Summary

Introduction

The world today has witnessed a scientific and technological revolution, has not been before, where increased and accelerated growth with size & quantity of information at all filed levels of knowledge .

The most modern tech, tools that contributed in education process, to use the web, so web based learning environment with services and abilities related to digital world are considered a crucial source of information related to education technology. ₍Hanan M Al-shaier 2006 , Rabie Abd elazieem 2007 , Akram Fatheey 2007₎.

One of strategies that employs the web especially in research topics the student apply is Webquest. besides that it focuses on student learning and offer education process in attractive forms to reach the most desired results . where it consists of activities and diversified tasks to assist student to discover , to summarize and to conclude results in addition it focus on using solving problems skills at both macro & micro levels , of course it will achieve more successful results if it accompiened wit hard sources like books and magazines . ₍ Abd Al-Aziz Tolba 2010 ₎ and others like : ₍Ikpeze, 2004₎; ₍:eanne, 2005₎; ₍Leite, 2005₎; ₍Tran, 2006₎; ₍Sen & Neufeld, 2006₎; ₍Ikpeze & Fenice, 2007₎

So, it is obvious that previous studies had indicated to the effectiveness to use knowledge navigations trough the web. But this studies had no strategies to organize effective method among learners or how to add reality in daily events .

And it is important of role playing strategies in electronically, that considering one of the most effective ones to provide simulation systems to students, where they can make multi roles in all daily events especially those realty ones.

Studies has assured that online role-playing has influenced on student achievements and to contribute to increase their knowledge and cognitive growing.

Also it gave them the chance to express their feeling & emotions and to articulate their thoughts , beside to enlighten the new concepts. And to connect them with the school environment; ₍Barrett, 1998; Compton et al, 2004; Lane & Rollnick, 2005; Manning & Kripalani, 2007₎; ₍Arend Lightenbergm et al., 2010₎; ₍M.Y. Lim, et al., 2011₎; ₍Francesca Pozzi,2011₎

But some studies has diversified results about which the best type of online role-playing and the effectiveness of each one , ₍Barrett, 1998; Compton et al, 2004; Lane & Rollnick, 2005; Manning & Kripalani, 2007₎; ₍Arend Lightenbergm et al., 2010₎; ₍M.Y.

Lim, et al., 2011); (Francesca Pozzi,2011) some studies has applied role-playing strategy in free way and they confirmed their effectiveness like : (O'Neal, Rhiannon, 2011) but others has not confirmed (Wold, Kari, 2013); (Chan, Zenobia C.Y., 2012) .

So from previous monitoring that , although the assurance of role-playing strategy develop social interactive skills , it is diversifications about the types of it especially the best ones and it is to hard to identify the effectiveness of play role as a part of education strategies or how to merge role-playing in education strategy ?

Sensitivity of the problem :

Many studies like (Fielder & Allen,2002);(Cromwell, 2002);(Dodge,2002);(Valmont,2003); (Ikpeze, 2004); (Leite, 2005); (Jackson, 2005); (Leanne, 2005);(Tran,2006); (King,:2006); (Hanan Mohammed El-shaieer, 2006); (Sen & Neufeld, 2006); (Ikpeze & Fenice, 2007); (li & Yang, 2007); (Abd Al-aziz Tolba,2009) assured the effectiveness of webquest strategy to develop student skills , in addition it make most benefit from web using as learning tool and to access to information , but those studies did not focus on the way the interactive among students and how tasks & activities are distributed among groups ?, also some studies like (Colin Depradine, 2006); (Mei Yii Lim, et al., 2010); (Francesca Pozzi,2011)has indicted to the success to apply role-playing is based on reality practice for role-playing strategy, level of competition among comparators , type and quality of role-playing; in addition to lack of Arabic studies related to the effective of using strategies of play roles impacts in diversified learning environments .

Research problem :

As was mentioned , we can identify the study problem as "there is shortage in solving problems skills of education situations designing" . so it was need to develop new strategy to assist learners to use internet benefited in education process collaborate with each other in interactive environment to achieve education objectives.

So study focused on the main following question as problem " what is the impact of webquest based on strategy of online role-playing to develop problem solving skills of designing education situation, among student of education technology ?

Also there are sub- questions belong the main one as :

What is the suggested perspective for a webquest based on strategy of online role-playing?

What is the impact of a webquest to develop :

  - The cognitive perspective for designing instructional situations?

- Skills of Solving Problems of Designing Instructional situations ?

What is the influence to use a webquest based on strategy of online role–playing to develop
:

- The cognitive perspective for designing instructional situations?

