THE IMPORTANCE OF INFORMATION COMUNICATION TECNOLOGY (ICT) IN EDUCATIONAL ATTAINMENT AMONG STUDENTS OF THE HIGHER INSTITUTE OF SCIENCE AND TECHNOLOGY (H.I.S.T) -AZIZIA

اهمية تكنولوجيا المعلومات في التحصيل العلمي لطلبة المعهد العالي للعلوم والتقنية العزيزية

ESAM NASSAR ALGARGOUZI   WESAM YOUSEF ALKKABOUR   NAJAH ABDULHAMED M NSER

Essam.nasser89@yahoo.com   wesam.kabour@cetz.edu.ly naja7nser@yahoo.com

نجاح عبد الحميد نصر   وسام يوسف الكعبور   عصام نصر القرقوزي

Abstract

The ICT and its related technologies play a ubiquitous part in modern life due to the unlimited availability of data , services and uses. One of the technologies that has changed the world is the internet , This study investigates an important subject of the importance of ICT especially the Internet usage among students of the Higher Institute of Science and Technology (H.I.S.T) –AZIZIA in educational purposes. In particular, the study identifies the extent of their Internet use in study, and the obstacles and barriers that limit their use. The study uses descriptive survey method and designed questionnaire carried out among 80 students as a study sample. With statistical significance, the results revealed that there was a low percentage of Internet use for studying purposes by students in the Institution. Moreover, students believe that the internet can save time to prepare scientific research. In addition, no web site belongs to the institution, and the lack of computers containing software, and poor internet services were the most obstacles facing the suitable utilization of the Internet by (H.I.S.T)to accomplish educational attainment. Furthermore, the results revealed that there is no correlation between academic attainment and number of hours of Internet use .

تلعب تكنولوجيا المعلومات والاتصالات والتقنيات المرتبطة بها دورًا واسع النطاق في الحياة الحديثة نظرًا للتوافر غير المحدود للبيانات والخدمات والاستخدامات. واحدة من هذه التقنيات التي غيرت العالم هي الإنترنت.تبحث هذه الدراسة في موضوع مهم وهو أهمية تكنولوجيا المعلومات والاتصالات وخاصة استخدام الإنترنت بين طلاب المعهد العالي للعلوم والتقنية العزيزية في الأغراض التعليمية. وتحديداً, تعرف الدراسة مدى استخدامهم للإنترنت في الدراسة، والمعوقات والصعوبات التي تحد من استخدامه.استخدمت الدراسة المنهج الوصفي المسحي، وتم تصميم استبيان وتم توزيعه على عينة الدراسة المكونة من (80) طالباً

وطالبة. وبدلالة إحصائية أظهرت النتائج أن هناك نسبة منخفضة لاستخدام الإنترنت في أغراض الدراسة من قبل الطلبة في المؤسسة, علاوة على ذلك، يعتقد الطلاب أن الإنترنت يمكن أن يوفر الوقت لإعداد البحث العلمي. وقد اظهرت النتائج ان، عدم وجود موقع الكتروني خاص بالمؤسسة، وعدم وجود أجهزة كمبيوتر تحتوي على برامج (سوفتويرات) مخصصة للدراسة وايضا ضعف خدمات الانترنت كانت من أكثر العوائق التي تواجه الاستخدام الأمثل للإنترنت لتحقيق التحصيل العلمي الامثل. كما أظهرت النتائج

Introduction

Escalating changes are occurring in all aspects of life, including medicine, engineering, computing, law and education; all are increasingly based on sharing and transferring information using technologies, such as satellite, telecommunications, GPS and the Internet (Cuenca & Tanaka, 2005). All technologies arise to make life easier, and few technologies in history have had such a revolutionary role in transforming everyday life as the Internet.

The Internet, as explored in more detail later in this research paper, is essentially a large network of information, connecting computers to each other to enable users to communicate with each other (Wanajak, 2011; Business Dictionary, 2016). The importance of the Internet, as confirmed by innumerable reports and measurements, is immense and ever-increasing, primarily based on its ability to give users access to information, but also due to opening new platforms for e-commerce via online shopping and communicative interactions in social media (Luan et al., 2005; Internet Society, 2014; UK Office of Communications [Ofcom], 2014).

In recent decades a huge revolution has occurred in the field of information and communications technology (ICT) and the growth of the information sector, which in turn has underpinned the emergence of modern educational and research techniques that were previously unknown (Cuenca & Tanaka, 2005). Many modern systems (e.g. in economics, ICT and education) are now absolutely dependent on the fast and efficient transfer of information via the Internet and new hardware and software technologies (Cuenca & Tanaka, 2005; Al-Senaidi, Lin & Poirot, 2009; Wanajak, 2011).

