The Impact of the Different Style of Organizing the Content of Digital Video through Mobile Applications on the Development of Computer Skills and Information Technology in the Preparatory Year Students at the University of Jeddah

Naif Saud Al-Enzi

Abstract— The current research intend to define the effect of content discrepancy pattern (totally-partially) digital video clips among the mobile applications to develop computer skills and information technology for students of preparatory year on the university of Jeddah. The research controlled over (50) computer skills and information technology studentsasrandom pattern for the year 2015/2016. Then, they divided to two groups randomly according to the variable autonomous, each one contains (25) students. The first heuristically students group had studied by the partial pattern of arranging the content. On the other side, the second heuristically students group had studied by the total pattern of arranging the content. What's app application used as one of the mobile application to present the content pattern (total-partial) for both heuristically students. The research tools represented as achievement test and note card to measure knowledge and performance side for the computer skills and information technology respectively.

Both tools controlled over the two groups, and the results showed statically significance differences between the average degrees for knowledge achievements and skilled performance for computer skills and information technology due to, the main effect of discrepancy of arranging partial pattern group. On the light of the research results, the researcher recommended to use digital videos and mobile applications in the educational process. In addition, The Research recommended using arranging partial pattern when prepare and present the content among mobile applications.

Index Terms—Computer Skills, Information Technology.

I. INTRODUCTION

The current era is characterized by the continuous and rapid change in ICT innovations based on the employment of ICTs, which has reflected its impact on community organizations and bodies, resulting in new interactive learning environments that need to develop new methods of organizing e-content and modern learning strategies that are appropriate to the nature of content presented and continuous development. Learning environments, resulting in research trends and interests targeting mobile learning communities and environments and their effectiveness in diverse learning

tasks and diverse design variables among students with different characteristics

Corlett et al. 2005, Motiwalla 2007, Barak et al., 2007, Chen et al., 2008 that learning using mobile devices enhances and improves the learning process, as well as the advanced interaction offered by these devices to students. Mobile devices, especially smart ones, have revolutionized education, and have become the most important technology that has spread rapidly among students because of the flexibility of its use at any time and from any place, and its potential for users to help them exchange information, discuss and share files and communicate with (Arhippainen&Tahti, 2003). The ability of mobile phones to increase the contribution of teachers to the educational process, as well as to improve their performance and interaction with colleagues M and students.

Mobile applications are one of the most important features of the mobile phone, which has developed and spread rapidly for its large potential and its dependence on multimedia (such as voice, image, motion and video), as well as its simple interactive interfaces, and its ability to facilitate user communication and exchange Among others, mobile applications have the potential to rapidly spread among users because of their Internet connection (Tarasewich, 2003; Wasilewska& Wong, 2009; Lan&Tasi, 2011).

Mobile phone applications have the tools and features to be used and used in different learning situations, which will enhance student learning through content acquisition, knowledge development, learning efficiency, and acceptance of instruction (Sandaran&Kia, 2013).

Digital video is one of the most modern methods that can be effectively employed through mobile applications, through which many obstacles can be overcome in the teaching process. Digital video is characterized by an effective display system, a source of information, a self-learning aid, , A language of dialogue, and a tool for solving problems, and it has many possibilities that allow the student to walk in the educational process according to its own speed and ability by controlling the presentation in terms of submission and delay, speed and slow, and repeat the offer in addition to saving time, distance, size or It also increases the ability to absorb difficult

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concepts and ideas and provides a live and powerful database to support action and discussion (Farreraet al., 2007; Wrubel et al., 2009).

Several studies have emphasized the importance of following an appropriate method for organizing digital content, which is reflected in the quality of learning outcomes and the achievement of the desired goals (Colla and Terrie, 2005; Britney, 2010; Richard, 2012).

The application of What's App is one of the most important applications of mobile phones and the most widespread because of the potential and multiple advantages can be employed in different forms of education, and can send digital video to students, where the application allows users to exchange messages and dialogues and discussions and various sections of images and sounds and video, Edit and resubmit to others. The application also allows multiple groups to be created for a number of members in order to share them collectively.

Based on the literature and previous studies, there is a paucity of studies that focused on the use and employment of digital video through mobile phone applications in the educational process and the study of the impact on different learning outcomes. This study seeks to study the effect of both content / How to properly organize the content of digital videos that can be made using the What's App application as one of the most important mobile applications to develop the computer skills and information technology of preparatory year students at the University of Jeddah.

II. RESEARCH PROBLEM

In light of the above, the research problem stems from the following points:

1. Many courses, especially those related to practical training, need to be taught in non-traditional ways. Some of the difficulties faced by the teacher in communicating the skill required by the student, including the lack of time allocated for teaching in accordance with the content of the course, with each other.

2. Some modules, especially computer skills and information technology, need to organize their subjects to suit the nature of the content and the characteristics and abilities of the students. Partial Regulation is therefore expected to contribute gradually to students' learning so that they can master the course's aspects. In a framework that allows them to focus on the aspects of performance within the skill, while the student through the total Regulation can understand the relationship between the parts of the material as a whole and thus aware of the characteristics and relationships shared between them and this in turn helps to absorb the knowledge required.

3. Traditional educational systems face many difficulties in creating a kind of communication and social interaction between the students on the one hand, and with the teacher on the other, in addition to the difficulties of providing the necessary support for students, prompting the researcher to employ a Web application 2, to overcome these constraints facing traditional learning systems.

4. The scarcity of Arab research and studies - to the knowledge of the researcher - which dealt with structural changes of digital video and its use through mobile phone applications in the educational process to achieve its objectives.

5. Through an exploratory study conducted by the researcher before the start of the current research on the number of (15) students of the preparatory year, in the course "Computer Skills and Information Technology" for the first semester 2015-2016 to ensure the availability of smart phones that support the application The results of the survey showed that 100% of the students agreed on their use of smart phones and no difficulties in dealing with them, and 90% of the students agreed to use them. Apply What's App and that they do not find it difficult to deal with, and this means the need to go to study ways to benefit from the application of What's App through smart phones within the educational process to achieve their educational goals, and 85% of the sample of the study on the lack of skills in computer and information technology and their need To acquire these skills at the beginning of the university.

