

## USING DIGITAL BOOKS IN DEVELOPING STUDENT'S MATH SKILLS AT PUBLIC AUTHORITY FOR APPLIED EDUCATION AND TRAINING-HIGHER INSTITUTE OF ENERGY-KUWAIT

NIZAR AL-SHEMALI & AHMAD A. ALOMRAN

*The Public Authority for Applied Education and Training Higher Institute of Energy-Kuwait*

### ABSTRACT

*The application of new technology in teaching and learning processes becomes critical following the fourth industrial revolution. The novel notion of digital books emerged in recent years, and its significance increased during the Covid-19 epidemic, when most learning systems throughout the world moved to distant or e-learning processes. The purpose of this paper is to investigate the feasibility of using digital or E-books in educational systems in the mathematics learning process for students at the Training-High Institute of Energy-Kuwait in order to improve teaching processes. The acceptance of this new technique in education, as well as the requirements for its application in educational systems in such institute, as well as the ability of such institute to accommodate and offer technical requirements, financial and technical requirements to employ them, are discussed and analyzed here. This technique's requirements include: good infrastructure, including qualified technical staff, and technology in order to reap the greatest benefits from their application and benefit to educational process operators, including students, teachers, professionals, and parents. The principles of e-books applied on mathematical teaching processes are discussed here. The results showed that E-books simplify the study of such material, gives the student more flexibility in tracking and studying the math book and contains multimedia resources which explains the issues of the course in more attractive and clear methods. The study also, uses a questionnaire to assess the effect of using E-books in the education process which shows a positive effect on both instructors and student at the institute*

**KEYWORDS:** Digital Books, Mathematics, Teaching, Learning

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### INTRODUCTION

Digital or electronic books have a text similar to traditional books but in digital format and can be viewed on a digital screen. As a result, an electronic book is a digital representation of a printed book. An e-book is also a digital version of a printed text that can be read on computers or mobile devices. Alternatively, it is software that combines textual texts with a collection of illustrated, drawn, and animated features and stimuli, and this computerized e-book is distributed via networks and CDs via a computer or mobile phone. According to Naim (2011), it is "a new vision of the sophisticated book in electronic form with the addition of multimedia elements and highly researched texts." Al-Sharhan (2002) defined an electronic book as "a text file similar in layout to a printed book, but in digital format." Its contents can be accessed via computers, handheld devices, or specialized devices such as Sony's digital book reader." E-books are represented in a variety of formats, including HTML, PDF, and others. Some e-books include advanced features such as the ability to add text or audio notes, link comments, add links and links, and integrate the chat feature with others who own the same book. As (Mohammed, 2003) defined it as "a term used to describe a text similar to a book, but in digital form, to be displayed on a computer screen." (Ismail, 2006) defines

an e-book as “a development of word processing devices systems that transformed from an automated form of letter execution to A distinct form of output with different sizes of letters, it may be difficult for a professional to print the same level of computer output for the text.” (Al-Bassiouni, 2005) also mentioned another definition of an e-book as “a book which can be read on a computer or any other handheld device and found in a distributed as a single file, and it comes as a complete and complete element in the sense that it is not a chapter or part of a book or series or that it is still under completion. Its length is between 25,000 and 400,000 words (Millar, 2015).

The study's main problem is that conventional books have grown increasingly costly, and their transportation and damage potential is quite high. With the availability of technology and multimedia, can the digital book replace the traditional book? According to studies, the school bag has become a strain and an added load on our kids in schools and universities, causing problems in the student's back, joints, ligaments, and neck.

In this paper, the digital book will be introduced, its concept, characteristics, components, features, benefits, and the possibility of applying and employing the digital textbook in schools, where the employment of the electronic book is one of the challenges facing the educational process that is increasing day by day, despite the great interest that Most countries took over e-learning, especially after the increasing demand for e-learning, in addition to the inability of educational systems in their old or traditional form to meet the needs of learners by developing their activities and skills and diverse abilities (Fayyad, 2020).

## **E-BOOK GENERATION**

The concept of the e-book originated with (Michael Hart), who founded the (Gutenberg) project in 1971, in which all books in the public domain are published electronically on the Internet, allowing anyone to obtain original books from various eras for free. The concept of a computerized book (electronic) began to take shape in the 1980s, coinciding with the spread of computers and their superior ability to store giant texts that allow a single device to contain thousands of addresses and the ability to transfer them on CDs to reach thousands, if not millions, of readers worldwide via the information network. Internet in the shortest possible time, as the e-book began to make its way and compete strongly as a medium for the transfer of human knowledge after that. According to Ezzat (2012), Andree Van Dam was the first to coin the term (electronic book) in 1967, when he led the team that created the first hypertext system, a computer-based system. Students and faculty at Brown University used another system (the file retrieval and editing system) in the 1970s. Some believe that (Michael Hart) invented the electronic book in 1971 AD, when he launched the Gutenberg Project to convert heritage books into electronic form. Regardless of the discrepancy in determining the correct date for the invention of the electronic book, it is still relatively recent when compared to the date of the invention of the paper book more than four centuries ago. And Stephen King was the first author to publish an electronic book when he released his book, *Riding the Bullet*, in 2000, and 42 hours later, more than 400,000 people had purchased and downloaded the book for a price that did not exceed two and a half dollars (Lareau, 2001).

