NEAR EAST UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
DEPARTMENT OF COMPUTER EDUCATION AND INSTRUCTIONAL TECHNOLOGY DEPARTMENT

CULTIVATING DIGITAL CITIZENSHIP BY CREATING AN EFFECTIVE ROADMAP FOR NEW GENERATION OF DISTANCE LEARNING

Ph.D. THESIS

Mahmoud AL-HAWAMDEH

Nicosia
December, 2021

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Approval

This study was accepted as a doctoral thesis in the Department of Computer Education And Instructional Technology Department by our jury. The thesis defense was made online and the jury members gave their consent verbally. The whole process has been recorded electronically.

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19/12/2021

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Declaration

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

Mahmoud Al-Hawamdeh

19/12/2021

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Mahmoud Al-Hawamdeh

Abstract

Cultivating Digital Citizenship by Creating an Effective Roadmap for New Generation of Distance Learning

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Prior to the eruption of COVID-19 pandemic, studies shown that there is insufficient digital knowledge among students in distance learning as they do not adequately use technology as a digital citizenship indicator, while the awareness and knowledge of digital citizenship among teachers and students remains a key criterion for improving distance learning that mainly depends on information technology. Therefore, this study comes up to investigate the current situation of digital citizenship in the distance and online learning environment by focusing on two different higher academic institutions, namely the Al-Quds Open University (QOU) in the Palestinian territories and the University of Kyrenia (KU) in the Turkish Republic of Northern Cyprus in 2020, using mixed research methods (interview, survey descriptive analysis, and Z-test Technique). The results revealed that students and faculty in both institutions were aware of the digital citizenship concepts, but lacked the in-depth knowledge and understanding of concepts such as digital rights, digital security, and digital ethics. Furthermore, the awareness and knowledge of digital citizenship among KU students are higher than QOU students. Faculty in both institutions agreed with the importance of integrating digital citizenship practices such as digital rights, digital security, and digital ethics into elearning curriculum.

Keywords: digital citizenship, distance learning, e-learning, ICT, mixed methods

Öz

Yeni Nesil Uzaktan Eğitim İçin Etkili Bir Yol Haritası Oluşturarak Dijital Vatandaşlığı Geliştirmek

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PhD, Bilgisayar Eğitimi ve Öğretim Tecknolojileri Bölümü
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COVID-19 pandemisinden önce yapılan araştırmalar, dijital vatandaşlık göstergesi olarak teknolojiyi yeterince kullanmadıkları için uzaktan eğitimde öğrenciler arasında yetersiz dijital bilgi olduğunu gösterirken, öğretmenler ve öğrenciler arasında dijital vatandaşlık bilinci ve bilgisi hala geliştirilmesi gereken konu olarak devam etmektedir. Bu nedenle, uzaktan öğrenmeyi geliştirmek için temel kriter olarak dijital vatandaşlık konusunun dikkate alınması önemlidir. Bu çalışma, Filistin topraklarındaki Al-Quds Open University (QOU) ve Girne Üniversitesi (GÜ) olmak üzere iki farklı yüksek akademik kuruma odaklanarak dijital vatandaşlığın uzaktan ve çevrimiçi öğrenme ortamındaki mevcut durumunu araştırmak için ortaya çıkmıştır. 2020 yılında Kuzey Kıbrıs Türk Cumhuriyeti'nde karma araştırma yöntemleri (mülakat, anket betimsel analiz ve Z-test) tekniği kullanılarak gerçekleştirilmiştir. Sonuçlar, her iki kurumdaki öğrencilerin ve öğretim üyelerinin dijital vatandaşlık kavramlarının farkında olduklarını ancak dijital haklar, dijital güvenlik ve dijital etik gibi kavramlar hakkında derinlemesine bilgiye ihtiyaçları olduğunu ortaya koydu. Ayrıca, GÜ öğrencilerinin dijital vatandaşlık bilinci ve bilgisi QOU öğrencilerine göre daha yüksek olduğu görülmüştür. Her iki kurumdaki öğretim üyeleri, dijital haklar, dijital güvenlik ve dijital etik gibi dijital vatandaşlık uygulamalarını e-öğrenme müfredatına entegre etmenin önemi konusunda hemfikirdi.

Anahtar Kelimeler: dijital vatandaşlık, uzaktan eğitim, e-öğrenme, BİT, karma yöntemler

Table of Contents

Approval 1
Declaration 2
Acknowledgments 3
Abstract 4
Öz 5
Table of Contents 6
List of Tables 9
List of Figures 10
List of Abbreviations 11
CHAPTER I 12
Introduction 12
Introduction 12
Problem Statement 14
Purpose of the Study 15
Research Questions 16
Research Aims/Objectives 16
Significance of the Research 16
Definition of Terms / Related Descriptions of the Research 17
CHAPTER II 19
Literature Review 19
Introduction 19
Conceptual Review 19
Information and Communication Technology (ICT) 19
Distance Learning Approach 21
the Concept of Distance Learning 21
Digital Citizenship Concept 23
Understanding the Digital Citizenship 23
What is the digital citizenship? 24
Goals of Digital Citizenship 25
Digital Citizenship Elements 25

Theoretical Review 26
Empirical Review 27
Summary of the Existing Studies 33
CHAPTER III 35
Methodology 35
Introduction 35
Participants/Population and Sample 35
Participation Procedures 37
Data Collection Tools/Materials 38
For the Qualitative Data Collocation 38
For the Quantitative Data Collocation 39
Data Collection protocols 40
Interview Protocol: 40
Digital Citizenship Scale protocol 40
Validity and Reliability of the Data 41
Method 42
For Qualitative phase 43
For Quantitative phase 43
Data Analysis Procedures 43
During the Qualitative phase 43
During the Quantitative phase 45
Ethical Considerations 46
CHAPTER IV 47
Findings and Discussion 47
CHAPTER V 74
Discussion 74
CHAPTER VI 76
Conclusion and Recommendations 76
Conclusion 76
Recommendations 77

Appendices 89
Appendix A 89
Appendix B 90
Appendix C 93
Appendix D 94
Turnitin 97

List of Tables

Table 1a. Demographic Data of the Interviewed Faculty Members in Al-Quds Open University 36
Table 1b. Demographic Data of the Interviewed Faculty Members in University of Kyrenia 36
Table 3. Gender 51
Table 4. Level of Study 52
Table 5. The Al-Quds Open University (QOU) Participants' Responses on Awareness and Knowledge 55
Table 6. The University Of Kyrenia (UK) Students' Responses on Awareness and Knowledge 57
Table 7. Z-Test on Whether Digital Citizenship Brings Positive Social Change 60
Table 8. Z-Test on Whether Digital Citizenship Promotes Ethical and Moral Use of Technology in Distance Learning 61
Students Awareness on their Health 62
Table 9. Z-Test on Whether the Students are Aware of their Health Problems Caused by the Abuse of Digital Devices 63
Table 10. Z-Test on Whether Students Belong to an Online Community Related to Social or Political Issues 64
Table 10. *Z-Test on Students' Level of Awareness on Digital Citizenship in Distance Learning Environment* 65
Table 12. Z-Test on Students' Level of Prior Knowledge of Digital Citizenship in Distance Learning Environment 67
Table 13. Z-Test on Students' Level of Knowledge on Engage in Bullying Behaviour in an Online Environment 69
Table 14. Z-Test on Students' Level of Knowledge on Deleting Emails from Suspicious Senders in Distance Learning Environment 70
Table 15. *Z-Test on Students' Level of Knowledge on Whether Digital Citizenship Promotes Cybersecurity and Social Responsibility in Distance Learning Environment* 72
Table 16. Z-Test on Students' Level of Knowledge on Digital Citizenship in Distance Learning Environment 72

List of Figures

Figure 1: Bar Graph of Respondents Based on University 51
Figure 2: Bar Graph of Respondents Based on Gender of Respondents 52
Figure 3: Bar graph of Respondents Based on Level of Study 53
Figure 4: Digital Citizenship Brings Positive Social Change 59
Figure 5: Digital Citizenship Promotes Ethical and Moral Use of Technology 60
Figure 6: Students Awareness of their Health 62
Figure 6: Belonging to an Online Community Related to Social or Political Issues . 63
Figure 7: Prior Knowledge on Digital Citizenship is Important in Engaging in Appropriate and Responsible Behavior Using Technology 66
Figure 8: Not Participating in Unacceptable Activities in Cyberspace Such as Bullying 68
Figure 8: Student Knowledge of Dealing with Potential Problems 69
Figure 9: Digital Citizenship Promotes Cybersecurity and Social Responsibility 71

List of Abbreviations

ISTE: The International Society for Technology in Education

ICT: Information and Communication Technology

CHAPTER I
Introduction

Introduction

The rapid growth of Information and Communication Technology (ICT) has affected our lives and changed the way we interact with information. Not only has it increased the use of and dependency on digital technology, but also changed behavior and affected the way people search, share and consume information. The inclusion of ICT in people's daily life has contributed to the rise of digital communities with the endeavor to create digital citizenship where people engage in various issues positively, respectfully and efficiently.

Distance learning as defined by Rahman (2014) is the method in which learning or training is delivered to those who are isolated mostly by time and space from those who teach training. The new generation of distance learning relies on the use of information technologies to increase the distance between the student and the teacher and to create highly interactive self-paced learning systems in the distance learning environment (Rahman, 2014).

Distance learning provides a convenient way to teach digital citizenship to the students through the online environment which is created as result of technology adaption. Distance learning not only does it offer a convenient and flexible learning environment, but also enables them to participate in aspects of digital citizenship in situation (Farmer, 2013). Furthermore, the distance learning has the flexibility and delivery options to reach non-traditional students, offer a good digital citizenship education opportunity for those not in traditional settings (e.g., prisoners, transients, workers), for those unable to access traditional universities for cultural, economic, social, and geographic obstacles (Abu-Ayyash, 2012).

Ribble et al. (2004) explained the digital citizenship as the norms of behavior with regard to technology use. They defined nine general areas of behavior that make up digital citizenship as a way of understanding the complexity of digital citizenship and the issues of technology use abuse and misuse (etiquette; communication; education; access; commerce; responsibility; rights; safety; and security). Nowadays, being digital citizen is more important. Therefore, there are some key features in education

that make students looking for digital citizenship goals at the 21st century. Such key features include student learning and academic performance, social environment and student behaviour, student life outside of the school environment (Isman & Gungoren, 2014).

Digital citizenship has become an important topic due to the increase use of information and communication technologies. As younger generations spend most of their time using and interacting with digital technologies using mobile devices like tablets and smartphones, there is a need to investigate the role of digital citizenship in changing behavior (Kara, 2018). The use of such devices by young people could lead to risk-taking endeavors such as talking to strangers, not adjusting privacy settings correctly, and cyberbullying. The risks associated with using technology make the students need to be taught digital citizenship by schools (Dillinger, 2015).

This approach can be of great benefit to distant learning students to learn digital citizenship skills by integrating technology used into daily life experiences. To achieve this, a digital citizenship road must be devised with the needed infrastructure. It is important to make sure that students have flexible curriculum with clear instructions on how to earn the required digital citizenship skills and competencies in a digital learning environment offered through distance learning.

The purpose of this study is to examine the awareness and knowledge of students and faculty of digital citizenship in distance environment by focusing on two different higher academic institutions, namely the Al-Quds Open University (QOU) in the Palestinian territories and the University of Kyrenia (KU) in the Turkish Republic of Northern Cyprus. However, the reason for choosing these institutions is because both universities are located in developing countries, both universities offer up to a master degree, both universities are not profit oriented objective but public service, both universities have distance learning center offering distance learning courses, in both universities English is used in providing education, and in both universities the students staff ratio is 10:1. Furthermore, in research involving primary data in which some part (as in this study) or whole will be collected through interview, it will be more suitable to conduct the research in the area you are familiar with. Also, in comparison, it will be interesting to compare things that have certain features in common. These are the reasons that make this study to choose those universities.

Problem Statement

Technology has increasingly become a part of the day-to-day experience of many people over the last few years. This is especially true of young people. Young people are more in the class of those at the center of the effects of technology. This is because their generation is the one which witnesses the direct consequences of technological advancement which has become the norm in the world.

Nowadays, young people can connect with the rest of the world by virtue of a simple click on their mobile phones. While this technology can be leveraged for beneficial purposes such as information gathering, schooling and the search for knowledge, it can also be used negatively. The online space is also occupied by people who engage in cyberbullying, online crimes and other such activities. Young people who are students might be vulnerable to all these actions.

Lenhart (2015) records that 92% of teenagers go online daily; and out of those, 24% report going online "almost constantly." It is evident that most students of the technological generation practically live online. And as Dillinger (2015) records, this direct internet connection which allows them instant access can also lead to risk-taking endeavors. It is therefore clear that digital citizenship knowledge is necessary to provide students with the needed skills to live safely in a digital world.

Digital citizenship is an important skill for students. It enables them to be productive and responsible, and to become contributing members of the global society. Schools are responsible for helping students to develop their mental and intellectual capacities, therefore to make them digital citizens. Schools must respond to the changing needs of students in order to prepare them for the rapidly changing world. Digital citizenship, according to Ribble et al. (2004), has to become a priority for schools especially in the new dispensation of technological evolution. Schools must and have begun to see the integration of technology as a major teaching and learning strategy for preparing students to live and work in the 21st century.

Distance learning students have their own computers, and teachers are educated on the pedagogical and technical aspects of distance learning technology as part of technologic incorporation into education without explicit instruction, Distance learning students have limited knowledge about the legal, responsible, and ethical

behaviors of technology use. To make this instruction meaningful, the students should consider a new terminology of media-based skills to become empowered and engaged in their learning. Therefore, distance learning students should be provided with appropriate guidance for their careers and personal behavior benefits in their digital world (Ata & Yıldırım, 2019).

New generation of distance learning has obtained more and more the technology, flexibility and delivery options to reach the students. According to Farmer (2013), it can offer a digital citizenship education for those not in traditional settings (e.g., prisoners, transients, workers). Abu-Ayyash (2012) further comments that distance learning provides educational opportunities also to people who cannot reach traditional universities. Furthermore, the field of distance learning is changing rapidly by adopting the digital technology into the learning process and offers new opportunities for digital citizenship education. Accordingly, the learning environment where technology is used regularly makes it easier to incorporate digital citizenship skills into the curriculum. Distance learning is already conducted mostly through the means of technology. It is therefore set up as a perfect environment within which to introduce digital citizenship education. Thus, digital citizenship education if integrated into the distance learning curriculum will provide the students with guidelines and skills to practice digital citizen behavior, and whether this will be applied in the school environment and at home.

Purpose of the Study

An opportunity exists for the inclusion of digital citizenship education in the curriculum of Distance Learning. It must, however, be mentioned that there is also a need for a clear digital citizenship roadmap which makes sure that the students have a flexible curriculum. That curriculum should provide them with clear and easy-to-follow instructions. The instructions will be on how to earn the required digital citizenship skills and competencies in the peculiar digital learning environment offered through distance learning. Thus, a roadmap must be devised with all the required components and details. This research, therefore, aims to investigate the current situation of digital citizenship in the distance and online learning environment based on the aforesaid. It will use the result to propose and design a

prioritized set of digital citizenship guidelines and policies suitable for distance learning students.

