



Mansoura University
Faculty of Specific Education
Computer Teacher Preparation Department

Developing a System Based on Web Quest Through The Web for
the Development of the Problem Solving Skill for the Students of the
Faculty of Specific Education".

Thesis Presented By

Reda Awad El Refaiy EL Sayed

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Supervised By

Prof. Dr.

Abd Elaziz Tolba Abd Hameed

Prof. And The Head Of Instructional
Technology At The Faculty Of Education
Mansoura University

Dr.

Tarak Mohammad Ahmed Afifi

Lecturer of Computer Information Systems
Faculty of Specific Education
Mansoura University

Introduction

Within the massive amount of information and the increasingly rates of the changes in knowledge which resulted from the information and communication revolution that we encounter nowadays – which led to the necessity to use the technological application in the teaching process and reconsidering the traditional teaching methods within the classrooms to cope with the desires of the generation of technology who needs to be trained and qualified to cope with these technologies simultaneously, the use of the technological applications in learning led to some problems that the educational institutions encounter. This necessitates that both the developed and developing societies to devote their efforts to prepare these institutions to cope with these changes that the current era encounters in one side and to face the problems that these changes lead to on the other hand.

Web based education is one of the most important services that is considered as a source of information related to the new educational technologies that provide various sources and forms through the various sites on the web. One of the most important strategies of web based education is the strategy of knowledge trips (Abd El Aziz Tolbah 2010).

Sahar Teama's study (2013) recommended the importance of enhancing the teaching practices in the preparatory stage through keeping away from the traditional ways that concentrate on acquiring the mere concepts and knowledge and to care about constructing the knowledge by the learners so that their learning becomes meaningful and

to concentrate on the modern strategies that contribute effectively in the learning process.

So, the researcher notices the web quest strategy is successful according to its ability of putting content in context by making the learners learn the desired searching point through the general frame of the web quest. In some cases, it allows the learners to find out the searching point as part of a strict unit. One of the successful factors of the web quest is that it is able to attract the pupils, attention through its sites, pictures, maps, voices, texts, videos and all the other elements that are available on the internet. All these elements attract the pupils and listen during carrying out the task.

Identifying the research problem

The researcher as a computer at Tanah Prep School noticed that there is a shortage in the design of the traditional teaching methods as they do not care about or enhance the various performance and cognitive skills and the higher cognitive skills. These strategies lack the ability to follow up the learner by the teacher during the teaching process. There is also a shortage in the interactivity between the learner and the teacher and among the learners. The learner spends too much time searching for information on the internet. The research process is done haphazardly and wastes time and effort. Moreover, the information that the learner gets is repeated and useless.

In order to make sure of the research problem, the researcher conducted a pilot study on the pupils of the first year at the department concerned with the preparation of the computer teachers at the Faculty of Specific Education at Mansoura University about the use of the internet to get the information related to certain subject. The sample revealed that they lack of an accurate searching strategy. All of them uses a haphazard strategy. Table (1) shows the results of the pilot study.

The pilot sample questionnaire
Table (2) The items for the pilot sample and the percentage of their responses

No.	The items	The response	
		Yes %	No %
1	Do you face any difficulty on searching using the internet?	30	70
2	Do you need anyone to help you identify the sites for a certain subject?	15	85
3	Do you follow a certain strategy when you search for information on the internet?	0	100
4	Do you feel that all the information you get is suitable for your subject?	80	20
5	Do you notice that the web pages for a certain subject are repeated?	25	75
6	Do you waste a lot of time and effort when you search for a certain piece of information on the internet?	12	88
7	Do you need whoever directs you to a certain strategy that enables you to do a systemized search for information?	0	100
8	Do you have the ability to judge the suitability of the information that you get from the internet?	15	85

According to the previous table, it is clear that the pupils face difficulty in searching the internet and the research process is done haphazardly without any searching strategies or skills.

The researcher noticed the research problem according to the following clues:

- 1- The pupils lack the skill of searching the internet that should be obtained.
- 2- The pupils need to know the necessary skills for the “Basic mathematics’ syllabus through comparing their scores on mathematic subjects to their scores on the other subjects during the previous years.
- 3- Using the traditional methods in teaching the mathematics syllabus which leads to a difficulty in paying attention to the individual differences among the pupils during the teaching process.
- 4- The difficulty in monitoring the performance by all the pupils simultaneously which leads some pupils towards paying attention to other things during the practical application.

The research problem can be stated as follows:

“Mansoura University lacks a web navigation knowledge trips based system to develop the necessary skills for the “Basic mathematics” syllabus by the first year pupils at the Faculty of Specific Education at Mansoura University as they depend on the traditional methods. The idea of the current research is how to

apply the modern strategies in the educational process. One of these strategies is the web navigation knowledge trips.

The research problem can be stated in the following main question:

How can a web based knowledge trips system be developed to enhance the skills of the “Basic mathematics” syllabus among the pupils of the Faculty of the Specific Education?