## **ADVANTAGES OF E-BOOKS**

E-books have several advantages, the most important of which are:

**Ease of transportation**, as one cannot move or carry everything he wants to read while traveling or on public transportation. This constitutes a burden in carrying or taking a particular book that you may get bored of. The E-reader is a comprehensive library that contains dozens of books that you can choose from at any time.

These devices also allow you to easily purchase new books with the click of a button or the mouse. And the learner can take all of his study materials with him wherever he goes, and he can call them up on one device and review them digitally at any time.

**It is also convenient:** e-book devices today offer many advantages that were not available in previous versions or generations. For example, many e-book devices now have wireless capabilities, which allow downloading the local newspaper or reading blogs and magazines around the world without any download charges, and then the reader can read any book in a place with Wi-Fi coverage. Electronic reading devices are light in weight and can contain hundreds of books, unlike paper books, which are usually heavy in weight and occupy a large space and space in their storage and require effort in arranging and cleaning them from dust.

**Multiple Choices:** Technology and the Internet offer millions of e-books, millions with multiple options, and there are millions of books available for download online. In a library and read a few pages in any book you like. And if the readers don't like it, you don't have to buy it, and some e-book readers allow you to share some books with family and friends.

**Multi-functionality:** E-book readers have many features and capabilities such as:

- Make reading easier than before, such as text-to-speech capabilities, as these capabilities allow you to listen to the books you buy while reading them aloud by the device, which is a very useful feature for the blind, and it is of course not available to all books and all devices.

Another option is to be able to enlarge pages and texts, which is useful in poorly lit areas or for people who prefer to read large texts. E-book readers also make it simple to browse books, read extensive reviews, and search for a specific word or piece of information.

- Environmental protection: E-books clearly help to protect the environment by saving thousands of trees that would otherwise be cut down to make printed paper. Printed books use a lot of resources during the printing process, from electricity and petroleum to power the printing machines to books that are thrown away if they don't sell.
- Low prices: Unlike expensive paper books, e-books are low in price and easy to get within seconds of purchase unlike books that take several days to be mailed depending on the distance. For those looking for free books, they can read any books on any device that is connected to the Internet and has a web browser (Waller, 2013).

## **REASONS FOR THE SPREAD OF E-BOOKS**

There are several factors and reasons for the spread of the electronic publishing industry (e-book) rather than the (traditional) paper book, including: massive inflation in the volume of paper publications, high material costs of printing in traditional publishing houses, whether in terms of labor, paper, ink, or otherwise, and the emergence and widespread use of information bases and CDs. The widespread use of computers in libraries, information centers, the private sector, and the personal sector, the widespread use and retrieval of information in libraries via the Internet, and finally the establishment and development of electronic library systems (Al-Sharhan, 2002).

**Ease of use and speed:** which means easy access to the required information by searching or using hyperlinks, and because the content is digital, searching in it is as simple as searching on a computer, and this feature is very useful and practical with large books such as scientific references, dictionaries, and dictionaries.

**Save in space and storage space:** Because each CD contains 500 books in the normal range, there is a saving in natural storage space estimated to be (more than 10 meters) based on a medium-sized book (thickness 2.5 cm). In the case of large books, that space must be doubled.

**Convenience:** The design and appearance of special electronic book devices does not require holding them with both hands, like a traditional book. It is possible, with the addition of some software, to convert written texts to be read by human voices.

Printing and copying: the user of the e-book can, in the absence of special rights for the author or publisher, print the contents of the book or part of it, and he can also make a non-computerized copy.

**Distribution and Dissemination:** Since the electronic book will not have a tangible physical presence due to its digital nature, this helps to speed its distribution and spread, and this particular feature will help the cultural, knowledge and education field to spread.

Update and modification: The user of the e-book can update its copy directly from the site without the need to purchase new editions.

**Pure environment:** Preserving the environment by reducing pollution from paper manufacturing waste.

The Book for all: Availability of Audio Information for the Visually Impaired.

**Abundance:** which means ensuring that copies of the book do not run out in the publishing market, as they are always available on the Internet and can be obtained at any time by the individual?

**Encourage** authors by giving them the option of self-publishing their books, either on the publisher's website or on their own.

**Lower cost:** An e-book is less expensive for the reader than a paper book because printing and distribution costs are avoided.

**No Obstacles:** The ability to overcome obstacles, limitations, and complications encountered in a paper book.

**Abundance:** Getting rid of quantity restrictions for editions and not running out of them.

**Writer and Reader:** The e-book enables direct interaction between the writer and the reader.

**Book safety:** Preserving books from the natural factors harmful to them when storing them, such as insects and moisture (Salem, 2004).