- Skills of Solving Problems of Designing Instructional situations ?

What is the influence of diversify of role–playing types for a webquest to develop :

- The cognitive perspective for designing instructional situations?

- Skills of Solving Problems of Designing Instructional situations ?

Research objectives :

The current research objectives are :

1– To describe the webquest based on role-playing strategy .

2– To measure the influence of using role–playing strategy to develop problem solving
skills of designing instructional situation.

3– To measure the influence of using role–playing strategy to develop problem solving
skills of designing instructional situation.

The importance of the research :

The current search is important to benefit in :

1– Specify good criteria to design webquests based on online role–playing strategy.

2– Design new form to use the web to access the desired information effectively through
webquests & online role–playing strategy.

3– Assist teaching staffs to teach education situation designing for students of education
technology , through using new trends in education based on web and inquiries tools .

4– Agree with the new trends that call to use education based on web to enable student to
acquire new skills in solving problems in all university topics .

5– The results of current search is so benefit by integrating with other related
researchesconcern with to apply education technology through the webas an effective
education techniques .

Research limits :

The current search was focused on the following limits :

- The 4th academic year – education technology – 2013/2014

- A webquest based on role-playing strategy.

- Instructional situation's designing course.

- Problems related to implementing the skills of education situation designing .

Methodology :

      The current research based on analytical descriptive approach , that related to previous studies & researches that handled and talked about current one, beside to use the experimental approach to discover the effective of webquests based ononline role-playing strategies.

The experimental designing for the study :

      The researcher was applying the experimental designing based on the web , on two category (experimental & control) , so the following table describes the experimental designing as :

Table (1) experimental design for research groups

The applied strategies in studying	Cooperative webquests		webquests based on online role-playing strategy						Ordinary method	
			Participative planning		Free planning		Restricted planning			
	Pre	pro	pre	pro	pre	pro	pre	pro	pre	pro
1ˢᵗ experimental group			√	√	√	√	√	√		
2ⁿᵈ experimental group	√	√								
The control group									√	√

Hypothesis of research:

First: the private hypotheses compared to averages between experimental and control groups in developping cognitive perspective for designing instructional situations:

1. There is no inferred statistical difference between average degrees of two experimental groups, that used webquests, and control group that used classic teaching techniques in pro test of cognitive perspective for designing instructional situations.

2. There is no inferred statistical difference between average degrees of 1st experimental group , that used webquests based on online role-playing, and 2nd experimental one that used webquests collaboratively in pro test of cognitive perspective for designing instructional situations.

3. There is no inferred statistical difference between average degrees of 1st experimental group, that used webquests based on online role-playing, and control one that used classic teaching techniques in pro test of cognitive perspective for designing instructional situations.

4. There is no inferred statistical difference between average degrees of 2nd experimental groups, that used webquests collaboratively, and control one that used classic teaching techniques in pro test of cognitive perspective for designing instructional situations.

Second: private hypotheses compared to averages between experimental and control groups in developping problem solving skills of education situations designing:

1. There is no inferred statistical difference between average degrees of two experimental groups , that used webquests, and control group that used classic teaching techniques in pro performance levels' assessment cards for skills of solving Instructional situations design problems.

2. There is no inferred statistical difference between average degrees of 1st experimental group, that used webquests based on online role-playing, and 2nd experimental one that used webquests collaboratively in pro performance levels' assessment cards for skills of solving Instructional situations design problems.

3. There is no inferred statistical difference between average degrees of 1st experimental group , that used that used webquests based on online role-playing, and control one that used classic teaching techniques in pro performance levels' assessment cards for skills of solving Instructional situations design problems.

4. There is no inferred statistical difference between average degrees of 2nd experimental group that used webquests collaboratively, and control one that used classic teaching techniques in pro performance levels' assessment cards for skills of solving Instructional situations design problems.

Third,private hypotheses compared to averages between the three types of role–playing strategy (restricted– free – participative):

1. There is no inferred statistical difference between average degrees of **the three types of role–playing strategy groups (restricted– free – participative) in:**

   -pro test of cognitive perspective for designing instructional situations.

   - pro performance levels' assessment cards for skills of solving Instructional situations design problems.

Fourth: private hypothesis related to the effectiveness of webquests based on role–playing strategy's three types on developping Skills of Solving Problems of Designing Instructional situations:

1. The webquest based on role–playing strategy's restricted type do not attain developping:
- Cognitive perspective for designing instructional situations?
- Skills of Solving Problems of Designing Instructional situations ?