This main question can be subdivided into the following questions:

- 1- What are the knowledge trips?
- 2- What are the desired mathematical skills to be enhanced?
- 3- What are the elements of the web based knowledge trips?
- 4- What are the bases for designing and producing the web based knowledge trips?
- 5- What are the steps of developing a web based knowledge trips system?
- 6- What is the effectiveness of the suggested system on enhancing the skills of the “Basic mathematics” syllabus?

The research goals

The current research aims at:

- 1- Clarifying the elements of the web based knowledge trips.

- 1- Identifying the bases for designing and producing the web based knowledge trips systems.
- 2- Developing a list of the necessary skills to be obtained by the pupils of the Faculty of the Specific Education.
- 3- Developing a web based knowledge trips system to enhance the skills of the “Basic mathematics” syllabus.
- 4- Identifying the effectiveness of the suggested system on enhancing the skills of the “Basic mathematics” syllabus.
- 5- Developing a model for designing and producing the web based knowledge trips systems which is used in developing other systems.

The research importance

The current research is important as it contributes in:

- 1- highlighting the importance of using web based knowledge navigation trips systems within the educational institutions.
- 2- providing a list of the necessary skills for web research.
- 3- providing a knowledge navigation trips system to enhance the skills of the “Basic mathematics” syllabus.
- 4- reducing the difficulties that the pupils face when learning through the web.
- 5- developing the necessary skills for web research.
- 6- the current research may highlight other related fields and aspects to be examined.

The research hypothesis

- 1- There are no statistically significant differences between the mean score of the experimental group and that of the control group of the post measure of the skills for the "Basic mathematics" syllabus.
- 2- There are statistically significant differences between the mean score of the experimental group and that of the control group of the post measure of the skills for the "Basic mathematics" syllabus in favour of the experimental group.
- 3- There are statistically significant differences between the mean scores of the pre measure and that of the post measure of the of the skills for the "Basic mathematics" syllabus of the experimental group in favour of the post measure.

The experimental design of the study:

In the light of the nature of this study , the experimental design was chosen which known as the "pre-post administration design by using two equivalent groups, one experimental and the other control group," Table 2 shows the experimental design of the study.

Table (2) the experimental design of the study

Groups of the Study	Pre test	The dependent variable	Post test
Control	The application of the electronic test.	Providing the Educational content in the traditional method.	The application of the electronic test.
Experimental	The application of the electronic test.	providing the proposed WebQuest system	The application of the electronic test.

The variables of the study:

- 1-The Independent variable: the proposed cognitive navigation system.
- 2- The Dependent variable: Principles of Mathematics skills.

Limitations of the study:

This research is limited to the following limitations:

Human limits: a sample of first - year students of the Department of Preparation of Computer's teacher at the Faculty of Specific Education, Mansoura University, consists of (60) sixty male and female students.

Objective limits: this research is limited to verify the effectiveness of system based on the WebQuest over the Web for the development of the skills of the principles of mathematics' course.

Spatial limits: This research applied at the Department of Preparation of Computer's teacher at the Faculty of Specific Education, Mansoura University.

Temporal limits: This research applied in the first semester of the academic year 2015/2016.

Research Methodology:

This research followed two approaches are:

Descriptive method: Used the descriptive approach to address the theoretical framework of research.

Experimental method: Used the experimental approach to design and produce a system based on webquest via the web for developing the skills of the principles of mathematics' course among students of the Faculty of Specific Education.

Sample of the study:

Participants:

The sample of the study consists of (60) students of the first year students of the Faculty of Specific Education, Mansoura University, were randomly divided as follows:

1. Experimental group, consists of (30) male and female students.

2. Control group, consists of (30) male and female students.

Instruments:

4. cognitive Navigation system via the Web for developing the skills of the principles of mathematics' course .

5. Administration form of the proposed system.

6. A test to measure the skills of the principles of mathematics' course among the sample of the study.

Definition of the research terms

The web based learning:

The web based learning is an elastic learning style that makes use of the new technologies and the web that depends on multi directions communications and that provides an effective learning material that is concerned with the interaction among the learners, the teaching staff, the experiences, the software at any time and any place (El Ghareeb Ahir 2009, 54-55).

The researcher defines it operationally as an electronic educational style that is based on utilizing the technology of the computer and its networks and the interactive communication technologies (The internet, the debating forum, the electronic mail, the videoconference, the CDs, the virtual networks and the satellites) to provide the teaching syllabus and the training service for the students with the least effort and at the quickest speed and the most efficiency at an time and place according to the needs of the pupils. It also provides the pupils

with the possibility of communication among the mates and the teacher. To achieve certain educational goals."

Web Quest:

Dodge, (1995: 11) defines web quest as a way that depends on the integrating the web into the educational process. It is an elastic strategy that can be used for the various subjects and grades.

Etman (2010,7) reveals that the word "Web" means The internet and the word Quest means searching for the information. So the term "Web Quest" depends basically on research and how it can be utilized effectively to help the learners to get the information using the internet without affecting their effort or time except for obtaining something useful.