It was necessary for educational institutions to believe in the inevitability of change and to acknowledge the importance of the role that modern technology plays in improving the educational process and scientific research, albeit it was practically and methodologically difficult for such institutions to accept such change (Duggan et al., 1999). Thus with great effort and expense, learning institutions developed and adopted new styles and methods of teaching and research in an ICT-dominated environment (Wanajak, 2011). As a result, universities and higher institutions have been at the forefront of modern educational systems based on and driving these developments, to meet the educational and developmental needs of the community and individuals alike, whereby information and technology have become two sides of the same coin, and the main sources and resources of knowledge at present time (Luan et al., 2005).

In most of the developed world countries, Universities and educational institutions are working to provide electronic sources of information and facilitate access to it. Internet is one of the most important of these sources, it has received considerable attention in all aspects of life in general and by educational institutions in particular. the Last one works on providing the Internet in libraries and campus to get access to different sources of information. The importance of this research essentially pertains to the ubiquitous use of the Internet today in the lives of institutions and individuals. Worldwide, computers and the Internet have brought a huge change in the modern age (Khannanov, 2003) ,becoming a basic tool in daily living, including in education (Khannanov, 2003). However, despite in recent years witnessing a reasonable increase in the use of the Internet and a new proliferation of computer-based technology, Libya still lags behind international norms in the use of ICT and Internet technologies in education, thus this research is very important to explore barriers and facilitators of technology adoption in the education sector in a developing country.

There is a paucity of research concerning the use of the Internet in scientific and educational achievement in the institutes, thus this study explores this subject, with particularly consideration of the (H.I.S.T) and the role of using the Internet in scientific and educational achievement, and the obstacles to the role of the Internet .

These important dimensions of this study can be encapsulated in the following points:

1. This study will contribute to identifying the importance of the Internet and its active role in the educational process service, particularly in academic achievement, which is becoming recognized among (H.I.S.T)students.
2. The results of this research will contribute to identify the size of the students' use of the network and identify the purpose of use, addressing the scarcity of research on the importance of the Internet in education and its role in educational attainment within the (H.I.S.T). This can give decision makers an indication of the importance of the Internet, and thus drive more comprehensive adoption of Internet technologies and solutions.

The results of this study may provide the curriculum officials at the (H.I.S.T)with information and new visions to emphasize the importance of using the Internet in the learning process, both within the educational institution or outside it.

Previous studies

The use of Internet and its related technologies in universities, institutions and classrooms has been the topic of increasing research interest in recent years (Mohammed & Al-karaki, 2008). By using the Internet in classrooms, teachers can integrate the lesson with some interesting methods by accessing different site and multimedia files, documents, lesson plans, data, graphics, and software to support students' understanding and learning (Wiesenmayer & Koul, 1998). (Williams, 2010) sees that the Internet is a key factor that can play major part to change students desire and motivation. By entering to the Internet world students can get loads of information and knowledge. Baer (2005) saw it as inevitable that higher educational institutions would turn to new ICT to improve the quality of instruction, with the Internet playing a pivotal role to access resources and raise productivity, especially in higher education (Baer, 2005).

Edutopia (2008) sees the involvement of technology in education as a major priority for modern educational environments to remain relevant to people's lives. Siraj et al. (2015), see that the Internet nowadays is used in educational institutions and society in general due to its manifest benefits, and many users, including teachers, students and normal people, rely on the Internet to increase their knowledge and use its provided services, including access to different data bases, browsing websites and communicating with other people across the world. According to Jones & Fox (2009), 91% of legal age Internet users use email; whereas, 38% use instant messaging and only 35% use different social network sites for communication with each other. On the other hand, some researches pointed that there is a real concern of some services that Internet provides, and they have berated the folly of thinking that e-learning can replace traditional learning outright; rather its adoption is advocated as a complementary, supplementary learning stream (Bird, 2014), and a reasonable alternative when traditional learning is not available. Based on a cross-examination of German and US educational policy on use of the Internet, Starke (2003) explored the impact of the Internet on individuals and the public good, concluding that in both countries the policy of higher education is oriented toward academic development, which can be enhanced by Internet usage. If one wishes to go beyond such general conclusions, targeted case studies offer more detailed information on potential advantages and barriers.

The most obvious benefit of e-learning, as with traditional correspondence courses, is in distance learning for people in remote or otherwise inaccessible areas, as noted by an early study by Dickinson (1997) to explore how the Internet could improve access to education via distance learning. The researcher confirmed that ICT is important for students and teachers in the classroom, and students were training on the computer and succeeded in preparing the required software. Also, the learners succeeded to use a lot of appropriate educational programs. The study aimed to compare and investigate the impacts of Internet as a tool in learning and teaching and traditional instruction systems on learners in terms of quality of students' achievement and time used for study. The study was done on 80 randomly selected students from different classes of four subjects. The researcher divided the study sample into

two groups, the first of which comprised four control groups, and the second of which included four experimental groups. The control groups studied with traditional instruction, while the experimental groups had an Internet-based system. The researcher used a one-way t-test to analyse data. The results showed that there was no negative effect on the learners. Also, there was a difference in the scores of experimental groups were higher than the control group in terms of term papers, students' outcomes and homework. Moreover, the experimental groups spent significantly spent less time on information and data searching than the control groups. However, Selwyn, a senior lecturer in information technology, noted that equal access to the Internet is not the same thing as equal outcomes (Hull, 2010, p.5).