## DISADVANTAGES OF E-BOOKS

**Health problems:** There are many disadvantages of e-books, including that not everyone is comfortable reading from the screen, some of them feel pain and others may suffer from eye pain or headache from looking at the computer or phone screen for hours.

**Electronic piracy:** Unlike printed books, electronic books are easier to copy, distribute, and exchange, and reports indicate that 60% of e-books on the market today are pirated. Otherwise, piracy will crawl on the e-book as it has on computer programs, movies, and music, endangering the pen and music industries and exacting a heavy toll. However, it is worth noting that there are new techniques that limit the process of electronic book piracy, such as limiting the process of copying the book more than once and other techniques.

High prices of E-reader and tablet, despite their popularity, their prices are still high, and this is a problem that will inevitably disappear in the future, especially with the fierce competition in the market of electronic readers or tablets, and we must not forget, of course, that we can read digital books on the desktop or smartphone (Waller, 2013).

Getting used to the paper book: The wide segment of readers - especially the elderly - adheres to the traditional paper book, and sees the use of electronic books as a departure from the usual situation between the reader and writers, as the paper book is rooted in societies due to its long history. One of the most important disadvantages of digital books is their availability in digital form, which may result in infringement of intellectual property rights (copyright). Some people do not consider the possibility of distributing and publishing the book on the Internet to be an impediment, and some books that allow their readers to modify their content may cause the author's main ideas to be distorted and attributed to others. Another significant disadvantage of electronic books is that they will not replace the paper format and the mechanics of dealing with it. Reading for long periods of time on an electronic device also causes eye strain (Waller, 2013).

## **E-BOOK FORMATS**

E-books are represented in a variety of formats, including HTML, PDF, and others. Some e-books include advanced features such as the ability to add text or audio notes, link comments, add links and links, and integrate the chat feature with others who own the same book. Of course, the first ones interested in electronic publishing of books are academic and commercial publishing houses. The first name that might come to mind is Google, its Google Books project, the Open Content Alliance, NetLibrary, Questia, and others. Of course, there are programs dedicated to reading e-books, some of which are well-known and widely spread, and some are intended for either a specific format or a specific device. Among these programs are browsers, whether Firefox or Internet Explorer, and others, in order to read books in HTML format. There is also the Acrobat Reader program to read files in PDF format, while books in CHM format come with its built-in Windows readers. There are also unknown but emerging formats such as DJVU, which is famous for its great ability to reduce the size of scanned books stored as images. There is also open source software with multiple possibilities, such as linking book readers to a discussion panel, exchanging comments between readers about a specific section of the book, or even real-time chatting. As for the hardware, the first known hardware is the traditional computer, mobile device, or supports (Hoel, 2013).

### **Formats used in e-books**

There are many formats and extensions that are used in creating e-books, and each of them has something that distinguishes it from others, including:

- **JPEG photocopies**

It refers to the use of digital images for book pages scanned by a scanner, and the compressed file format JPEG is the most commonly used format with digital photography, as well as the designation JPEG is an abbreviation for the organization that created the image compression algorithm known as (Joint Photographic Experts Group), a format with numerous applications. The user can browse or exchange images over the Internet, and this type of format is frequently large in size, because the image size is usually larger than the size of words on one page, and this method has one disadvantage, which is that the user cannot copy the stored words unless it is Program to convert images into words.

- **CHM format**

It is an abbreviation for Compressed HTML and is commonly used to create auxiliary files in programs. It is originally a single file consisting of several pages created in the HTML programming language, but it can also be used to create an e-book, in which case the file may contain text as well as digital images.

- **PDF format**

This format is considered as one of the most popular formats used in the field of e-books and the most widely used on the Internet, and it is a type of file opened by Adobe's Acrobat program. This type of file has features that are not found in other types of e-book files, including the ability to encrypt the text so that no one can copy it as it is written. As well as the possibility of adding a signature or a digital certificate from the author of the book. There is also the possibility to print the entire pages of the book, and there is an option to disable this ability when making the file. But this type, like the rest of the types, has drawbacks, for example, that large files of it consume large memory before opening them, because the computer brings all the amount of information available in the book to memory, which causes the computer to slow down.

- **TXT format and RTF format**

Because of their simplicity, these two formats are among the most basic types of e-books, and they can be created using Microsoft Windows' Notepad and Word pad programs. The RTF format distinguishes itself by allowing the reader to make changes to the book's design and formatting, such as changing the font quality, size, and color, changing the page margins, and changing the spacing between lines.

- **HTML Format**

It is the format used in web page programming and is occasionally used to create electronic books, particularly those available for browsing and printing on the Internet, and usually consists of more than one page of information.