Fathallah (2013) describes it as a strategy of the directed research that is based on the directed and purposeful educational activities that depends on the research processes within the various sites that are related to the tasks to be carried out by the learners and that are available on the internet and that are specified by the teacher to directly and properly obtain the desired information within the minor time.

Fielder & Allen (2002:3) defines it as a web based educational activity that deals with a real problem of the learner's interest in which he/she examines the various points of view from different aspects in order to achieve solutions or opinions that help in solving the problem. The teacher's role is to set the web based educational environment and to arrange the teaching resources and to

provide suggestions and directions to solve the problem. The web based strategy depends on the teacher's ability to design the strategy and it related tasks and to determine the related activities.

The researcher defines it operationally as “An strategy to develop the skills of the “Basic mathematics” syllabus through surfing the internet in order to obtain the information directly with the least possible time and effort. This seeks to change the learner’s role from a mere receptor to a seeker for the information and to change the teacher’s role from a speaker to be a director and advisor.

The problem:

Hassan Shehata (2008,128) defines the problem as “a feeling within which that the individual encounters a critical situation or a question which he can’t answer and which he would like to know its correct answer. The critical situation presents a desired action to be carried out. He/she does not already have the answer”.

Magdy Aziz Ibrahim (2008,313) defines the problem as “a situation that the individual, or a group of people, encounters and that requires a solution. The individual does not notice a clear way to achieve the desired solution”.

The researcher defines it operationally as “an obstacle that hinders the individual from achieving his desired goal. The individual has to search and ask to seek the means that help him /her to achieve his/her goal and reveal this obstacle”.

The skills of the “Basic mathematics” syllabus

Ali Sayed Mohamed (2012) defines it as “the mental activity that the learner carries out in each step in solving the problem and that is expressed by the degree that the learner gets in the problem solving test”.

Cormier & Nurius,(2003) define it as “a cognitive behavioral process through which the individual tries to identify, discover and create effective means to deal with the problems that he/she faces during his/her daily life”.

The researcher defines it operationally as “a set of abilities, whenever they are available for the learner at the Faculty of Specific Education, he/she can solve the mathematical sums accurately and without mistakes and at the least time and with the least effort”.

Building research tools:

The sources which are used by the researcher in the preparation of the research instruments:

- ✓ A review of previous researches and studies related to the strategy of cognitive trip (web quest) via the Web, and associated with the research variables.
- ✓ The use of guidance of the supervisors on the research and implement their guidance.
- ✓ The use of the guidance and views of a number of professionals in the field of education technology and teaching methods and so as to determine the validity of the research instruments, where the researcher implements the guidance which are recommended by them.

Instruments of The Study:

These instruments include the following:

- ✓ A cognitive Navigation system via the Web to develop the skills of principles of mathematics course. (Prepared by the researcher)

- ✓ Arbitration of the proposed system Form. (Prepared by the researcher)
- ✓ A test to measure the skills of principles of mathematics course for the sample of the study. (Prepared by the researcher)

Verify the validity of the list of standards:

To ensure the validity of the list of criteria, the researcher has presented it to a number of specialized professors in the field of educational technology, so as to identify the opinions of the arbitrators on determining importance of considering these standards in designing web quest via the Web, the adequacy of those standards, linguistic formulation and scientific accuracy of each criterion, where arbitrators agreed to the following:

- ✓ The Importance that there should be a list of criteria, which is taken into account on designing web quest via the Web.
- ✓ Some arbitrators also recommended re-formulate some criteria which were not formulated clearly.
- ✓ Add some standards, which were not present.
- ✓ Delete some criteria that arbitrators agreed to its lack of importance.

The studies related to the web quest in teaching mathematics:

The study by Goktepe (2014) that is entitled “Using the web quest as a model for teaching mathematics”.

This study aimed at using the knowledge trips through the web in teaching the subject of axis in mathematics to increase the effectiveness of learning and to enrich the content visually and to provide interaction among the pupils of grade seven at a Turkish primary school. The study followed the descriptive approach.

The study concluded that using the knowledge trips through the web provides positive contributions to develop the pupils' cognitive and affective domains and arise their interest and curiosity towards learning. Teaching using the knowledge trips through the internet enriches the educational environments.

The study by Ibrahim El Saman (2014) that is entitled "The effectiveness of web quest in enhancing the mathematical thinking skills among the preparatory stages.

This study aimed at identifying the effectiveness of web quest in enhancing the mathematical thinking skills among the preparatory stages at one of the preparatory schools in Damietta . the study followed the quasi experimental approach. The research sample was 70 pupils.

The study concluded that:

There are statistically significant differences between the mean score of the experimental group and that of the control group in the post administration of the cognitive achievement test of the mathematical thinking and the motivation scale towards learning in favour of the experimental group.

The study also recommended that there is a need to design the lessons using the web quest strategy.

The study by Akram Saleh (2012) that is entitled “The effectiveness of web quest in enhancing the mathematical thinking skills among the preparatory stages.

