deductive statistical analyses were conducted. The analyses revealed a group of results. To make their presentation easy, they were classifies into groups.

Results related to the first question

First: To answer the first question "What are the current abilities of the faculty staff concerning using the Blackboard LMS in teaching the courses?", a questionnaire was administered for this purpose. It consisted of three dimensions.

Results of the first dimension: Techniques of dealing with the Blackboard LMS

The following table presents frequencies, percentages, Chai Square, relative weight and estimation of importance for the

items related to techniques of dealing with the Blackboard LMS of faculty staff's use of the Blackboard LMS in teaching the courses. The following results were reached.

Table 12: Frequencies, percentages, Chai Squares for the techniques of dealing with the Blackboard LMS

Item	Yes No./ %	Sometimes No./ %	No No./ %	X^2	Sig.	Relative weight	Importance
I can design webpages 1. for e-learning.	17 28.3%	0	43 71.3%	11.267	Not sig.	94	1.57
2. I can manage online discussions.	32 53.3%	0 0	28 46.7	0.267	Not sig.	124	2.067
3. I master designing a course for the e-learning environment.	33 55%	1 1.6%	26 43.4%	28.3	Sig.	127	2.116
I can introduce 4. guidelines for e-learning.	39 65%	1 1.6%	20 33.3%	36.1	Sig.	139	2.316
I write guidelines for 5. my students through e-learning.	51 85%	1 1.6%	8 13.3%	73.3	Sig.	163	2.716
I can design e-tests. 6.	26 43.3%	0 0	34 56.7%	1.067	Not sig.	122	1.866
I can deal with the 7. legal status such as property and privacy.	19 31.6%	0 0	41 68.4	8.067	Not sig.	98	1.633
I search for learning 8. resources through the internet.	26 43.3%	2 3.3%	32 53.3%	25.2	Sig.	114	1.9
I design e-learning 9. resources for my students.	37 61.6%	0 0	23 38.4%	3.267	Not sig.	134	2.233
I contact my students 10. using the internet.	38 63.4%	1 1.6%	21 35%	34.2	Sig.	137	2.283
I evaluate e-learning 11. outcomes.	43 71.6%	2 3.3%	15 25%	43.9	Sig.	148	2.466
I have information 12. and communication skills.	40 66.4%	2 3.3%	18 30%	36.4	Sig.	142	2.366
I use the basics and 13. methods of learning based on computer guidance.	14 23.4%	1 1.6%	45 75%	51.1	Sig.	89	1.483
I design e-teaching 14. programs.	33 55%	1 1.6%	26 43.4	28.3	Sig.	127	2.116

It is clear from table 12 that there are statistical significant differences at the 0.01 level among the faculty staff responses on the items of the first dimension, techniques of dealing with the Blackboard LMS, of the questionnaire of faculty staff abilities in using the Blackboard LMS in teaching in favor of accepting the response. Most items in the dimension received high degree of importance which means the existence of a high percentage of the techniques of dealing with the Blackboard LMS in teaching the courses among the faculty staff. They are, in order, as follows: I write guidelines for my students through e-learning with importance reaching (2.716) and relative weight (163), I evaluate e-learning outcomes with importance estimating (2.466) and (148) relative weight, having the communication and information skills with importance reaching (2.366) and relative weight (143), the ability of introducing guidelines through e-learning with importance reaching (2.316) and relative weight (139), contacting students using the internet with importance reaching (2.283) and relative weight (137), the ability of designing e-learning resources with importance reaching (2.233) and relative weight (134), and finally mastering designing courses for the e-learning environment and designing e-teaching programs with importance reaching (2.116) and relative weight (127) for both abilities.

The techniques of dealing with the Blackboard LMS which are not available in high percentage among the staff members were as follows: the ability of managing online discussions, designing e-tests, searching for learning resources through the internet, designing webpages for e-learning, using the basics and methods of learning based on computer guidance and finally dealing with the legal status such as property and privacy.

Results of the second dimension: Teaching skills using the Blackboard LMS

The following table presents frequencies, percentages, Chai Square, relative weight and estimation of importance of the faulty staff's teaching skills using the Blackboard LMS. This revealed the following results.

Table 13: Frequencies, percentages, and Chai Square for the teaching skills using the Blackboard LMS

Item	Yes No./ %	Sometimes No./ %	No No./ %	X^2	Sig. at 0.01	Relative weight	Importance
1. I analyze the learners' e-learning needs.	31 51.7%	1 1.6%	28 46.7%	27.3	Sig.	123	2.05
2. I predict the problems of e-learning in teaching.	47 78.3%	0 0	7 21.7%	19.1	Sig.	154	2.566
3. I support the students with different learning styles.	34 56.6	1 1.6%	25 41.6%	29.1	Sig.	129	2.15
4. I can formulate the aims of the e-learning course.	39 65%	2 3.3%	19 31.7%	34.3	Sig.	140	2.33
5. I can enhance the learners' motivation.	31 51.7%	2 3.3%	27 45%	24.7	Sig.	124	2.066
6. I can design teams for assessing e-learning.	42 70%	1 1.6%	17 28.47%	42.7	Sig.	145	2.416
7. I can use active learning methods in the e-course.	31 51.6%	0 0	29 48.4%	1.67	Not sig.	122	2.033
8. I can enrich the e-learning experiences.	41 68.4%	1 1.6%	18 30%	40.3	Sig.	142	2.383
9. I support self-learning through e-learning.	36 60%	2 3.3%	22 36.7%	29.2	Sig	134	2.233
10. I support problem solving using e-learning.	36 60%	3 5%	21 35%	27.3	Sig.	135	2.25
11. I evaluate learners using non-traditional methods.	15 25%	0 0	45 75%	15	Sig.	90	1.5
12. I deal with and remedy the learners' counter-culture.	22 36.7%	1 1.6%	37 61.7%	32.7	Sig.	75	1.25

It is clear from table 13 that there are significant differences at 0.01 among the faculty staff's responses on the items of the second dimension dealing with the teaching skills using the Blackboard LMS in favor of accepting the response.

Most items of the questionnaire received a high degree of importance which means the existence of a high percentage of teaching skills using the Blackboard LMS among the staff members in teaching the courses. They are according to importance as follows: predicting the problems of e-learning in teaching with importance and relative weight reaching 2.566 and 154 respectively, designing teams for assessing e-learning with importance and relative weight reaching 2.416 and 145 respectively, enriching the e-learning experiences with importance and relative weight reaching 2.383 and 142 respectively, formulating aims for the e-learning course with importance and relative weight reaching 2.33 and 140 respectively, supporting problem solving using cooperative learning with importance and relative weight reaching 2.25 and 135 respectively, supporting self-learning through e-learning with importance and relative weight reaching 2.2333 and 134 respectively, then supporting the students with different learning styles with importance and relative weight reaching 2.15 and 129 respectively, followed by mastering enhancing the learners' motivation with importance and relative weight reaching 2.066 and 124 respectively, analyzing the learners' e-learning needs with importance and relative weight reaching 2.05 and 123 respectively, and finally using active learning methods in the e-course with importance and relative weight reaching 2.033 and 122 respectively. However, the teaching skills using the Blackboard LMS which did not exist in a high percentage among the faculty staff were evaluating the learners using non-traditional methods and dealing with the learners' counter-culture.

Results of the third dimension: Previous experience of using the Blackboard LMS

The following table presents frequencies, percentages, Chai Square, relative weight and estimation of importance of the faulty staff's previous experience in using the Blackboard LMS. This revealed the following results.