- **DJVU Theme**

This type of file is opened by a program added to the Internet browser. It was originally a type of file taken by a scanner, and in 2002 this format was chosen to be the file type used in the Million Books Project launched by the Internet Archive, in addition to the PDF and TIFF formats.

- **Exe file format**

It works under Windows systems, and one of the good programs used to prepare this format is the e-Book Workshop (Ismail 2009).

## **PRODUCERS OF E-BOOK READERS**

There are many companies that have entered the e-book reader industry, and they will be listed in the order in which they entered the market.

**Sony Corporation:** Sony may be the first company to introduce a device dedicated to reading electronic books through its Libra device (LIBRIÉ) in 2005 AD, but the company decided to replace these readers with new modern-looking readers with the year 2006 AD.

**The Bookeen Company:** The Bookeen Company entered the field of e-book readers in 2007, with its electronic reader called (CyBook).

**Amazon Corporation:** In the summer of 2007, Amazon entered the e-book reader market with the Kindle reader.

**The iLiad e-reader experience:** The iLiad e-reader from iRex is one of the most popular e-readers on the market. However, the drawback of this device and similar e-readers is its high price compared to the limited features that it offers.

### **Soft Book Reader**

This device is characterized by its small size and light weight, and is equipped with an Internet connection to allow viewing books, documents and magazines published on it easily, safely and preparing it for reading. (Alan, 2010); (Fayyad, 2020).

Many researches were conducted and discussed the E-books and its usage in education processes, Novita and Herman (2021) summarized the responses to the question "Can the use of digital technology enhance mathematical literacy in the process of studying Mathematics?" The findings show that continued use of technology can improve students' discovery and interaction with mathematics. Various studies have found that the use of technology plays an important role in mathematics learning and mathematical literacy practice. However, the tool used to integrate technology in the development of mathematical literacy must take pedagogical considerations as well as mathematical concepts into account. The use of digital technology does not remove the need for instructors to be physically present in the classroom. Instead, it now serves as a designer and facilitator, ensuring the implementation of learning that effectively covers mathematical literacy and digital literacy.

Al-Astal and Abu Zaydah (2015) investigated the efficacy of an e-book on Developing Mathematical Thinking Skills and Acquiring Mathematical Concepts among Gaza fifth-grade students. The researchers used an experimental method. The research sample is made up of two classes drawn at random from the fifth grade classes at the school, one as the experimental group (36 children) and the other as the control group (36 children) (34 students). The Mathematical Thinking Test and the Mathematical Concepts Acquisition Test were both used. The results of the mathematical thinking abilities test revealed a statistically significant difference ( $= 0.05$ ) in favor of the experimental group between the means of the experimental and control groups. Furthermore, there are

significant differences in Acquisition of Mathematical Concepts scores between the experimental and control groups, with the experimental group outperforming the control group by ( $= 0.05$ ). According to the estimated 2 and d values, the used e-book was very beneficial in developing mathematical thinking skills and acquiring mathematical ideas in 5th grade students in Gaza.

By investigating the development process, practicality, validity level, and media efficacy of a digital book, Buchori et al. (2021) used CTL (Contextual Teaching and Learning) to improve students' mathematical economic problem solving skills. The R&D research technique and the ADDIE development model were employed (Analysis, Design, Development, Implementation, and Evaluation). Seventh-grade students from SMP Negeri 4 Semarang will be the research subjects for the 2019/2020 academic year. Prior to testing in teaching materials, media experts, material experts, and media design experts chose two classes as the experimental and control classes, VII E and VII G. Expert verification of media, material, and design outcomes Media experts received 93.33%, instructional media design experts received 80.88%, material experts received 87.3%, the media was usable, and teacher responses received 87.5%, and student responses received 87.05%. The media is simple to use. The average score of the N-Gain Test for the experimental and control classes is 0.419 and 0.132, respectively.

Figueiredo et al. (2016) described the creation of an eBook to aid secondary students in their math studies. It is based on the open and free EPUB 3 standard, which is supported by Android and iOS. This standard permits the use of video in eBooks. This paper demonstrates how to take advantage of this capability by making recordings of lectures and problem answers available online, which is especially useful for math students.

Siano and Potane (2022) investigated the use of e-books in the classroom to assist students in improving their academic performance. The research was conducted at one of the secondary schools in the Division of Cagayan de Oro City, with the assistance of a Kotobee author and reader. A one-group pretest-posttest design, as well as quantitative and qualitative analyses, were used in the study. We used the Kotobee author and reader, as well as a success test and interviews. According to the findings, when students were exposed to the interactive e-book, they achieved a suitable level. There was a statistically significant difference in how well children performed on their tests before and after the intervention. Students are encouraged to study when they use an interactive e-book to supplement their knowledge. Students had a fantastic learning experience thanks to the interactive e-book.

## METHODOLOGY

The study employed a questionnaire to investigate the feasibility of using E-books in developing students' math skills at the public authority for applied education and training at Kuwait's high institute of energy, as well as the requirements for using E-books and the benefits of such applications. An E-book is created as a sample of one unit or title of a math course learned at such an institute. Table 1 shows the study questions on the questionnaire.