The study aimed at finding out the obstacles that hinder using the internet for the educational purposes for a sample of the ninth grade pupils in the north of Tolkarm and to find out the effectiveness of web quest in arising the academic attitudes towards learning mathematics and to know their opinions about using the web quest in learning mathematics. In order to achieve this a web quest based unit (The first unit that deals with the analytical geometry of the mathematics content for grade nine) was designed. The sample was intentionally chosen of 56 male and female pupils.

The study concluded that there are obstacles that hinder using the internet for the educational purposes for a sample of the ninth grade pupils. Some of these obstacles are:

1-The weak encouragement by the parents and parents for the pupils to use the internet in learning.

2-The curricula lack enhancing learning using the internet.

3-The lack of the Arabic interactive educational sites.

The pupils expressed their feeling of various positive academic feelings when carrying out the web quest activities in groups. So,

using the internet as an educational environment will motivate the learners to learn mathematics. Their suggestions will high lighten the desired role by the teacher to help the learners in learning mathematics through the web quest strategy that had the most positive effect in their learning and in developing the positive attitudes and hindering the negative attitudes.

Studies related to problem solving through teaching strategy.

The study by Oguz (2011) that is entitled " The effect of computer based learning on the academic achievement and the problem solving skills in technology and science"

The study aimed at identifying the effect of computer based learning on the academic achievement and the problem solving skills in technology and science. The study followed the experimental approach. The study tools were an achievement test and a test of skills. The sample was 53 pupils. They were divided into two groups the experimental group of 26 pupils who were taught using computer and technology based learning and the control group of 26 pupils.

The study concluded that:

There are statistically significant differences between the mean scores of the experimental group and that of the control group in the academic achievement and problem solving skills in favour of the experimental group.

The study by Al fifi (2011) that is entitled " Using the problem solving strategy in teaching grammar on the academic achievement of the lower Bloom levels by the six grade students"

The study aimed at identifying the effect of Using the problem solving strategy in teaching grammar on the academic achievement of the lower Bloom levels by the six grade students. The study followed the quasi experimental approach. The study tool was an achievement test. The sample was 46 six grade pupils. They were divided into two groups the experimental group of 23 pupils and the control group of 23 pupils.

The study concluded that:

There are statistically significant differences at 0.05 level between the mean scores of the experimental group and that of the control group in each level of Blooms taxonomy in favour of the experimental group.

The study by Al Monzery (2009) that is entitled " The effectiveness of the problem solving strategy in

teaching mathematics on achievement and developing the skill of mental computing for the first grade students"

The study aimed at identifying the effectiveness of using the problem solving strategy in teaching the mathematical processes on the first grade students by training some students on using some computing problem solving strategies and identifying their effect on their academic achievement in mathematics and on enhancing their computing skills. The study tool was a teacher's guide to teach the mathematical processes using the problem solving strategy and an activity book for the students and a mathematical achievement test and a mental test. The sample was 66 first grade male and female students. They were divided into two groups the experimental group of 32 students and the control group of 32 students in Oman.

The study concluded that:

- 1- There are statistically significant differences at 0.05 level between the mean scores of the experimental group and that of the control group in the academic achievement in mathematics in favour of the experimental group.
- 2- There are statistically significant differences at 0.05 level between the mean scores of the experimental

group and that of the control group in the mental computing test in in favour of the experimental group.

Applied framework of the research:

Preparing the electronic test

In light of the general and procedural objectives, and educational content, the researcher has designed and constructed an achievement test of objective (a multiple choice, true and false,) the electronic achievement test has been designing and implementing for the student to answer it on the Internet, achievement test has gone through the following stages during preparation :

1-1-defining the goal of the test:

Test aims to measure the achievement of the students, the sample of the study of the scientific content of the proposed Curriculum of the principles of mathematics' course for first year students at the Department of Preparation of Computer's teacher at the Faculty of Specific Education, Mansoura University of cognitive levels, So as to determine the achievement of the objectives of the study of the proposed system by the students.

1-2 -Identify the type of the test and its items:

Questions have been set of the objective type, the test consists of two parts, the first part is multiple choice questions, and the second is true and false questions, the researcher took into account the necessary conditions for each type, so that it will be a good test and be easily corrected by using the computer.

1-3 -Putting the instructions of the test:

The researcher has formulated the instructions of the test in an easy and clear form for the students, the sample, and takes into account in the formulation of the test's instructions to clarify (the goal of the test, the number of the items, The time of it, the total score of the test, to explain to the students how to answer the multiple choice questions, as well as true and false questions.

1-4- Preparing the test in its initial form:

Electronic test at its intial form, consists of (50) items, (25) items of the multiple

choice questions, and (25) items of true or false questions.

1-5-Validity:

The test is valid if it measures what it is set to measure whereas the test was presented to a group of jury from experts in the field of computers and the curriculum and teaching methods and technology education, so make sure to:

- Reliability and clarity of instructions of a multiple-choice.
- Suitability of the number of items in each of the true and false questions, and multiple choice questions.
- The extent of the linguistic validity and its suitability for students, the sample of the study.
- The extent of the validity of the application as a whole for the application.

Table 5 shows percentage of the jury agreement on the availability of the previous criteria in the test.