Based on the above, the problem of the current research is determined by the need for students of the preparatory year at the University of Jeddah to acquire computer skills and information technology in non-traditional ways, and then the current research attempts to detect the effect of two styles to organize the content (partial vs. total) Development of the cognitive and performance aspects of computer skills and information technology in the preparatory year students at the University of Jeddah.

III. RESEARCH QUESTIONS

The research seeks to answer the following main question:

What is the difference in the pattern of content regulation (partial and total) of digital video applications over mobile applications on the development of computer skills and information technology among preparatory year students at Jeddah University?

This question is divided by the following sub-questions:

1. What is the instructional design of learning content using digital video through mobile phone applications in ways of organizing content (partial, holistic) for the development of computer skills and information technology?

2. What is the difference in the pattern of content regulation (partial and total) of digital video over mobile applications on the achievement related to the cognitive aspect of computer skills and information technology among preparatory year students at Jeddah University?

3. What is the difference in the pattern of content management (partial, total) of digital video over mobile applications on the skillful performance associated with computer skills and information technology among preparatory year students at Jeddah University?

IV. RESEARCH AIMS

Current search goal to detect:

1. The difference in the pattern of content regulation (partial and total) of the digital video through mobile applications has influenced the development of the achievement related to the cognitive aspect of computer skills and information technology among preparatory year students at the University of Jeddah.

2. The difference in the pattern of content regulation (partial and total) of digital video applications in mobile applications has influenced the skillful performance related to computer skills and information technology among preparatory year students at the University of Jeddah.

Research importance:

The results of this research may contribute to:

1. Determine the most appropriate way to organize video content across mobile phone applications by identifying the appropriate regulation pattern for this purpose.

2. Introducing an educational system aimed at overcoming the problems of traditional education by employing some modern mobile applications in the educational process.

3. To conceptualize the employment of digital videos through mobile phone applications, and to guide researchers in the field of education technology to study this structure as containing influential variables in learning outcomes.

4. To direct the attention of educational institutions to take advantage of various educational aids and modern applications of mobile phones in support of the educational process and keep abreast of technological developments in the field of education.

5. This study is in response to the recommendations of previous studies that recommended further research on the use of mobile applications in the educational process and measuring their impact on different learning outcomes.

Research hypotheses:
The current research sought to validate the following:

1. There is no statistically significant difference at (0.05) between the average scores of the two experimental groups in achievement related to the cognitive aspect of computer skills and information technology due to the fundamental impact of the different style of content regulation of digital video by mobile applications.

2. There is no statistically significant difference at (0.05) between the average scores of the two experimental groups in the skill performance related to computer skills and information technology due to the fundamental impact of the different style of content regulation of digital video by mobile applications.

Search limits:
The current research was limited to:
1. Objective limits:
- Three units (Information Technology, Operating Systems, Internet, E-mail Management, E-Learning and Distance Learning) from the "Computer Skills and Information Technology" course for the preparatory year students at the University of Jeddah.

- Typical digital video content regulation across mobile applications: partial- regulation versus total regulation.
- What's App as an Android mobile application to send digital video clips.

2. Spatial limits: Jeddah University in Asfan.

3. Time limits: First semester of the academic year 2015-2016.

4. Human limits: preparatory year students at the University of Jeddah.

The research sample:

The sample of the research consisted of (50) students of the preparatory year at the University of Jeddah who have a smart phone connected to the Internet, and installed the application of What's App. The sample was randomly distributed into two experimental groups according to the independent variable of research; the strength of each group was 25 students.

V. RESEARCH METHODOLOGY

The current research is based on the following two approaches:

1. Analytical Descriptive Methodology: To analyze studies, research and previous literature in this field, in light of which the educational design of the research experiment was determined, the patterns of organizing the content and its impact on the different variables, building the research tools and interpreting the results.

2. Experimental Methodology: Use in the current research to reveal the relationship between the following variables:
- Independent variables: the style of organizing content for digital video over mobile applications, and has two levels:
- Partial regulation.
- Total regulation.
- Dependent variables: represented in two variables:
- Achievement related to the cognitive aspect of computer skills and information technology.
- Computer skills and information technology skills.

Search tools:

The research tools were:

1. Achievement test for the cognitive aspect related to computer skills and information technology.

2. Note card for the skill performance related to computer skills and information technology.

Search experimental design:

In the light of independent variables and their levels, the experimental design (A priori/ post) of the universal design (2 x 1) was used as shown in Table (1):

Table (1): experimental design of the research

The groups	A priori Measurement	Experimental Treatment	A posterioriMeasurement
First experimental group	▪ **Achievement test** ▪ **Note card**	▪ **(M1) Partial Content Regulation**	• **Achievement test** • **Note card**
Second experimental group		▪ **(M2) Totally Content Regulation**	

The experimental groups of the research are therefore composed of two groups:

Initial Experimental Group: Students studying in part mode to organize digital video content through mobile applications.

Second Pilot Group: Students who are taught in a holistic manner to organize digital video content through mobile applications.

Research steps and procedures:

The researcher took the following steps to conduct the research:

1. Review the educational literature and previous studies related to the subject of the research, to create a background reference on the subject and the development of the theoretical framework and the preparation of experimental treatment materials and the design of research tools.

2. Setting up an initial list of educational objectives to be achieved for computer skills and information technology and arbitration by a group of specialists and experts in the field.

3. Preparation of a final list of objectives after making the proposed amendments by the arbitrators.

4. Preparation of a preliminary list of computer skills and information technology.

5. Present the initial list of skills to a group of specialists and experts in the field.

6. Preparation of a final list of skills after the proposed amendments of the arbitrators.

7. Preparing educational content according to specific goals and skills.

8. To view the various educational design models and adopt one of them in proportion to the nature of the current research for use in the design and production of digital video and design activities for students.

9. Design and produce digital video clips according to the typical content regulation.

10. Prepare the research tools and submit them to the arbitrators and calculate their honesty and stability.

11. Random selection of students from the preparatory year at the University of Jeddah and dividing them into two groups according to the experimental design of the research.