Table 1: The Questionnaire used in the Study

Question number	Content	1 Never	2 rarely	3 frequently	4 Often	5 Always
1	I prefer soft copies of books					
2	I find the E-book interesting and encourage me to get more information					
3	E-books are attractive and gives ideas easily					
4	The e-books is a chance to develop my skills in using computer and new technologies					
5	The material after using e-book becomes more easy and flexible					
6	E-book enables me make review of the given material more easily					
7	My exam results were improved after I use E-books					
8	I can access the digital books anywhere and anytime using mobile.					
9	E-books contains multimedia sources which make the material more clear which can be understood easily					
10	I get a training lessons about using E-books					
11	Supervisors, lecturer and instructors use e-books which helps us to understand the course					

## POPULATION AND SAMPLE OF THE STUDY

The sample of study is selected from about 50 students and workers in the high training colleges, the respondents are about 45 persons. The data then tabulated and analyzed using SPSS software. Hypotheses of the study shown in table 2 were then tested and the results of the test were shown in table 3.

## RESULTS AND DISCUSSION

E-book for the math course were created using two approaches: Flipping book for all the material and digital book for chapter 1. Figure 1 to 3 show the flipping E- book for one of mathematics material learned at High Institute of Energy-Kuwait.

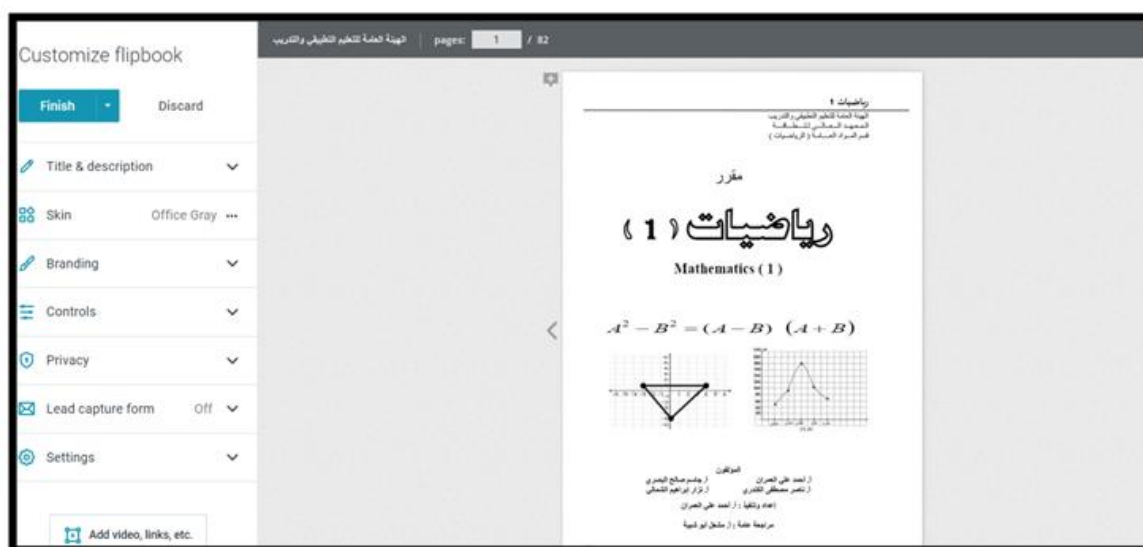


Figure 1: Flipping E-book Cover Page of Math Material at HIE- Kuwait.

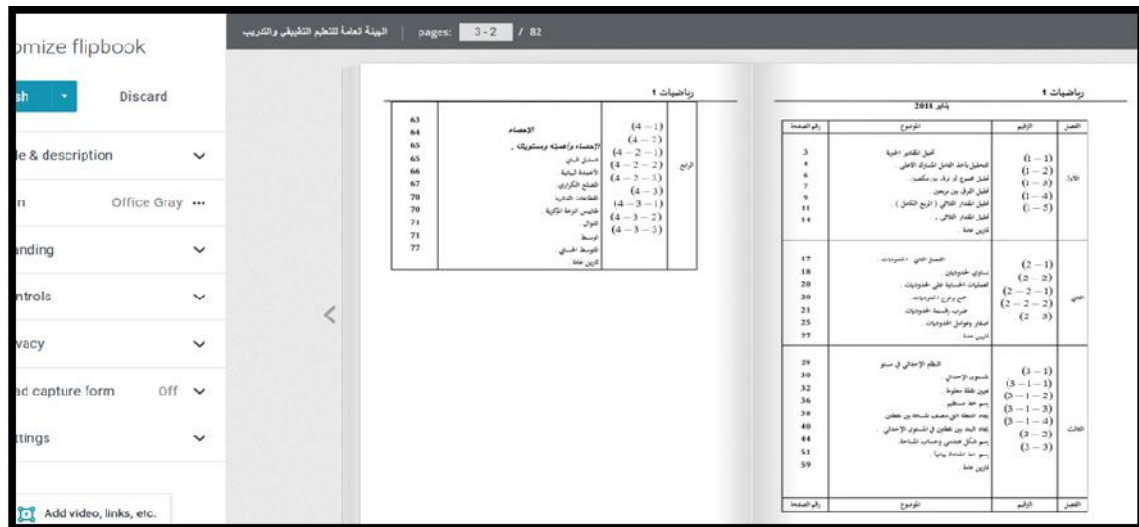


Figure 2: Flipping E-book of Math Material Content at HIE-Kuwait.