Table 5 shows percentage of the jury agreement on the test.

The jury panel	percentage of the views%
First	96.25
Second	92.5
Third	93.75
Fourth	96.25
Fifth	95
Sixth	96.25
Seventh	96.25
Eighth	93.75
Ninth	93.75
Tenth	96.25
Eleventh	92.5
Twelfth	96.25

Thirteenth	95
Total percentage	*94.9
The jury panel	percentage of the views%
* The approximate total	

In light of the views of the jury, the researcher conducted many of the modifications such as he deleted some other items and the number of the test items after the jury's modifications (40) items, including (20) items of multiple choice questions, and (20) items of true or false questions. Thus, the test has become valid for the application in the random experiment.

1-6-A random experiment on the achievement test

After proposing the achievement test on the jury and conducting the suggested modification, it has been testing the test on a random sample of the students, and it the aim of the random experience was

- 1- To determine the required time for the application of the test .
- 2- To calculate the ease and difficulty Coefficient for each test items .
- 3- To test the stability of the test.

This has been done through the following procedures:

- Determining a random sample consists of ten (10) students from the first year students at the Department of Preparation of Computer's teacher at the Faculty of Specific Education, Mansoura University.
- Preparing the Test and the guide.
- Applying the test on a sample of students while leaving the time open to answer the test questions.
- The researcher corrected students' performance on the test and estimated the grades after completing the test.
- Calculating stability for each single test items.

Allocation time:

As the researcher has registered the actual time which is taken by each student from the random sample to answer the test questions, and then the researcher has calculated the test time through the following formula:

$$\frac{\text{maximum time to answer} + \text{minimum time to answer}}{2}$$

The average time of the test, which is taken by the researcher and considered it the actual time of the test is 120 minutes.

1-8- the ease and difficulty Coefficient for the items

The aim of calculating the ease and difficulty Coefficient for the test items is to delete the so easy items and also the so difficult items.

The ease Coefficient was calculated through the following formula:

$$\frac{\text{The number of the correct answers for each question}}{\text{students' number}}$$

The difficult Coefficient was calculated through the following formula:

$$\frac{\text{The number of the wrong answers for each question}}{\text{students' number}}$$

The researcher considered that the items that its ease Coefficient increases (80) are very easy, and that the items of less coefficient Ease (20) are very difficult.

1-9- The Reliability:

The test reliability was calculated of the random experiment group that consists of (10) students from the first year students at the Department of Preparation of Computer's teacher at the Faculty of Specific Education, Mansoura University, after two weeks of the first application and then calculating the correlation coefficient between the first application and the second, by using the statistical software package (Excel), the reliability of the test was calculated by using Cronbach's Alpha which indicated that the reliability of the Test was (0.94). This value can be trusted and means that the test was reliable.

1-10- The final form of the test

After completing the steps of preparing the test, and making sure of its validity and reliability, the test became at its final form and consists of 35 items, (20) items of multiple choice questions, and (15) items of true or false questions.

Second: preparing a system-based on webquest through the

proposed web

To prepare the proposed system, it has passed through three main stages such as, the stage of searching for the potentials and exploring new future, designing webquests, designing websites, figure (2) the stages of designing the proposed system.