2. The webquest based on role–playing strategy's free type do not attain developping:
- Cognitive perspective for designing instructional situations?
- Skills of Solving Problems of Designing Instructional situations ?

3. The webquest based on role–playing strategy's participative type do not attain developping:
- Cognitive perspective for designing instructional situations?
- Skills of Solving Problems of Designing Instructional situations ?

Research tools :

It includes :

1. Performance levels' assessment cards, to develop Skills of Solving Problems of Designing Instructional situations " by the researcher "

2. Achievement Test for to develop Cognitive perspective for designing instructional situations "by the researcher ".

3. Validity card for suggested webquest based on online role–playing "Researcher adopted a judged webquest validity card".

Study sample :

The researcher has chosen a sample from the 4th academic year – education technology department – in faculty of diversified education – Fayoum University . to sort them randomly and it was distributed into three categories "groups" as:

1. The 1ˢᵗ experimental group : to use webquest based on role-playing strategy. Researcher divided it into three sub-groubs according to the type of role-playing strategy, as shown below:

- Restricted role-playing type: to use webquest based on role-playing strategy's restricted type.
- Free role-playing type: to use webquest based on role-playing strategy's free type.
- Participative role-playing type: to use webquest based on role-playing strategy's Participative type

2. The 2ⁿᵈ experimental group: to use webquests collaboratively.

3. The control group: to use the ordinary in teaching process.

Search steps & procedures :

First, theoretical study for framework included the following:

 1. To review and to analysis the previous literatures "studies & researches" related the study field and its perspective (webquests ,and online role-playing strategy).

 2. To choose content of one of instructional technology, 3th year "Instructional programs production" and analysis its content.

 3. To identify the specifications and criteria of webquests , so the researcher will determine that accurately through reviewing the ex- literature in criteria of designing webquests .

Second, experimental developing study :

 The researcher has depend on Mohammed Ibrahim El- desouky model , because of the technological developmental search , that model contains:

First phase, **approach assessment & analysis includes**:

- To measure the pre requirements for teacher , learners and education environment .
- To handle the shortages existed in light of analysis of learners experience and to analysis the teacher performance requirements for their role .
- To identify the general objectives for education content ,
- To identify the procedural objectives for education content
- To determine the learners requirements and features,
- To specify the educational tasks & activities .

Second phase, **the indexing**, **includes**:

To specify the objectives that may implement face to face , this ones may come true in reality.

Third phase, **The designing**, **includes**:

Designing process as indicated in indexing one, so the researcher to use the electronic indexing for :

- To design tasks and activities for teacher & learners.
- To design strategies for education & learning.
- To specify the learning resources .
- To specify the learning resources .
- To design assessment & evaluation tools .
- To determine the teamwork for multi– media production.
- To determine the production programs & programming languages .
- To design the suitable tools to test model .

The fourth phase: **Production and assessment**, **includes** :

- To design tasks and activities for teacher & learners .
- To design strategies for education & learning.
- To specify the learning resources.
- To specify the learning resources.
- To design assessment & evaluation tools .
- To apply & experiment the model.
- To apply the pre test for study .
- To monitor the pre test results for study tools.
- To make modifications " amendments " finally on model .

The fifth phase, **the implementation phase**, **includes**:

- To use finally of the education & learning model.
- To disseminate and availability to use .
- Implementation and content managing .
- Pro applying for study tools .
- Statistical treatment .
- To analysis and to discuss the results .
- To make recommendations & suggestions .

Research results :

***First*: *Private results compared to averages between experimental and control groups in developping cognitive perspective for designing instructional situations*:

1. There is inferred statistical difference between average degrees of two experimental groups, that used webquests, and control group that used classic teaching techniques in pro test of cognitive perspective for designing instructional situations, for both experimental groups.

2. There is inferred statistical difference between average degrees of 1st experimental groups, that used webquest based on online role-playing, and 2nd experimental one that used webquest collaboratively in pro test of cognitive perspective for designing instructional situations, for the 1st ex- group.

3. There is inferred statistical difference between average degrees of 1st experimental group, that used webquests based on online role-playingstrategy, and control one that used classic teaching techniques in pro test of cognitive perspective for designing instructional situations, for the 1st ex- group.

4. There is inferred statistical difference between average degrees of 2nd experimental groups, that used webquests collaboratively, and control one that used classic teaching techniques in pro test of cognitive perspective for designing instructional situations, 2st ex- group.

Second, *Private results compared to averages between experimental and control groups in developping problem solving skills of education situations designing*:

1. There is inferred statistical difference between average degrees of two experimental groups , that used webquests, and control group that used classic teaching techniques in pro performance levels' assessment cards of skills of solving Instructional situations design problems, for both ex- groups.