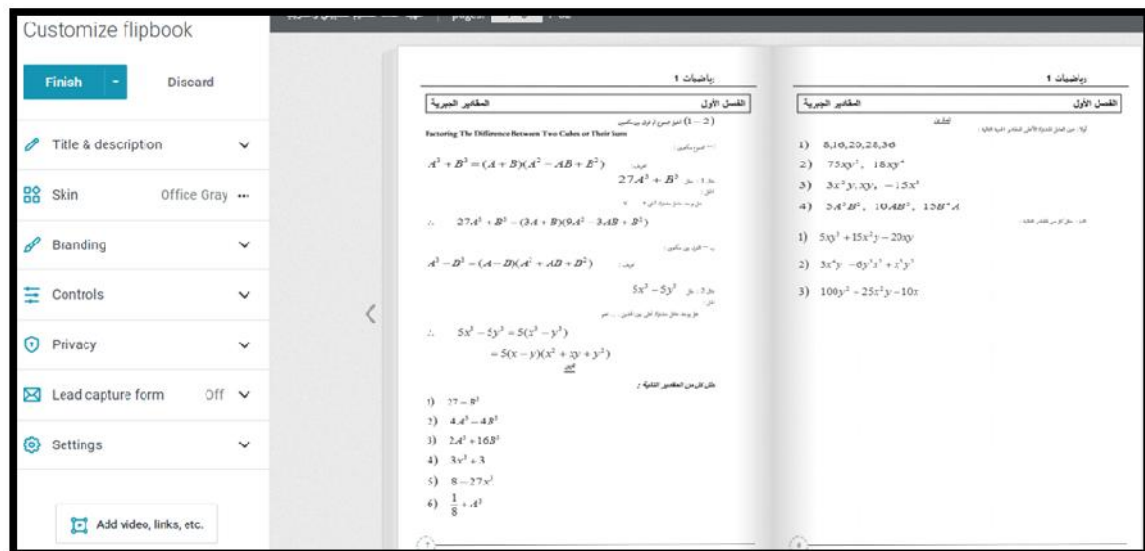


Figure 3: Flipping E-book of Math material-Chapter 1- at HIE- Kuwait.

For follow this flipping E-book students can find it by following the website:

<https://flippingbook.com/account/online/767708947/edit/14>

Figures 4 to 10 show the E-book of the mathematical course material-ch.1 only which was created using book creator application.