Table 14: Frequencies, percentages, and Chai Square for the previous experiences in using the Blackboard LMS

Item	Yes/No./ %	Sometimes No./ %	No/No./ %	X^2	Sig. at 0.01	Relative weight	Importance
1.I developed an e-learning material	8 13.4%	1 1.6%	51 85%	73.3	Sig.	77	1.283
2. I developed an e-learning course.	17 28.3%	1 1.6%0	42 70%	42.7	Sig.	95	10583
3. I used a virtual learning environment.	22 36.7%	0 0	38 63.3%	4.27	Not sig.	104	1.733
4. I used composing e-learning programs.	13 21.7%	1 1.6%	46 76.7%	54.3	Sig.	87	1.45
5. I used e-learning materials that were developed by other universities.	7 11.7%	1 1.6%	52 86.7%	77.7	Sig.	75	1.25
6. I used a commercial e-course.	4 6.4%	0 0	56 94.3%	45.1	Sig.	68	1.133
7. I participated as a learner in an e-learning course before.	24 40%	0 0	36 60%	2.4	Not sig.	108	1.8
8. I managed online discussions using video conferences.	8 13.4%	0 0	52 86.6%	32.27	Sig.	76	2.266

It is clear from table 14 that there were statistical significant differences among the faculty staff's responses to the items of the third dimension that dealt with previous experience in using the Blackboard LMS for teaching the courses in the faculty staff's questionnaire of abilities to use the Blackboard LMS in favor of rejecting the response. This means that the faculty staff had no previous experience in using the Blackboard LMS in teaching the courses. They only had experience in participating as learners in virtual classrooms' sessions and used virtual learning environments. The importance of these items reached 1.8 and 1.733 with a relative weight reaching 108 and 1.4 respectively.

The faculty staff had no previous experience in developing an e-learning course, using e-learning composing programs,

developing e-learning materials, managing online discussions using video conferences, using any e-learning materials developed by other universities, and finally using a commercial e-learning course.

Second: Results related to the faculty staff's attitudes towards using the Blackboard LMS in teaching the courses

The results were divided as follows:

To answer the second question "What are the faculty staff's attitudes towards using the Blackboard LMS in teaching the courses?", a scale of faculty staff's attitudes towards using the Blackboard LMS was designed (Appendix 1).

Presenting the results of faculty staff towards using the Blackboard LMS in teaching the courses according to academic degree ((professor – associate professor – assistant professor – assistant lecturer – demonstrator). To answer the third question "Do faculty staff's attitude differ according to academic degree (professor – associate professor – assistant professor – assistant lecturer – demonstrator)?", the validity of the second hypothesis which states "there are no statistical significant differences at the 0.05 level between the mean scores of the faculty staff on the scale of attitudes towards using the Blackboard LMS in teaching the courses due to academic degree (professor – associate professor – assistant professor – assistant lecturer – demonstrator)" was checked.

Mean scores and standards deviations for the academic degree variable

The following section presents the mean scores and standard deviations in their distribution among the faculty staff's scores on the scale of attitudes towards using the Blackboard LMS in teaching the courses according to the academic degree (professor – associate professor – assistant professor – assistant lecturer – demonstrator). Table 15 presents these results.

Table 15: Mean scores and standard deviations for groups according to the academic degree of the faculty staff

Group	Mean score	Standard deviation	No.
Associate professor	108.25	12.792	9
Assistant professor	115.615	28.715	37
Assistant lecturer	118.000	18.357	3
demonstrator	124.031	14.259	11
Total	119.400	18.976	60

It is clear from table 15 that the highest mean score was for the demonstrators' group with a mean score 124.031 followed by the assistant lecturers' group with a mean score reaching 118.000, the assistant professors' group with a mean score reaching 115.615 and finally the associate professors' group with a mean score reaching 108.25.

To check the validity of this hypothesis, the researcher used One Way ANOVA to measure the differences among the faculty staff's scores on the scale of attitudes towards using the Blackboard LMS in teaching.

Table 16: Significance of differences and results of One Way ANOVA for the academic degree of the faculty staff

Source of variance	Sum of squares	Degree of freedom	Mean squares	F ratio	Level of sig.
Among groups	1644.351	3	548.117	1.566	0.208
Within groups	19602.049	56	350.037		
Total	21246،400	59			

Analyzing the results in table 16 shows that the differences are not significant which indicates that there were no differences between the mean scores of the faculty staff on the scale of attitudes towards using the Blackboard LMS in teaching the courses due to academic degree (professor – associate professor – assistant professor – assistant lecturer – demonstrator). Thus, this null hypothesis is accepted.

Presenting the results related to the attitudes of the faculty staff towards using the Blackboard LMS in teaching the courses according to experience in using the computer (one, two, five years, and more)

To answer the fourth question of the study "Do faculty staff's attitude differ according to experience in using the computer (one, two, five years and more than five years)?", the validity of the second hypothesis which states " there are no statistical significant differences at the 0.05 level between the mean scores of the faculty staff on the scale of attitudes towards using the Blackboard LMS in teaching the courses due to experience in using the computer (one, two, five years and more than five years) was checked.

Mean scores and standard deviations according to experience in using the computer variable

The following section presents the mean scores and standard deviations in their distribution among the faculty staff's scores on the scale of attitudes towards using the Blackboard LMS in teaching the courses according to experience in using the computer (one, two, five, and more than five years)). Table 17 presents these results.

Table 17: Mean scores and standard deviations for groups according to experience in using the computer

Group	Mean score	Standard deviation	No.
One year	124.111	141.844	8
Two years	115.351	20.699	13
Five years	129.000	4.000	7
More than five years	126.545	15.436	32
Total	119.400	18.976	60

It is clear from table 17 that the highest mean score was for the five years group followed by the group with more than three years, one year and finally two years of computer experience with a mean score 129.000, 126.545, 124.111 and 115.351 respectively. This result indicates that most of the participants had a high experience in using the computer.

To verify the validity of this hypothesis, the researcher used One Way ANOVA to measure the differences between the faculty staff's scores on the scale of attitudes towards using the Blackboard LMS in teaching the courses according to years of experience with the computer (one, two, five and more years).

Table 18: Significance of differences and results of One Way ANOVA for the experience with the computer

Source of variance	Sum of squares	Degree of freedom	Mean squares	F ratio	Level of sig.
Among groups	1880.854	3	626.951	1.813	1.55 Not sig.
Within groups	1936.546	56	345.813		
Total	21246.400	59			

Analyzing the results in table 18 shows that the differences are not significant which indicates that there were no differences between the mean scores of the faculty staff on the scale of attitudes towards using the Blackboard LMS in teaching the courses due to experience with the computer (one, two, five or more than five years). Thus, this null hypothesis is accepted. The researcher attributed these results to the participants' high level, generally, in the experience with the computer.

Presenting the results related to the level of utilizing e-learning in teaching the courses (complete –blended or supportive e-learning)

To answer the fifth question of the study which states "Do faculty staff's attitude differ according to the level of utilizing e-learning (complete, blended or supportive e-learning)?", the validity of the third hypothesis which states "there are no statistical significant differences at the 0.05 level between the mean scores of the faculty staff's scores on the scale of attitudes towards using the Blackboard LMS according to level of utilizing e-learning (complete, blended and supportive e-learning) was checked.

Mean scores and standard deviations according to level of utilizing e-learning in teaching the courses

The following section presents the mean scores and standard deviations in their distribution among the faculty staff's scores on the scale of attitudes towards using the Blackboard LMS in teaching the courses according to level of utilizing e-learning in teaching the courses (complete, blended and supportive e-learning). Table 19 presents these results.

Table 19: Mean scores and standard deviations for groups according to level of utilizing e-learning in teaching the courses

Group	Mean score	Standard deviation	No.
Complete e-learning	125.500	20.885	4
Blended e-learning	117.833	6.337	6
Supportive e-learning	115.909	3.798	33
The traditional method	127.667	4.674	6
E-learning (complete- blended- supportive)	124.000	3.849	11
Total	119.400	2.449	60

It is clear from table 19 that the highest mean score was for the group using the traditional method with a mean score reaching 127.667 followed by the complete e-learning group, the e-learning (complete- blended- supportive) group, the blended learning group and finally the supportive e-learning group with mean scores reaching 125.500, 124.000, 117.833 and 115.909 respectively. This result indicates that a great number of the faculty staff use the traditional method. Those were mentioned before as most of them specialize in Islamic Studies and believe that the Blackboard LMS is not appropriate for teaching the courses related to the formation of doctrine. Other staff members are convinced with the traditional method and do not want to change it. This asserts the necessity of exerting efforts for changing their attitude towards e-learning, in general, and LMSs in particular through increasing technical support presented by the deanship of e-learning to the faculty staff at the faculties.