Dickinson's (1997) expectation that ICT would enable distance education such that there would be schools without walls, and colleges and universities available to everyone, was utopian, as noted previously, although great advances have been made in distance learning capability (Bird, 2014). For instance, Fusayil (2000) studied Internet adoption among members of the Ohio State University teaching staff. The study aimed to find out the extent to which faculty members at the University used the Internet in their work, and to investigate its use among them as a research, communication and learning tool with regard to variables such as academic specialization, years of experience in higher education, and workplace in the University. In addition, the study investigated the way in which teaching staff members dealt with the Internet in their academic work by administering a questionnaire that included two main parts, the first of which concerned demographic and general information concerning role, years of experience in higher education and real use of the Internet. The second part is divided into sections A and B. Section A includes the available Internet services used by teaching members, while section B concerns Internet use by faculty members as a research, communication and educational tool. The study population consisted of a sample of regular faculty members at Ohio University at the main University (n= 167), and faculty members distributed over the other branches of the University between six colleges. The chief results of Fusayil (2000) are listed below.

- The percentage of Internet use by faculty members at the University amounted to 98.8%. Email and the web were the most widely used Internet services. Email was used by 98.8% per day, while the web (i.e. non-email) was used by 86.8% daily.
- There were no differences in Internet usage among faculty members according to their academic specialization or years of experience in education.
- Obstacles to the use of the Internet include time, technical equipment, Internet access and training in using the Internet in scientific research.
- Some of the benefits of using the Internet included improving communication with other scholars around the world, ease of use, and overcoming time and distance barriers.

The differing outcomes for different users can be related to the uses to which the Internet is put, rather than access *per se*. Devendra Kumar (2010) conducted a case study of University of Nebraska and investigated the use of the Internet by students and faculty members using a questionnaire for data collection. He concluded that the majority of the research respondents used the Internet for accessing information quickly and for research purposes, email and the web were the most used technologies, and the most used search engine was Google. Finally, a lack of knowledge about the most important websites that provide information related to subject area was the main problem that students faced (Kumar, 2010).

Uwaifo (2014) conducted a study at a university in Nigeria to investigate the factors and difficulties militating against the use of the Internet among students. The researcher used a questionnaire for collecting data from 35 participants who comprised the sample of the study, asking about Internet use, services and the problems encountered while using the Internet. He used frequency counts and simple percentage formula to analyse the data collected. The results revealed that email, online databases, and electronic journals were the most used services among students. Though the Internet helped students with their studies and was a major source

of accessing information, identified barriers to Internet use included the slow speed of the Internet, electricity and power cuts, and high cost of services.

Turning to the Arab World, at the Hashemite University of Jordan, Mohammed & al-karaki (2008) explored students' usage of the Internet, and their attitudes and outcomes with regard to variables such as computer usage experience, major, and the ratio of using the Internet in the learning process, as part of efforts to integrate e-learning with traditional formats in the University. The researcher used a reliable and comprehensive questionnaire administered to 502 male and female students. The study also looked at the different views and strategies of the University to integrate the use of Internet and its associated ICT tools into scientific studies. Surprisingly, the results showed that computer experience fundamentally impacts on how the Internet is used in the learning process, and (surprisingly) that the usage of the Internet in university education was quite low. However, there were no considerable differences in the results regarding the computer usage experience, major, and the ratio of using the Internet in the learning process. The survey also demonstrated that email messaging and Internet search are the most common uses of the Internet among students in the university (Mohammed & Al-karaki, 2008).

A research about Internet use in the University of Sharjah (UAE) by faculty members was undertaken by BuMa'rafi (2001). The results of the research showed that most of the respondents used the Internet every day and learned its use autonomously. Their use of the Internet was mainly for email, accessing digital libraries, and getting in contact with colleagues. The major problems that limit respondents' use of the Internet were identified as training and a lack of time.

The practical implications of these findings are that the role and importance of using the Internet for educational processes are universally acknowledged, particularly for scientific research, e-learning and distance learning, but to realize the benefits of Internet technologies higher education institutions need to improve their ICT infrastructure, including the provision of Internet access and formal training for students and faculty members in the use of Internet resources and modern technology generally.