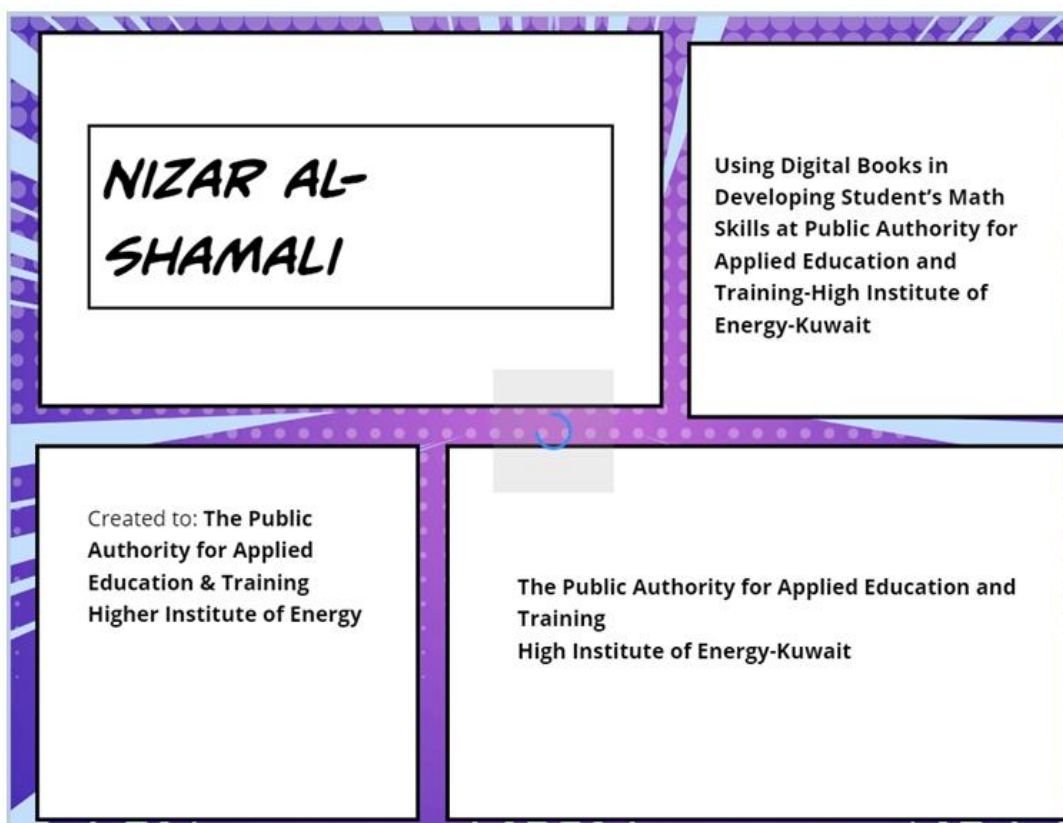


Figure 4: Cover page of the created E-book.



Figure 5: E-book: second page for the chapter content

# 1.1 مقدمة

Greatest Common Divisor Factoring 11 – التحليل بأخذ العامل المشترك الأعلى –  
 مثال : أوجد العامل المشترك للمقدارين الجبريين التاليين :  
 $4x^2$  و  $6x^3$

الحل:  
 $6x^3 = 2 \cdot 3 \cdot x \cdot x^2$   
 $x^2 = 2 \cdot 2 \cdot x^2 \cdot 4$

العامل المشترك هو  
 $2x^2$

Figure 6: Introduction of the created E-book

# ACTIVITY 1

THINK ?????

  
 activity 1.docx

Figure 7: Some activities of E-book





Figure 8: One Page of Created E-book shows a Lesson about the Highest Common Factor of Algebraic Expressions

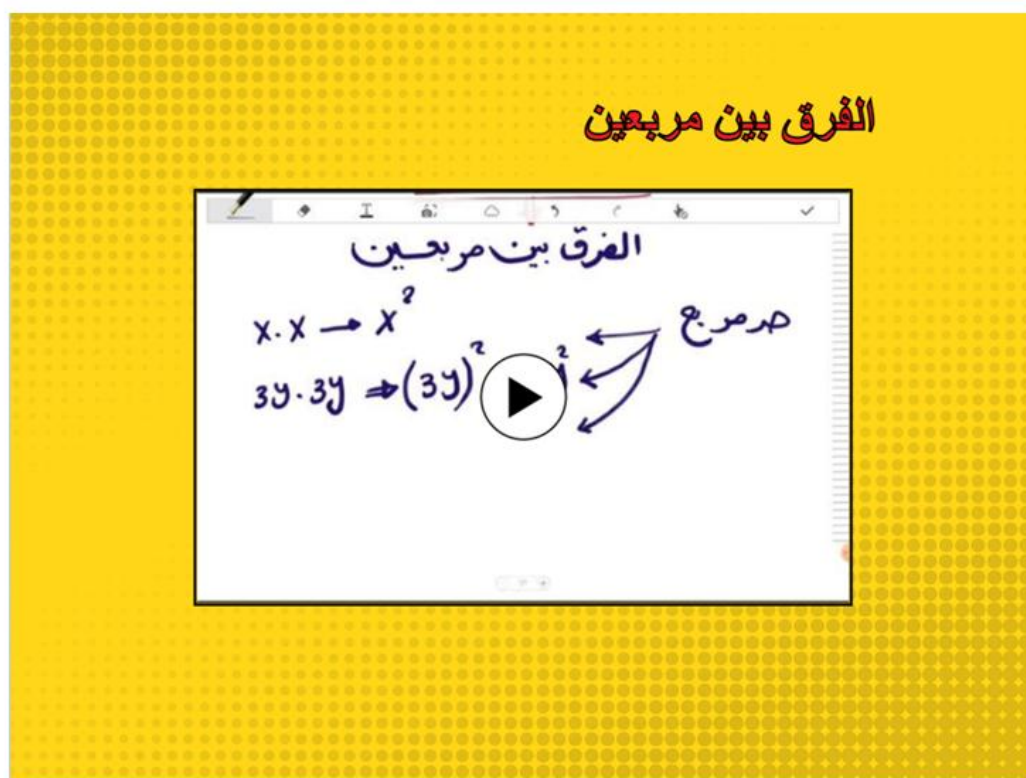


Figure 9: One Page of Created E-book shows a Lesson about Two Squares Difference



Figure 9: One Page of Created E-book shows a Lesson about Distance between Two Points and Midpoint

For all slides of the E-book created, the following website can be followed: <https://app.bookcreator.com/library/-LdUA2-Gvqke8BPjc9d7/TojC2uhdxSTJolP0CZuioyvyzdC2/chHVVcozS5yFnA4rV4RsrA/JwIHAdR4SLKJubPNACdgGw>

### Hypotheses test

Table 2 shows the hypotheses of the study, the study has 11 hypotheses shows all aspects of the effect of Digital-book on students in developing math skills.