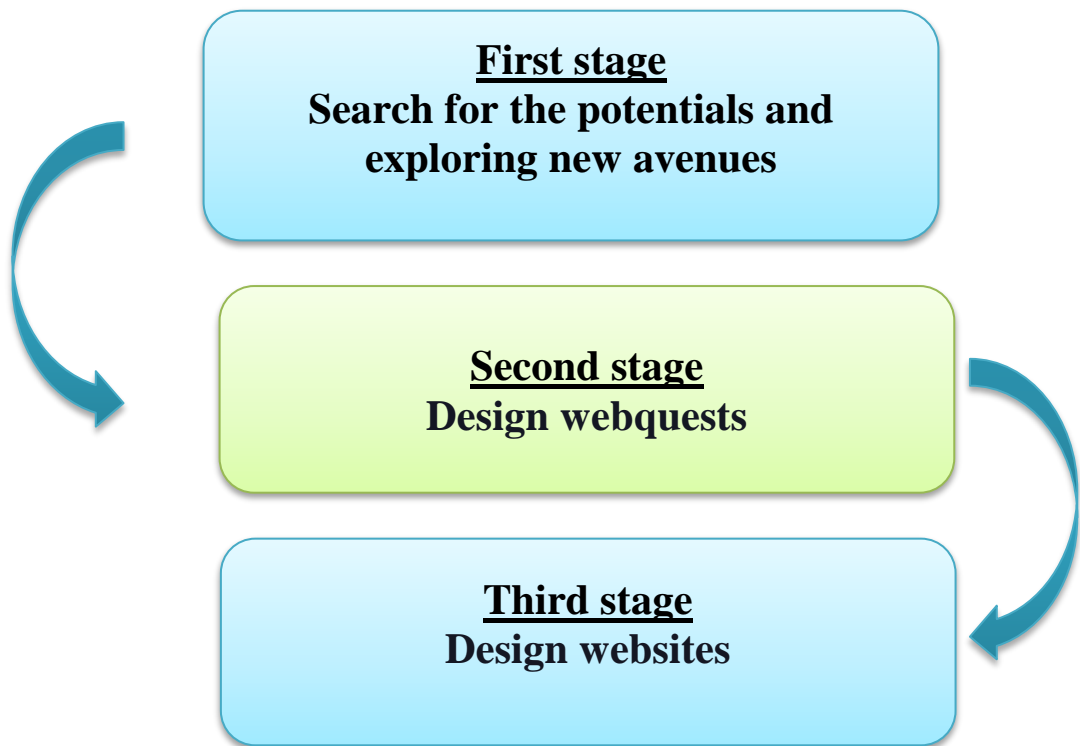


Figure (2) the stages of designing the system of webquests through the proposed web.

1- First stage / Search for the potentials and exploring new avenues

Consideration should be given to the previous experiences of students and their

interests and goals, as well as to identify the learning gaps, such as weaknesses that may face the subject, and measuring the relevance of the information acquired for students.

1-1 selecting the main topic:

We raise the idea of determining the objective of the study in trying to employ webquest through the web for the development of the principles of mathematics course, the program follows the traditional method of teaching, and measuring whichever is more effective in developing those skills

1-2 Determining characteristics of learners

In order to ensure the success of the learner in the study by the webquest system through the proposed Web, it has been determined the characteristics of learners, as follows:

- Gender: male and female Students of the first year at the Department of Preparation of Computer's teacher at the Faculty of Specific Education, Mansoura University .
- Students' number: a control group (30 male and female students), experimental group (30 male and female students) .
- Not all students studying any courses related to the variables of the study.

2- Second stage/ Design webquests

It has been taken into account the elements of a Web Quest through the web during its design, and it has been divided into a way related to the raised subject of the study in accordance with the following:

1-2- Determining educational lessons for the proposed system:

The focus was on the following lessons of the principles of mathematics course, which are taught for the first year at the Department of Preparation of Computer's teacher at the Faculty of Specific Education, Mansoura University, as:

- Matrices and parameters.
- Partial fractions .
- Mathematical conclusion .
- Solving mathematical equations.

2-2- collecting sources:

It has been identified the sources of the webquest in the proposed system and which characterized by modernity and scientific linguistic and accuracy and its

association with main topics of web quests which is the component of the proposed system, those sources have been selected , according to the following criteria :

- That the source is exciting for the students .
- It contains the start of the subject from different points which encourage the Students to understand the meaning.
- To give new avenues which the various roles, problems and facts overlap

3-2- The Assessment:

Evaluation/Assessment ; is a criteria to measure the skills, and the results, which will be mastered by the student through his study of the proposed system based on webquest through the web, and a list of criteria was prepared which will be used to evaluate the students, as follows:

1. Logging on all the sources listed in the webquest.
2. The implementation of the List of the activities which are included in the webquest on time.
3. The accuracy of the eports carried out by the student.
4. Cooperation and interaction between the student and his colleagues.
5. The student acquire much of knowledge and skills related to the topics of the webquest.

3- Third stage/ Design websites

There are ready-made models (Template) existed on the Internet at Specialised sites for the Web Quests through the Web, but the researcher has designed and implemented his own model and it is located on the Internet at the following site:

[/http://www.mathedutech.com](http://www.mathedutech.com)

1-3 The design of interaction interfaces:

It has been designed the interaction interface for the website by using the Adobe Photo Shop program, and taking into consideration the simplicity and not over-decoration so as not to lose its educational goals. It was taken into account determining the locations of the elements of media such as texts, videos and

images, etc while designing them, in order that those items appear on the screen in an order.

2-3 The Website Programming:

It has programmed a website of a set of webquests by using the language of, PHP to link between the different files, interaction interfaces and the different elements of the program. Table (6) illustrates some of the models of Website pages of the proposed system based on the Web Quest.

Table (6) models of the Executive scenario of the proposed system

Web page	The description
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Home page of the site, explains:


- General goal of the website.
- Log on to the site.
- The main components of the site.
- User record.
- Instructions
- Contact us.
- About WebQuest.

	<ul style="list-style-type: none">▪ How to design WebQuest.
Web page	The description

[تسجيل المستخدم](#)
[التعليمات](#)
[الاتصال بنا](#)

[الرئيسية](#)
[مقرر الرياضيات](#)
[البركات المعرفية عبر الويب](#)
[تصميم الرحلات المعرفية](#)





المقدمة

أعزائي الطلاب...

عرف البعض علم الرياضيات بأنه علم القياس، تعتبر الرياضيات لغة العلوم إذ أن هذه العلوم لا تكتمل إذ عندما نحول نتائجها إلى معادلات ونحوها لنتمكن من خطوط بيانية.

نعلم من السنوات الدراسية السابقة تعرفنا على المصفوفات والمحددات، ونظرا لأهميتها فإننا سوف نقوم بسرد معلوماتنا في هذا المجال وذلك من خلال الأبحار معا في هذه الرحلة المعرفية عبر الويب.