This study has the distinction of being the first to be concerned with students of (H.I.S.T). The present study will try through the descriptive survey method to answer the research questions. This research hypothesises that students who use the Internet more hours per day have a higher curriculum average. To test this, the study seeks to answer the following questions:

Q1 To what extent do (H.I.S.T)- *students benefit from the Internet in educational attainment?*

Q2 What are the ways and means by which (H.I.S.T)-*students utilize the Internet in achieving educational achievement?*

Q3 What are the obstacles facing the suitable utilization of the Internet by (H.I.S.T)*to accomplish educational attainment?*

Q4 What are the possible suggestions given by (H.I.S.T)-*students on the employment of the Internet for improving their academic attainment?*

Q5 Are there any statistically significant differences between academic achievement and the number of hours of Internet use at level (0.5)?

methodology

This research was conducted with the framework of descriptive survey method with the questionnaire used to examine the Internet effect and role on students. secondary data was collected from previous researches.

Secondary research indicates the method of research utilizing existing information abstracted, synthesized and collected from previous studies. As this research was focused on research investigating the role and importance of using the Internet in educational attainment, there is ample secondary data available pertinent to this research, which was identified using the key

terms: Internet in Libya, higher education, ICT, E-learning, academic achievement). The information was mainly collected from scholarly sources, Science Direct, the IEEE, books, and previous research papers, to ensure that the study remains reliable and useful.

The study sample distribution

As mentioned previously, data were collected through a questionnaire for the purposes of this study, based on findings from the literature review. The questionnaire comprises two parts: general demographic and student information (concerning age, sex, specialization, and GPA . the second part of the questionnaire includes four themes:

The first theme: *To what extent do* (H.I.S.T)- *students benefit from the Internet in educational attainment?*

The second theme: *What are the ways and means by which* (H.I.S.T)- *students utilize the Internet in achieving educational achievement?*

The third theme: *What are the obstacles facing the suitable utilization of the Internet by* (H.I.S.T)*to accomplish educational attainment?*

The fourth themes: *What are the possible suggestions given by* (H.I.S.T)*students*

This part of the research displays the results of the study in order to answer the questions of this research.

General characteristics

General characteristics	frequency	percentages
Gander		
Male	67	83.7
Female	13	16.3
Age		
Between 18-20	12	15.0
Between 21-24	68	85.0
Academic specialization		
Administrative and financial vocations	20	25
petroleum engineering	2	3.8
Medical optics	7	8.8
Computer science	33	38.8
Electronic engineering	3	4.5
Communication engineering	13	16.3
Mechanical engineering	2	3.8
Cumulative average		
Between 40-45	2	3.2
Between 46-50	7	8.8
Between 51-55	6	7.5
Between 56-60	7	8.8
Between 61-65	26	32.5
Between 66-70	16	20
More than 70	16	20
Familiarity with English Language		
Excellent	9	12
Medium	45	56
Weak	21	26

None   5   6

Purpose of using the Internet

	What do you use the Internet for?	Answer	Frequency	Percentage
1	Search for -search for information related to the curriculum (course)	Yes	47	58.7%
		No	33	41.3%
		Total	80	100%
2	Send and receive emails	Yes	20	25%
		No	60	75%
		Total	80	100%
3	For online gaming	Yes	14	17.5%
		No	66	82.5%
		Total	80	100%
4	Social website	Yes	56	70%
		No	24	30%
		Total	80	100%

As the results of data analysis revealed, the majority of the study sample (85%) were over 20 years old, and were males (83.7 %). Also, where the English language level is considered moderate for most students (56% of the study population ,and the main purpose of using the Internet is for social and recreational purposes, consistent with the findings of Kim (2011).

Results relating to the first research question

Q1: To what extent do (H.I.S.T)- students benefit from the Internet in academic attainment? The researcher calculated the responses of study sample using the SPSS program for phrases that describe the extent of Internet use by (H.I.S.T)students and their benefit from the Internet in academic attainment.

Table 1: Responses to the first question (first theme)

Statement			Respondents						Rank
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	
S1	Your use of the Internet helps you to understand the information that the curriculum contains	Frequency	25	50	2	3	0	80	3
		Percentage	31.3%	62.5%	2.5%	3.8%	0%	100%	
S2	Using the Internet helps you in distance learning	Frequency	22	49	3	6	0	80	5
		Percentage	27.5%	61.3%	3.8%	7.5%	0%	100%	
S3	Using the Internet increases your desire to learn	Frequency	27	48	4	1	0	80	3
		Percentage	33.8%	60%	5%	1.3%	0%	100%	
S4	Using the Internet helps you access published research and studies related to the school curriculum	Frequency	23	50	6	1	0	80	4
		Percentage	28.7%	62.5%	7.5%	1.3%	0%	100%	
S5	Using the Internet helps you exchange information and interact with people who have the same specialization	Frequency	24	52	3	1	0	80	2
		Percentage	30%	65%	3.8%	1.3%	0%	100%	
S6	Using the Internet can save time to prepare scientific research	Frequency	25	53	2	0	0	80	1
		Percentage	31.3%	66.3%	2.5%	0%	0%	100%	
S7	The use of the Internet for scientific research increases scientific efficiency and educational attainment	Frequency	21	48	5	6	0	80	6
		Percentage	26.3%	60%	6.3%	7.5%	0%	100%	