Research Questions

i. What is the extent of awareness and knowledge of faculty members on digital citizenship in a distance learning environment?
ii. What is the levels of awareness and knowledge of students on digital citizenship in a distance learning environment?
iii. Is there a difference between the students practice of digital citizenship in distance learning based on their age, gender or study level?
iv. What are the changes that must be made to the "existing" distance learning curricula in order to be aligned with the elements and principle of digital citizenship?

Research Aims/Objectives

i. To examine the levels of awareness and knowledge of faculty members on digital citizenship in a distance learning environment;
ii. To determine the levels of awareness and knowledge of students on digital citizenship in a distance learning environment;
iii. To investigate whether there is difference between the students practice of digital citizenship in distance learning based on their age, gender or study level;
iv. To explore the changes that must be made to the "existing" distance learning curricula in order to be aligned with the elements and principle of digital citizenship.

Significance of the Research

It evidently important for students and teachers to have the skills and conduct of professionals of digital age as technological integration continued to increase in our societies and in the educational field. The ISTE Standards for Teachers have defined several benchmarks that should be incorporated into teaching to inspire and engage students: the modelling of work and learning in the field of digital age, the promotion and modelling of the digital citizenship and responsibility and the engagement of global learning communities in professional growth and leadership (Holland, 2017).

Digital citizenship is a set of behavioral issues. Digital citizenship education is, therefore, an education that involves the impartation of knowledge about the proper handling of these issues. These issues can be taught through digital components of distance learning. The schools that offer distance learning opportunities can be made to work better to the advantage of their students. This can be done through the adaptation of online courses and assignments to teach digital citizenship skills, for instance, digital rights and responsibilities, intellectual rights, and use, trademarks, etc. Moreover, the technology that is offered by distance learning can be used to prepare the students for a society full of technology rather than just teaching tools. Investigate and Analysis the perceptions of teachers, experts and students can provide a deeper understanding of the potential benefits and pitfalls associated with digital citizenship and new generation of distance learning. They can help to define and experiment the most suitable digital citizenship's elements for distance learning setting. This understanding can lead to the development of policies and guideline that would promote the digital citizenship in the digital learning environment offered by distance learning, and could be used for teacher professional development to integrated digital citizenship into distance learning process.

Definition of Terms / Related Descriptions of the Research

- ***Digital Citizenship***: The norms of behavior with regard to technology use. It is defined as the a way of understanding the complexity of digital citizenship and the issues of technology use, abuse, and misuse (Ribble et al., 2004).
- ***Digital Communities*****:** Communities of interest or place that rely on digital technologies to connect and disseminate information through mobile phones, Internet and e-mail (Odendaal, 2009).
- ***Distance Learning*****:** The way in which learning or teaching is given to those often isolated by space and time from those who are teaching training (Rahman, 2014).
- ***New Generation of Distance Learning*****:** New generation of distance learning uses information technology to enrich teacher-student distance interaction and the development of highly interactive self-paced learning packages used in the distance learning environment. (Rahman, 2014).

- ***Digital Learning*:** Any form of learning that is supported by technology or educational activity that makes use of technology effectively. This includes implementing a wide range of activities, including: mixed and virtual learning (Elçi et al., 2019).

CHAPTER II
Literature Review

Introduction

This chapter divides into three sections, namely conceptual review, theoretical review, and empirical review. The conceptual review divides into three areas where the first area focuses on information and communication technology (ICT) including the historical and background aspects as well as technology's influence on learning, the second area involves the distance learning approach and how influenced by ICT, and the third area incorporates digital citizenship concept and how it is necessary for the people to be responsible in society with access to digital media. Moreover, at the end, the relation between these three areas discussed and how it served as the main approach that underlies the study's intervention. The theoretical review deliberates on the theoretical view that expounds on the topic under and thereby helps in better understanding of the study. The empirical part is on the review of the existing studies.

Conceptual Review

Information and Communication Technology (ICT)

ICT relates to technologies that provide access to information which include the Internet, wireless networks, mobile phones and other media (Tamilselvan & Sevukan, 2012). UNISCO defined ICT as a scientific, technological and engineering discipline and management technique used in the management, implementation and interaction of information with social economic and cultural aspects (Akarowhe, 2017).

According to Martínez-López et al. (2015), the four major changes in the ICT's evolution in recent decades as the following:

- Between 1960 and 1980 there was the first period characterized by the focus on large machines, mainframes (central units) and the beginning of minicomputers. In this phase they were primarily used by large companies and institutions.

- The eighties were characterized by the expansion of personal computer use, stemming from the appearance of IBM's PC in 1981. From then on, companies have progressively integrated their use into the business setting.
- The Internet momentum in the nineties produced a paradigm shift, gaining importance in external communications. This phase had the establishment of connections between all areas and levels as a priority, making the computer into a ubiquitous element of life.
- The fourth phase, in which we currently find ourselves, is defined by a convergent appearance, digital multimedia content, promoted by the maturation and possession and utilization of information infrastructures at the global level, causing evolution towards the Society of Information and Knowledge.

Sarkar (2012) divided the ICTs into two parts, Information and Communication Infrastructure (ICI) which contain the physical telecommunications systems and networks (cellular, broadcast, cable, satellite, postal) and the services that use those (Internet, voice, mail, radio, and television), and Information Technology (IT) include the software and hardware of information collection, storage, processing, and presentation.

According to Tamilselvan et al. (2012) since the end of the 20th century, the developments in ICT have led to multiple convergences of content, computing, telecommunications and broadcasting. It has changed other areas, especially in the area of knowledge management and the human resources development. Increasing ICT capability has been further driven by the evolution of a global computer network called the Internet. It has influenced the way in which business operates, enabled learning and sharing of knowledge, developed global flows of information, empowered individuals and societies in ways which redefined governance and produced.

Currently, information and communication technologies (ICTs) influence every aspect of human life. They play important roles in places of work, industry, education and entertainment. Moreover, ICTs are recognized by many to be key drivers for changes; working conditions change, information processes and exchanges, methods of teaching, scientific research, learning approaches and access to Information (Ratheeswari, 2018). Modern ICT has created global village that

enables people to communicate as though they were living next-door to others throughout the world. Therefore, ICT is always studied about how modern communications technologies influence society (Tamilselvan et al., 2012).

Kumar (2019) has described ICT as Technology portal where the people received more information than ever before in a wider variety of formats. He indicated that ICT literacy is the most essential skill needed in the 21st century that help students to manage information, solve problems and critically thinking about information, provide them with more about their success in the future than our knowledge of particular hardware or software (Kumar, 2019). ICT literacy is a type of literacy of the 21st century, in which communication information and researching via digital environment is as critical as reading and writing were in the earlier centuries. ICT literate students master information more quickly, are better problem-solvers, become more independent and take greater control over learning.

The most important task in ICT is the dissemination and transition of desirable objectives and values by means of education that cannot be overemphasized in society. ICT is a driving force in the educational system to transfer worthwhile aims from a teacher to the expected learners that make them useful to themselves and society as a whole (Akarowhe, 2017). According to UNESCO (2002) ICT is now permeating the educational environment and underpinning the education success in the 21st century. Moreover, ICT adds value to the learning process and to management of educational institutions.

Distance Learning Approach

the Concept of Distance Learning

Most of the countries consider distance learning as a new approach that enhances access, quality, cost-effectiveness, and equity. Distance mode of education offers the common man an opportunity to study regardless of geographic, socio-economic and other constraints. It is more than ever clear that distance learning will be an important element of future education systems (Oadejo & Qesinde, 2014). Technology has been the most critical aspect which influenced the recent trends in distance learning. Internet revolution and other digital technologies has increased the access and quality

potential of distance learning. A new method of distance learning, namely technology-mediated distance learning has emerged (Webster & Hackley, 1997).

Now, each student has a vast array of resources available free from limitations of time and space. With the expansion of internet facilities the cost of processing, storing and transmitting education declined and this has contributed to substantial changes in the perception, design, delivery, and administration of distance.

Distance Learning Evolution

Aoki (2012) addressed the generations of the distance learning evolution: First, the generation of correspondence model that refers to the use of written and printed texts and postal services for delivering theses text. It is known as print correspondence model. At this stage teachers and students interacted normally only in correspondence, which means hand written texts were sent via mail.

The second generation is the model that relates to use of radio and television as well as print materials as instructional media. This generation related to as an "industrial mode of distance education," which provides highly specialized work in the production and delivery of educational materials and the opportunity to teach thousands of students concurrently (Aoki, 2012).

The third generation of distance education uses ICT to deliver interaction in addition to content delivery; the use of ICT has two types of interactivity: The interactivity between the student and content in multimedia interactive learning material on CD-ROM and on the Internet as well as the interactivity between students and teachers and among students (Aoki, 2012).

The fourth generation based on the interactive nature of the Internet, the social network or what is called Web 2.0 plays a major role in transforming learning experience in distance learning. Furthermore, the wide availability of OERs decreases the burden of content production by distance education organizations and allows them to focus more on student support and learning design (Aoki, 2012). Bandalaria (2007) described the fourth generation of distance learning using terms such as e-learning, m-learning , the teachers using ICTs as digital learning environment helped improve their skills and knowledge and can also be seen as an' enhanced process.' Using ICTs allowed students to monitor their learning

environment in a wider way, particularly the "how," the "when," the "where," and sometimes even what they are going to learn (Bandalaria, 2007).

According to the Beldarrain (2007), the demand for Distance Learning will only continue to grow. The ever-changing nature of technology will continue to encourage distance learning institutions to use new tools to create learning environments that effectively prepare students for life-long learners who can collaborate together with global learners to solve problems.

Digital Citizenship Concept

Understanding the Digital Citizenship

Information and communications technology (ICT) has become a necessity for our lives. This change increases the use of digital tools and the primary requirement for people is being use ICT not only to entertain, but also for searching and sharing information, communication, access, law and consumption (Isman & Gungoren, 2014).

Feenberg (1991) proposed that the effect of ICT has two perspectives: an autonomous perspective where technology more or less takes on a life of its own, helping to define and in some circumstances actually drive human activity; and a human controlled perspective, where technologies are neutral and it is decisions about how to use them that eventually defines technology's character in everyday life. This decision-making considers technology as an augmentation for extending capabilities, but it can also take users along darker roads, including the desire for control. Any positive or bad technology should not be blamed on the technology itself but on the people who use it, or more likely the culture society that sets the context for individual choices (Choi et al., 2017).

Emmer and Kunst (2018) discussed the impact of ICTs on citizen and they pointed out that ICTs deliver a sphere of almost unlimited information; allow for new configurations of communication relations; combine synchronous and asynchronous communication; enable communication partners to interact with each other; reduce cost, time, and space limitations of communication; and integrate textual and audio-visual content. As a result, communication becomes networked and interactive,

extending the available repertoire for individuals, as well as organizations, in the political sphere.

The new opportunities of communication enable what we call “digital citizenship”: People in a society with access to digital and networked media (provided by ICTs) can practice their citizen role using digital technologies (Emmer & Kunst, 2018). A technology awareness campaign began in the United Kingdom in the mid-1990's to define digital citizenship and allow educators to work towards protocols for good digital citizenship (Dillinger, 2015).

What is the digital citizenship?

The literature defines digital citizenship as "the norms of behaviour with regard to use of technology (Ribble et al., 2004). Farmer (2011) defined the digital citizenship as the ability to use technology in responsibly, productively, civically, critically, and safety. Buente (2015) describes the digital citizens that use the Internet every day, because regular usage includes access to a number of media (usually at home), technical skills and educational skills for tasks such as discovering and using information on the Web and communicating on the Internet.

Logan (2016) states that the International Society for Educational Technology (ISTE) defines the digital citizen by identified the standards needed for protecting students online as follows:

- Students recognize the rights responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal ethical.
- Students: Cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.
- Engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
- Demonstrate an understanding of and respect the rights and obligations of using and sharing intellectual property.
- Manage their personal data to maintain digital privacy and security and are aware of data-collection technology use to track their navigation online (ISTE Standards, 2016).

Even though the digital citizenship addresses negative aspects of the digital world, it also addresses the benefits of online collaboration and communication and makes digital citizenship a concept that tackles negative behaviours, and an opportunity for a positive practice repertoire (Ghamrawi, 2018).

Goals of Digital Citizenship

The goals of digital citizenship in the twenty-first century as explained by Ribble and Bailey (2007), Isman and Gungoren (2014), and Ghamrawi (2018) are
respect yourself and others (etiquette, access, law), educate you yourself and others (communication, literacy, commerce), and protect yourself and others (rights and responsibility, safety/security, health and welfare).

Digital Citizenship Elements

As digital citizens are becoming increasingly important in today's world, some key features in education can help students become digital citizens to achieve the 21st-century digital citizenship goals. These key factors include student learning and academic performance, student environment and behavior, and student life outside school. According to Isman and Gungoren (2014) the nine elements of digital citizenship sorted by Ribble and Bailey (2007) under the three key goals are as follows:

Student Learning & Academic Performance

1- Digital Access: full electronic participation in society.
2- Digital Communication: electronic exchange of information.
3- Digital Literacy: the process of teaching and learning about technology and the use of technology.

Student Environment & Student Behavior

4- Digital Security (self-protection): electronic precautions to guarantee safety.
5- Digital Etiquette: electronic standards of conduct or procedure.
6- Digital Rights & Responsibilities: those freedoms extended to everyone in the digital world.

Student Life outside the School Environment

7- Digital Law: electronic responsibility for actions and deeds

8- Digital Health & Wellness: physical and psychological well-being in a digital technology world.
9- Digital Commerce: electronic buying and selling of goods.

Theoretical Review

The epoch in which we live is known and referred to as the digital age of technology, where technology is changing and developing rapidly in this age. In light of these technological advances in this twenty-first century, schools must train "digital citizens" as well as good citizens. Digital citizens must have extensive skills and knowledge, and access to the Internet and technology, and schools must guide students in becoming digital citizens. Manasco (2020) added that as students are currently taking classes online due to the COVID-19 pandemic, it's important that they know how to be responsible digital citizens. However, the teachers/educators too need to promote digital citizenship through distance learning and this can be achieved by holding online discussions about digital citizenship and distance learning, encouraging activities outside of social media, share video resources, including digital citizenship in online learning assignments, and have students write it out i.e. after these lessons or a day of limited social media use, ask students to journal their thoughts. Some characteristics of a digital citizen include understanding human, cultural, and societal issues related to technology and practising legal and ethical behavior; advocating for and practicing safe, legal, and responsible use of information and technology; demonstrate a positive attitude toward using technology to support collaboration, learning, and productivity; demonstrate personal responsibility for lifelong learning; and demonstrate digital citizenship leadership (Ribble, 2008; Isman & Gungoren, 2014). Furthermore, digital citizenship should not be a laundry list of dos and don'ts. It should be about the actions that contribute to the development of thoughtful, empathetic digital citizens capable of grappling with the important ethical questions at the intersection of technology and humanity. Among these dos are using technology to improve your community, engaging respectfully online with people who hold different beliefs than you, using technology to make your voice heard by public officials and influence public policy, as well as determining the veracity of online information sources. Conversations about personal responsibility are not the only topics covered by digital citizenship. It is about being active citizens who see opportunities rather than

problems, and as they cultivate a positive and effective digital footprint, they see opportunities rather than risks. However, Pedersen et al. (2018) presented a technical innovation in education by introducing the concept of hybrid education in digital citizenship. The hybrid concept of education was defined as an on-site and online learning model, increasing digital citizenship awareness as well as bridging the gaps of distance learning. They conducted workshops and training on the effectiveness of the hybrid model and concluded that the model was successful in strengthening the gaps that were part of the digital citizenship and distance learning platform. In addition, Fields and Hartnett (2018) discussed the concept of digital fluency in the distance learning model. The editorial covered the aspects of distance and flexible learning combinations in the current education system. It concluded that with the current times, the students employ all the tools at their disposal, whether distance-learning or face-to-face, thus creating a concept of flexible learning that creates wider knowledge and clears the boundaries of education.