12. Apply search tools in advance to the search sample.

13. Apply specific treatments to search groups.

14. Apply search tools to the search sample.

15. Recording and monitoring the results, organizing and processing them statistically.

16. Interpret and discuss the results.

17. Provide recommendations and future research proposals.

Search procedures

Search actions include the following elements:

(1) Instructional design for search processors

(2) Design and construction of search tools

(3) Search experience procedures

(4) Monitoring and analyzing results and their interpretation

They will be addressed in detail as follows:

(1) Instructional design for search processors

After studying a set of models of instructional design, the researcher in the design of experimental treatment materials adopted the model of Abdul LatifElgazzar for educational design, which consists of five stages (Elgazzar, 2013) as shown in Figure (1), for the following considerations:

- Modernity of the model and its relevance to the nature of the current research.

- Applicability of the application at all levels starting from a single lesson, unit of study or course.

- It is characterized by flexibility and mutual influence among its elements.

- Include the model for all design and educational development processes.

- Ease of application and ease of return.

- Give clear details of the procedures in the form.

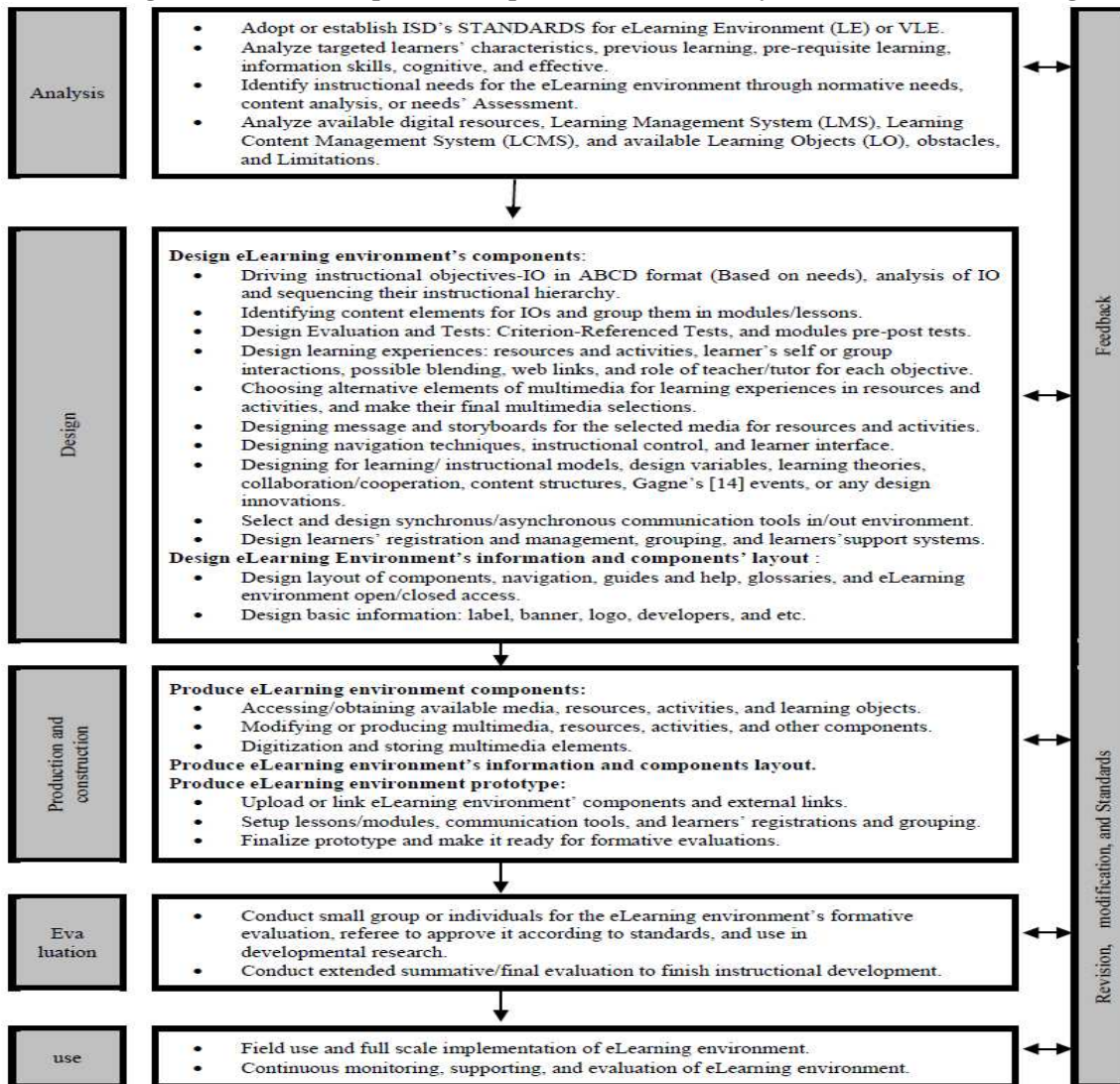**The following is a detailed description of the procedures followed by the researcher at each stage:**

Analysis
- Adopt or establish ISD's STANDARDS for eLearning Environment (LE) or VLE.
- Analyze targeted learners' characteristics, previous learning, pre-requisite learning, information skills, cognitive, and effective.
- Identify instructional needs for the eLearning environment through normative needs, content analysis, or needs' Assessment.
- Analyze available digital resources, Learning Management System (LMS), Learning Content Management System (LCMS), and available Learning Objects (LO), obstacles, and Limitations.

Design

Design eLearning environment's components:
- Driving instructional objectives-IO in ABCD format (Based on needs), analysis of IO and sequencing their instructional hierarchy.
- Identifying content elements for IOs and group them in modules/lessons.
- Design Evaluation and Tests: Criterion-Referenced Tests, and modules pre-post tests.
- Design learning experiences: resources and activities, learner's self or group interactions, possible blending, web links, and role of teacher/tutor for each objective.
- Choosing alternative elements of multimedia for learning experiences in resources and activities, and make their final multimedia selections.
- Designing message and storyboards for the selected media for resources and activities.
- Designing navigation techniques, instructional control, and learner interface.
- Designing for learning/ instructional models, design variables, learning theories, collaboration/cooperation, content structures, Gagne's [14] events, or any design innovations.
- Select and design synchronus/asynchronous communication tools in/out environment.
- Design learners' registration and management, grouping, and learners'support systems.