Table 2: Study hypotheses

H1	H1 <sub>0</sub>	Soft copies of books has no mutual effect on the reader.
	H1 <sub>1</sub>	Soft copies of books has a significant effect on the reader.
H2	H2 <sub>0</sub>	E-books have no mutual effect on getting more information.
	H2 <sub>1</sub>	E-books have a significant effect on getting more information.
H3	H3 <sub>0</sub>	E-books have no mutual effect on attract and encourage students to more interest upon their courses
	H3 <sub>1</sub>	E-books have a significant effect on attract and encourage students to more interest upon their courses
H4	H4 <sub>0</sub>	E-books have no mutual effect on developing student's computer skills and use new education technologies.
	H4 <sub>1</sub>	E-books have a significant effect on developing student's computer skills and use new education technologies.
H5	H5 <sub>0</sub>	E-books have no mutual effect on materials flexibility and simplicity
	H5 <sub>1</sub>	E-books have a significant effect on mutual effect materials flexibility and simplicity

H6	H6 <sub>0</sub>	E-books have no mutual effect on materials revision during exams.
	H6 <sub>1</sub>	E-books have a significant effect on materials revision during exams.
H7	H7 <sub>0</sub>	E-books have no mutual effect on student's exam results.
	H7 <sub>1</sub>	E-books have a significant effect on student's exam results
H8	H8 <sub>0</sub>	E-books have no mutual effect saving time of both students and instructors
	H8 <sub>1</sub>	E-books have a significant effect saving time of both students and instructors
H9	H9 <sub>0</sub>	Multimedia resources in E-books have no effect on the reader and material understanding
	H9 <sub>1</sub>	Multimedia resources in E-books have a significant effect on the reader and material understanding
H10	H10 <sub>0</sub>	Training on using E-books has no effect on good use of E-books
	H10 <sub>1</sub>	Training on using E-books has a significant effect on good use of E-books
H11	H11 <sub>0</sub>	Instructors and supervisors usage of E-books has no effect on understanding the math material
	H11 <sub>1</sub>	Instructors and supervisors usage of E-books has a significant effect on understanding the math material

After testing the hypotheses of the study using SPSS software application, the results are shown below in table 3.

**Table 3: The Results of Hypotheses Test**

Alternative Hypothesis	Paired Sample Correlation		Paired Sample Test			Decision
	Pearson	P-value	t-value	DF	P-value	
H1 <sub>1</sub>	0.982	0.000	2.95	44	0.000	Reject H1 <sub>0</sub>
H2 <sub>1</sub>	0.830	0.000	2.89	44	0.000	Reject H2 <sub>0</sub>
H3 <sub>1</sub>	0.850	0.000	2.93	44	0.000	Reject H3 <sub>0</sub>
H4 <sub>1</sub>	0.774	0.000	2.90	44	0.0001	Reject H4 <sub>0</sub>
H5 <sub>1</sub>	0.814	0.000	2.92	44	0.000	Reject H5 <sub>0</sub>
H6 <sub>1</sub>	0.805	0.000	2.89	44	0.000	Reject H6 <sub>0</sub>
H7 <sub>1</sub>	0.581	0.000	2.83	44	0.0001	Reject H7 <sub>0</sub>
H8 <sub>1</sub>	0.874	0.000	2.94	44	0.000	Reject H8 <sub>0</sub>
H9 <sub>1</sub>	0.780	0.000	2.82	44	0.000	Reject H9 <sub>0</sub>
H10 <sub>1</sub>	0.800	0.000	2.88	44	0.001	Reject H10 <sub>0</sub>
H11 <sub>1</sub>	0.850	0.000	2.92	44	0.000	Reject H11 <sub>0</sub>

From table 3 it can be noticed that all values of p for all hypotheses are less than the assumed p-value which taken here as 0.005, so all null hypotheses were rejected while alternative hypotheses are accepted. Which means that the created E-book is accepted by the institute students and has its positive effect on developing the education process?

The mentioned up figures showed the created of the E-book for math material learned at the High Institute of Energy-Kuwait at level 1. The created E-book can help students to improve and develop their math skills and as shown it gives them an easy way to track the course and encourage them to study in easy and flexible way.

## CONCLUSIONS

This study discussed the effect of using E-books on improving the educational processes of mathematical course at High Institute of Energy-Kuwait, the study including a creation of E-book in two forms: as a flipping E-book and the other as an interactive E-book. E-book simplify the study of such material, gives the student more flexibility in tracking and studying the math book and contains multimedia resources which explains the issues of the course in more attractive and clear methods. The study also, uses a questionnaire to assess the effect of using E-book in the education process which shows a positive effect on both instructors and student at the institute.

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