Empirical Review

There are various studies related to the digital citizenship that already exists in the literature. For instance, Farmer (2013) emphasize that the distance learning provides a good fit for both students and working teacher to learn digital citizenship, it is not only does it offer a convenient and flexible learning environment, but also enables students and teacher to participate in aspects of digital citizenship in situation of ICT offered by distance learning. Several online formats can be used to teach digital citizenship such as Blogs, wikis, OER and social media platform in addition to the advanced technology such as virtual reality environments and second life which enable students and teachers to interact using avatar representations.

Netwong (2013) examined the development of digital citizenship and learning achievements in information technology by students at Suan Dusit Rajabhat University using e-learning. An experimental group have pretest-posttest learned digital citizenship by using e-learning. The findings shows that the growth of digital citizenship before and after undertaking e-learning were high level and the post-test scores on learning achievement were significantly higher than pre-test scores at .05 significant level.

Said et al. (2014) investigated the using of E-Service Learning for Promoting Digital Citizenship by reviewing relevant and widely literature to the answer the question, (Is e-service-learning a useful tool to prepare responsible digital citizens?). The relevant literature reviewed by researchers showed that e-service-learning is an effective tool for promoting digital citizenship. Students who participate in an online course develop a level of empowerment as digital society citizens. It is also enhances the commitment of students to close the digital gap. They also better understand their societies ' complex issues by reflecting and discussing them online with their colleagues and their community members. The study also provides an insight that those engaged in e-service learning improve essential citizenship skills such as effective communication, interpersonal skills and cultural skills. These are considered the essential elements of an engaged citizenship. This study showed that e-Service-Learning allows students also to think critically about politics, social justice, social responsibilities and right to citizenship by engaging in an intellectual debate during their online service-learning activities.

Dillinger (2015) reviews the literature on the student's use of technology and digital citizenship in education to explore the role of school librarian and teacher in school settings and how to improve classroom lessons with digital citizenship skills where technology is used. The findings of his study showed that digital citizenship skills need to be integrated into the school lessons in order to teach students independent responsible online behavior. Furthermore, he stated that teachers integrated digital citizenship skills into the school setting by using technology daily in class, being role models on how that technology is used, and educating themselves on new and current applications. Using technology in the classroom allows students to practice the digital citizenship skills needed to survive a tech savvy world. Students are able to see what behaviors are acceptable and what not. They will also see how technology affects their lives and that it is important to use responsible skills in the classroom and on their own.

Gazi (2016) conducted a study aimed at examining awareness among learners and teachers in internalization of digital literacy within the framework of digital citizenship regarding right behaviors, while using technology in the life. The study implemented qualitative method and case study approach through action learning process fosters the value of building awareness and adapting to new behaviors that

support learners and teachers in internalizing digital literacy and digital citizenship. The study results make it important to know how to use technology with digital roles in the appropriate and efficient way. In this regard, education programs and courses need to extend scope and integrate ways of using technology efficiently through the understanding of technology content within the courses. The study recommended the mobile learning technologies and digital learning environments as best solution to foster a context of learning and teaching the digital citizenship.

Mithat et al. (2018) stated that the online education environments have contribution to both social presence and digital citizenship levels based on the result of their study which showed that the graduate students having distance education use online learning environment ethically, correctly and consciously.

Helen and Closier (2018) reported that the library at Open University in UK created learning objects and collaborated with academics to integrate them into the online curriculum to develop the University's distance learners' digital literacy and digital citizenship. The University librarians created many resources to help University distance learners develop digital citizenship skills and make them freely available online for the benefit of all. Some of these resources are produced in collaboration with academics and are planned to be relevant and timely for students.

Social media become one of the effective digital tools for distance learning, there are clear advantages in using social media in distance education, the online teachers and learners can experience new and better types of communication and interaction, and they can be more connected to each other than ever before (Ooko & Oduor, 2013).

Benjamin and Gillern (2018) explored the dimensions and possibilities of digital citizenship for young people, enabled through digital and social media. They suggested model to be integrated with social media to develop young people citizenship practices, digital citizenship model that is student-centered (e.g., as opposed to teacher-directed), emphasizes engagement through strategic development, curation, and dissemination (e.g., rather than passive information acquisition), and is focused on young people's authentic and socio-cultural practices (e.g., rather than normative technological uses).

Hava and Gelibolu (2018) examined the effect of the instruction of digital citizenship on several variables such as learning efficiency, self-regulated learning, self-directed learning and knowledge literacy via the flipped classroom as a modern online learning environment. The study used a quasi-experimental research method in which both experimental and control groups were exposed to pre-tests and post-tests. The participants were 59 teachers from Bozok University, who were freshmen undergraduates. The experimental group students performed some activities related to digital citizenship during a five-week implementation period, while the control group used traditional methods to learn digital citizenship. The findings showed that the flipped classroom model only had a significant effect on the performance of learning. However, the research results that the flipped classroom does not affect the self-regulated learning of students, self-directed learning information literacy. The researchers explained no differences might the students give false responses to the scale items. Therefore, they recommended that different tools should be used for data collection such as observation and reflection in order to measure the student's skills.

Jwaifell and Alkhales (2019), who compare the appropriate use of technology as an indicator of digital citizenship in two different universities in Jordan and Palestine. Digital citizenship is defined in terms of nine elements, including etiquette, communication, and access; the study results indicate a lack of knowledge because they do not adequately use technology as a digital citizenship indicator.

Suson (2019) employed the model of Ribble and Bailey for digital citizenship in schools in the Philippines. The research was based on the awareness of teachers and students on the concept of digital citizenship in a select sample study area. The study concluded that the students and teachers alike were moderately aware of digital citizenship in schools and that even though many are aware of the concept; there is still a lack of digital law and digital safety that leads to a high-risk factor.

In a study conducted by Xu et al. (2019), in which they used a sample size of 772 college students in China to examine the key social media competencies (social media self-efficacy, social media experience, effort expectancy, performance expectancy, facilitating conditions, and social influence) and digital citizenship. The study makes two related contributions to literature. First, by providing a benchmark

of college students' social media competencies and digital citizenship in higher education. Moreover, it is expands knowledge of college students' social media competencies and digital citizenship, which can be used to inform educational processes and pedagogy that provide opportunities to improve individuals' digital citizenship. Based on the conclusion of this study, Identifying a relationship between social media competencies and digital citizenship expands the depth of literature alleging social media skill gaps among college graduates in a way that further emphasizes interest among college students when discussing social media competencies. In theory it is now important to recognize that all efforts in education to address social media competencies must also increase the level of digital citizenship for individuals. To use social media competencies to enhance digital citizenship, all educational disciplines should find ways of stimulating the development of digital skills. The study recommends including the social media competencies as independent education objective in the Higher Education curriculum in order to improve digital citizenship skills for students.

Study conducted by Alrehaili and Aljohani (2019) aimed to measure the effectiveness of the proposed mobile learning environment in developing awareness among Taibah University female students about the elements of digital citizenship and being in harmony with them. They used quasi-experimental design based on a sample of (72) female students. To achieve the study objective, the researchers developed a scale for data collection. The results of the study showed statistically significant differences in post measurement between the mean of the experimental and control groups in the level of awareness of digital citizenship elements inclined to the experimental group. In the meantime there were no statistically significant differences in post-measurement between the experimental groups mean and control one in harmony with the elements of digital citizenship. Study results also showed that there were no statistically significant differences in the mean of the experimental group in the level of awareness of digital citizenship elements in both pre and post measurements. The results of the study also showed statistically significant differences in pre- and post-measurements in the mean of the experimental group in harmony with these elements.

Al-Abdullatif and Gameil (2020) conducted a study concerning the students' experience and perceptions of digital citizenship. The population was assessed on

their knowledge and experience of eight of the nine elements of digital citizenship. The analysis included 204 undergraduate students who were chosen by purposeful sampling. The study concluded that even though many of the students are aware of digital citizenship, there is a wide gap in knowledge and practice regarding the security and authenticity of information amongst students. It showed that the usage of the Internet does not increase the digital citizenship of an individual if it is not utilized properly; however, the nature of academic specializations and knowledge do contribute to the digital knowledge of an individual.

Elmali et al. (2020) determined the perceptions of pre-school teachers regarding digital citizenship and their level of digital citizenship. The study consisted of 80 teaching candidates, employing quantitative and qualitative methods, employing surveys and interviews to understand the participants' perceptions better. It was concluded from the study that the perceptions of digital citizenship of the participants were above average; however, a lacking was in the form of digital rights and responsibilities as well as digital security.

Grammon (2020) conducts a comparative study on comparing digital citizenship perceptions of online students and teachers from the same population using the DCS (Digital Citizenship Scale) instrument created by Choi, Glassman, and Cristol (2017) and make use of t-test technique based on a sample size consisting of 114 students and 93 teachers from an online Oregon school where the results indicated no statistically significant difference in digital citizenship perceptions between online, secondary students and teachers.

The research conducted by Martin *et al.* (2020) considers middle school students' perception as it relates to their digital citizenship practices. The study results indicate that mobile devices' use among students has increased; therefore, the parents bear the responsibility to check their children's online behavior, and 37.1% of the students revealed that their schools had taught them about digital citizenship. The study concludes that students lack a basic understanding of digital citizenship, which has broad consequences for teachers, administrators, and parents.

Summary of the Existing Studies

In the rapidly growing field of distance learning, the digital citizenship becomes more of a catalyst behind how our teachers and students use technology for learning. Digital citizenship has an obvious influence on ICT used by the distance learning, while teachers and students are increasingly realizing how important it is that they are a good digital citizen in ensuring effective online education. And when students understand and practice digital citizenship through the technology used by distance learning, the digital learning environment becomes more than a place of collaboration, but also a safe place to share ideas and reflect on.

It is important that academics, policymakers and practitioners understand the relationship between ICT enhanced distance learning and digital citizenship in order to improve the learning and enhance the level of student digital citizenship. However, limited research has been focused on the topics related to new generation of distance learning and digital citizenship such as (social media, e-learning) and no study has explored directly the relation between distance learning and digital citizenship. It was not clear how Information and Communication Technology (ICT), distance learning and digital Citizenship can be used in cultivating students learning and preparation to take up roles related to digital citizenship. Integrating digital citizenship into the distance learning curriculum when combined with Information and Communication Technology were missing from the literature.

So, this study filled the gap in the literature through conducting mixed research, in which teachers and other distance learning experts interviewed for thick, rich description of their perspectives on the integration of digital citizenship into new generation of distance learning. A likert scale modified and used to measure the student's perspectives on the extent of digital citizenship in a distance learning setting. The results expected to contribute to the development of policies and guideline that can be used to promote the digital citizenship in the digital learning environment offered by distance learning, and could be used for teacher professional development to integrated digital citizenship into distance learning process.

However, this study expected to contribute to the area of education technology by deriving perspectives from teachers, experts and distance learners on how to integrate digital citizenship into ICT enhanced distance learning to help students

become responsible technology users as digital citizens engaging in a globally digital society. The methods of research design conducting are discussed in Chapter 3.

CHAPTER III
Methodology

Introduction

The Digital Citizenship is very important skill for students due to the increase use of information and communication technologies. Therefore, the Digital Citizenship has to become a priority for schools especially in the new dispensation of technological evolution. Distance learning students have limited knowledge about the legal, responsible, and ethical behaviors of technology use. The distance learning students should be provided with appropriate guidance for their careers and personal behavior benefits in their digital world. The new generation of distance learning provides a convenient way to teach digital citizenship to the students through the online environment which is created as result of technology adaption. Distance learning has the flexibility and delivery options to reach non-traditional students, and offer a good digital citizenship education opportunity for those not in traditional settings.

Participants/Population and Sample

The Participants in this study were selected from two distance learning universities in two diversity countries (developed and developed countries), namely University of Kyrenia from Turkish Republic of Northern Cyprus and Al-Quds Open University from Palestine representing different cultural countries during the fall semester of the year 2020. The selected universities used distance learning technologies to deliver learning courses. However, the study participants were selected using a sample size formula based on standard 5% margin error procedure. For the faculty awareness and knowledge of digital citizenship the researcher interviews 16 faculty members in total, 8 from the faculty of the Al-Quds Open University (QOU) in which two of them were females and six of them were males. Three of them in Technology and Applied Science faculty, two in the Educational Science faculty, one in English Department and One in the media and one ICT as shown in Table 1*a*; and 8 from the faculty of the University of Kyrenia (KU) in which two of them were females and six of them were males. Five of them are related to Computer Education and

Institutional Faculty, one participant work in English department, another in preparatory school, and one in special education teaching as shown in Table 1*b*.

Table 1a. Demographic Data of the Interviewed Faculty Members in Al-Quds Open University

Participant No.	Gender	Major
1	Female	Faculty member of Education Science Faculty
2	Male	Head of ICT Research Unit and Faculty member in Technology and Applied Science faculty.
3	Male	Faculty member in Technology and Applied Science Faculty
4	Male	Faculty member in English Department
5	Male	Dean of Media Faculty
6	Male	Faculty member /Technology and Applied Science Faculty.
7	Male	Faculty member/Educational Science Faculty
8	Female	Faculty member/Technology and Applied Science Faculty

Table 1b. Demographic Data of the Interviewed Faculty Members in University of Kyrenia

Participant No.	Gender	Major
1	Male	Computer Education and Instructional Technology
2	Male	Department of English Teaching
3	Female	Head of Preparatory School
4	Male	Doctorate Student/Computer Education and Instructional Technology
5	Male	Doctorate Student/Computer Education and Instructional Technology
6	Male	Computer Education and Instructional Technology
7	Female	Head of Special Education Teaching
8	Male	Computer Education and Instructional Technology

For the students awareness and knowledge of digital citizenship, from Al-Quds Open university (QOU) 558 students were selected to the survey which represents 68.7% of the sample, while 254 students were selected from the University of Kyrenia (KU) which represents 31.3% of the sample where the selection of the students executed using a simple random sampling technique in which each student had an equal chance of being selected. Nonetheless, the sample gender is based on sex ratio of the respondents available in the named higher institutions.

For the qualitative part of the study, the research employed a non-probability sampling technique. Instead of random sampling, the research chose samples based on its subjective judgment on this method. It is a less stringent method, but it allows the researcher to use his knowledge and expertise in selecting the sample (Strauss and Corbin, 1990). Specifically, the non-probability sampling technique employed to select the faculty members for the interview is the purposive sampling technique. Under this sampling technique, the research used its judgment for the sample based on the research questions. The purposive sampling technique depends on the researcher's judgment so as to effectively collect data from the experienced relevant teachers and students. In the data collection, an online interview technique through ZOOM was used due to the current situation of the COVID-19 pandemic. The Zoom connection is the current preferred method for the qualitative research approach.