Design eLearning Environment's information and components' layout :
- Design layout of components, navigation, guides and help, glossaries, and eLearning environment open/closed access.
- Design basic information: label, banner, logo, developers, and etc.

Production and construction

Produce eLearning environment components:
- Accessing/obtaining available media, resources, activities, and learning objects.
- Modifying or producing multimedia, resources, activities, and other components.
- Digitization and storing multimedia elements.

Produce eLearning environment's information and components layout.
Produce eLearning environment prototype:
- Upload or link eLearning environment' components and external links.
- Setup lessons/modules, communication tools, and learners' registrations and grouping.
- Finalize prototype and make it ready for formative evaluations.

Evaluation
- Conduct small group or individuals for the eLearning environment's formative evaluation, referee to approve it according to standards, and use in developmental research.
- Conduct extended summative/final evaluation to finish instructional development.

use
- Field use and full scale implementation of eLearning environment.
- Continuous monitoring, supporting, and evaluation of eLearning environment.

Feedback

Revision, modification, and Standards

Figure (1) Model of Elgazzar Developer (2013) for educational design

First: Analysis phase:

This phase included the following steps:

1. Analysis of students' characteristics and needs:

This step included:

- Demographic analysis: which includes age and they are the students of the preparatory year at the University of Jeddah, sex all male, and the cultural background was suitable to start learning the content, the language where the Arabic language was used, making sure there is no student with special needs, the social and economic level was average.

Educational analysis: This is the definition of the level of education they are students in the preparatory year, the ability to learn computer and information technology, the availability of mobile phones and the application of (What's App).

Analysis of the learning environment: The training of students in mobile phones, the application of "What's App", and the participation in the Internet service are valid. The educational resources used by the researcher in his educational design were in the course of computer skills and information technology.

To define the objectives to be achieved for this content in a clear, understandable and measurable manner, where the objectives are divided into:

- General objectives represented in the overall objective of the current research is the development of computer skills and information technology among students of the preparatory year at the University of Jeddah.

- Procedural objectives formulated in the form of behavioral statements describing student behavior, taking into account that this behavior is observable and measurable.

Identification of the educational content: IT units and operating systems, the Internet and e-mail management, e-learning and distance education of the course of computer skills and information technology for preparatory year students at the University of Jeddah.

Second: the design phase

1. Organizing content and following it up

It aims to identify elements of the content and put them in an appropriate sequence in order of objectives to achieve the educational objectives within a specified period of time. The

researcher identified the elements of the educational content and organized and arranged in a specific sequence to achieve the specific educational objectives, limited to only three units of the computer curriculum and information technology Which is offered to students of the preparatory year at the University of Jeddah, and these units are:

- Information technology and operating systems.
- Internet and email management.
- E-learning and distance learning.

2. Determine the ways to deliver content

The researcher determined the ways to deliver content to students based on the objectives to be achieved as follows:

Division of students into two experimental groups A group taught by digital video clips in a partial- regulation mode and a group taught by digital video clips in the totalregulation style.

The student used the application (What's App) to send the lessons, and then the performance and application of these lessons on the computers available in the computer lab of the General Department of Educational Media at the University of Jeddah in order to achieve the technical goals required of the student development, Typical partial - regulation and total regulation of skills learning.

- Create a record of achievement for each individual student.

3. Design tests and calendar tools

The researcher designed and constructed an objective type test to measure the students 'ability in cognitive achievement related to computer skills and information technology. The researcher also designed and built a note card to measure students' performance in computer skills and information technology.

4. Designing educational lessons

The lessons were divided into two types:

- The partial regulation of the content, which includes the presentation of the skill that the student should acquire, fragmented on several digital videos (Figure 2).
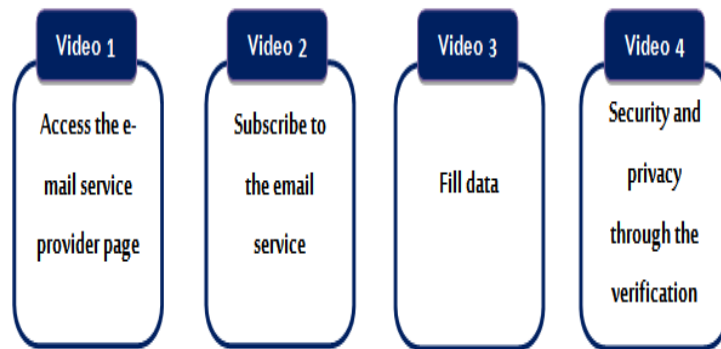
Figure (2) Graphic layout of digital videos for the skill of creating e-mail according to the pattern of partialregulation of content

- **The total regulation of the content**, which includes the skill display that the student should acquire in a single digital video (Figure 3).
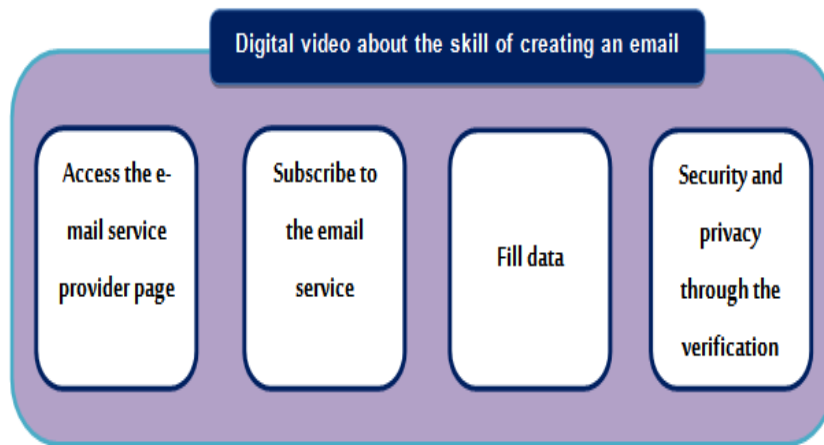

Figure (3) Graphic layout of a digital video for the skill of creating an e-mail according to the pattern of total content regulation

Third: the stage of construction and production

The construction and production stage included the following stages:

1. Production of digital video clips: using Camtasia Studio 8 to explain and record the educational content of the video courses of the computer and information technology course in its partial and total modes.