In terms of responses to phrases describing the extent of Internet use by (H.I.S.T)students and their benefit from the Internet in academic attainment, the results showed that S-6 ("Using the Internet can save time to prepare scientific research") was the top-ranked statement for the study sample, indicating their agreement that one of the advantages of the Internet is that it can help to conduct scientific research and research related to the study purposes in a short

time. This result is in line with the study of Ken (1997), whose research results indicated that students do their work when they using the Internet quicker than when they do not, as

affirmed by Azonobi (2014). Also, the results showed that S-5 ("Using the Internet helps you exchange information and interact with people who have the same specialization") was ranked in second place, and S-3 ("Using the Internet increases your desire to learn") came in third. This indicates that a high percentage (93.8%) of the study sample is convinced that the Internet increases the effectiveness and desire of student to learning. This corroborates the view that the Internet is a strong tool to change education and increasing desire to learn and motivation (Williams, 2010).

S-1 ("Your use of the Internet helps you to understand the information that the curriculum contains") was ranked in fourth place, with a percentage of 93.3% of the study sample. Edutopia (2008) discussed that involving technology in education helps students achieve a better understanding of their courses. S-2 ("Using the Internet helps you in distance learning") came in fifth place, indicating a lack of knowledge and awareness among students about distance learning and e-learning, or perhaps conservative attitudes toward pedagogy.
S-7 ("The use of the Internet for scientific research increases scientific efficiency and educational attainment") was ranked in last place, indicating that students have poor awareness of the importance of the Internet to increase scientific efficiency and develop their skills in research, as the Internet as a global communications network fundamentally allows users to follow developments continuously.

Results relating to the second theme

Q2: What are the ways and means by which HICP- students utilize the Internet in achieving educational achievement?

Table 2: Results associated with the second research question

Statement			Respondents						Rank
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	
S8	Providing computer labs connected to the Internet within the Institute enables you to take advantage of the Internet to increase educational attainment	Frequency	31	43	6	0	0	80	1
		Percentage	38.8%	53.8%	7.5%	0%	0%	100%	
S9	Attending specialized courses in the area of using the Internet is considered one of the most important ways to enable you to take advantage of the Internet to increase educational attainment	Frequency	25	47	6	2	0	80	3
		Percentage	31.3%	58.8%	7.5%	2.5%	0%	100%	
S10	Using e-mails to send and receive information and files associated with the curriculum is considered one of the most important ways that enable you to take advantage of the Internet to increase academic achievement	Frequency	24	49	5	2	0	80	2
		Percentage	30%	61.3%	6.3%	2.5%	0%	100%	
S11	Joining online forums to exchange views and information related to courses is one of the most important ways enabling you to benefit from the Internet for academic achievement	Frequency	15	51	8	6	0	80	4
		Percentage	18.8%	63.7%	10%	7.5%	0%	100%	
S12	Tracking the references in electronic sources is one of the most important ways that enable you to take advantage of the Internet to increase academic achievement	Frequency	14	50	14	2	0	80	5
		Percentage	17.5%	62.5%	17.5%	2.5%	0%	100%	

Through the findings to the benefit from the Internet in academic attainment, it can be noticed that phrases that describe the use of Internet in a way that serve to get better understanding to the curriculum were not highly ranked. This may be due to other results linked to this axis being more resonant, such as those concerning the Internet being used to increase motivation and desire to seek knowledge and information sharing between colleagues. This means that the use of the Internet from the point of view of the study sample is represented in academic research

and contact with people that have the same interests, while achieving time efficiency in preparing and conducting research and the use of the Internet in association with the curriculum is still weak, reflecting the predominance of the traditional classroom format.

In this case the researcher sees that in order to get benefits from the Internet for (H.I.S.T)in terms of students' academic achievement and better performance, there must be a scientific curriculum for students taught via the Internet and that there be an effective means of communication (i.e. email system) between students and faculty members. Most studies have demonstrated a role of the Internet in academic achievement (Ken, 1997; Ogedebe, 2012).

The vast majority of participants strongly agreed that computer labs connected to the Internet should be provided within the Institute (S-8), which was ranked first, followed by S-10 ("Using e-mails to send and receive information and files associated with the curriculum is considered one of the most important ways that enable you to take advantage of the Internet to increase academic achievement") and S9. It can be inferred from these results that such means are not currently applied practically, because S-8 ("Providing computer labs connected to the Internet within the Institute enables you to take advantage of the Internet to increase educational attainment") is aspirational, and the majority of the students believe in the importance of the Internet and what Internet can provide to them, but currently a negligible number of students are able to use the Internet inside (H.I.S.T), despite very high demand.(Cuenca & Tanaka, 2005) confirmed that ICT is important for students and teachers in the classroom, and his experimental groups that had an Internet-based system scored higher scores than the other group that had a traditional instruction in term papers and other student outcomes

Results relating to the third theme

Q3: What are the obstacles facing the suitable utilization of the Internet by HICP to accomplish educational attainment?