While for the quantitative part of the study, an online survey was employed to provide a complete understanding of the student's awareness and knowledge on digital citizenship in a distance learning environment. The survey constituted 812 students, of which 558 from the Al-Quds Open University (QOU) and 254 from the University of Kyrenia (KU) where the selection of the students executed using a simple random sampling technique in which each student had an equal chance of being selected from a total of 2,500 in the Al-Quds Open University (QOU) and 44,305 from the University of Kyrenia (KU). Nonetheless, the sample gender is based on sex ratio of the respondents available in the named higher institutions.

Participation Procedures

Participants in this study were selected based on their experience in distance learning and digital citizenship. The letter of invitation (Appendix B) include interview protocol were sent to the participants the student participants were selected randomly from different study levels at both universities. The email were sent to the students with the consent form (Appendix C).

The consents form for both interview and scale provide an opportunity for the researcher to engage with the participants in the planning, purpose and intent of the study findings. The researcher received permission from both universities for this study to take place before the data being collected. After the final approval of the

dissertation, the findings and conclusions of the research explained to the experts, teacher's student's participants.

Data Collection Tools/Materials

The researcher used integrating qualitative and quantitative data and a combination of research instruments and triangulates the data. Triangulation refers to a combination of two or more theories, data sources, methods or investigators in a single phenomenon study that converges on a single construct and can be used in both quantitative and qualitative studies (Yeasmin & Rahman, 2012).

According to the Yeasmin & Rahman (2012), Triangulation 'offers a variety of valuable resources for researchers. It allows researchers to be more confident about their findings. This too can play a lot of other positive roles. It may stimulate the development of innovative approaches, new ways to capture an issue in combination with traditional methods of collecting data. This can help to uncover a phenomenon's deviant aspect. This may also serve as a crucial test for competing hypotheses by virtue of its comprehensiveness. 'Triangulation' minimizes single-source analysis insufficiencies. Two sources complement and test each other, thereby reducing the effect of bias. This offers more detailed and richer knowledge.

The structured interviews, digital citizenship scale served as the main instrumentation of this study. The digital citizenship scale used to collect data from the students (see Appendix D), the scale modified based on the interview with the teachers to fit with the study objectivise and questions.

For the Qualitative Data Collocation

The researcher used structured interview as primary source for data collecting qualitative data. A personal interview is one of the tools commonly used to gather the data. There are a number of interview varieties that are used. The interview form used for this study as follows. After considering the variety of possible interview methods, structured interview the format has been selected for this study. The researcher have the opportunity to ask open-ended questions and several directed questions in order to answer the research questions. It was vital for the researcher that questions be included, modified or left out depending on the response of the participants. The open-ended question and direct questions provided the teachers

with a good opportunity to discuss their perspectives while ensuring that everyone concerned had similar main questions to allow for a comparison between interviews. The researcher proposed a set of initial questions for teachers before undertaking the interviews. Before taking a final decision on the interviews questions, the researcher discussed the advantages and disadvantages of different questions with his advisor.

The date and location of the interviews agreed upon before the interviews conducted. Before interviews, neither of the interviewees requested a copy of the interview questions. Each interviewee signed a form consent (see Appendix A) to participate in research activities prior to the interviews. It intended to ensure that they were informed of the participation and to inform them if they participate what they will be expected to do. Every teacher received the interview form during an initial visit. The researcher demonstrated to the participants that they could stop the interview at any time if they want and they don't have to answer the questions.

For the Quantitative Data Collocation

The researcher used Digital Citizenship Scale (DCS), developed by Choi et al. (2017) from The Ohio State University in USA. An approval obtained from the Author to use and modify the scale. "The DCS had a 26-item five-factor model was derived using an Exploratory Factor Analysis (EFA) and then cross-validated using a Confirmatory Factor Analysis (CFA)". "The DCS had respected strong reliability and positive evidence; it was supported by concept analysis of the digital citizenship, the review panel, the EFA and the CF". In fact, it is shown a converging relationship with Internet self-efficacy and a divergent relationship with anxiety about the Internet (Choi et al., 2017).

The DCS measures individuals' abilities, perceptions, and levels of participation in goal oriented and Internet based community at different conditions of complexity. This scale has important implications to educate students to become informed and active digital citizen (Choi et al., 2017). The scale reviewed by the researchers and discussed in the interview with the teachers modified to match the study questions based on the interview results.

Data Collection protocols

Interview Protocol:

The first method for collecting data was based on interviews with the teachers as open-ended questions and conversational interactions through Zoom due to the Coivd-19.. Through interviewing the teachers, data e collected about their perceptions of digital citizenship in distance learning technologies. Additional data collected to understand of the use of technologies integrated into distance learning and how can be used by teachers to teach students to be good digital citizens.

Teachers were invited to participate in the interview process which took 45-60 minutes. Interviews data collected online through zoom, and collected only by the researcher. The interviews data were transcribed and recorded in Google Docs. Member testing performed by teachers through reviewing transcription shared on Google Doc. Only the corresponding teachers who provided the feedback shared with individual Google Docs. They didn't share the results with other participants or colleagues until the research was completed.

Basic script of questions outlined in the interview protocol to provide the participant opportunity to engage and enlarge on related information throughout the interview. There was support for open discussion and moving through the cycle of thinking, without the researcher encouraging ideas. However, the researcher collected more information when the answers reflected the potential for more relevant information.

Digital Citizenship Scale protocol

The second method for data collection is Digital Citizenship Scale (DCS) developed by Choi, Glassman, & Cristol (2017) from The Ohio State University in USA (Appendix D). The scale reviewed by the researcher and discussed in the interview with the teachers, and it modified to match the study questions based on the interview results. The DCS Measures the perception and level of participation of students in digital world and Internet-based community under different conditions of complexity. The sample students requested to fill out the scale which is available on Google forms.

Validity and Reliability of the Data

The researcher obtained information through various methods for the triangulation of data in order to improve the reliability and credibility of the data and its interpretation. The triangulation of research data is the use of more than one approach to the research of a question. The objective is to increase confidence in the findings by confirming a proposal using two or more independent measures (Heale & Forbes, 2013).

A comprehensive explanation of how distance learning teachers understood the student's awareness and knowledge of digital citizenship collected by qualitative data. The level of distance learner efficacy of digital citizenship collected by quantitative data obtained on a digital citizen scale. Creswell (2003) indicates that the exploratory design included four steps: (First step) collection of qualitative data and analysis, (Second step) modify of quantitative tool (digital citizenship scale), (Third step) quantitative tool deliver, and (Fourth step) quantitative data analyse.

Based on the steps of Creswell (2003), the researcher first collected and analysed qualitative data to explore the teachers understood the student's awareness and knowledge of digital citizenship through the new generation of distance learning environment. Later, the researcher analysed the qualitative data and used the result to evaluate and modify the quantitative tool (digital citizenship scale). The students provided with the quantitative tool (survey as google form) in the third steps. Finally, the researcher investigated the perceptions of distance learning students about digital citizenship through a statistical analysis of quantitative data.

In this study, the main strategy the researcher used to ensure the validity is to provide rich, thick, detailed descriptions for a solid comparison framework for anyone interested in transferability (Merriam, 1988). In this study there are three techniques used to ensure reliability. First, the researcher provide a detailed report on the study's focus, the role of the researcher, the position and selection basis of the participants and the context in which the data collected (LeCompte & Goetz, 1984). Second, triangulation or multiple data collection and analysis methods used to reinforce both internal validity and reliability (Merriam, 1988). Third, in order to give a clear and accurate picture of the methods used in this study, data collection and analysis

strategies reported in detail. Moreover, an external auditor who has a good experience in mixed research methods examined all phases of this study.

The DCS created as a google form and administered online by the researcher, and the researcher invited the target students to participate in the DCS via an e-mail invitation after obtaining the approval of the two university administrators. The data collected online and any identification information about the participants removed after extracted. To avoid identity details, a questionnaire of each student was coded so that the name of the student did not appear on the results of the DCS. The codes of correspondent stored in a computer file which is secured by password.

Method

In order to address the study questions, a mixed-method approach used to explain the research issue effectively by integrating quantitative and qualitative queries (Creswell, 2014). The sequential explanatory design of the mixed methods consists of two distinct phases: quantitative and qualitative (Creswell & Plano Clark, 2007; Creswell, Plano Clark, Gutmann, & Hanson, 2003). In this design, the researcher first collected and analysed the qualitative data to gather information about distance learning teachers experience, opinion. Literature review conducted to enable researcher gathering information about diverse set of countries for which sufficient data exists concerning their concept of Digital Citizenship and related policies and practices. This was a vital in obtaining a rich understanding about the current situation of digital citizenship in distance learning and ability to modify and adapt the current digital citizenship scale. The second phase collected and analysed the quantitative data about the level of awareness and knowledge of distance learning students about digital citizenship.

The quantitative part of the study built on the qualitative phase in a way that the results from the two phases are integrated in the presentation and discussing part of the findings. The sequential explanation design in mixed methods allowed the research to fully understand distance learning teachers and students' thoughts and practices about digital citizenship by exploring their views in more depth (Creswell et al., 2007).

For Qualitative phase

Due to the unique context of this study, the initial qualitative stage of the study used a case study approach as the research method. This study carried out at Al-Quds Open University in Palestine and the University of Kyrenia (KU) in the Turkish Republic of Northern Cyprus in 2020. The researcher used the a case study approach in line with goal of studying opinions of teachers about students' development as digital citizens when engaged in digital learning environment offered by distance learning. Case study had the potential to provide rich knowledge in order to understand and analyse the process from within the specific context (Creswell 2013).

For Quantitative phase

According to the Muijs (2004), there are two main types of quantitative research design, experimental design and non-experimental designs. Experimental designs are sometimes referred to as 'the scientific method' because of their popularity in the scientific research they originated in (Muijs, 2004). In certain cases, non-experimental research is related to survey investigation and very popular in social science (Muijs, 2004).

There are three non experimental design types: descriptive design, correlation design, and causal-comparative design (Rovai et al, 2014).

The core aim of this study is to explore teachers 'and student perspectives on incorporation of digital citizenship into distance learning curricula and how the nine elements of digital citizenship can be leveraged to assist students in ethical and responsible use of the technology. In particular, cross-sectional design was used to collect data because it was one of the basic types of descriptive design, as the data was collected in a single point time.

Data Analysis Procedures

During the Qualitative phase

The study focused on understanding and exploring how teachers and experts can integrate technology into distance learning to cultivate digital citizenship. The analysis of the qualitative date followed the Grounded Theory, the 'grounded theory,' stems from its core premise: theory must be formulated through systematic empirical

data analysis (Smelser & Baltes, 2001). This approach consists of flexible techniques for guiding the collection of qualitative data, and especially the analysis of data. The power of the grounded theory approach lies in articulating: (a) rational steps to tackle data collection and analysis, (b) a way to correct errors and omissions and develop theoretical concepts, (c) methods to research basic social and psychological processes in natural settings, and (d) strategies to build middle-range theories (Smelser & Baltes, 2001).

The researcher's objective is to develop a "grounded" or data-based theory (Corbin & Strauss, 1990). The evidence used for developing the theory collected through interviews and a literature review examination. Open, axial, and selective coding used to analyze the data. "The study starts in grounded theory as soon as the first bit of data is collected" (Corbin & Strauss, 1990). This sequential collection and analysis of data continues until the researcher no longer gains new data from the sample. The researcher used open and axial coding techniques of grounded theory for this study to analyse the data collected during interviews (Strauss & Corbin, 1998).

Coding is the first step in the qualitative data analysis process. Instead of applying existing concepts to their data, grounded theorists build codes when analysing their data and describe what they see in the data in abbreviated terms (Charmaz, 2001). Coding lets the researcher begin to conceptualize which specific processes exist in the environment or condition of the study (Charmaz, 2001).

In order to begin open coding, the researchers performed microanalyses of interview data through the method of naming or labelling ideas (Irby, 2017). The researcher reviewed each interview and analysis line-by-line and added codes (phrases and words) to the margins of the paper to sentences in the text that would enable the researcher to understand and explain the perspectives of the teachers. Naming phenomena enable researchers to group same events and objects under common classification (Strauss & Corbin, 1998).

The researcher wrote notes during the labeling process, as suggested by Strauss & Corbin (1990) to help the researcher deepen his understanding of the concepts being described (Irby, 2017). Through such notes, the researcher were able to ask himself questions about the concepts that were presented think of the original interpretation

and flush other possible meanings and concepts that were not apparent in the data after the initial text examination (Strauss & Corbin, 1990).

The researcher started by grouping concepts into "categories, during this coding procedure. The categories that emerged contributed to better understanding of and explaining the study phenomenon (Irby, 2017). To identify the relationships between the open codes, the researcher used the axial code. The Axial code is the mechanism by which codes, categories and properties, are related to each other by a combination of inductive and deductive reasoning. The next step identified the core variable which contains all the data with selective coding. Then read the transcripts again and code any data relating to the core variable you found selectively. A code book has documented the development of these categories and the categories fully explained in the following chapter. The categories were developed by using a constant comparison method of data analysis. Constant comparison may be described as comparing incidents while searching for differences and similarities (Irby, 2017).

During the Quantitative phase

During the quantitative phase, to statistically determine the level of awareness and knowledge of students on digital citizenship in a distance learning environment, the study employed *Z*-test Technique for Different in Proportion which is the test for determining whether two proportions differ significantly. For students' awareness, it used students' responses from the following questions – to what extent digital citizenship brings positive social change, digital citizenship promotes ethical and moral use of technology, students' awareness of their health, and students belonging to an online community related to social or political issues. However, for students' knowledge, it employed based on the students' responses from the following questions – prior knowledge of digital citizenship, engaging in bullying behaviour in an online environment, deleting emails from suspicious senders, and digital citizenship promotes cybersecurity social responsibility. Furthermore, the questions on both the awareness and knowledge have three options as follows: strongly agreed, agreed, neutral, strongly disagreed, and disagreed. For the test set, strongly agreed and agreed merged as the same (i.e., the proportion of positive responses) while strongly disagreed and disagreed merged as the same (i.e., the proportion of the negative responses). Moreover, the calculated *Z*-score compared with the tabulated

Z-scores at 1%, 5%, and 10% levels of significance where the respected tabulated *Z*-scores are between -2.54 to 2.54, -1.96 to 1.96, and -1.645 to 1.645, i.e. at 1%, 5%, and 10%, respectively.

Ethical Considerations

During this study ethical issues we addressed. Both universities provided permission for the study to take place before started. The forms which include the study description, methods, procedures, participants and the status of research were filled out. Students, teachers, required to sign the form. The teachers invited to the interview and they was chosen on a voluntary basis and during the interview they confident and anonymous.

The consent forms identified that the participants granted the right and agree to take part of this study, and provided them information that their rights are protected. Moreover, they informed that they can withdraw from the study any time and not answer any questions if they chose not to continue.

The researcher used the literary review for developing the interview protocol, survey protocol triangulation. The pre-organized procedures in the literature reviews were used in order to guide the data collection and to ensure that all protocols are relevant to the study, the interview protocol, survey protocol were used to achieve triangulation.