2. Digital editing: Camtasia Studio 8 was used to perform digital editing of recorded videos. The editing process included text annotations on the video that support voice annotation, adding some symbols and shapes to attract student attention, focus on educational content, and delete errors Recording, improving the quality of a video clip, organizing a video clip according to the experimental (partial / total) processing modes, and determining the final format of the digital video to fit the What's App application on mobile phones.

3. Create What's App: The researcher created two groups by applying What's App according to the two types of experimental treatment (the partial-pattern group, the total regulation pattern group).

Fourth: the evaluation phase

At this stage, the digital processors were presented with a card to a group of arbitrators specialized in the field of education technology and computer to evaluate and determine the validity of the application. It was clear that the arbitrators agreed on the digital treatments and that they are applicable and achieve the research objectives. Completion of recommended edits The digital video content is ready to experiment with a large student population.

Fifth: the use phase

This phase includes the following steps:

Add students to "What's App" application groups according to the pattern of content to be studied by the student.

- Experimenting the learning environment through the application of "What's App" to ensure the work environment, and has been proven to work environment learning efficiently and quickly and easily send and receive messages and files between students.

Mini experiment (exploratory experiment): The research experience was applied minimally on a sample of students in the preparatory year at the University of Jeddah (non-sample) of 10 students to measure the achievement of the objectives set for the environment and the ease of using the mobile application in discussions and exchange Digital videos, and have benefited from their response to refinement, improvement and development.

The final experiment (the basic experiment): The experiment was conducted extensively on a sample of students in the preparatory year at the University of Jeddah and measuring the learning outcomes included the cognitive and practical aspects of computer skills and information technology.

(2) Design and construction of search tools

The current search uses two basic tools to make sure your students meet your learning goals:

- Knowledge achievement test related to computer skills and information technology.

The skill performance note is related to computer skills and information technology.

First: the achievement test:

In the light of the educational objectives that have already been identified and arbitrated, the researcher has prepared an achievement test to measure the cognitive aspect of the two research groups. The process of constructing and designing the achievement test has undergone a number of steps and stages as follows:

1. Determining the objective of the achievement test: The goal of the achievement test is to measure the level of students' achievement of the cognitive aspects of computer skills and information technology by applying it before and after.

2. Identifying the type and wording of the test vocabulary: The type of test vocabulary was defined as: Multiple Choice Question Pattern, Right and False Question Patterns, Vocabulary was formulated to cover all cognitive aspects of the skills, and the number of its vocabulary was (95): 40 Error and (45) are singular in a multi-choice pattern. The formulation of the test vocabulary is considered to be clear and cannot be more than one interpretation.

3. Formulation of the test instructions: formulated in the introduction to the test and considered to be clear, accurate, concise, and direct and simplified so as not to affect the student's response and change from the results of the test.

4. Grade and correction: The test consisted of (95) questions, and one score for each correct answer was evaluated on each of the correct and false and multiple choice questions. Thus, the maximum test score (95) Clarity and ease of use to rely on to correct the test.

5. Preparation and printing of the test in its initial form: After the preparation of the vocabulary of the achievement test in light of the cognitive objectives of the theoretical part of the educational content was placed in a single table with the behavioral objectives that measure and then presented to a group of gentlemen in the curriculum and teaching methods, For the test of "Face Validity" in order to ensure:

- Appropriate wording of the test vocabulary.
- The extent to which questions relate to behavioral goals.
- Suitable alternatives for each of the test vocabulary.

In the light of the opinions of the arbitrators, the researcher made the amendments, which included correcting some linguistic errors, and modifying the wording of some questions, and change some of the obvious alternatives that suggest the student to answer.

6. Test experimentation and tuning: After verifying the veracity of the test, a pilot experiment was conducted on a sample of the preparatory year students at the University of Jeddah (excluding the research sample) with total of (10) students for each of the following (for the achievement test):

- Calculate the test application time.
- Calculation of the ease and difficulty coefficient for each test vocabulary.
- Calculation of the ease of test as a whole.
- Calculate the coefficient of discrimination for each of the test vocabulary.
- Calculation of test stability coefficient.

- Calculation of the validity of the test.

After the completion of the implementation of the assessment test and assessment and monitoring of grades and analysis of results resulted in the pilot experiment on the following:

Calculation of the test application time: To determine the test time, the test start time was determined on each student's paper, the time the student completed the test, and the time it took each student to answer the test vocabulary. The average time taken by the students in the test was to answer the test by combining the time taken by each student to answer the questions and dividing the output by the number of students. The average test time was approximately 40 minutes.

Calculation of the coefficient of ease and difficulty for each of the test vocabulary: The ease coefficient for each of the test items was calculated. The percentages of the ease coefficients ranged between (0.25 - 0.85), which is acceptable. Therefore, the results of the test were rearranged according to the ease coefficient so that the vocabulary of the test is easy for the patient. The overall ease of test is 52%, which is acceptable.

Calculation of the coefficient of discrimination: The coefficient of discrimination measures the ability of each test vocabulary to distinguish between the high and low performance of the sample. The discrimination coefficients ranged from 0.37 to 0.63, which is acceptable. And is able to distinguish between the high and low performance of the sample.

Stability of the test: The internal stability of the Split-Half Method was confirmed to calculate the stability coefficient of the test. The test was divided into two equal scores. The first includes the total number of students in the individual questions. And the correlation coefficient bySpearman test and was calculated using SPSS (Ver 21). The stability coefficient (0.82), which is a high stability coefficient, indicates that the test has a high degree of stability, The accuracy of the test in the measurement and its consistency in

what it provides us with And died from the collection of the members of the research sample for the knowledge side, after which the test was produced in its final form.