To verify the validity of this hypothesis, the researcher used One Way ANOVA to measure the differences between the faculty staff's scores on the scale of attitudes towards using the Blackboard LMS in teaching the courses according to level of utilizing e-learning in teaching the courses (complete, blended and supportive e-learning).

Table 20: Significance of differences and results of One Way ANOVA for the level of utilizing e-learning in teaching the courses

Source of variance	Sum of squares	Degree of freedom	Mean squares	F ratio	Level of sig.
Among groups	1208.506	4	302.127	0.829	0.512 Not sig.
Within groups	20037.894	55	364.325		
Total	21246.400	59			

Analyzing the results in table 20 shows that the differences are not significant which indicates that there were no statistical significant differences between the mean scores of the faculty staff on the scale of attitudes towards using the Blackboard LMS in teaching the courses due to level of utilizing e-learning (complete, blended and supportive). Thus, this null hypothesis is accepted.

Discussion of the results

The main aim of this study was to identify the faculty staff's abilities in using the Blackboard LMS in using the courses and their attitudes towards using them according to academic degree (professor – associate professor – assistant professor – assistant lecturer – demonstrator), experience in using the computer (one – two – five years and more than five years) and level of utilizing e-learning in teaching the courses (complete – bended and supportive e-learning).

The results related to the faculty staff's abilities in using the Blackboard LMS in teaching the courses showed that they had many techniques of dealing with the Blackboard LMS in teaching the courses, they also had many teaching skills using the Blackboard LMS and that they had no previous experience in using LMSs except for participating as learners in virtual classroom training sessions.

Concerning the results of the faculty staff's attitudes towards using the Blackboard LMS in teaching the courses, there were no statistical significant differences in attitudes due to academic degree (professor – associate professor – assistant professor – assistant lecturer – demonstrator). This result is contradictory to Lal (2009) who revealed that faculty staff less than five years of experience had more positive attitudes towards e-learning. In addition, there were no statistical significant differences in attitudes due to experience in using the computer (one – two – five years and more than five years). This result is consistent with Alkahtany (2010) which revealed the absence of attitudes due to experience in using the computer or the internet and Farouk (2010) which showed no differences due

to mastery of the computer. However, this result is different from Sadque (2005) which indicated that experience in e-learning and its skills is an important and influential factor in accepting and utilizing e-learning in the universities. Concerning the third result, there were no statistical differences in attitudes due to level of utilizing e-learning (complete, blended and supportive). This result is consistent with Mohammed and Almatary (2009) which revealed no significant differences in the attitudes of graduate studies students towards e-learning applications due to experience in e-courses. The researcher believes that having the techniques of dealing with the Blackboard LMS and the teaching skills for using it was an influential factor in the results which indicated the absence of significant differences attributed to academic degree, experience in using the computer and level of utilizing e-learning. This is because the ability of dealing with the LMS, in general, increases attitudes towards it.

Recommendations

1. Making connection to the internet available for all the faculty staff at the computer labs with high speed, setting alternative plans for dealing with interruption in the connection, and making use of Wi –Fi connection for the faculty staff as well as the students.
2. Supporting those who use e-learning financially and emotionally.
3. Setting a plan for unifying the efforts between the Egyptian universities, and making the cooperation and information and programs sharing which serves e-learning between them easy, in order not to repeat the efforts.
4. Generalizing using the Blackboard LMS to the different educational stages.
5. Training the instructors on using LMSs in the courses introduced at the different educational stages.
6. Designing e-learning courses based on sound scientific standards to guarantee continuity.

7. Supporting the traditional teaching through utilizing e-learning to overcome the educational problems.
8. Raising the awareness of the faculty staff concerning the importance of utilizing LMSs in the educational process.
9. The necessity of activating LMSs, specially the Blackboard, due to its advantages which allows building an e-learning culture.
10. Providing an infrastructure for training the students and the faculty staff on LMSs.
11. Developing the effectiveness of the computer and internet labs in order to suit the LMSs.
12. Providing technical support for solving the students' and the faculty staff's problems online in order to overcome the obstacles of using the LMSs.
13. Motivating the faculty staff to use the Blackboard LMS.

Suggestions for further research

1. Conducting a similar study on a similar sample of males and a mixed one including males and females.
2. Studying the students' attitudes towards e-learning using LMSs at the Egyptian universities.
3. Studying the effectiveness of teaching using the Blackboard LMS in developing the students' skills.
4. Studying the students' attitudes towards other LMSs.

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Programme proposé basé sur la stratégie de résolution de problèmes pour développer quelques compétences de la pensée critique chez les étudiants de la faculté de pédagogie, section de français

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Résumé de la recherche

Cette recherche avait pour but de mesurer l'efficacité d'un programme proposé basé sur la stratégie de résolution de problèmes au développement de quelques compétences de la pensée critique. Afin d'atteindre ce but, la chercheuse a élaboré deux outils : un questionnaire des compétences de la pensée critique nécessaires aux étudiants de l'échantillon de la recherche et un test des compétences de la pensée critique. L'échantillon était composé de 90 étudiants à la deuxième année, section de français, faculté de pédagogie, université de Mansourah, la chercheuse l'a réparti en deux groupes : un groupe expérimental (45 étudiants) qui a appris selon la stratégie de résolution de problèmes et un groupe témoin (45 étudiants) qui a appris selon la méthode traditionnelle. Les résultats ont abouti à l'efficacité du programme proposé au développement de quelques compétences de la pensée critique chez les étudiants de l'échantillon de la recherche.

Introduction

Tout en étant un don d'Allah, la pensée, seule, peut discriminer l'homme des autres créatures. L'islam nous provoque à penser, à raisonner et à réfléchir:

"Dis : Est – ce que sont égaux l'aveugle et celui qui voit? Ne réfléchissez – vous donc pas?" ﴿50﴾ (Sourate d'Al – An'am).

"À quiconque nous accordons une longue vie, nous faisons baisser sa forme. Ne raisonneront – ils donc pas?" ﴿68﴾ (Sourate d'Ya – Seen).

En fait, la pensée critique, comme l'un de types de la pensée, se distingue d'autres types par la caractéristique

évaluative. Elle donne la chance à l'individu d'expliquer, d'analyser, d'induire, de justifier et de porter un jugement.

De plus, l'aptitude à penser de manière critique dépend que l'apprennant ait des expériences et des informtions adéquates. En conséquence, la pensée critique lui permet de relier les connaissances nouvelles et antérieures, de communiquer et d'échanger ses connaissances, ses idées et ses points de vue avec les autres dans la classe. Alors, les pratiques critiques ne convoquent pas seulement des dimensions intellectuelles, mais aussi sociales et affectives.

D'ici, vient la nécessité de la pensée critique à la formation des enseignants qui vont la développer à leur tour chez leurs élèves, d'une part, et d'autre part elle les aide à améliorer leurs pratiques professionnelles.

I. Position du problème

En dépit de l'importance des compétences de la pensée critique et leur rôle vital à la formation initiale des étudiants/enseignants, elles ne prennent pas le soin suffisant d'études et de recherches faites dans le domaine de l'enseignement de la langue française en comparaison de compétences linguistiques, malgré qu'il y ait une faiblesse au niveau des étudiants à la faculté de pédagogie aux compétences de la pensée critique.