فكل انتم جاهزون لتجرب هذه الرحلة المعرفية عبر الويب والتي من خلالها سوف نلمو معلوماتنا في هذا المجال؟

المصفوفات
والمحددات

المقدمة

المهام

العمليات

المصادر

التقييم

الخاتمة

صفحة المعلم

Front Page

- It describes the idea of the main topic of Web Quest, and its components, and it focuses on its objectives, in order to put the student in advance development about


what he
will
learn.

Web page	The descriptio n

The screenshot shows a website page for 'MATRICES'. The header includes navigation links like 'الرئيسية', 'مقرر الرياضيات', 'الرحلات المعرفية عبر الويب', and 'تصميم الرحلات المعرفية'. The main content area features a large graphic with the word 'MATRICES' and various mathematical notations, including matrix multiplication $A \cdot B = A \cdot B$ with dimensions 3×4 and 4×2 , and a 2×2 matrix $\begin{bmatrix} a & b \\ c & d \end{bmatrix}$. Below the graphic, there is a section titled 'المهمة' (Task) with a list of objectives in Arabic. On the right side, there is a vertical menu with items like 'المصفوفات والمحددات', 'المقدمة', 'المفهوم', 'العمليات', 'المصادر', 'التقويم', 'الخاتمة', and 'صفحة المعلم'.

Tasks page

- It shows the basic tasks and subtasks which is organized and well-prepared and which must be carried out by the student.

<p>مقرر الرياضيات الرحلات المعرفية عبر الويب تصميم الرحلات المعرفية</p>	<p>Processes</p>
	<p>Page</p>
 <p>العمليات</p> <p>في بداية الامر يجب التأكد من أن كافة أجهزة الكمبيوتر الموجودة في معمل الحاسب الآلي بالكلية والتي سيتم الاستعانة بها في الرحلة المعرفية عبر الويب علي اتصال جيد بشبكة الانترنت، حيث سيتم الإبحار في هذه الرحلة المعرفية عبر الويب من خلال مجموعات، بحيث يتم تقسيم العمل بينكم علي شكل (كاتب، منسق،ناطق، مسجل للوقت)، وزيارة المواقع المحدده و البحث عن المعلومات و الحقائق وذلك لتحقيق الاهداف المحدده مسبقا لهذا الفصل.</p> <ul style="list-style-type: none"> • كما يمكن أن نتواصل معا اعزائي المتعلمين من خلال ما يسمى بمؤتمر المجموعات والذي يتم من خلاله:- • عمل مناظرة بين طلاب المجموعة الواحدة، يتم من خلاله مناقشة طلاب المجموعة الواحدة معا لما قد توصلوا اليه من معلومات. • كل مجموعة تدعم ما قد توصلت اليه من نتائج من خلال العروض التقديميه او اوراق عمل توضح ما تجزوه. • كما يمكنكم اعزائي المتعلمين التواصل معا من خلال إنشاء بريد الكتروني خاص بكل متعلم ليساعدكم في التواصل معا إن أمكن. 	<p>It describes the processes which are followed by the students while navigating their webquest via the Web, in order to perform tasks that have been assigned to them.</p>

The screenshot shows a web page for 'MATRICES' (مصفوفات والمحددات). The header includes social media icons and navigation links like 'الرئيسية', 'مقرر الرياضيات', 'الرحلات المعرفية عبر الويب', 'تصميم الرحلات المعرفية', 'التعليمات', and 'اتصال بنا'. The main content area has a large graphic with mathematical symbols and a sidebar with a table of contents.