Second: Card performance note

The performance note card was prepared and constructed in light of the task analysis list for computer skills for three units of the computer and information technology course for students of the preparatory year at the University of Jeddah according to the following:

1. Identify the target of the skill performance note card

The skill performance note was designed to measure the performance aspect of computer skills and information technology among preparatory year students at the University of Jeddah.

2. Design and build card performance skill note

In the light of the technical objectives and the list of tasks analysis of computer skills in the selected units of the computer course and information technology for the students of the preparatory year at the University of Jeddah, a note card was prepared and included (10) skills or main tasks branch out (87) sub-skill, The order of these skills is a logical arrangement according to the sequence and steps of executing the required tasks.

- Clear and precise description of the performance required of the student.

- Each word should measure one skill or behavior so that the observer can determine the level of performance.

- Scientific and linguistic accuracy of words.

The observation card included three levels of required skill performance, respectively (skill, skill led, skill did not perform), and a skill value was then set as shown in Table (2).

Table (2) Relative values of card skill performance levels of skill performance note

[2] Level of skill performance	[1] Relative value of performance
[4] Perform the skill	[3] 2
[6] Perform the skill with the help	[5] 1
[8] Did not perform the skill	[7] 0

The observation card included three levels of required skill performance, respectively (Perform the skill, Perform the skill with the help, did not perform the skill), and a skill value was then set as shown in Table (2).

- Perform the skill (2): means that the student-led the required skill without errors and without the help of the teacher.

- Perform the skill with the help of (1): means that the student made a mistake and discovered the error with the help of the teacher and corrected him himself.

- Did not perform the skill (0): means that the student was

unable to perform the skill at all even with the help of the teacher.

The total score obtained by the student in the skill performance note is determined by the score obtained at all levels, by which the skill level of the student can be determined. Based on the number of card skills, the maximum score will be = 87 x 2 = 174 degrees.

3. Put the card instructions to note the skill performance

The instructions for the performance note were formulated clearly and comprehensively, which included card objectives, instructions for the reader to read the contents of the card in

full, and to identify the levels of performance and quantification of each level with a precise description of the potential performance of the skill.

4. Adjust and standardize the note card skill performance

A performance note card has been set and validated by:

Verify the authenticity of the performance note card

After the preparation of the note card in light of the objectives of the skill side and the list of task analysis was presented to a group of gentlemen specialized in the field of technology education and curriculum, methods and computer for the purpose of judging the card and the judgment of honesty "face validity" by making sure:

- Suitable scientific and language wording of the words of the card.

- appropriate skill levels and quantification.

- The validity of the card for the application.

The amendments were made in the light of the views of the arbitrators, which were limited to rewriting some of the items and correcting some spelling and linguistic errors.

Calculate the stability of the performance note card.

The method of observation of the card was calculated during the exploratory experiment conducted by the researcher on a sample of preparatory year students at the University of Jeddah (excluding the research sample) of 10 students who have the same characteristics of the basic sample. The ratio of the agreement between the students was calculated on the performance of each individual student, and the average agreement ratio for all students was calculated at 0.87.

5. The final image of the performance note card

After adjusting and codifying the observation card by verifying its authenticity and stability, the card in its final form consists of (10) main skills and consists of (87) sub-skills and three performance levels, namely: "skill performance" and quantitative estimate, Of the teacher "and takes a quantitative estimate (1)," did not perform the skill "and takes a quantitative estimate (zero), thus the endpoint of the note card is (174) degree.

Third: Search experiment procedures

1. Determine the research sample and its experimental design

The research sample included (50) students of the preparatory year at the University of Jeddah for the academic year 2015-2016. The sample of the research was selected in a random manner, then randomly distributed to the two research groups as follows:

- Initial experimental group: They learn using digital video clips in the form of partial regulation of content, and the number of members of the group (25) students.

- Second experimental group: They learn using digital video clips in the total regulation style of the content, and the number of members of the group (25) students.

The researcher sponsored several considerations when choosing the research sample:

- Each member of the research sample is connected to the Internet by a smartphone.

Proficiency in the application of "What's App" in terms of communication and sending and sharing files.

Do not suffer from any physical disability or learning difficulties.

2. Pilot study of research

The pilot study was conducted according to table (1) which illustrates the experimental design of the research. The basic experiment was conducted during the period from 22/12 / 1436H corresponding to 5/10/2015 to 13/1/1437 corresponding to 26/10/2015.

3. A prioriapplication of search tools

The test was carried out prior to the two sets of research on the same day in order not to leak questions among students. The purpose of the test was to determine the parity of the two groups of research and their homogeneity, and to stand at the level of members of the sample before the experiment, Independent Samples T-Test "to show the significance of the difference between the average a prioriachievements of the two groups of research. Table (3) provides a summary of the results of the T test for the homogeneity of the two groups in the a prioriachievement test.

Table (3) shows the results of the T test for the homogeneity of the experimental groups in the a **priori application of the test**

Experimental group		N	Mean	Std. Deviation	T-Test			
					df	t	Sig	p=0.05
First group	Pattern of partial regulation	25	56.60	8.59	48	0.02	0.98	Non-significant
Second group	Pattern of Totally regulation	25	56.64	8.64				

From the results of the previous table it is clear that the value of "T" was (0.02) at a freedom level (48) and a significance level of (0.98) which is a level of significance greater than (0.05) indicates that there is no statistically significant difference between the average scores of the students of the two groups in the a prioriachievement test, Indicating the homogeneity and equivalence of the two research groups prior to the implementation of the experiment.

The following day, the observation card was applied to the two groups to determine the homogeneity of the two groups through the results of the skill performance. To achieve this, the Independent Samples T-Test was used to reveal the difference between the a prioriskill performances of the two groups (4) summarizes the results of the T test for the homogeneity of the two groups in the pre-application of the observation card.