CHAPTER IV

Findings and Discussion

Findings for Research Question I: What is the extent of awareness and knowledge of faculty members on digital citizenship in a distance learning environment?

The faculty awareness and knowledge of digital citizenship were assessed using the semi-structured interview that consisted of 11 queries. The faculty awareness is based on awareness with respect to the importance of digital citizenship in a distance learning environment and whether students are equipped to engage responsibly in digital citizenship in a distance learning environment. While the faculty knowledge is based on teaching digital citizenship in a distance learning environment, digital citizenship integration in a distance learning environment, and available resources and tools to incorporate in digital citizenship in a distance learning environment.

Faculty Awareness on Digital Citizenship in a distance learning environment

Faculty Awareness with Respect to the Importance of Digital Citizenship

The study's findings revealed that most of the Al-Quds Open University's (QOU) interviewed faculty members believed that digital citizenship is very important; where one faculty member stated that it is only important in assessment and evaluation, seven faculty members agreed that it is important in increasing students' knowledge of internet use as well as their privacy and protection, two faculty members believe that it is important to improve students' behavior and skills in a digital environment, while one faculty member believes it is important to enhance social and cultural perspectives on technology as well as internet usage. The same finding was at the University of Kyrenia (KU), where all faculty members agreed that digital citizenship is important for distance learning students, four of them stating that it is important for effective education and helping students for better learning through distance learning, while some faculty members added that it is critical for proper information utilization, and contributes to enhancing the country’s economy.

Faculty Awareness on Whether Students are Equipped to Engage Responsibly in Digital Citizenship

Most faculty members from Al-Quds Open University (QOU) stated that the students are not equipped with digital citizenship and do not even know or be aware. On the other side, there was a difference in faculty members' responses from the University of Kyrenia (KU). Three of them stated that students are equipped with technological skills, while one states that it depends on the geographical and infrastructure of the area where the students live. Other faculty members also stated the students are well-equipped because they use information technology in distance learning. Four faculty members claimed that students were not equipped.

Faculty Knowledge on Digital Citizenship in a Distance Learning Environment

The study's findings revealed that faculty members from the Al-Quds Open University (QOU) have differing perspectives about the definition of the digital citizenship concept. One faculty member defined student knowledge of Digital Citizenship based on their technical skills, three faculty members based on the students' digital resource ethics, and two faculty members based on the students' knowledge of cybercrime; however, one faculty member defined it based on student's engagement and contributions in a digital environment, while one faculty member defined it based on the student use of e-learning tools and resources. On the other hand, all faculty members at the University of Kyrenia (KU) defined the students' digital citizenship knowledge based on their computer skills.

Faculty Knowledge on Teaching Digital Citizenship in a Distance Learning Environment

According to the study results, three faculty members at Al-Quds Open University (QOU) suggested that distance learning should focus on teaching digital skills and behavior. One faculty member added digital etiquette to be considered, and another faculty member added teaching cybercrime. Moreover, another faculty member suggested that teaching methods include retrieving, analyzing, and evaluating the information. University of Kyrenia (KU) faculty members emphasized that we should focus on the skills needed for students to use technology

more efficiently and ethically in the distance learning environment. Five of them suggested focusing on digital safety and ethics.

Faculty Knowledge on Digital Citizenship Integration in a Distance Learning Environment

According to the study results, faculty members at Al-Quds Open University (QOU) believe integrating digital citizenship skills into distance learning curricula is important and necessary. Three of them stated that it could be integrated as part of the courses offered. Three faculty members indicated that it could be integrated by developing a specialized course for digital citizenship. Two faculty members indicated that integration can be done by adding a chapter in the essential courses. On the other hand, the Faculty members from Kyrenia University (KU) have stated that it is important and needed to integrate digital citizenship into the distance learning curriculum, and all of them agreed that a specialized digital citizenship course should be developed.

Faculty Knowledge on Available Resources and Tools to Incorporate in Digital Citizenship in a Distance Learning Environment

The study findings revealed that the faculty members at Al-Quds Open University (QOU) had proposed various tools and resources that can be used to enhance the student's digital citizenship skills in the distance learning environment. Most of them suggested tools such as Moodle, Zoom, and University TV Channel. Moreover, two faculty members added that the social media platforms WhatsApp and YouTube can be used for this purpose. On the other hand, the interview results with faculty at the University of Kyrenia (KU) reveal that three interviewed faculty members suggested distance learning applications and tools. Other faculty members suggested the available Digital Citizenship resources, such as the resources and materials created by the Global Digital Citizen Foundation. Two faculty members had no idea, while one faculty member stated that virtual classroom applications and digital content could be done.

Findings for Research Question II: What is the levels of awareness and knowledge of students on digital citizenship in a distance learning environment?

With respect to the students' awareness of digital citizenship, the questions asked include whether digital citizenship brings positive social change, digital citizenship promotes ethical and moral use of technology, students' awareness of their health, and whether students belong to an online community related to social or political issues. Nonetheless, let us first start with the presentation of the demographic information of the respondents as well as the reliability and validity test of the survey data collected, and then present the findings with respect to the levels of awareness and knowledge of students on digital citizenship in a distance learning environment.

Demographic Information of the Respondents

The survey about student awareness, knowledge of digital citizenship was sent to student in two universities. The University of Kyrenia (KU) in the Turkish Republic of Northern Cyprus and Al-Quds Open university (QOU) in the Palestian territorities. The total number of sample is 812 students where 558 students (68.7) are from the Al-Quds Open University (QOU), and 254 students (31.3) from the University of Kyrenia (KU).

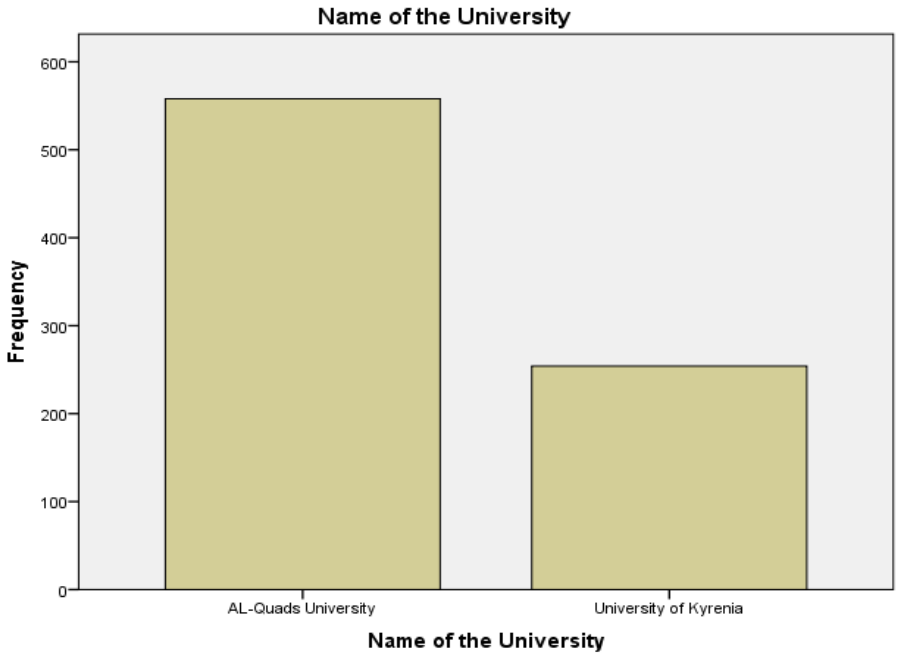
Table 2. Respondents by University

		Frequency	Percent	Valid Percent	Cumulative Percent
Respondents by University	QOU	558	68.7	68.7	68.7
	KU	254	31.3	31.3	100.0
	Total	812	100.0	100.0	

Table 2 shows the number of students responded to the survey from each university and percentage of students responded to the survey. From Al-Quds Open university (QOU) 558 students responded to the survey which respresent 68.7% of the population compare to 254 respondents from The University of Kyrenia (KU)

which represents 31.3% of the population. However, the results in Table 2 were further presented in figure 1:

Figure 1: Bar Graph of Respondents Based on University



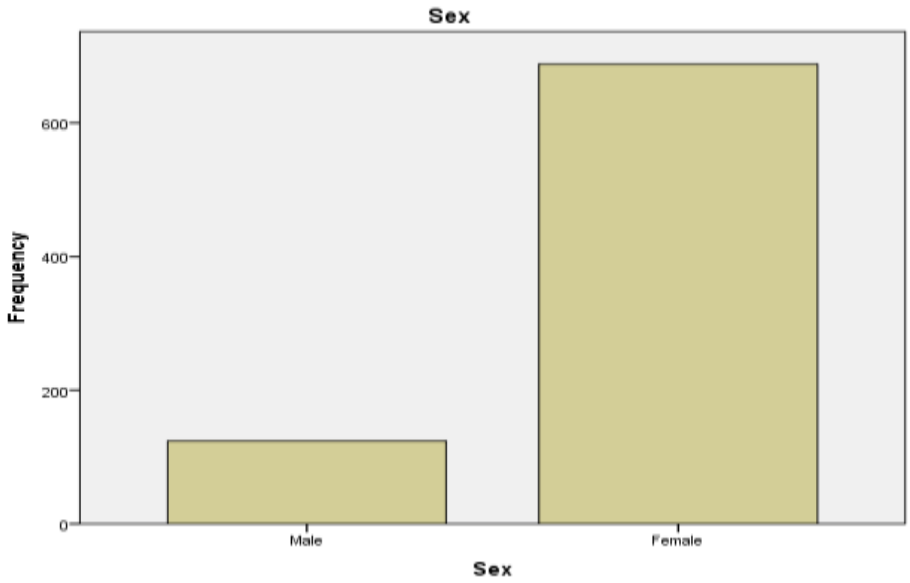
Furthermore, the sample consists of (549, 67.6%) females and (263, 32.4%) males. Moreover, the enrolled sample was varied in age groups, where 561 (69.1%) were between 18-22 years old, while 127 (15.6%) were more than 26 years old, and the remaining of the sample 124 (15.3%) belonged to age group 23-25 years old as shown in Table 3.

Table 3. Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	124	15.3	15.3	15.3
	Female	688	84.7	84.7	100.0
	Total	812	100.0	100.0	

This gender result was attributed to the fact that at Al-Quds Open University (QOU), the majority of the students are females, hence when the study was conducted it became normal to get a large number of respondents coming from there. These results are also presented in a bar graph in Figure 2.

Figure 2: Bar Graph of Respondents Based on Gender of Respondents

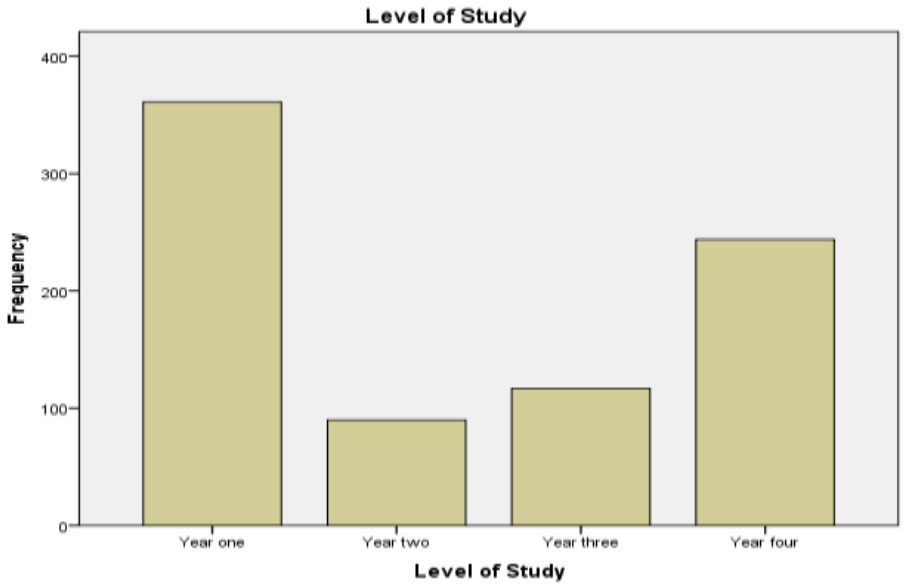


Moreover, in term of the education level, Table 4 shows the level of study. The results from the survey show that 44.5% of the respondents were first-year students (freshmans), 11.1% were second year (juniors), 14.1% were in their third year and the other 30% of the students were already in their fourth year of study (seniors). The frequency results with respect to gender were thus presented in Figure 3.

Table 4. Level of Study

		Frequency	Percent
Level of Study	Year one	361	44.5
	Year two	90	11.1
	Year three	117	14.4
	Year four	244	30.0
	Total	812	100.0

Figure 3: Bar graph of Respondents Based on Level of Study



The Al-Quds Open University (QOU) Students' Responses on Awareness and Knowledge

The students' responses from the Al-Quds Open University (QOU) show that 557 students from the Al-Quds Open University (QOU) answered the 25 questions (418, 75.0%) females and (139, 25.0%) males. This can be attributed to the fact that most students in Al-Quds Open University (QOU) are females. Hence, when the study was conducted, it became normal to get many respondents from a female. The enrolled sample was varied in age groups, (353, 63.4%) out of the participants from Al-Quds Open University (QOU) were between 18-22 years old, while (108, 19.4%) were more than 26 years old, the remaining of the sample (96, 17.2%) belonged to age group 23-25 years old. However, regarding the study level of the sample, out of the enrolled sample, (120, 21.5%) were in the first year of study, and (82, 14.7%) were in the second year of study. While (114, 20.5%) and (241, 43.3%) were in the third and fourth year of study.

Table 5 shows the students response with respect to the 25 research questions in which the values outside the brackets are the number of students in each case, the values in parenthesis is percentages/proportions, while the boldness symbolized the majority. From the table, majority of the students strongly agreed that they do not engage in bullying behavior in an online environment. For all the remaining twenty-

four research questions, the students agreed that they do respect other people in the online environment; responsible for their own online activities; using the internet to access more information about domestic and international issues; aware of the order of others in the online environment; obeying the order in the environment; using digital technology to achieve various goals; immediately manage unnecessary files and programs on their computers; expressing their opinions online and learn and share their expertise; purchasing legitimate goods during e-commerce activities; aware of my health problems caused by the abuse of digital devices such as addiction and stress; establishing their beliefs and values about the digital environment; immediately deleting emails from suspicious senders; presenting their feelings, thoughts, and opinions while posting text, photos, music, or videos online; always check the price on the Internet when purchasing goods; work with others online to solve social or my university problems; active in social network services such as Facebook and Twitter; having prior knowledge that digital citizenship is to engage in appropriate and responsible behavior when using technology; digital citizenship brings positive social change; digital citizenship promotes ethical and moral use of technology in distance learning; digital citizenship promotes cyber-security and social responsibility in distance learning; instruction in digital citizenship should be included in existing distance learning curricula; purchasing legitimate goods during e-commerce activities, belonging to an online community related to social or political issues, and taking care of the computer immediately if something goes wrong.