La chercheuse s'est assurée de ce problème comme suit:

1. Elle a observé pendant son enseignement des cours que les étudiants/enseignants ne maîtrisent pas les compétences essentielles de la pensée critique.
2. La chercheuse a appliqué un test exploratif à 40 étudiants de la deuxième année à la faculté de pédagogie, université de Mansourah, pour vérifier leur niveau dans les compétences de la pensée critique. Les indices des résultats ont démontré que :
    1. La fréquence de la compétence (l'interprétation) est 46 %.
    2. La fréquence de la compétence (l'analyse) est 40 %.

3. La fréquence de la compétence (l'inférence) est 39 %.
4. La fréquence de la compétence (l'évaluation) est 43 %.
5. La fréquence de la compétence (l'autorégulation) est 41 %.

Ceci montre une faiblesse dans les compétences de la pensée critique chez ces étudiants, ce qui exige une étude expérimentale approfondie pour y développer.

Par conséquent, on devrait avoir recours à des stratégies et à des méthodes d'apprentissage qui contribuent au développement des compétences de la pensée critique, qui donnent un rôle positif à l'apprenant, qui lui donnent la chance de l'échange de ses idées et de ses connaissances différentes avec ses camarades et qui lui permettent de penser, de raisonner, d'analyser, d'évaluer, de prendre une décision et de la justifier. La stratégie de résolution de problèmes est l'une de ces stratégies qui convient à cet environnement.

Dans ce contexte, Gradinariu (2014) montre que la situation de résolution de problèmes est avant tout une occasion d'apprendre à penser, c'est-à-dire d'apprendre à reconnaître les ressources intellectuelles, à les développer et les utiliser pour résoudre la multitude des petits et grands problèmes. En outre, la relation de la pensée critique à la résolution d'un problème peut prendre tout son sens au moment où les apprenants peuvent choisir une solution parmi un certain nombre de possibilités.

Ainsi, les résultats de plusieurs études ont démontré l'efficacité de la stratégie de résolution de problèmes au développement des compétences de la pensée critique chez les apprenants comme les études de Williams (2001), de Wenglinsky (2004), de Patel (2006), de Gagnon (2008), de Schellens, de Keer & de Valcke (2009), d'El Bana (2010), d'Oja (2011), de Masek & de Yamin (2012), d'El Tounsi (2012), d'Hartman & de Media (2013), de Tang & de Sung (2014) et de Kaupp, de Frank & de Chen (2014).

II. Problématique de la recherche

La problématique de la recherche réside dans la faiblesse du niveau des étudiants de la deuxième année à la faculté de pédagogie en ce qui concerne les compétences de la pensée critique. Cette faiblesse revient à l'absence de stratégies d'enseignement adéquates au développement des compétences de la pensée critique chez ces étudiants. Ainsi, la présente recherche vise à répondre aux questions suivantes :

1. Quelles sont les compétences de la pensée critique nécessaires aux étudiants de l'échantillon de la recherche ?
2. Jusqu'à quel niveau les étudiants de l'échantillon de la recherche maîtrisent-ils ces compétences?
3. Quelle est l'efficacité du programme proposé basé sur la stratégie de résolution de problèmes au développement de ces compétences chez les étudiants de l'échantillon de la recherche ?

III. Objectifs de la recherche

Dans cette recherche, nous tentons de :

1. Déterminer les compétences de la pensée critique nécessaires aux étudiants de la deuxième année à la faculté de pédagogie.
2. Mesurer l'efficacité du programme proposé basé sur la stratégie de résolution de problèmes au développement de quelques compétences de la pensée critique chez les étudiants de l'échantillon de la recherche.

IV. Importance de la recherche

La recherche actuelle essaie de :

1. Développer quelques compétences de la pensée critique chez les étudiants/enseignants à travers le programme proposé basé sur la stratégie de résolution de problèmes.
2. Attirer l'attention des chercheurs sur la nécessité de s'intéresser aux compétences de la pensée critique au cycle universitaire et aux autres cycles.

3. Solliciter l'attention des spécialistes sur l'importance de l'emploi de la stratégie de résolution de problèmes dans l'enseignement / apprentissage de français.
4. Attirer l'attention des spécialistes sur l'importance du soin de la formation des étudiants/enseignants.
5. Encourager les chercheurs à faire d'autres études et recherches nouvelles visant à mesurer l'effet de l'emploi de la stratégie de résolution de problèmes sur le développement d'autres compétences en français.

V. Hypothèses de la recherche

1. Il y a une différence statistiquement significative entre les moyennes des notes des étudiants du groupe expérimental et celles des étudiants du groupe témoin au post-test des compétences de la pensée critique en faveur des étudiants du groupe expérimental.
2. Il y a une différence statistiquement significative entre les moyennes des notes des étudiants du groupe expérimental au pré/post test des compétences de la pensée critique en faveur du post- test.
3. Il y a une efficacité du programme proposé basé sur la stratégie de résolution de problèmes au développement de quelques compétences de la pensée critique chez les étudiants de l'échantillon de la recherche.

VI. Limites de la recherche

La recherche se limite à :

- Un échantillon d'étudiants au nombre de 90 de la deuxième année, section de français, faculté de pédagogie, université de Mansourah.
- Cinq compétences de la pensée critique nécessaires aux étudiants de l'échantillon de la recherche: l'interprétation, l'analyse, l'inférence, l'évaluation et l'autorégulation.

VII. Outils de la recherche

Afin d'atteindre les objectifs de la recherche, la chercheuse a élaboré les outils suivants :

1. Un questionnaire des compétences de la pensée critique nécessaires aux étudiants de l'échantillon de la recherche.
2. Un test des compétences de la pensée critique.

VIII. Curricula de la recherche

La chercheuse adopte deux curricula :

1. **Le curriculum descriptif** : en ce qui concerne le cadre théorique de la recherche (la stratégie de résolution de problèmes et la pensée critique).
2. **Le curriculum expérimental** : en ce qui concerne l'étude expérimentale et l'application d'un test afin de mesurer l'efficacité du programme proposé basé sur la stratégie de résolution de problèmes au développement de quelques compétences de la pensée critique chez les étudiants de la deuxième année à la faculté de pédagogie.

IX. Démarches de la recherche

1- Pour répondre à la première question, nous procédons comme suit :

1. Passer en revue les recherches et les études antérieures concernant la pensée critique pour en tirer profit à l'élaboration du questionnaire des compétences de la pensée critique.
2. Élaborer un questionnaire des compétences de la pensée critique pour les étudiants de la deuxième année à la faculté de pédagogie.
3. Présenter ce questionnaire au jury afin de déterminer les compétences les plus nécessaires et convenables aux étudiants de l'échantillon de la recherche.

2- Pour répondre à la deuxième question, nous procédons comme suit:

1. Élaborer un test pour détecter jusqu'à quel niveau les étudiants/enseignants maîtrisent les compétences de la pensée critique.

2. Présenter ce test aux membres du jury pour déterminer sa validité.

3- Pour répondre à la troisième question, nous procédon comme suit:

1. Préparer un programme proposé basé sur la stratégie de résolution de problèmes.
2. Présenter ce programme proposé aux membres du jury afin de déterminer sa validité.
3. Choisir l'échantillon de la recherche et le répartir en deux groupes (expérimental et témoin).
4. Appliquer le pré-test sur l'échantillon de la recherche.
5. Enseigner le programme proposé au groupe expérimental selon la stratégie de résolution de problèmes et au groupe témoin selon la méthode traditionnelle.
6. Appliquer le post-test sur l'échantillon de la recherche.
7. Analyser les résultats en employant les méthodes statistiques convenables.
8. Discuter et interpréter les résultats.
9. Proposer des recommandations et des suggestions.
10. Présenter un résumé de la recherche en langue française.

X. Terminologie de la recherche

La stratégie de résolution de problèmes

Pallascio (2002) définit la stratégie de résolution de problèmes comme "une approche pédagogique consiste à confronter l'élève à des problèmes signifiants et motivants, réels ou fictifs, dans le but de développer son autonomie et son implication dans la résolution de ses problèmes personnels, sociaux et éducationnels".