Table (4) shows the results of the T test for the homogeneity of the experimental groups in the pre-application of the observation card

Experimental group		N	Mean	Std. Deviation	T-Test			
					df	t	Sig	p=0.05
First group	Pattern of partial regulation	25	74.40	3.29	48	0.042	0.97	Non-significant
Second group	Pattern of Totally regulation	25	74.36	3.38				

From the results of the previous table it is clear that the value of "T" reached (0.042) at the degree of freedom (48) and the level of significance of (0.97), a level of significance greater than (0.05) indicates that there is no statistically significant difference between the average scores of students in both groups in the pre - Observation, which also shows the homogeneity and equivalence of the two research groups prior to the implementation of the experiment.

4. Actual application of the search experience

In this stage, the researcher carried out the basic research experiment where the units were taught using digital video clips sent through the application of What's App. The first group of 25 students were trained in computer skills and information technology using digital video format, While the second group of 25 students were trained in the same skills using digital video clips according to the total regulation pattern.

5. Remote application of search tools

After the research experiment was carried out and the experimental groups were taught according to the proposed pattern of regulation, the researcher applied the research tools to the two groups in order to measure the effect of the independent variable on the two dependent variables. The performance test and the skill performance note were applied to the two groups, and the results were recorded and processed using the appropriate statistical methods.

6. Statistical methods used

After completing the post-application of the research tools on the two experimental groups, the researcher emptied the grade data in the fields of statistical packages program (SPSS Ver 21) in preparation for statistical operations. The researcher used the following statistical methods:

The Independent Samples T-Test test for the independent samples to verify hypotheses.

Paired Samples T-Test for the associated samples in order to measure the magnitude of the effect using the ETA square (η^2).

Measuring the magnitude of the effect known as the η^2 box to calculate the extent to which the independent variable (digital content regulation pattern) affects its two dependent variables (cognitive achievement and skill performance).

Fourthly :Search Results

This section deals with the results of the research in light of the research questions and hypotheses, interpreting the results and discussing them in light of the theoretical framework and the results of the previous studies.

1. Respond to research questions, test hypotheses, interpret and discuss results

Answer the first question to search

To answer the first question of the research entitled "What is the instructional design of learning content using digital video over mobile applications in ways of organizing content (partial, holistic) for computer and IT skills development?" The researcher studied and analyzed a set of educational design models. In light of the results of this analysis, one of the models was chosen according to the nature of the current research. Elgazzar (2013) model was chosen for the educational design.

Answer the second question to search

To answer the second question of the research, "What is the difference in the pattern of content regulation (partial, total) of digital video over mobile applications on the achievement related to the cognitive aspect of computer skills and information technology among preparatory year students at Jeddah University?" The researcher tested the first hypothesis of the research, which stated that "there is no statistically significant difference between (0.05) between the average scores of the two experimental groups in the achievement related to the cognitive aspect of computer skills due to the fundamental impact of the different style of organizing the content of digital video through mobile applications, In order to test the validity of this hypothesis, the independent sampling test was used for the independent samples to calculate the mean and standard deviations, and therefore the value of V and its statistical significance

between the average scores of the students of the two groups (partial regulation of content, Lee content) in the cognitive achievement test posttest, and illustrates the table (5) the

results of the statistical analysis of the results of students in the meta-application to test the cognitive achievement.

Table (5) shows the results of the "T" test in the post-application to test the cognitive achievement

Experimental group		N	Mean	Std. Deviation	T-Test			
					df	t	Sig	p=0.05
First group	Pattern of partial regulation	25	84.48	5.15	48	2.35	0.02	significant
Second group	Pattern of Totally regulation	25	79.68	8.80				

From the results of the previous table it is clear that the value of "T" was 2.35 at a score of (48) and at a level of significance (0.02), a level of significance less than 0.05 indicating a statistically significant difference between the average scores of the two groups in the post- For the group with the highest arithmetic mean, the first group (which used the pattern of partial content regulation).

Based on this finding, the first research was rejected. The statistical results indicated that "there is a statistically significant difference at (0.05) between the average scores of the two experimental groups in the achievement related to the cognitive aspect of computer skills and information technology due to the fundamental impact of the different style of organizing the content of the videos "This finding suggests that students who studied through the partial regulation pattern were more proficient in cognitive achievement associated with computer skills and information technology than students who studied through the totalregulation pattern, This result is consistent with the results of the studies of Ashraf Zaidan and Walid Al-Halafawi (2011) and Walid Mohammed (2014).

There may be a statistically significant difference between the two groups of research in post-achievement and the different pattern of digital video content regulation:

Divide the content into small, specific and specific parts of a specific goal that gives the student more motivation to progress in the learning process, reflecting his or her knowledge-related cognitive attainment, as well as the early sense of progress towards his goal, enhancing his learning efforts, increasing self-confidence and encouraging perseverance. , And can experience learning before moving to a new experience and connecting them.

This result can be explained in the light of Cognitive Theory Load Theory and Information Processing Theory, which emphasize the importance of the principle of information differentiation by dividing it into small units, and in the light of constructivism theory, It is necessary to present the specificities of the student at the beginning of the learning process, followed by the generalizations.

Answer the third question of the research

To answer the third question of the research, "What is the effect of the different style of content regulation (partial, total) of digital video applications on the performance of skills related to computer skills and information technology among preparatory students at Jeddah University?" The researcher tested the second hypothesis of the research, which stated that "there is no statistically significant difference between (0.05) between the average scores of the two experimental groups in the skill performance associated with computer skills and information technology due to the fundamental impact of the different style of organizing the content of digital video through mobile applications" In order to test the validity of this hypothesis, the independent sampling test was used for independent samples to calculate the mean and standard deviations, and therefore the value of V and its statistical significance among the average scores of the students of the two groups (partial regulation of content, The totalregulation of the content) in the post application note card, and shows a table (6) the results of the statistical analysis of the results of students in the post application of note card performance skills.

Table (6) shows the results of the T test in the remote application of the observation card

Experimental group		N	Mean	Std. Deviation	T-Test			
					df	t	Sig	p=0.05
First group	Pattern of partial regulation	25	151.12	4.39	48	2.94	0.01	significant
Second group	Pattern of Totally regulation	25	147.68	3.86				

From the results of the previous table, it is clear that the value of "T" was 2.94 at a level of freedom (48) and at a level of significance (0.01), a level of significance less than (0.05) indicating a statistically significant difference between the average scores of the two groups in the post- For the group with the highest arithmetic mean, the first group (which used the pattern of partial content regulation).