Table 5. The Al-Quds Open University (QOU) Participants' Responses on Awareness and Knowledge

Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I respect other people in the online environment.	250 (44.9)	**268 (48.1)**	33 (5.9)	3 (0.5)	3 (0.5)
I do not engage in bullying behavior in an online environment.	**253 (45.4)**	170 (30.5)	46 (8.3)	30 (5.4)	58 (10.4)
I am responsible for my online activities	254 (45.6)	**279 (50.1)**	15 (2.7)	6 (1.1)	3 (0.5)
I am aware of the order of others in the online environment.	193 (34.6)	**322 (57.8)**	32 (5.7)	5 (0.9)	5 (0.9)
I obey the order in the environment.	152 (27.3)	**350 (62.8)**	45 (8.1)	4 (0.7)	6 (1.1)
I use digital technology to achieve various goals.	155 (27.8)	**286 (51.3)**	91 (16.3)	21 (3.8)	4 (0.7)
I immediately manage unnecessary files and programs on my computers.	93 (16.7)	**267 (47.9)**	130 (23.3)	59 (106)	8 (1.4)
I use the Internet to access more information about domestic and international issues.	175 (31.4)	**309 (55.5)**	54 (9.7)	13 (2.3)	6 (1.1)
I express my opinions online and learn and share my expertise.	112 (20.1)	**301 (54.0)**	101 (18.1)	37 (6.6)	6 (1.1)
I purchase legitimate goods during e-commerce activities.	59 (10.6)	**194 (34.8)**	133 (23.9)	124 (22.3)	47 (8.4)
I am aware of my health problems caused by the abuse of digital devices, such as addiction and stress.	191 (34.3)	**278 (49.9)**	42 (7.5)	36 (6.5)	10 (1.8)
I establish my beliefs and values about the digital environment.	50 (9.0)	**238 (42.7)**	180 (32.3)	78 (14.0)	11 (2.0)
I immediately delete emails from suspicious senders.	206 (37.0)	**231 (41.5)**	70 (12.6)	38 (6.8)	12 (2.2)
I present my feelings, thoughts, and opinions while posting text, photos, music, or videos online.	87 (15.6)	**230 (41.3)**	140 (25.1)	71 (12.7)	29 (5.2)
I belong to an online community related to social or political issues.	70 (12.6)	**193 (34.6)**	169 (30.3)	80 (14.4)	45 (8.1)
I always check the price on the Internet when purchasing goods.	119 (21.4)	**240 (43.1)**	125 (22.4)	52 (9.3)	21 (3.8)
I work with others online to solve social or my university problems.	52 (9.3)	**221 (39.7)**	177 (31.8)	80 (14.4)	27 (4.8)
I take care of the computer immediately if something goes wrong.	166 (29.8)	**294 (52.8)**	64 (11.5)	29 (5.2)	4 (0.7)
I am active in social network services such as Facebook and Twitter.	90 (16.2)	**203 (36.4)**	144 (25.9)	95 (17.1)	25 (4.5)
I have prior knowledge that Digital citizenship is to engage in appropriate and responsible behavior when using technology.	59 (10.6)	**232 (41.7)**	194 (34.8)	62 (11.1)	10 (1.8)
Digital citizenship brings positive social change.	58 (10.4)	**277 (49.7)**	183 (32.9)	31 (5.6)	8 (1.4)
Digital citizenship promotes ethical and moral use of technology in distance learning.	57 (10.2)	**313 (56.2)**	146 (26.2)	29 (5.2)	12 (2.2)
Digital citizenship promotes cyber-security and social responsibility in distance learning.	76 (13.6)	**297 (53.3)**	145 (26.0)	29 (5.2)	10 (1.8)
Instruction in digital citizenship should be included in existing distance learning curricula.	99 (17.8)	**293 (52.6)**	115 (20.6)	36 (6.5)	14 (2.5)

Source: Researchers' Computation

Note: the values in parenthesis are percentages, while the boldness symbolized the majority.

The University of Kyrenia (UK) Students' Responses on Awareness and Knowledge

The students' responses from the University of Kyrenia (KU) show that 255 students from the University of Kyrenia (KU) answered the 25 questions (131, 51.4%) females and (124, 48.6%) males and thus approximately equal, the enrolled sample was varied in age groups (208, 81.6%) out of the participants from University of Kyrenia (KU) were between 18-22 years old, while (19, 7.5%) were more than 26 years old, the remaining of the sample (28, 11.0%) belonged to age group 23-25 years old. However, with respect to the study level of the sample, the majority of the respondents were in the first year of study (241, 94.5%) and (8, 3.1%) were in the second year of study. While only (4, 1.6%) and (2, 0.8%) were in the third and fourth year of study, respectively.

Table 6 shows the students response with respect to the 25 research questions where the values outside the brackets are the number of students in each case, the values in parenthesis are percentages/proportions, while the boldness symbolized the majority. From the table, majority of the students strongly agreed with that they do respect other people in the online environment; do not engage in bullying behavior in an online environment; responsible for their own online activities; and using the internet to access more information about domestic and international issues.

While on statements such as aware of the order of others in the online environment; obeying the order in the environment; using digital technology to achieve various goals; immediately manage unnecessary files and programs on their computers; expressing their opinions online and learn and share their expertise; purchasing legitimate goods during e-commerce activities; aware of my health problems caused by the abuse of digital devices such as addiction and stress; establishing their beliefs and values about the digital environment; immediately deleting emails from suspicious senders; presenting their feelings, thoughts, and opinions while posting text, photos, music, or videos online; always check the price on the Internet when purchasing goods; work with others online to solve social or my university problems; active in social network services such as Facebook and Twitter; having prior knowledge that digital citizenship is to engage in appropriate and responsible behavior when using technology; digital citizenship brings positive social

change, digital citizenship promotes ethical and moral use of technology in distance learning, digital citizenship promotes cyber-security and social responsibility in distance learning, and instruction in digital citizenship should be included in existing distance learning curricula, the majority of the students do agreed with the statements.

But majority of the students are neutral with the statements on whether they purchase legitimate goods during e-commerce activities, belonging to an online community related to social or political issues, and taking care of the computer immediately if something goes wrong.

Table 6. The University Of Kyrenia (UK) Students' Responses on Awareness and Knowledge

Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I respect other people in the online environment.	**145 (56.9)**	80 (31.4)	9 (3.5)	6 (2.4)	15 (5.9)
I do not engage in bullying behavior in an online environment.	**183 (71.8)**	49 (19.2)	3 (1.2)	8 (3.1)	12 (4.7)
I am responsible for my own online activities	**119 (46.7)**	105 (41.2)	17 (6.7)	7 (2.7)	7 (2.7)
I am aware of the order of others in the online environment.	93 (36.5)	**107 (42.0)**	37 (14.5)	13 (5.1)	5 (2.0)
I obey the order in the environment.	68 (26.7)	**115 (45.1)**	49 (19.2)	14 (5.5)	9 (3.5)
I use digital technology to achieve various goals.	112 (43.9)	**115 (45.1)**	14 (5.5)	7 (2.7)	7 (2.7)
I immediately manage unnecessary files and programs on my computers.	49 (19.2)	**112 (43.9)**	63 (24.7)	22 (8.6)	9 (3.5)
I use the Internet to access more information about domestic and international issues.	**129 (50.6)**	94 (36.9)	19 (7.5)	6 (2.4)	7 (2.7)
I express my opinions online and learn and share my expertise.	58 (22.7)	**116 (45.5)**	62 (24.3)	10 (3.9)	9 (3.5)
I purchase legitimate goods during e-commerce activities.	53 (20.8)	69 (27.1)	**70 (27.5)**	42 (16.5)	21 (8.2)
I am aware of my health problems caused by the abuse of digital devices, such as addiction and stress.	57 (22.4)	**121 (47.5)**	50 (19.6)	19 (7.5)	8 (3.1)
I establish my beliefs and values about the digital environment.	42 (16.5)	**125 (49.0)**	63 (24.7)	18 (7.1)	7 (2.7)
I immediately delete emails from suspicious senders.	58 (22.7)	**90 (35.5)**	76 (29.8)	20 (7.8)	11 (4.3)
I present my feelings, thoughts, and opinions while posting text, photos, music, or videos online.	48 (18.8)	**128 (50.2)**	56 (22.0)	15 (5.9)	8 (3.1)
I belong to an online community related to social or political issues.	23 (9.0)	72 (28.2)	**81 (31.8)**	50 (19.6)	29 (11.4)
I always check the price on the Internet when purchasing goods.	75 (29.4)	**102 (40.0)**	45 (17.6)	21 (8.2)	12 (4.7)
I work with others online to solve social or my university problems.	47 (18.4)	**96 (37.6)**	78 (30.6)	26 (10.2)	8 (3.1)

I take care of the computer immediately if something goes wrong.	37 (14.5)	76 (29.8)	**79 (31.0)**	47 (18.4)	16 (6.3)	
I am active in social network services such as Facebook and Twitter.	50 (19.6)	**109 (42.7)**	44 (17.3)	37 (14.5)	15 (5.9)	
I have prior knowledge that Digital citizenship is to engage in appropriate and responsible behavior when using technology.	64 (25.1)	**124 (48.6)**	46 (18.0)	15 (5.9)	6 (2.4)	
Digital citizenship brings positive social change.	53 (20.8)	**131 (51.4)**	52 (20.4)	13 (5.1)	(2.4)	6
Digital citizenship promotes ethical and moral use of technology in distance learning.	64 (25.1)	**113 (44.3)**	66 (25.9)	6 (2.4)	6 (2.4)	
Digital citizenship promotes cyber-security and social responsibility in distance learning.	59 (23.1)	**118 (46.3)**	61 (23.9)	10 (3.9)	7 (2.7)	
Instruction in digital citizenship should be included in existing distance learning curricula.	52 (20.4)	**104 (40.8)**	72 (28.2)	15 (5.9)	12 (4.7)	

Source: Researchers' Computation

Note: the values in parenthesis are percentages, while the boldness symbolized the majority.

Reliability and Validity Analysis

In order to determine the reliability of the constructs employed in this study, Cronbach's Alpha method was used. The results from the test revealed an Alpha value of 0.878 or 87.8 percent, a value which is above the standard recommended value of at least 60%. Therefore, the construct used to design the instrument deemed reliable the purpose of answering the research questions.

Students Awareness of Digital Citizenship

This part presents the results of students' awareness of digital citizenship with respect to the questions including whether digital citizenship brings positive social change, digital citizenship promotes ethical and moral use of technology, students' awareness of their health, and students belonging to an online community related to social or political issues.

Students Awareness on Whether Digital Citizenship Brings Positive Social Change

Figure 4: Digital Citizenship Brings Positive Social Change

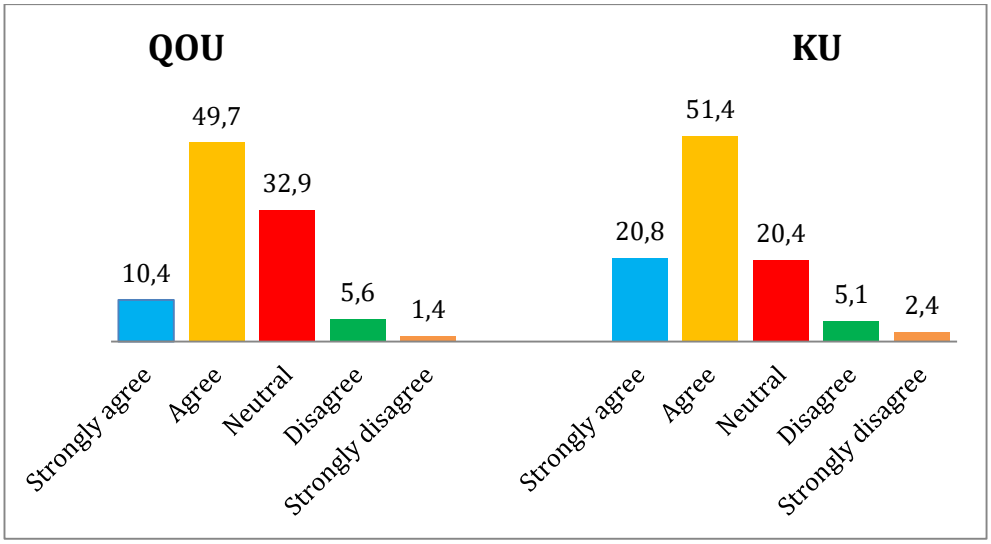


Figure 4 displays the results of whether digital citizenship brings positive social change. According to the figure, students from both higher academic institutions agreed that digital citizenship brings positive social change. The results are encouraging and indicate that students in the two higher academic institutions understand the issues that need to be tackled by adopting digital citizenship as part of the curriculum.

Table 7. Z-Test on Whether Digital Citizenship Brings Positive Social Change

Students awareness with respect to whether digital citizenship brings positive social change in QOU	Z-score = 4.021*
Students awareness with respect to whether digital citizenship brings positive social change to KU	Z-score = 1.948**
Comparing students awareness with respect to whether digital citizenship brings positive social change between QOU and KU	Z-score = 2.562*

Source: Researchers' Computation

The Asterisk * and ** denote significance at 1% and 5% levels, respectively.

From Table 7, the results are encouraging. They indicate that students in QOU and KU understand that digital citizenship brings positive social change at 5% and 1% levels, respectively. When comparing the level of awareness in the two higher institutions, the awareness of KU is greater than that of QOU at 1% level.

Students Awareness on whether Digital Citizenship Promotes Ethical and Moral Use of Technology

Figure 5: Digital Citizenship Promotes Ethical and Moral Use of Technology

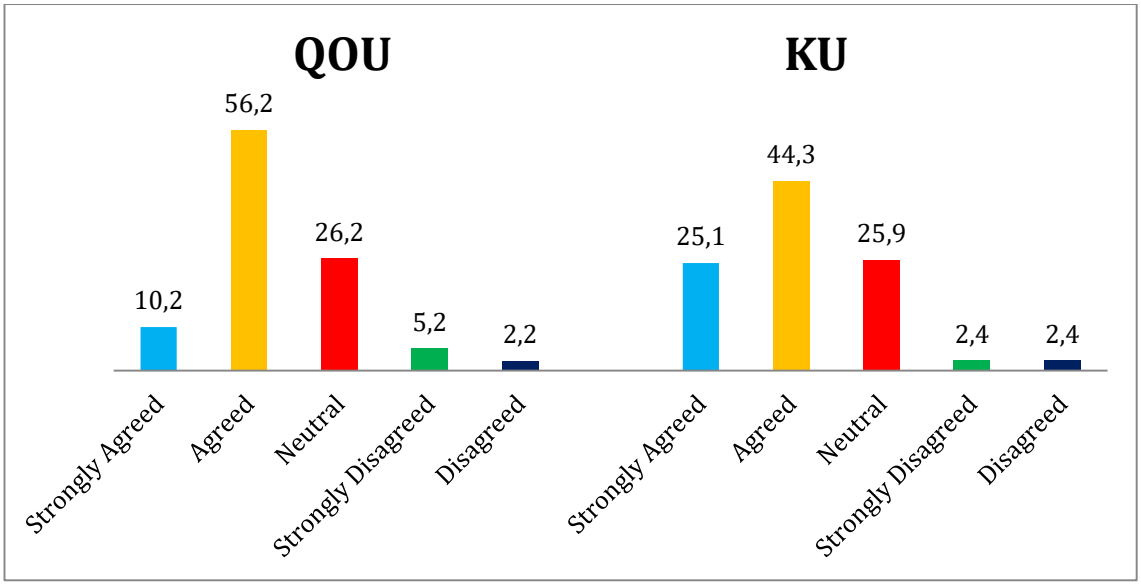


Figure 2 reports the results of the question of whether digital citizenship promotes ethical and moral use of technology in distance learning, the students from

both universities are aware of the importance of this area. This indicates that even though that the students from both universities are skilled in technology use, their awareness may not inappropriate use of technology and for unethical ways such as cheating an assignment. This supports the important of integrating digital citizenship into distance education curriculum.