Clément (2009) définit la stratégie de résolution de problèmes comme "un processus qui permet d'identifier des solutions pour éliminer une divergence entre un état initial et le but à atteindre. Ce processus implique la découverte de solutions. Une fois que toutes les solutions possibles ont été

identifiées, il s'agit alors de prendre une décision en choisissant la meilleure solution".

Définition opérationnelle

La chercheuse définit la stratégie de résolution de problèmes comme une activité cognitive comportant des différents problèmes ou des situations nouvelles qui permettent à l'apprenant de penser, d'analyser, de discerner et d'évaluer les différentes solutions en sélectionnant la meilleure et la plus appropriée à résoudre ces problèmes.

La pensée critique

Boisvert (2000) définit la pensée critique comme "une pensée réfléchie et raisonnable qui permet de décider ce qu'il faut croire ou faire pensée qui est motivé par l'examen d'un principe ou d'un fait en vue de porter un jugement d'appréciation sur ce principe ou ce fait".

Gagnon (2008) définit la pensée critique comme "une pratique évaluative fondée sur une démarche réflexive, autocritique et autocorrectrice impliquant le recours à différentes ressources (connaissances, habiletés de pensée, attitudes, personnes, informations et matériel) dans le but de déterminer ce qu'il y a raisonnablement lieu de croire (au sens épistémologique) ou de faire (aux sens méthodologique et éthique) en considérant attentivement les critères de choix et les diversités contextuelles".

Définition opérationnelle

La chercheuse définit la pensée critique comme l'habilité de l'apprenant à interpréter, à analyser, à inférer et à évaluer des connaissances, des idées, des points de vue, des arguments, des conséquences et des expériences afin de porter un jugement ou de prendre une décision autorégulateurs et justes dans une situation d'apprentissage.

Cadre théorique de la recherche

A) La stratégie de résolution de problèmes

La stratégie de résolution de problèmes est une approche de l'apprentissage qui tient compte de modifications de

l'environnement éducatif. Ce courant qui a été conçu en 1969 par Jensen, s'inscrit parfaitement dans le courant socioconstructiviste où l'apprenant est véritablement au centre de la construction du savoir.

Cette stratégie nécessite une démarche de recherche active de solutions qui n'apparaissent pas de manière évidente au départ, un exercice est en quelque sorte la reprise ou la reproduction d'opérations connues pour mieux se les approprier et les maîtriser. Elle exige aussi la mise en oeuvre d'un processus de raisonnement pour élaborer les situations les plus convenables.

Par ailleurs, il faut ajuster le niveau de difficulté en fonction des connaissances acquises ou acquérir et mettre en considération le niveau de développement d'autres habiletés requises dans la résolution de problèmes, notamment celles qui sont reliées à la prise de décision, à la pensée critique et à la pensée créatrice. (Minuth, 2014)

Importance de la stratégie de résolution de problèmes

La stratégie de résolution de problèmes est un moyen d'apprentissage très important parce qu'elle aide les apprenants à réfléchir de manière claire à des questions complexes, à penser logiquement à des nouvelles situations, à les analyser, à trouver des nouvelles façons de résoudre des problèmes, à justifier leurs solutions et à communiquer leurs solutions de façon simple et convaincante.

En outre, cette approche pousse les apprenants à exécuter plutôt qu'à chercher. Elle permet aussi de développer chez les apprenants une multitude d'habiletés intellectuelles, un esprit d'engagement et de responsabilisation par rapport à l'apprentissage. Les apprenants sont aussi actifs dans leur apprentissage et, lors de l'échange, utilisent des différentes représentations (illustrations, diagrammes, graphiques, dessins, modèles, symbols) pour confirmer leur compréhension des

nouvelles connaissances et prennent confiance dans des situations déroutantes. (Clément, 2009)

D'autre part, Dupin (2011) souligne que la stratégie de résolution de problèmes permet aux élèves de:

- Apprendre des connaissances dans un contexte qui encourage l'acquisition et l'utilisation d'habiletés diverses.
- Améliorer leur raisonnement en explorant des idées variées, en faisant des conjectures et en justifiant les résultats.
- Persévérer en affrontant des nouveaux défis.
- Formuler leurs propres explications et écouter celles des autres.
- Participer à des activités d'apprentissage ouvertes qui permettent d'utiliser des diverses stratégies de resolution et de reconnaître que ces stratégies mènent à la même solution.
- Utiliser les connaissances acquises et établir des liens avec des situations quotidiennes.
- Utiliser les processus de la pensée critique (l'estimation, l'évaluation, la classification, l'établissement de relations, la formulation d'hypothèses, la justification d'une opinion et l'expression d'un jugement).
- Comprendre que l'erreur offre des occasions de réexaminer une démarche, d'analyser un processus et de raisonner à un niveau plus élevé.

Principes de la stratégie de résolution de problèmes

Poissant, Poëllhuber & Falardeau (2004) assurent que la stratégie de résolution de problèmes porte sur les principes suivants:

1. Prendre des décisions: les chemins de résolution sont multiples, la créativité, l'engagement et le courage doivent être encouragés (compétence d'être autonome et de faire preuve d'initiative).

2. Articuler des données issues de l'expérience personnelle et des acquis des apprenants et des documents proposés. Les données utiles ne sont pas apportées par l'énoncé de manière séquentielle mais elles peuvent être regroupées au début ou à la fin du document présentant la résolution de problème, il peut y avoir des données manquantes que l'apprenant doit identifier et dont il doit éventuellement estimer une valeur (compétences de s'approprier et d'analyser).
3. Schématiser, identifier et nommer des grandeurs, mobiliser des modèles jugés pertinents pour faire des prévisions ou apporter des arguments (compétences de s'approprier et d'analyser).
4. Rendre compte de travaux des apprenants à l'écrit comme à l'oral, individuellement ou collectivement (communiquer).
5. Avoir un regard critique sur le résultat trouvé qui peut amener l'apprenant à reconsidérer sa démarche (valider).
6. Les questions posées n'induisent pas a priori une démarche de résolution.
7. La réponse n'est ni évidente, ni immédiate (sinon ce n'est plus une résolution de problème), ni forcément précise (ordre de grandeur à choisir ou à estimer) et pas toujours unique (des différentes réponses).
8. Toute démarche cohérente, même si elle ne débouche pas sur un résultat abouti, est évaluée positivement par l'enseignant. Il en est de même pour toute analyse critique du travail réalisé et des résultats obtenus.

Caractéristiques d'une bonne situation de résolution de problèmes

Dumais & Blais (2004) montrent que la bonne situation a plusieurs caractéristiques distinguées:

- Elle est formulée clairement, sous forme d'un énoncé écrit, oral ou même illustré, de façon à être comprise par tous les apprenants.

- Elle est énoncée de manière à ne pas induire une stratégie de résolution.
- Elle éveille la curiosité et maintient l'intérêt des apprenants.
- Elle stimule la pensée et la réflexion.
- Elle est à la portée de tous les apprenants tout en leur offrant un défi.
- Elle se prête à l'utilisation des stratégies de résolution variées.
- Elle reflète le niveau de compréhension et de raisonnement des apprenants.
- Elle fait appel au vécu des apprenants.
- Elle donne lieu à une ou à plusieurs réponses correctes.
- Elle permet un temps de résolution raisonnable et suffisant.