Table 3: Results associated with the third research question

	statement		Respondents						Rank
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	
S13	The absence and lack of Internet access within the Institute is one of the difficulties that affect getting the advantages of using the Internet to increase educational attainment	Frequency	35	36	5	4	0	80	2
		Percentage	43.8	45	6.3	5	0	100	
S14	The lack of computers containing software such as Microsoft Word, PowerPoint, etc. to print scientific research is one of the difficulties affecting the increase of educational attainment	Frequency	28	44	4	4	0	80	1
		Percentage	35	55	5	5	0	100	
S15	The lack of time to use the Internet is considered one of the most important obstacles that affect getting the advantages of using the Internet to increase educational attainment	Frequency	18	39	8	15	0	80	6
		Percentage	22.5	48.8	10	18.8	0	100	
S16	The lack of awareness of the	Frequency	28	41	5	6	0	80	3

statement		Respondents						Rank
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	
	importance of the using the Internet in research and study purposes among students is considered one of the most important obstacles that affect getting the advantages of using the Internet to increase educational attainment	Percentage	35	51.2	6.3	7.5	0	100	
S17	Unfamiliarity with the English language and mastery of it is considered one of the most important obstacles that affect getting the advantages of using the Internet to increase educational attainment	Frequency	24	42	7	7	0	80	
		Percentage	30	52.4	8.8	8.8	0	100	4

Table 3 cont.

statement			Respondents						Rank
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	
S18	The lack of sites and references linked to the curriculum is considered one of the most important obstacles that affect getting benefit from the Internet to increase academic achievement	Frequency	21	51	5	3	0	80	1
		Percentage	26.3	63.6	6.3	3.8	0	100	
S19	The high cost of the Internet is considered one of the major difficulties affecting the lack of access to the Internet in increasing educational attainment and increasing scientific competence	Frequency	22	36	7	15	0	80	5
		Percentage	27.4	45	8.8	18.8	0	100	
S20	Power and network cut is	Frequency	36	36	6	2	0	80	1

		45	45	7.5	2.5	0	100	
considered one of the major difficulties affecting the lack of access to the Internet in increasing educational attainment and raising the scientific efficiency	Percentage							

For the results related to the third axis, S14, S18 and S20 were jointly ranked first according to the study sample, concerning terms of the obstacles preventing students benefitting from using the Internet, represented in "The lack of computers containing software such as Microsoft Word, PowerPoint, etc. to print scientific research", "The lack of sites and references linked to the curriculum" and network cuts, consistent with the findings of Azonobi (2014), which revealed that electricity and power cuts that led to internet fail down and high cost of services were the main factors militating against the use of the Internet. The absence and lack of Internet access within the Institute was ranked second.

For S19 ("The high cost of the Internet is considered one of the major difficulties affecting the lack of access to the Internet in increasing educational attainment and increasing scientific competence"), 22 participants (27.5%) strongly agreed and 36 (45%) agreed, whereas seven (8.8%) were neutral and 15 (2.5%) disagreed.

For S20, 36 respondents (45%) strongly agreed and 36 (45%) agreed that network and power cuts are a major difficulties affecting Internet access and use, whereas only two students (2.5%) disagreed.

Results relating to the fourth theme

Q4: What are the possible suggestions given by (H.I.S.T)students on the employment of the Internet for improving their academic attainment?

Table 4: Possible suggestions given by HICP students

	statement		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	Rank
			Respondents						
S21	To benefit from the Internet I suggest providing the institute with computer labs and connecting them to the Internet	Frequency	45	34	1	0	0	80	1
		Percentage	56.3	42.5	1.3	0	0	100	
S22	To benefit from the Internet to increase educational attainment I propose providing the best practices to support students, training them to use the Internet	Frequency	35	43	1	1	0	80	2
		Percentage	43.7	53.7	1.3	1.3	0	100	
S23	To benefit from the Internet to increase educational attainment I suggest providing some lessons for students online	Frequency	31	45	3	1	0	80	3
		Percentage	38.8	56.3	3.8	1.3	0	100	
S24	To benefit from the Internet to increase educational attainment I propose setting up a special site for the institution and developing its curriculum and making it available online.	Frequency	37	38	4	1	0	80	4
		Percentage	46.3	47.4	5	1.3	0	100	
S25	To benefit from the Internet to increase educational attainment I suggest using e-mail as a means of communication between faculty members and students within the institution	Frequency	35	39	3	3	0	80	5
		Percentage	43.8	48.8	3.8	3.8	0	100	
S26	To benefit from the Internet to increase academic attainment I suggest giving attention to the concept of e-learning and its application in the teaching process	Frequency	32	41	6	1	0	80	6
		Percentage	40	51.2	7.5	1.3	0	100	

From Table 4 It can be seen that HICP students selected, 98.8% of the study sample responded with the phrase "To benefit from the Internet I suggest providing the Institute with computer labs and connecting them to the Internet", followed by proposing establishing a special site for the Institution and providing curriculum lessons online.