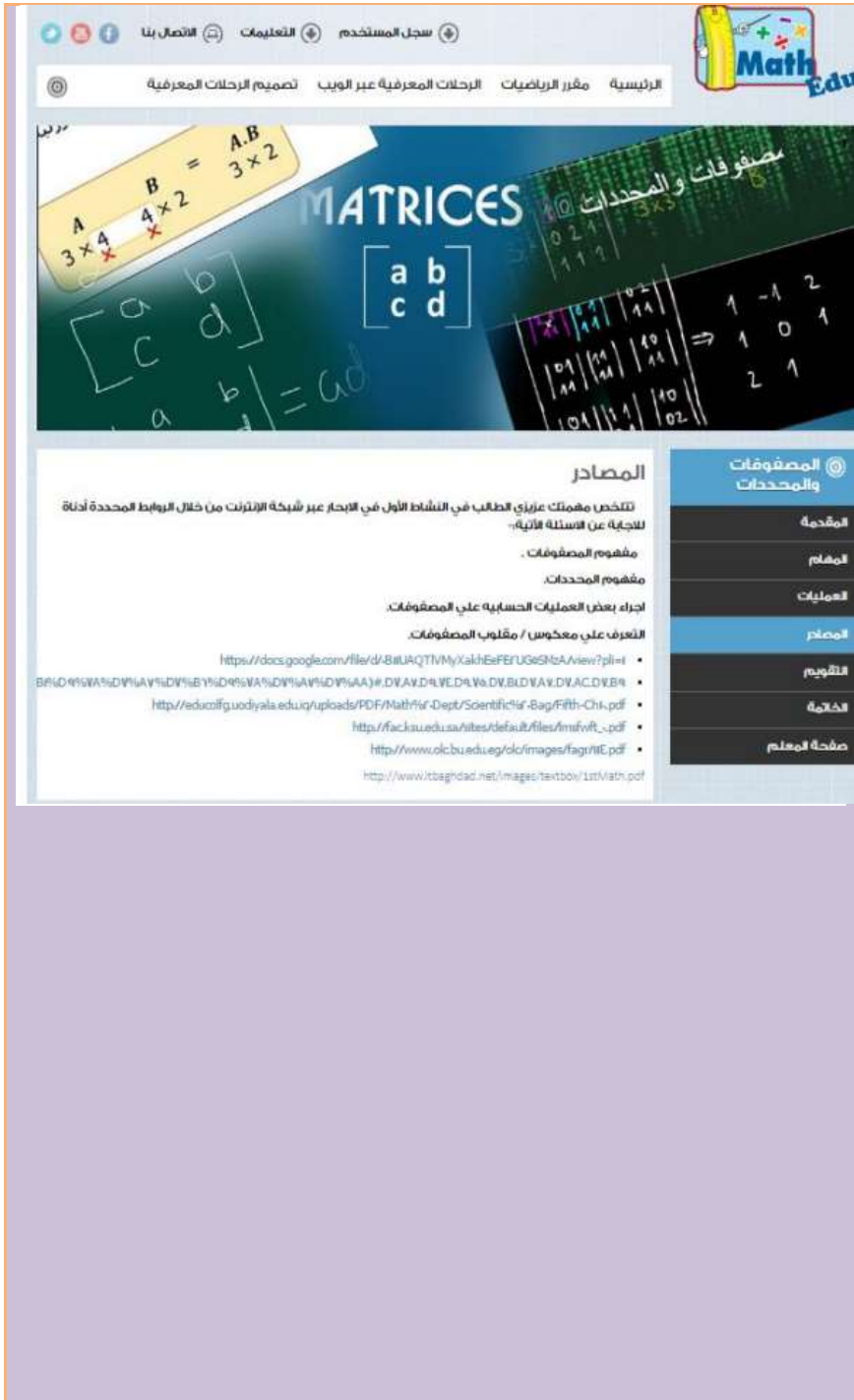
المصفوفات والمحددات
المقدمة
أعزائي الطلاب...
المفاهيم
العمليات
المصادر
التقييم
الخاتمة
صفحة المعلم

Front Page

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	advance develop ment about what he will learn.
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Web page	The descriptio n
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Sources

Page

- It displays a list of set of sources that the student would use during the webquest through the web, to get the required



knowle
dge and
develop
the
require
d skills.

The screenshot shows a web page with a header in Arabic: 'الرئيسية', 'مقرر الرياضيات', 'الرحلات المعرفية عبر الويب', 'تصميم الرحلات المعرفية', 'التعليمات', 'الاتصال بنا', and 'سجل المستخدمين'. The main content area is titled 'مصفوفات والمحددات' and includes a section 'المقدمة اعزائي الطلاب...' with introductory text. A table of contents on the right lists: 'المقدمة', 'المفاهيم', 'العمليات', 'المصادر', 'التقييم', 'الذاكرة', and 'صفحة المعلم'. The background features mathematical diagrams and equations related to matrices and determinants.

Conclusion


Page

- Reminding the learners through it with the information they will gain at the end of the webquest through the web, as well as to motivate them to communicate


	<p>te in obtaining informatio n, and seeking more at other times.</p>
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<p>Web page</p>	<p>The description</p>
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سجل المستخدم التعليمات الاتصال بنا



الرئيسية مقرر الرياضيات الرحلات المعرفية عبر الويب تصميم الرحلات المعرفية



المقدمة

اعزائي الطلاب...

عرف البعض علم الرياضيات بأنه علم القياس. تعتبر الرياضيات لغة العلوم إذ إن هذه العلوم لا تكتمل إلا عندما نحول نتائجها إلى معادلات و نحول لها إلى خطوط بيانية.

فعلى مر السنوات الدراسية السابقة تعرفنا على المصفوفات والمحددات. ونظرا لأهميتها فإننا سوف نقوم بسرد معلوماتنا في هذا المجال وذلك من خلال الأبحار معا في هذه الرحلة المعرفية عبر الويب.

فهل أتم جاهزون لخوض هذه الرحلة المعرفية عبر الويب والتي من خلالها سوف نتم ومعلوماتنا في هذا المجال؟

المصفوفات
والمحددات

المقدمة

المفاهيم

التعليمات

المصادر

التقييم

الخاتمة

صفحة المعلم

Teacher Page

- it describes information deepened in the plan to start the lessons, and the expected results after the implementation of the lesson, the main objective of this page is to build or develop a guide to other teachers

	<p>about employing other WebQuest through the Web.</p>
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