Étapes de la stratégie de résolution de problèmes

Legault (2006) détermine six étapes pour la stratégie de résolution de problèmes:

1. **Définir le problème**: il est essentiel de clairement définir les problèmes en établissant une liste écrite, pour s'assurer de les avoir bien défini et d'établir un ordre de résolution. Il est important de se limiter à la résolution d'un seul problème à la fois.
2. **Dresser la liste des solutions éventuelles**: cette étape s'apparente à un brainstorming: demander à l'apprenant d'imaginer le plus de solutions possibles, même s'il elles sont absurdes ou ridicules. Il doit l'inciter à être créatif et à ne pas porter de jugement sur ces suggestions.
3. **Évaluer**: discuter en bref des avantages et désavantages de chaque solution.
4. **Sélectionner la meilleure solution**: en fonction de ses objectifs, de la facilité de son application et de la satisfaction qu'elle apportera à l'apprenant. Il est possible de combiner plusieurs solutions si nécessaire.

5. **Prévoir la mise en oeuvre de la solution sélectionnée**: la planification optimise les chances de mise en oeuvre et de réussite de la solution.
6. **Apprécier le travail accompli (bilan)**: le plan d'action est ensuite appliqué et évalué. Certaines modifications peuvent être nécessaries. Il est fondamental de féliciter l'apprenant pour chaque effort effectué et les résultats positifs doivent être récompensés.

La résolution de problèmes en équipe

L'activité de résolution de problèmes en équipe permet à tous les apprenants de contribuer à résoudre le problème, tout en s'aidant les uns des autres. La façon de procéder:

1. On présente un problème à résoudre à des équipes d'apprenants.
2. On attribue un numéro à chaque apprenant de l'équipe (ex. de 1 à 5).
3. On demande aux équipes de résoudre un problème de façon à ce que chaque membre de l'équipe puisse expliquer la réponse afin de résoudre ce problème.
4. Lorsque le temps est échu, l'enseignant choisit un numéro au hasard, correspondant à un apprenant, qui doit présenter la solution de l'équipe aux autres.
5. Une variante peut être de demander que les apprenants présentent la solution à une seule autre équipe. Ceci permet à un plus grand nombre d'apprenants de présenter leur solution. (McKeachie, 2002)

Rôle de l'enseignant

Dumas (2007) montre que l'enseignant doit intervenir à trois moments précis:

1-Avant la résolution de problèmes, il doit:

- Faire le lien avec la vie réelle.
- Stimuler le rappel des connaissances antérieures.
- Modeler les stratégies de compréhension du problème.

- Faire illustrer ou dessiner le problème pour le comprendre.
- **Pendant la résolution de problèmes, il doit:**
- Inciter les apprenants à laisser des traces de leur démarche.
- Favoriser la manipulation de matériel.
- Faire travailler en équipe.
- Questionner les apprenants et dialoguer avec eux.
- Rappeler l'utilisation de l'une ou l'autre des stratégies.

2-Après la résolution de problèmes, il doit:

- Utiliser des différents moyens de communication: écriture individuelle, démonstration orale en grand ou en petit groupe.
- Évaluer non seulement le résultat ou la solution du problème, mais la qualité du processus et de la démarche qui ont été empruntés.

D'autre part, Josée (2013) assure que l'enseignant a comme rôle premier de faire vivre aux élèves des activités riches et efficaces en résolution de problèmes. En tant que facilitateur, il:

- Propose des problèmes convenables et stimulants.
- Aide les apprenants à élargir leur apprentissage.
- Encourage et accepte les solutions proposées par les apprenants.
- Questionne les apprenants et les incitent à réfléchir.
- Utilise le modelage.
- Observe et évalue le processus de résolution de problèmes des apprenants.
- Prévoit les difficultés conceptuelles et les fautes possibles.
- Aide les apprenants à surmonter les difficultés éprouvées.
- Donne beaucoup d'explications et d'informations afin que les apprenants puissent chercher des solutions.

- Établit un climat de classe dans lequel l'engagement des apprenants est valorisé et l'erreur est reconnue comme faisant partie intégrante du processus d'apprentissage.
- Agit comme médiatrice entre la connaissance et les apprenants.

B) La pensée critique

À partir du milieu du 20ème siècle, des philosophes américains (avec Ennis comme chef de file) et australiens, dont Passmore, ont mis le concept de la pensée critique. Celui – ci et son développement, en opposition à une pensée mécanique et spontanée, font partie des préoccupations majeures tant en philosophie qu'en psychologie qu'en éducation. La pensée critique est associée à l'apprentissage actif, à la découverte et à la tournure d'esprit autonome et indépendante.

Alors, penser de manière critique, ce n'est pas simplement donner une opinion, la pensée critique n'est pas une finalité, mais un moyen qui peut faciliter le bon jugement. Aussi, la pensée critique est une pensée qui:

a. Porte sur des critères : la notion de critères renvoie à une pensée logique.
b. Est autocorrectrice : l'autocorrection renvoie à une pensée métacognitive, c'est-à-dire une pensée qui réfléchit sur elle-même pour s'améliorer.
c. Est sensible au contexte : la sensibilité au contexte éclaircit le caractère transférable de la pensée critique, elle peut être mise en action dans des différents contextes uniques et spécifiques. (Lariba, 2012)

Importance de la pensée critique

La pensée critique est une approche pédagogique importante et efficace en enseignement parce qu'elle stimule l'intérêt des apprenants en améliorant leurs aptitudes et permet d'accroître leur satisfaction et le niveau de leur apprentissage. Les apprenants qui reçoivent de l'information de façon passive ou transmissive sont moins portés à comprendre ce qu'ils ont

entendu ou lu que les apprenants qui ont examiné, interprété, appliqué ou testé, de manière critique cette information.

Par conséquent, en présentant la matière sous forme de problème, les apprenants sont plus motivés et comprennent mieux. Les enseignants peuvent les aider à mieux comprendre le sujet enseigné en le problématisant, plutôt qu'en leur demandant de le mémoriser. (Boisvert, 2003)

D'autre part, Lasserre & Tozzi (2011) soulignent que la pensée critique est impliquée dans tout ce que font et étudient les apprenants à l'école et vitale pour le bon fonctionnement de la société. La pensée critique en situation professionnelle s'opérationnalise par un processus de pensée dynamique dans le but de développer une compréhension cohérente de la situation. Elle permet donc une prise de conscience des suppositions et de comment ces suppositions influencent le raisonnement afin de créer des nouvelles connaissances et une action convenable au contexte de la situation et surtout à celui de l'enseignement.

Dans ce cadre, l'étude de Forges & de Borges (2011) a assuré que l'efficacité du modèle développemental de la pensée critique sur la formation initiale à l'enseignement qui doit être orientée vers l'acquisition de la pensée critique permettant au futur enseignant de porter un regard critique sur ses pratiques :

1. Acquérir et développer des habiletés pour analyser, discuter et évaluer sa propre pratique.
2. Reconnaître le contexte d'enseignement.
3. Faire une analyse critique de ses propres opinions.
4. Développer ses propres théories en tant qu'enseignant.
5. Influencer les décisions futures.

D'ailleurs, préparer les étudiants à réfléchir et à comprendre la complexité de l'enseignement est revendiqué comme condition nécessaire à l'adaptation aux réalités changeantes du milieu professionnel, social et à l'évolution de la profession.

En outre, selon le modèle développemental de la pensée critique, celle - ci n'est pas considérée comme un produit mais comme un processus qui présuppose la mobilisation de quatre modes de pensée (logique, créatif, responsable et métacognitive), chacun d'eux se complexifiant selon trois perspectives épistémologiques (égocentrisme, relativisme et intersubjectivité). Voici, le modèle développemental de la pensée critique:

Tableau No.1 Modèle développemental de la pensée critique

Mode/Perspective	Logique	Créative	Responsable	Métacognitive
Égocentrisme	**- Énoncé basé sur l'expérience perceptuelle d'un fait particulier. - Sans justification.**	**- Énoncé qui donne du sens à un point de vue personnel.**	**- Réponse reliée à un comportement moral, personnel et particulier.**	**- Énoncé relié à une tâche, à un point de vue personnel et particulier.**
Relativisme	**- Énoncé basé sur une généralisation issue de la perception et du raisonnement. - Justification incomplète et concrète.**	**- Énoncé qui donne du sens au point de vue d'un pair. (relations simples).**	**- Réponse reliée au comportement moral d'un pair.**	**- Énoncé relié à un point de vue, à une tâche d'un pair.**
Intersubjectivité	**- Énoncé basé sur le raisonnement simple - Justification complète appuyée sur des critères. (conceptualisation).**	**- Énoncé qui apporte un sens divergent. (relations complexes). (transformation).**	**- Réponse reliée à l'évaluation des normes morales. (catégorisation).**	**- Énoncé exprimant un changement de perspective du groupe ou de l'individu. - (correction/ auto -correction).**

Quelles sont les conditions de possibilité d'une pensée critique?