Based on this finding, the second research was rejected. The statistical results indicated that "there is a statistically significant difference between (0.05) between the average scores of the two experimental groups in the skill performance related to computer skills and information technology due to the basic effect of the different style of content organizing for digital video Through mobile phone applications."This finding shows that students who were skilled by the partial regulation pattern were more superior to the skill rate than students who were skilled by the totalregulation pattern. This result was consistent with Net The results of several studies, including the study of Ashraf Zidan and Walid Al-Halafawi (2011), the study of Walid Mohammed (2014). A statistically significant difference between the two research groups in post-skill performance may be due to the different pattern of digital video content regulation:

- Complex skills that are difficult for the student to master completely, it is a series of steps, the introduction of these skills in fragmented sections each contain a set of related skills makes the student aware of the limits of this skill and all the steps associated with it and it helps him to progress at a pace Is fixed towards the performance of the total skill by moving from one section to another, where each skill is considered a requirement for the skill that follows.

- The ability of segmented sections to focus on each axis of skill separately, which helps the student to know all aspects of the skill without the existence of some kind of overloading knowledge that may occur as a result of the presentation of the skill in a holistic manner where the greater the amount of information being processed as this led to Loading my mind plus the student, which is confirmed by the theory of cognitive pregnancy (Cognitive Load Theory).

This result can be explained in the light of the structural theory and the hierarchical theory of Jannia, each of which focuses on providing the content of education in a simplified manner.

To calculate the effect of the independent variable by its level (partial regulation, total regulation of content) on cognitive achievement and skill performance, the significance of the differences between the Paired Samples T-Test was tested for the associated samples first, then the value of the ETA box is calculated. Table. 7 a summary of these results with an indication of the magnitude of the effect of the independent variable by calculating the value of the η^2 box mentioned above.

Table (7) shows the arithmetic mean, the standard deviation and the significance of the differences between the pre and post measurement scores of the performance of the research sample in the achievement test and observation card,

Groups	Dependent variable	N	A priori Measurement		A posteriori Measurement		df	t	η^2	Effect degree
			Mean	SD	Mean	SD				
First group (partial regulation)	achievement	25	56.60	8.59	84.48	5.15	24	**18.14**	**0.93**	High
	Performance of skills		74.40	3.29	151.12	4.39	24	**78.10**	**0.99**	High
Second group (Totally regulation)	achievement	25	56.64	8.64	79.68	8.80	24	**36.21**	**0.98**	High
	Performance of skills		74.36	3.38	147.68	3.86	24	**76.76**	**0.99**	High

It is clear from the results of the previous table that the size of the independent variable in its first level (the type of partial regulation of content) on the two dependent variables (cognitive achievement and skill performance) was significant. The value of ETA is η^2 (0.93) and (0.99) respectively, The maximum limit of the maximum impact is 0.15.

It is also noted that the magnitude of the effect of the independent variable in its second level (total regulation of content) on the two dependent variables (cognitive achievement and skill performance) was also significant with ETA (η^2) (0.98) and (0.99) respectively, values greater than the minimum impact limit Which is equal to (0.15).

In general, Table 7 shows a significant impact of digital video usage on mobile applications - regardless of the pattern of content - on the cognitive and technical aspects associated with computer skills and information technology, as confirmed by some studies such as the study Shaw, 2007, Burger, 2011 and Salina et al. 2012.

The positive impact of digital video over mobile applications can be attributed to cognitive achievement and skill performance for a number of reasons, including:

Videos allow the student to participate actively in learning, and make decisions on his own rather than being negative in the educational process.

Digital videos allow students to have full control over the presentation of educational content, as well as the location and time of presentation, which has a positive impact on student achievement and performance.

Videos are closer to the student than the level of direct experience, so the opportunity to learn is more sophisticated.

- Digital video clips may be of interest to students and provide them with an alternative to the dynamic reality of objects and objects, which contributes to the development of skills, and the ability to implement them accurately and easily.

- The continuity of motion in its natural form through digital video clips is expected to help students practice and train their performance.

Digital video clips have awakened students 'senses with a variety of audiovisual content that is easy and clear, which may have a positive impact on students' knowledge and skills.

VI. SEARCH RECOMMENDATIONS

Based on the findings of the current research, the following recommendations can be made:

1. The use of digitally organized videos for content in different courses and courses, in particular postgraduate courses.

2. Utilizing the possibilities of mobile applications, particularly the application of What's App to serve the educational process.

3. Encourage and encourage teachers to employ digital videos in the educational process to develop the knowledge and skills of students.

4. Use the pattern of partial content management when preparing educational content in general, and content that includes particularly complex skills.

5. Utilizing the educational digital video clips as a complement to the real labs by combining them in providing students with different performance skills.

6. Training teachers in the production of digital video clips and how to employ them in the educational process.

7. Urging those in charge of educational techniques in the Ministry of Education to train teachers in the use of modern educational methods, primarily mobile learning as alternatives to traditional methods that make the student a negative in the educational process.

8. Study the factors and elements that are related to the

production and regulation of educational content used by mobile phones, and their relationship to learning outcomes.

VII. SUGGESTED RESEARCH

1. Conduct studies similar to the current research on the impact of different content organizing patterns (such as image dimensions, image colors, image effects) of digital video through mobile applications on the development of skills among students of various stages.

2. Conduct studies similar to the current research on the impact of digital content organizing style on mobile applications to develop other skills and stages of study.

3. Conducting studies focusing on the interaction between the pattern of organizing the content and the cognitive methods of students in different educational stages.

4. Conduct similar studies and research on the implementation of different methods and strategies in the educational process through mobile phone applications.

5. Conducting a study to measure students' attitudes toward using digital video and mobile learning applications in the learning process.

6. Study the impact of instant messaging applications on providing students with some higher thinking skills such as innovative thinking and problem solving.

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