2. There is inferred statistical difference between average degrees of 1st experimental group, that used webquests based on online role-playing, and 2nd experimental one that used webquests collaboratively in pro performance levels' assessment cards for skills of solving Instructional situations design problems, for 1st ex- group.

3.   There is inferred statistical difference between average degrees of 1st experimental group , that used that used webquests based on online role-playing, and control one that used classic teaching techniques in pro performance levels' assessment cards for skills of solving Instructional situations design problems, for 1st ex- group.

4. There is inferred statistical difference between average degrees of 2nd experimental group that used webquests collaboratively, and control one that used classic teaching techniques in pro performance levels' assessment cards for skills of solving Instructional situations design problems, for 2st ex- group.

Third,private hypotheses compared to averages between the three types of role-playing strategy (restricted- free – participative):

1. There is inferred statistical difference between average degrees of *the three types of role-playing strategy groups (restricted- free – participative) in:*

-pro test of cognitive perspective for designing instructional situations.

- pro performance levels' assessment cards for skills of solving Instructional situations design problems.

Fourth, Private results related to the effectiveness of webquests based on role-playing strategy's three types on developping Skills of Solving Problems of Designing Instructional situations:

1. The webquest based on role-playing strategy's restricted type do attain effectiveness to develop skills of solving Instructional situations design problems.

2. The webquest based on role-playing strategy's restricted type do not attain effectiveness to develop Cognitive perspective for designing Instructional situations.

3. The webquest based on role-playing strategy's restricted type do not attain effectiveness to develop Cognitive perspective for designing Instructional situations.

4. The webquest based on role-playing strategy's free type do attain effectiveness to develop skills of solving Instructional situations design problems.

5. The webquest based on role-playing strategy's free type do not attain effectiveness to develop Cognitive perspective for designing Instructional situations.

6. The webquest based on role-playing strategy's participative type do attain effectiveness to develop skills of solving Instructional situations design problems.

7. The webquest based on role-playing strategy's free type do attain effectiveness to develop Cognitive perspective for designing Instructional situations.

So the researcher has confirmed that results are applied in general on content nature " education situation design " and to seek solutions for their problems. So that results may differ in another education content .

Finally … throughout the observations ,the researcher has noticed, she confirmed that both two experimental groups especially the one based on role-playing strategy, was

the most motivated & excited for learning among students – sample– and more interactive, also the most positive ex– group that depend on participative type, where students were more influenced with learning content and make more positives results in skills & achievements .

The researcher assured that webquests were contributed to develop student skills and achievement levels, also it offer relevant atmosphere to teachers to teach and to participate with learners , of course it provide them with positive learning resources with effective feedback system .

Search recommendations:

In light of the final results, the researcher recommends to the following:

1. To train academic staffs , their assistants to design & to produce cognitive navigations based on web and to use it effectively in education process.

2. To concern with applying education strategies based on learning with information from web. And to convert it to ideas capability to apply .

3.   To concern to design topics related to education courses through diversified study years with webquests.

4. To train students of education technology to specify the education problems, to search for positive solutions, through design instructional situations and to apply new technology .

5. To concern with reality when designing webquests, to use knowledge not just gathering.

6. To benefit from program of developins skills of solving Instructional situations design problems to design education situation course for student of instructional technology – faculty of diversified education .

7. To interest in practical courses in education technology department – faculty of diversified education, provided that offering resources necessary to assist students to acquire practical skills .

Suggested researches :

During indentifying the current results , reviewing researches and previous studies , the researcher has recommended the following :

1. To study the impact of diversifying of the interaction of webquests on developing achievement and other skills .

2. To evaluate webquests comparing with other learning methods on web.

3. To study the impact of diversifying in groups working in role-playing strategy, on developing achievement level and problems solving skills.

4. To apply role-playing stategy in other electronic learning approaches on developing achievement level and problems solving skills.

5. To study the impacts of interaction between learning approaches and electronic learning strategies on developing achievement level and thinking skills.

6. The current research was concentrated on applying role-playing strategy in discussion – text dialogue, so it is benefit to use this research in future to implements roles audio and visually to add connecting ways among learners.

7. The current research has adopted role-playing as simulation system, so it is possible to treat with more researches in future, to adopt also role-playing games.

The current research has focused on developing solving problem skills to dissolve any problem with designing process of education situation, so it is possible to treat with more researches in future, to develop critical thought, innovative skills or the ability to make decisions.