Table 8. Z-Test on Whether Digital Citizenship Promotes Ethical and Moral Use of Technology in Distance Learning

Students awareness with respect to whether digital citizenship promotes ethical and moral use of technology in QOU	Z-score = 1.677***
Students awareness with respect to whether digital citizenship promotes ethical and moral use of technology in KU	Z-score = 3.013*
Comparing students awareness with respect to whether digital citizenship promotes ethical and moral use of technology between QOU and KU	Z-score = 2.201**

Source: Researchers' Computation

The Asterisk *, **, and *** denote significance at 1%, 5%, and 10% level, respectively.

From Table 8, the results indicate that students from QOU and KU are aware of the importance of this area, which represents the student's awareness and recognition of the importance of digital citizenship in promoting ethical and moral use of technology at 1% and 10% levels respectively, and when comparing the level of awareness in the two institutions, it can be observed that the awareness of KU is greater than that of QOU at 5% level.

Students Awareness on their Health

Figure 6: Students Awareness of their Health

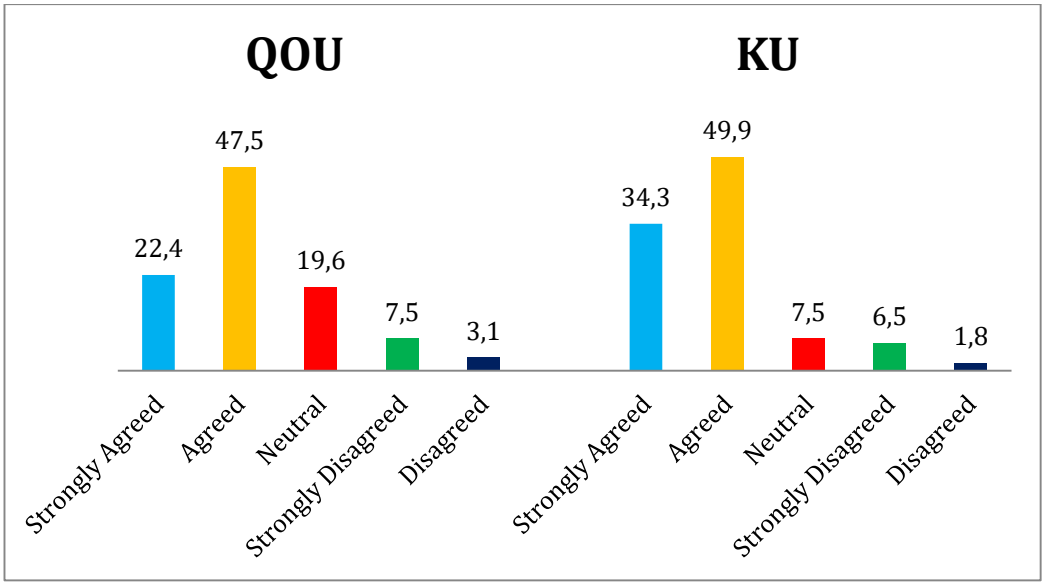


Figure 3: Students awareness of their health
Source: Researcher's Computation

Figure 6 portrays the results of whether the students are aware of their health problems caused by the abuse of digital devices, which means internet addiction, stress, and depression caused by the excessive use of technology that can be an issue affecting people's mental health. Overall results have shown that students from the two higher academic institutions are aware of the issues that might affect their health pertaining to the excessive use of technology. Results are comparable from the two institutions indicating a higher level of agreement that technology affects people's mental health. However, the student needs to learn how to avoid addiction, stress and depression by including this in the distance education curriculum.

Table 9. Z-Test on Whether the Students are Aware of their Health Problems Caused by the Abuse of Digital Devices

Students awareness with respect to whether the students are aware of their health problems caused by the abuse of digital devices in QOU	Z-score = 5.263*
Students awareness with respect to whether the students are aware of their health problems caused by the abuse of digital devices in KU	Z-score = 4.112*
Comparing students awareness with respect to whether the students are aware of their health problems caused by the abuse of digital devices between QOU and KU	Z-score = 3.925*

The Asterisk * denotes significance at 1% level.

From Table 9, the results indicate that students from QOU and KU are aware of the issues that might affect their health pertaining to the excessive use of technology both at 1% level and when compared from the two institutions, it is evidenced that the awareness of QOU is higher than that of KU.

Students Awareness on Whether They Belonging to an Online Community Related to Social or Political Issues

Figure 6: Belonging to an Online Community Related to Social or Political Issues

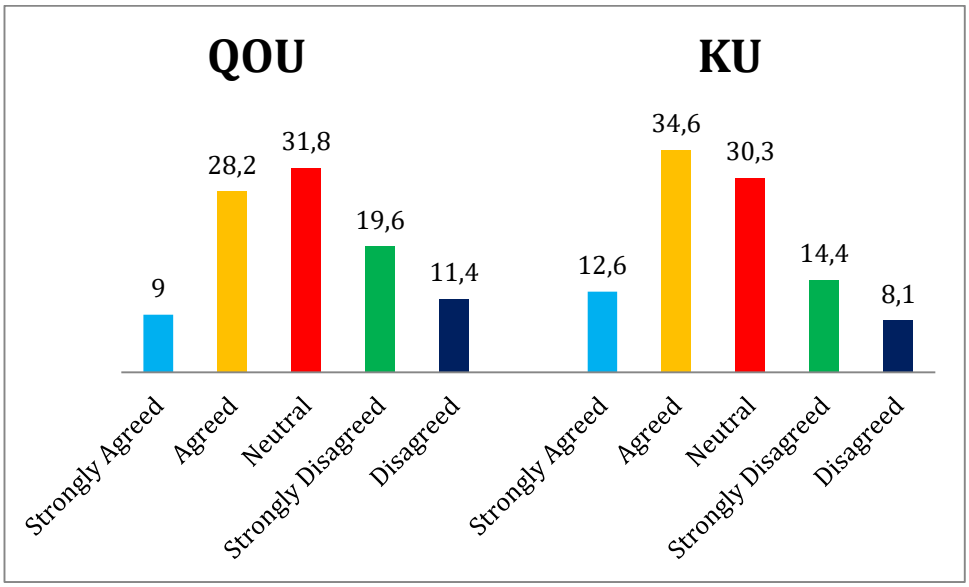


Figure 6 displays the results of whether students belong to an online community related to social or political issues. This indicates that the majority of students from both institutions not belonging to online communities related to social or political issues, which may due to a lack of digital rights and law in both countries, where students should be able to use any type of technology and have the freedom to express themselves. So, student's participation in online communities and their behavior in cyberspace have an impact on others.

Table 10. Z-Test on Whether Students Belong to an Online Community Related to Social or Political Issues

Students' awareness with respect to whether students belong to an online community related to social or political issues in QOU	Z-score = 2.872*
Students' awareness with respect to whether students belong to an online community related to social or political issues in KU	Z-score = 1.993**
Comparing students awareness with respect to whether students belong to an online community related to social or political issues between QOU and KU	Z-score = 6.491*

The Asterisk * and ** denote significance at 1% and 5% levels, respectively.

Table 10, shows that students from both institutions, QOU and KU do not belong to certain online communities related to social or political issues. This could be attributed to lack of digital rights and digital regulations, where students use of technology and the freedom to express themselves is rate at 5% and 1% levels respectively. However, when comparing the level of awareness in the two institutions on whether students belong to an online community related to social or political issues, the awareness of QOU is greater than that of KU at 1% level.

Table 10. ***Z-Test on Students' Level of Awareness on Digital Citizenship in Distance Learning Environment***

Students' level of awareness on digital citizenship in distance learning environment (it sums all the sub-indices of students' level of awareness on digital citizenship in distance learning environment) in QOU	Z-score = 7.234*
Students' level of awareness on digital citizenship in distance learning environment (it sums all the sub-indices of students' level of awareness on digital citizenship in distance learning environment) in KU	Z-score = 3.563*
Comparing students' level of awareness on digital citizenship in distance learning environments (it sums all the sub-indices of students' level of awareness on digital citizenship in distance learning environment) between QOU and KU.	Z-score = 4.62*

The Asterisk * denotes significance at 1% level.

Table 11 shows that students from QOU and KU are aware of digital citizenship in distance learning environment in terms of whether digital citizenship brings positive social changes, promoting ethical and moral use of technology, students' awareness of their health in excessive use of digital technology, and students not belonging to an online community related to social or political issues, which may be due to a lack of digital rights, digital security and law in both countries both at 1% level. However, when comparing the level of awareness in the two institutions, KU is greater than that of QOU at 1% level.

Students Knowledge of Digital Citizenship

This part presents the results of students' knowledge of digital citizenship with respect to the questions including whether prior knowledge of digital citizenship, engage in bullying behaviour in an online environment, delete emails from suspicious senders, digital citizenship promotes cybersecurity and social responsibility. Starting with the results of whether prior knowledge of digital citizenship, the findings are presented in Figure 7.

Students Knowledge on Whether Prior Knowledge on Digital Citizenship is Important in Engaging in Appropriate and Responsible Behavior Using Technology

Figure 7: Prior Knowledge on Digital Citizenship is Important in Engaging in Appropriate and Responsible Behavior Using Technology

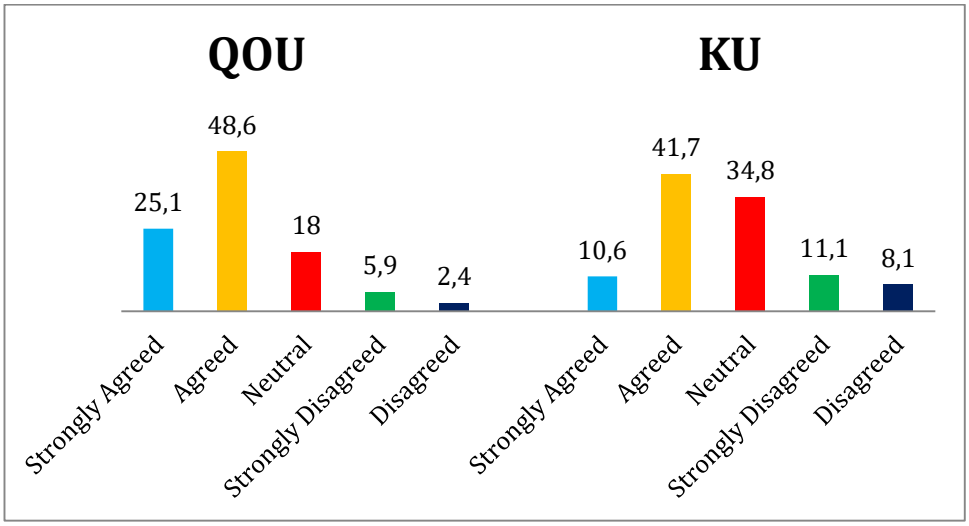


Figure 7 shows the results to the question about prior knowledge that digital citizenship is important in engaging in appropriate and responsible behavior using technology in both QOU and KU. The low strongly agree and higher disagree from Al-Quds Open University (QOU) indicated that the student from University of Kyrenia (KU) has more knowledge of the importance of digital citizenship. This may attributed to Palestine's lack of technical resources and poor internet access. In addition to the social norms and traditions that prevent women from participating in online activities.

Table 12. Z-Test on Students' Level of Prior Knowledge of Digital Citizenship in Distance Learning Environment

Students' level of prior knowledge of digital citizenship in QOU	Z-score = 3.562*
Students' level of prior knowledge of digital citizenship in KU	Z-score = 2.341*
Comparing students' level of prior knowledge of digital citizenship between QOU and KU.	Z-score = 7.668*

The Asterisk * denotes significance at 1% level.

Table 12 illustrates the results of Students' level of prior knowledge of digital citizenship in both QOU and KU. The responses presented in Figure 5 indicate low strongly agree and higher disagree from QOU but high in KU. Therefore, the results in Table 12 can be read as students from QOU have less prior knowledge of digital citizenship at 1% level, which may be attributed to Palestine's lack of technical resources and poor internet access. In addition to the social norms and traditions that prevent women from participating in online activities. However, when comparing the level of knowledge in the two institutions, it can be observed that of KU is higher than that of QOU at 1% level.

Students Knowledge on Whether Prior Knowledge on Digital Citizenship is Important in Engaging in Appropriate and Responsible Behavior Using Technology

Figure 8: Not Participating in Unacceptable Activities in Cyberspace Such as Bullying

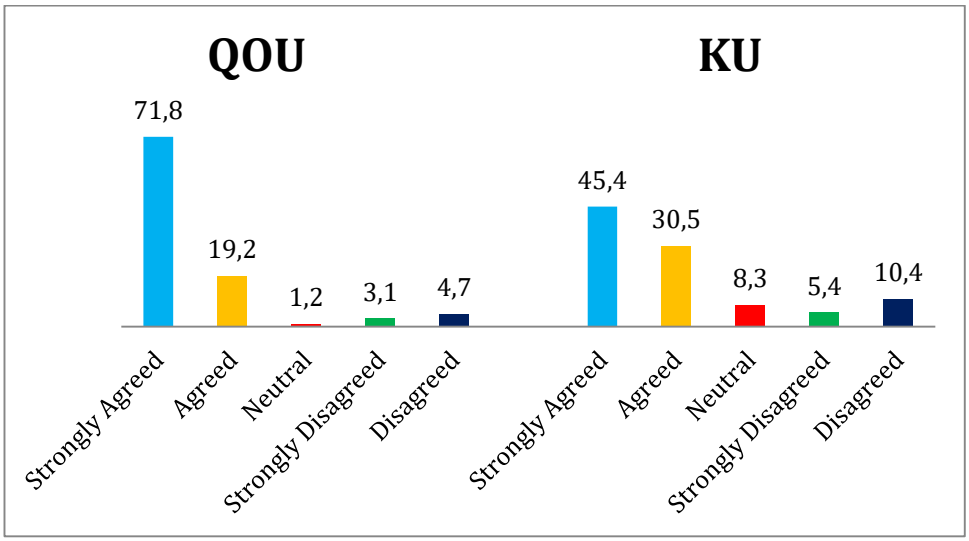


Figure 8 reports the degree by which students view the importance of not participating in unacceptable activities in cyberspace such as bullying indicates their understanding of digital citizenship. On the question of not engaging in bullying activities in cyberspace, Figure 6 shows the results from the two universities. The big difference in percentage between the two universities is interesting. The high percentage 71.8% strongly agree at the University of Kyrenia (KU) compared to 45.4% strongly agree at the Al-Quds Open University (QOU) indicates a deeper understanding of digital citizenship and its importance in dealing with such issues. Furthermore, this results support the result that KU students have a higher degree of digital citizenship knowledge.