Q5: Are there any statistically significant differences between the number of hours of Internet use and academic achievement?

The results revealed that there is no correlation between number of hours of using the Internet and GPA. Ngoumandjoka (2012) also reached this conclusion, although his study emphasized the academic importance of using the Internet. Cnversely, Asdaque (2010) found that students who used the Internet for research and study purposes had a higher CGPA, but without exploring the number of hours. Siraj et al. (2015) revealed that students who used the Internet for six hours per week had better results and a higher GPA than those who used it for less time. Although most participants in this study use the Internet for an average of two hours per day, no relationship was found between the use of the Internet and the cumulative rate.

Chi-square tests **خطأ! لا يوجد نص من النمط المعين في المستند.** *Table.*

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.533(a)	18	.070
Likelihood Ratio	26.112	18	
Linear-by-Linear Association	1.210	1	
N of Valid Cases	80		

The value of statistical significance (x = 0.07 > a=0.05) is greater than the value of the 0.05 level of significance, indicating that there are no statistically significant differences between the number of hours of Internet use and academic achievement.

To answer the research hypothesis that students who use the Internet more hours per day have a higher curriculum average (in other words, is there a correlation between the number of hours that students spent and their GPA?), the researcher computed the correlation using Spearman correlation coefficient, as shown in Table 6. It can be seen that there is an extrusive weak correlation between GPA and hours of Internet use, which is not significant as determined by the value of statistical significance (P-value) being greater than 0.05.

P_ value	Correlation
0.169	0.155

in a summary, it is clear that there are Internet-related factors that affect students' achievement scientifically, including living environment, technological infrastructure, ease of access to the Internet, the speed of the Internet, and the ability of students to learn and understand the content of the curriculum. Furthermore, teachers' way of explaining the curriculum to students is considered a major determinant of students' understanding and interaction. Most of the students believe they can understand the subject if the teacher is proficient in his explanation of the course content and delivery of correct information for students, corresponding to Khannanov (2003), who said the first step of preparation of contemporary students is to prepare and educate teachers.

Conclusion

To conclude that Internet-based technology has become a ubiquitous feature of all dimensions of modern life, and despite great progress worldwide since the 1990s, there is still a digital divide between developed and developing countries in terms of Internet availability, access and use, with major implications for socio-economic development (e.g. in banking, transportation and education etc.). This research found astonishingly moribund approach to Internet adoption and use academically in the (H.I.S.T), based on exploration of the role and importance of using the Internet in educational attainment among students. Despite the manifold advantages of using the Internet identified from the previous researches , and by participants themselves, there appeared to be no real actualization of Internet adoption in the Institution, which bodes ill for the future academic attainment of students.

There was a general consensus in worldwide settings explored in the researches that Internet usage is instrumental in educational attainment. Furthermore, it was the view of the researcher that Internet knowledge should be used to improve academic achievement. The results of this study showed that there was a lack of ICT and Internet use for students, the Internet usage for studying purposes was low, despite more than half of the study population using the Internet regularly for social and entertainment purposes. This suggests the need to educate students in the benefits of using the Internet as a tool in study purposes to increase their knowledge (e.g. tutorials on how to use databases for research). Similar findings have been made in other developing countries, which are also uniquely prone to the impact of power cuts on Internet-based education (e.g. in Nigeria and Pakistan); Libya was more comparable to these countries than to other Arab states with more advanced technological development, such as Sharjah (UAE), where BuMa'rafi (2001) found that the Internet is used daily, and mainly for email.

The results showed also that there is no correlation between GPA and hours of Internet use, with no significant associations based on a P-value of 0.05. Finally, the practical implications or these findings are that higher education institutions in Libya need to improve their ICT infrastructure, including the provision of Internet access and formal training for students and faculty members in the use of Internet resources and modern technology in general.

References

Al-Ansari, H. (2006). Internet use by the faculty members of Kuwait University. Electronic Library, 24(6), 791-803.

Al-Senaidi, S., Lin, L. & Poirot, J. (2009). Barriers to adopting technology for teaching and learning in Oman. Computers and Education, 53, 575-590.

Asdaque, M. M., Khan, M. N. & Rizvi, S. A. A. (2010). Effect of internet on the academic performance and social life of university students in Pakistan. Journal of Education and Sociology, 12, 21-27.

Baer, W. S. (2005). Will the Internet Transform Higher Education? [online]. Rand Corporation, RAND/RP-685.