C'est le passage de l'émotion et de la sensibilité, à la raison, au concept et aussi une démarche qui va du concret à l'abstrait, c'est un processus de généralisation : chaque fois qu'on essaye de

passer d'un exemple à un argument plus abstrait dans le raisonnement et l'argumentation, on fait preuve de pensée critique.

Une autre condition de possibilité de la pensée critique est que la pensée de l'enfant soit accompagnée par l'enseignant, l'enfant a de la difficulté à l'exploration et à l'expression de la pensée critique. Celle- ci repose essentiellement sur le langage et l'enfant n'a pas acquis les fondements nécessaires au langage. De plus, la pensée critique, c'est une réflexion, un exercice de la raison, un retour sur les connaissances antérieures et l'enfant n'a pas ces connaissances et manque d'une certaine maturité. (Daniel, 2002)

Caractéristiques du penseur critique

Le penseur critique idéal est habituellement curieux, bien informé, confiant en la raison, ouvert d'esprit, flexible, équitable dans l'évaluation, honnête face aux biais personnels, prudent dans l'émission des jugements, disposé à reconsidérer, lucide ou a les idées claires quant aux problématiques, méthodique face aux problèmes complexes, minutieux dans la recherche d'informations pertinentes, centré vers l'obtention des nouvelles informations et persévérant dans la recherche des résultats qui sont aussi précis que le permet le sujet et les circonstances. En outre, il a une intégrité, une humilité et une empathie intellectuelles. Il n'est pas seulement capable d'évaluer des raisons adéquatement, mais aussi a tendance à le faire et y être disposé. (Lasserre & Tozzi, 2011)

Comment favoriser le développement de la pensée critique?

Développer la pensée critique des apprenants face à l'information, c'est prévoir des situations dans lesquelles ils seront invités à réfléchir aux processus d'élaboration, à la valeur, à la portée et aux limites des informations, à discuter, à évaluer et à modifier leurs stratégies. Il s'agit de donner la chance aux apprenants de revenir sur leurs propres démarches et leurs

manières de voir les choses en vue de les examiner et de les évaluer.

Alors, afin d'inciter les apprenants à appliquer la pensée critique en salle de classe, il doit avoir recours à des autres méthodes d'enseignement différentes de la méthode traditionnelle qui associe un enseignant actif et des apprenants passifs. (Boisvert, 2000)

D'autre part, Daniel & Coll (2005) assurent que pour développer la pensée critique, les enseignants doivent aider les apprenants à réfléchir à toute tâche, à tout problème ou à toute question de façon ouvert, à examiner attentivement les différentes options présentes et à tirer des conclusions raisonnables basées sur une évaluation réfléchie des critères pertinents.

En conséquence, ils doivent développer les compétences de la pensée critique de leurs apprenants en mettant l'accent sur la manière dont ils perçoivent les connexions d'idées et de concepts. La mission de l'enseignant est donc de développer l'indépendance et l'ouverture d'esprit, la capacité à distinguer les données valides ou invalides et la recherche des diverses ressources d'information chez ses apprenants.

Étude expérimentale de la recherche

I- Choix de l'échantillon de la recherche

L'échantillon de la recherche comporte 90 étudiants. La chercheuse l'a réparti en deux groupes :

1. Un groupe expérimental (45 étudiants) qui apprend selon la stratégie de résolution de problèmes.
2. Un groupe témoin (45 étudiants) qui apprend selon la méthode traditionnelle.

La chercheuse a choisi l'échantillon des étudiants de la deuxième année à la faculté de pédagogie pour les raisons suivantes :

1. La chercheuse a fait une étude explorative sur les étudiants de la deuxième année, section de français, faculté

de pédagogie afin de déterminer et de justifier le problème de la recherche. Cette étude a montré que les étudiants sont faibles en pensée critique.

2. Ces étudiants ont un bagage linguistique et des connaissances antérieures qu'ils ont acquis pendant l'année universitaire précédente. Ce baggage et ces connaissances peuvent leur permettre d'achever facilement les activités proposées en pensée critique.
3. Il est important de faire acquérir à ces étudiants les compétences de la pensée critique au début de leur étude universitaire. Cela va aider de manière efficace au développement de ces compétences dans les prochaines années de leur étude.

II- Outils de la recherche

1- Le questionnaire

Le questionnaire dans sa forme finale se compose de 22 compétences de la pensée critique nécessaires aux étudiants de l'échantillon de la recherche. Pour vérifier la validité du questionnaire, la chercheuse l'a présenté aux membres du jury (certains spécialistes en didactique de la langue française et en psychologie). Les membres du jury ont apprécié le questionnaire. À la lueur de leurs suggestions, nous l'avons mis en considération.

2- Le test

Ce test se compose de 4 questions qui mesurent les compétences de la pensée critique chez les étudiants de l'échantillon de la recherche. On a consacré (20 points) à deux premières questions et (15 points) à deux dernières questions. La note totale du test est donc (70 points).

L'étude pilote du test

A- La fidélité du test

Pour calculer la fidélité du test, nous avons ré-appliqué le même test dans une période de 21 jours sur le même échantillon

en calculant les coefficients de corrélation des notes des étudiants dans les deux applications par la formule de Pearson :

$$R=\frac{N\sum XY-\sum X\sum Y}{\sqrt{\left[N\sum X^2-(\sum X)^2\right]\left[N\sum Y^2-(\sum Y)^2\right]}}$$

R= Le coefficient de corrélation.

N= Le nombre des étudiants.

$\sum$ = La somme.

X= Les notes des étudiants à la première application.

Y= Les notes des étudiants à la deuxième application.

X^2= Les carrés des notes des étudiants à la première application.

Y^2= Les carrés des notes des étudiants à la deuxième application.

$$R=\frac{1700}{2300.44}=0.74$$

Alors, le coefficient de fidélité du test des compétences de la pensée critique = 0,74. Cette valeur indique que le test est fidèle.

B- La validité du test

Pour calculer la validité du test, on a eu recours à deux moyens:

1. On a présenté le test aux membres du jury. Ils ont décidé que le test est valide à mesurer les compétences évaluées.
2. On a calculé la validité à partir de la fidélité en appliquant la formule suivante:

   La validité du test des compétences de la pensée critique $=\sqrt{\text{la fidélité}}$

   La validité = $\sqrt{0.74}$ = 0,86

   C'est une validité élevée. Donc, le test est valide.

C- La durée du test

Pour calculer la durée de l'application du test, la chercheuse a calculé la moyenne du temps pris par le premier et

le dernier étudiant pour répondre à toutes les questions du test selon la formule suivante :

$$D = \frac{T1+T2}{2}$$

D = La durée du test
T1 = Le temps pris par le premier étudiant.
T2 = Le temps pris par le dernier étudiant.

$$D = \frac{110+130}{2} = \frac{240}{2} = 120 \text{ minutes (2 heures).}$$

5- Le programme proposé

Ce programme vise à développer les compétences de la pensée critique chez les étudiants/enseignants. Il comporte trois unités. Chaque unité a ses objectifs, le matériel utilisé, les activités nécessaires à développer les compétences de la pensée critique et quelques consignes nécessaires à appliquer ces activités et les démarches de l'enseignement selon la stratégie de résolution de problèmes. La chercheuse a présenté ce programme aux membres du jury. Ils l'ont apprécié. À la lueur de leurs suggestions, nous l'avons mis en considération.