Bird, K. (2014). Online vs. Traditional Education: The Answer You Never Expected [online]. Ramussen College.

BuMa'rafi, B. M. (2001), Waqea' istakhdaam a'dha' hayy'at al-tadrees fi Jame'at Al-Sharqah lil-Internet: Darasat meddaniayah (Internet use by the faculty of the University of Sharjah: A descriptive study) [Arabic]. Risalat al-Maktabah, 31(1-2), 74-90.

Cohen-Almagor, R. (2011). Internet history. International Journal of Technoethics, 2(2), 45-64.

Cuenca, A. M. B. & Tanaka, A. C., d'A. (2005). The Internet influence on the academic-scientific public health community. Rev Saúde Pública, 39(5), 1-6.
[last accessed 15 July 2016].

Dickinson, Ken. (1997). Distance learning on the Internet: Testing students using Web forms and the computer gateway interface. TechTrends, 42(2), 43-46.

Duggan, A., Hes, B., Morgan, D., Kim, S. & Wilson, K. (1999). Measuring students' attitude toward educational use of the internet. Annual Conference of the American Educational Research Association, Montreal, Canada, April 19-23, 1-25.

Edutopia (2008). Why Integrate Technology into the Curriculum? The Reasons Are Many [online].

Fusayil, A., 2000. The adoption of the internet by faculty members at Ohio University. PhD thesis, University of Ohio.

Hull. D (2010). Research and Library Service Briefing Note. Paper 133/10, NIAR 420-10.

Jones, S. & Fox, S. (2009). Generations Online in 2009 [online]. Pew Research Center.

Khannanov, A. (2003). Internet in Education: Support Materials for Educators. Paris: UNESCO.

Kim, S. (2011). The Effects of Internet Use on Academic Achievement and Behavioral Adjustment Among South Korean Adolescents: Mediating and Moderating Roles of Parental Factors. University of Syracuse, Department of Child and Family Studies (Paper 62).

King, D. W., Tenopir, C., Montgomery, C. H. & Aerni, S. E. (2003). Patterns of journal use by faculty at three diverse universities. D-Lib Magazine, 9(10).

Kumar, D. (2010). Faculty use of internet services at a university of agriculture and technology. Library Philosophy and Practice (e-journal), Paper 323.

Luan, W. S., Fung, N. S., Nawawi, M. & Hong, T. S. (2005). Experienced and inexperienced Internet users among pre-service teachers: Their use and attitudes toward the Internet. Educational Technology and Society, 8(1), 90-103.

Mohammed, J. & Al-karaki, J. (2008). Integrating internet into traditional education: A practical study of university students' usage and attitudes. International Arab Journal of Information Technology, 5(3), 241-252.

Ngoumandjoka, U. -T. (2012). Correlation between internet usage and academic performance among university students. MSc dissertation, University of the Witwatersrand.

Ogedebe, P. M. (2012). Internet usage and students' academic performance in Nigeria tertiary institutions: A case study of University of Maiduguri. Academic Research International, 2(3), 334-343.

Osunade, O. (2003). An Evaluation of the Impact of Internet Browsing on Students' Academic Performance at the Tertiary Level of Education in Nigeria. Bamako, Mali: Rocare.

Osunade, O., Ojo, O. M. & Ahisu, E. V. (2009). The role of the internet on the academic performance of students in tertiary institutions. Editions Universitaires de Côte d'Ivoire (EDUCI), JERA/RARE, 1, 30-35.

Radwan, H. R., Jones, E. & Minoli, D. (2012). Solid waste management in small hotels: A comparison of green and non-green small hotels in Wales. Journal of Sustainable Tourism, 20(4), 533-550.

Siraj, H. H., Salam, A., Ashiqin, N., Jin, T. H., Binti Roslan, R., & Bin Othman, M. N. (2015). Internet usage and academic performance: A study in a Malaysian public university. International Medical Journal, 22(2), 83-86.

Starke-Meyerring, D. (2003). Re-visioning higher education on the internet: A cross-cultural rhetorical study of higher education policy in Germany and in the United States. PhD dissertation, University of Minnesota.

Uwaifo, S. O. & Azonobi, I. N. (2014). Factors militating against the use of the Internet by postgraduate students. International Journal of Library and Information Science, 6(2), 14-18

Wanajak. K (2011). Internet Use and Its Impact On Secondary School Students in Chiang Mai, Thailand. PhD thesis, Edith Cowan University. Available at:
http://ro.ecu.edu.au/cgi/viewcontent.cgi?article=1394&context=theses [last accessed 1 July 2016].

Wiesenmayer, R. L. & Koul, R. (1998). Integrating internet resources into the science classroom: Teachers' perspectives. Journal of Science Education and Technology, 7(3), 271-7.

Williams (2010). Five key ingredients for improving student motivation. Research in Higher Education Journal.