III- L'expérience

L'enseignement du programme s'est déroulé au deuxième trimestre de l'année universitaire 2014/ 2015. L'expérience a duré 3 mois à raison d'un cours par semaine. Chaque cours dure 2 heures.

Résultats de la recherche

I- Analyse statistique des résultats

1- Pour vérifier les deux premières hypothèses, nous avons utilisé:

- Le test de **(T)** pour examiner l'existence d'une différence entre les moyennes des notes de deux groupes (témoin et expérimental) au test des compétences de la pensée critique. Nous avons obtenu les résultats qui figurent dans les deux tableaux suivants:

Tableau No.2 Résultats de deux groupes (témoin et expérimental) au test des compétences de la pensée critique

Domaine	Groupe	M.	E.	D.L.	T	S.	V.L.
Interprétation	Témoin	15.94	3.53	78	14.93	0.05	0.76
	Expérimental	30.45	4.65				
Analyse	Témoin	3.87	0.81		12.85		0.72
	Expérimental	5.74	0.92				
Inférence	Témoin	2.69	0.84		11.78		0.66
	Expérimental	3.90	0.95				
Évaluation	Témoin	4.14	1.21		12.84		0.69
	Expérimental	7.86	1.87				
Autorégulation	Témoin	8.74	2.02		11.92		0.65
	Expérimental	12.91	1.99				
Note totale	Témoin	33.48	3.97		21.23		0.86
	Expérimental	54.82	4.56				

M. : Moyenne des notes.
E. : Écart-type.
D.L. : Degré de liberté.
T : Valeur de T.
S. : significative.
V.L. : Valeur de l'influence.

Commentaire du tableau:

Ce tableau montre qu'il y a une différence statistiquement significative au niveau de 0.05 entre les moyennes des notes des étudiants du groupe expérimental et celles des étudiants du groupe témoin au post-test des compétences de la pensée critique en faveur des étudiants du groupe expérimental. Par suite, la première hypothèse de la recherche est réalisée.

De même, les valeurs de l'influence à toutes les compétences sont élevées, surtout celles qui concernent l'interprétation (0.76) ainsi que la valeur de l'influence à la note totale est élevée (0.86).

Tableau No.3 Résultats du groupe expérimental au pré / post test des compétences de la pensée critique

Domaine	Groupe Expérimental	M.	E.	D.L.	T	S.	V.L.
Interprétation	Pré-test	14.87	2.38	39	16.39	0.05	0.88
	Post-test	30.05	3.22				
Analyse	Pré-test	3.00	0.96		12.98		0.83
	Post-test	5.28	0.98				
Inférence	Pré-test	6.40	1.16		16.75		0.86
	Post-test	12.45	1.37				
Évaluation	Pré-test	4.22	1.20		14.97		0.84
	Post-test	7.31	1.30				
Autorégulation	Pré-test	2.54	0.87		12.86		0.80
	Post-test	4.43	0.93				
Note totale	Pré-test	32.36	3.12		24.89		0.93
	Post-test	58.76	4.33				

Commentaire du tableau:

Ce tableau montre qu'il y a une différence statistiquement significative au niveau de 0.05 entre les moyennes des notes des étudiants du groupe expérimental au pré/post test des compétences de la pensée critique en faveur du post-test. Par suite, la deuxième hypothèse de la recherche est réalisée.

De même, les valeurs de l'influence à toutes les compétences sont élevées, surtout ceux qui concernent l'interprétation (0.88) ainsi que la valeur de l'influence à la note totale est élevée (0.93).

2- Pour vérifier la dernière hypothèse, nous avons calculé:

- Le pourcentage du gain modifié de Black et la moyenne du pourcentage de l'efficacité de Mc Gugian pour vérifier l'efficacité du programme proposé. Nous avons obtenu les résultats qui figurent dans le tableau suivant:

Tableau No.4 Pourcentage du gain modifié et moyenne du pourcentage de l'efficacité concernant les compétences de la pensée critique

N.T.	M.N.Pré.	M.N.Post.	P.G.M.	M.P.E.
70	31.28	60.62	1.28	0.66

N.T. : Note totale.
M.N.Pré. : Moyenne des notes du pré-test des compétences de la pensée critique.
M.N.Post. : Moyenne des notes du post-test des compétences de la pensée critique.
P.G.M. : Pourcentage du gain modifié de Black.
M.P.E. : Moyenne du pourcentage de l'efficacité de Mc Gugian.

Commentaire du tableau:

Ce tableau montre que le pourcentage du gain modifié de Black est (1.28), cette valeur est plus élevée que la valeur fixée (1.2) ainsi que la moyenne du pourcentage de l'efficacité de Mc Gugian est (0.66), cette valeur est plus élevée que la valeur fixée (0.6).

Ceci prouve l'efficacité du programme proposé basé sur la stratégie de résolution de problèmes au développement de quelques compétences de la pensée critique chez les étudiants de l'échantillon de la recherche. Par suite, la troisième hypothèse de la recherche est réalisée.

II- Interprétation des résultats

On peut dire que les résultats et la justification des hypothèses de la recherche reviennent aux facteurs suivants:

1. L'adéquation de la stratégie de résolution de problèmes aux étudiants de l'échantillon de la recherche et aux compétences de la pensée critique.
2. La convenance du contenu du programme au développement des compétences visées.
3. L'acte de donner une idée complète de la stratégie de résolution de problèmes (ses principes, son importance et ses étapes) aux étudiants de l'échantillon avant de

commencer l'enseignement du programme les a aidés à achever les activités de ce programme facilement.

4. La stratégie de résolution de problèmes a permis aux apprenants de discuter, d'échanger leurs idées, leurs connaissances et de prendre en charge la responsabilité de l'apprentissage, cet environnement d'apprentissage a favorisé leur acquisition des compétences de la pensée critique.
5. La planification et l'organisation des cours de manière qui convient aux démarches de la stratégie de résolution de problèmes.
6. Les connaissances antérieures et le bagage linguistique des étudiants de l'échantillon de la recherche en français ont permis d'accomplir les activités de la pensée critique efficacement.
7. L'existence d'une bonne relation interpersonnelle et la création d'un environnement de confiance et d'entraide entre l'enseignant et les étudiants.

Recommandations de la recherche

À la lumière des résultats obtenus par cette recherche, la chercheuse propose les recommandations suivantes:

1. Présenter des contenus variés et modernes pour développer les compétences de la pensée critique au cycle universitaire.
2. S'intéresser à la stratégie de résolution de problèmes dans l'enseignement / apprentissage de français aux différents cycles éducatifs.
3. Fournir aux conseilleurs pédagogiques et aux enseignants de français des informations sur les nouvelles stratégies et méthodes dans le domaine de la didactique de français à travers les stages pédagogiques, les vidéoconférences du Ministère de L'éducation et de L'enseignement et les sites d'internet.

4. Faire des stages afin d'entraîner les enseignants de français à l'emploi de la stratégie de résolution de problèmes dans la classe.
5. Consacrer une partie du contenu de la didatique de F.L.E. que les étudiants/ enseignants étudient aux facultés de pédagogie pour leur enseigner la stratégie de résolution de problèmes et les entraîner à l'emploi de cette stratégie au stage pratique.

Suggestions de la recherche

À la lueur des résultats de la recherche, la chercheuse suggère les recherches suivantes:

1. Étudier l'efficacité de la stratégie de résolution de problèmes sur le développement de différentes variables (l'expression orale ou écite, la lecture, la grammaire, les attitudes, la motivation et la pensée créative).
2. Comparer l'efficacité de la stratégie de résolution de problèmes aux autres variables comme l'apprentissage mixte ou le brainstorming pour développer des compétences linguistiques.
3. Effectuer des modèles et des stratégies proposés pour développer les compétences de la pensée critique.

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