Table 13. Z-Test on Students' Level of Knowledge on Engage in Bullying Behaviour in an Online Environment

Students' level of knowledge on engage in bullying behaviour in an online environment in QOU	Z-score = 2.447**
Students' level of knowledge on engage in bullying behaviour in an online environment in KU	Z-score = 5.567*
Comparing students' level of knowledge on engaging in bullying behaviour in an online environment between QOU and KU.	Z-score = 4.897*

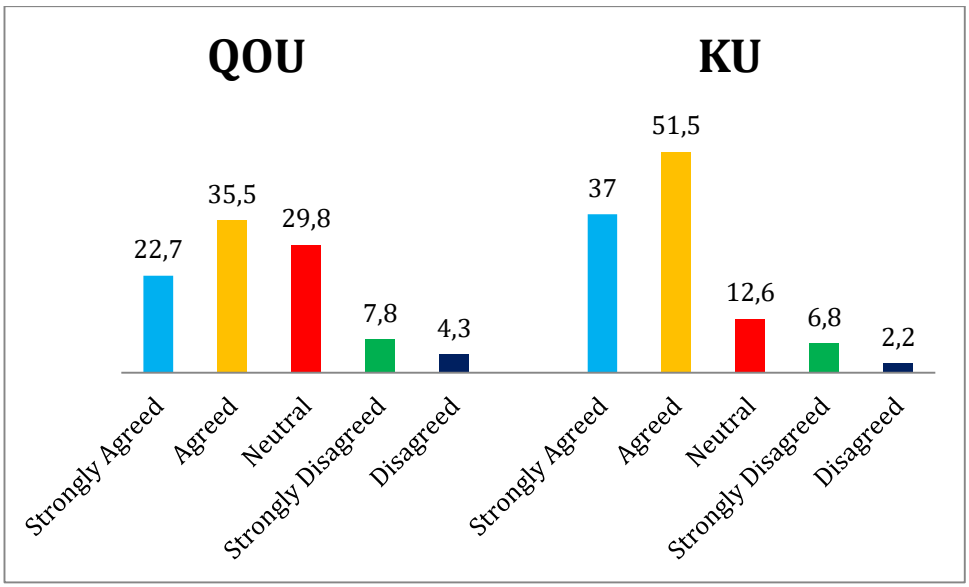
Source: Researchers' Computation

The Asterisk * and ** denote significance at 1% and 5% levels, respectively.

Table 13 shows the results on the question of whether not engaging in bullying activities in cyberspace wherefrom the responses presented in Figure 6, the degree by which students view the importance of not participating in unacceptable activities in cyberspace, such as bullying, indicates their understanding of digital citizenship in both QOU and KU, and this is statistical significance at 1% and 5% levels respectively. However, when comparing the level of knowledge in the two institutions, KU is greater than that of QOU at 1% level.

Student Knowledge of Dealing with Potential Problems

Figure 8: Student Knowledge of Dealing with Potential Problems



Student knowledge of dealing with potential problems such as spam and malicious email is also investigated. In dealing with suspicious emails, Figure 8 shows the student's understanding of email fishing and what they need to do to avoid potential problems. The results show that Al-Quds Open University (QOU) students have a better understanding of the danger of fishing and malicious. This may be due to the fact that the majority of QOU respondents are older and females who treating with more responsibilities with these issues.

Table 14. Z-Test on Students' Level of Knowledge on Deleting Emails from Suspicious Senders in Distance Learning Environment

Students' level of knowledge on deleting emails from suspicious senders in QOU	Z-score = 2.101**
Students' level of knowledge on deleting emails from suspicious senders in KU	Z-score = 1.693***
Comparing students' level of knowledge on deleting emails from suspicious senders between QOU and KU.	Z-score = 2.607*

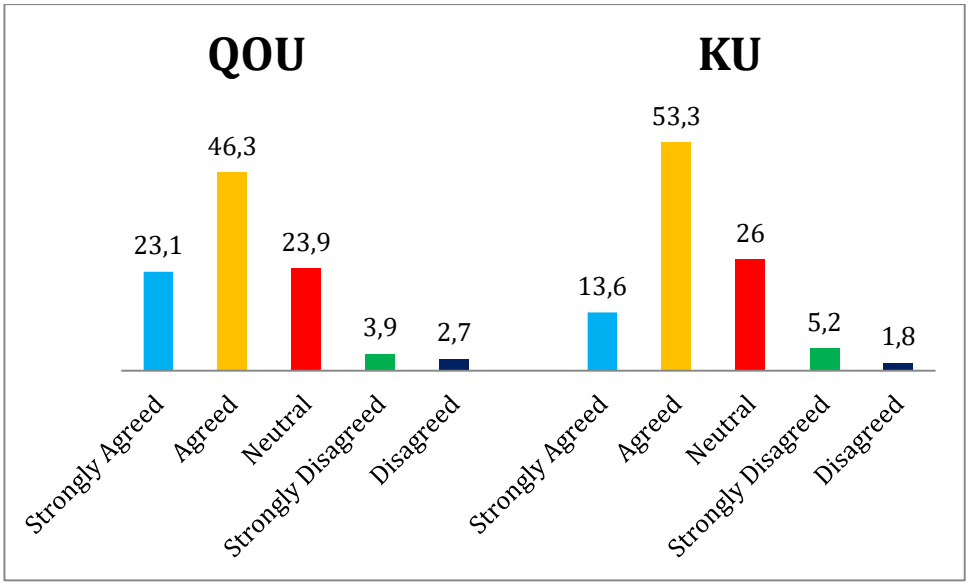
Source: Researchers' Computation

The Asterisk *, **, and *** denote significance at 1%, 5%, and 10% level, respectively.

Table 14 shows the results on the question of whether students delete emails from suspicious senders. From the table, students of both QOU and KU understand the danger of fishing and malicious at 10% and 5% levels, respectively. This may be because most of the QOU students are elderly and females who are treating with more responsibilities with these issues. However, when comparing the level of knowledge in the two institutions, it can be deduced that the knowledge of KU is greater than that of QOU at 1% level.

Student Knowledge on Whether Digital Citizenship Promotes Cybersecurity and Social Responsibility

Figure 9: Digital Citizenship Promotes Cybersecurity and Social Responsibility



A good citizenship is expected to promote better security practices to take a long the issue of cybersecurity and privacy in cyberspace and other important issues related to digital services. So, on whether digital citizenship promotes cybersecurity and social responsibility in distance education, Figure 8 shows that student's understanding and knowledge of the value of digital citizenship. The results show a good understanding of students from both universities about the importance digital citizenship in promoting cyber security and social responsibility.

Table 15. ***Z-Test on Students' Level of Knowledge on Whether Digital Citizenship Promotes Cybersecurity and Social Responsibility in Distance Learning Environment***

Students' level of knowledge on whether digital citizenship promotes cybersecurity and social responsibility in QOU	Z-score = 2.734*
Students' level of knowledge on whether digital citizenship promotes cybersecurity and social responsibility in KU	Z-score = 4.523*
Comparing students' knowledge level on whether digital citizenship promotes cybersecurity and social responsibility between QOU and KU.	Z-score = 3.001*

Source: Researchers' Computation

The Asterisk * denotes significance at 1% level.

Table 15 shows the results on whether digital citizenship promotes cybersecurity and social responsibility in distance education. The results show a good understanding of students from both universities about the importance of digital citizenship in promoting cybersecurity and social responsibility, both at 1% level. However, when comparing the level of knowledge in the two institutions, it can be construed that the knowledge of KU is greater than that of QOU at 1% level.

Table 16. Z-Test on Students' Level of Knowledge on Digital Citizenship in Distance Learning Environment

Students' level of knowledge on digital citizenship in distance learning environment (it sums all the sub-indices of students' level of knowledge on digital citizenship in distance learning environment) in QOU	Z-score = 3.012*
Students' level of knowledge on digital citizenship in distance learning environment (it sums all the sub-indices of students' level of knowledge on digital citizenship in distance learning environment) in KU	Z-score = 2.823*
Comparing students' level of knowledge on digital citizenship in distance learning environments (it sums all the sub-indices of students' level of knowledge on digital citizenship in distance learning environment) between QOU and KU.	Z-score = 4.773*

The Asterisk * denotes significance at 1% level.

Table 16 shows that students from KU and QOU have knowledge of digital citizenship in terms of prior knowledge of digital citizenship, engaging in bullying behaviour in an online environment, deleting emails from suspicious senders, and promoting cybersecurity and social responsibility both at 1% level. However, when comparing the level of knowledge in the two institutions, KU is greater than that of QOU at 1% level.

Findings for Research Question III: Is there a difference between the students practice of digital citizenship in distance learning based on their age, gender or study level?

QOU, faculties members mainly agreed that there are differences due to sex, age and study level. In addition, to the differences due to place of residence, and culture also has high impact. In Kyrenia, faculties members agreed mainly that there are differences due to study level only. On the other hand, some said there are differences due sex, age and study level.

Findings for Research Question IV: What are the changes that must be made to the "existing" distance learning curricula in order to be aligned with the elements and principle of digital citizenship?

The results of the interviews revealed that faculty members at the Al-Quds Open University (QOU) agreed on the importance of updating the distance learning curriculum to cultivate digital citizenship, whether by developing new courses or updating existing courses. Furthermore, some faculty members stated that the teaching methods should be revised or changed, and others suggested that they should have protocols, policies, and guidelines. On the other hand, the study's findings revealed that the faculty members at the University of Kyrenia (KU) share the same views about the need to update distance learning curricula; some faculty members suggested that government policies for digital citizenship in distance learning should be formulated and implemented, while others suggested that guidelines for digital citizenship in distance learning should be created to guide the students in the distance learning environment.

CHAPTER V
Discussion

This study examined students' awareness and knowledge of digital citizenship at two different Universities in two different countries, namely the Al-Quds Open University (QU) in the Palestinian territories and the University of Kyrenia (KU) in the Turkish Republic of Northern Cyprus. The results revealed that students and faculty in both institutions were aware of digital citizenship in distance learning environment in terms of whether digital citizenship brings positive social changes, promoting ethical and moral use of technology, students' awareness of their health in excessive use of digital technology, and students not belonging to an online community related to social or political issues, but lacked the in-depth knowledge and understanding of concepts such as digital rights, digital security, and digital ethics. Furthermore, there was a clear difference between the two universities in terms of student and faculty awareness and knowledge of digital citizenship in a distant learning setting. When it came to the awareness and understanding of digital citizenship among the students of the two universities, it was discovered that KU students have a greater level of awareness and knowledge than QOU students. However, based on the interview results, QOU faculty members have a high level of awareness of digital citizenship since they are familiar with digital resources and tools, whereas KU faculty members have a lower level of awareness and need to learn more about the available resources and tools. Moreover, both faculty members from the two universities agreed on the relevance of digital citizenship in remote learning and agreed that digital citizenship should be integrated into the distance learning curriculum. The findings are in line with the study conducted by Al-Abdullatif and Gameil (2020) concerning the students' knowledge and their perception of digital citizenship in higher education, where they concluded that even though many of the students are aware of the concept of digital citizenship, there is still exist a wide gap in knowledge and practice regarding the security and the authenticity of digital information. This is also in line with the study conducted by Suson (2019) based on the awareness of teachers and students on the concept of digital citizenship. While students and faculty were aware of digital citizenship, the study revealed that they lacked knowledge in digital rights, digital security, and

digital ethics. Faculty members and students at both universities expressed their digital citizenship knowledge by emphasizing the importance of digital citizenship in distance learning. The faculty members find digital citizenship important for students' privacy to enhance knowledge for effective distance learning. The students find it important for promoting ethical and moral use of technology in distance learning. This aligns with the technical innovation of Pedersen et al. (2018) that conducted workshops and training on the effectiveness of the hybrid model and concluded that the model was successful in strengthening the gaps that were part of the digital citizenship and distance learning platform.

CHAPTER VI
Conclusion and Recommendations

Conclusion

This study conducted mixed methods in two different higher academic institutions, namely Al-Quds Open University (QOU) in Palestine and The University of Kyrenia (KU) in the Turkish Republic of Northern Cyprus in year 2020 where the selected universities used distance learning technologies to deliver learning courses. The concept of distance learning refers to the learning style that does not require individuals' physical presence as a compulsion. The distanced learning concept is related to digital citizenship in terms of safety and precautionary online information measures. The survey constituted 828 participants, of which 565 from QOU and 263 from KU. The techniques employed include interview, descriptive analysis, and Z-test technique.

- The results revealed that students and faculty in both institutions were aware of digital citizenship in distance learning environment in terms of whether digital citizenship brings positive social changes, promoting ethical and moral use of technology, students' awareness of their health in excessive use of digital technology, and students not belonging to an online community related to social or political issues, but lacked the in-depth knowledge and understanding of concepts such as digital rights, digital security, and digital ethics.

- The results for both universities showed an obvious difference between the two universities in terms of awareness and knowledge of students and faculty members on digital citizenship in distance learning environment. With respect to the difference in awareness and knowledge of digital citizenship among the students of the institutions, it found that the awareness and knowledge of digital citizenship among KU students are higher than QOU students. However, with respect to the difference in awareness and knowledge of digital citizenship among the faculty members of the institutions based on the interview results, QOU faculty members had high awareness about digital citizenship as they are aware of the digital

resources and tool, but KU has less awareness and needs to learn more about the available resources and tools.

- Moreover, both faculty members at the two different universities agreed on the importance of digital citizenship in distance learning and agreed that there is a need to integrated digital citizenship into the distance learning curriculum.

The implication of the finding of this paper is that the level of students and faculty awareness and knowledge on digital citizenship in the distance learning environment gathered and interpreted in this paper could help other organizations around the world integrate digital citizenship in the distance learning curricula. Suppose students are to take on the responsibilities of digital citizenship. In that case, educational institutions must incorporate digital citizenship as an integral component of the distance learning program and be prepared to overcome challenges to students taking on these responsibilities. The findings of this research could be valuable in guiding universities and faculty aimed at incorporating digital citizenship into distance learning by improving the teaching methods, updating and developing new courses. In addition, it could be crucial to the educational policy reform for developing guidelines, protocols, and policies for cultivating digital citizenship in the distance learning environment.

Recommendations

- In terms of the measures that needed to be considered when integrating digital citizenship, There should be several ideas discussed at the cultural level as well as issue related to information security, information privacy, and the rights and responsibilities of the technology users and technology providers.

- The teaching methods should be revised or changed, and others suggested that they should have protocols, policies, and guidelines.

- There is to update distance learning curricula where government policies for digital citizenship in distance learning should be formulated and implemented,

- Guidelines for digital citizenship in distance learning should be created to guide the students in the distance learning environment.

Nonetheless, the research had some limitations. The first limitation is the timeframe in which to complete the study, the second limitation that small sample being used to collect qualitative data in depth for study. The small sample size meant that the researcher abled to ask participants for details and included a comprehensive summary of the results. The third limitation is that the sampling selection of quantitative data opens up the way to unequal representation of the population of the students in distance learning.

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Appendices

Appendix A

NEAR EAST UNIVERSITY
EDUCATIONAL SCIENCES INSTITUTE

Informed Consent Form

I, _____ hereby agree to participate in Mahmoud ALHawamdeh's study research entitled "**Cultivating Digital Citizenship: Creating Effective Roadmap for New Generation of Distance Learning (Digital Learning)**".

I have read and understood what participation entails as set out in the information sheet.

I understand that:

- Participation in this study is voluntary
- No information that may identify me will be included in the research report, and my responses will remain confidential
- I may withdraw information from the study at any time
- There are no risks or benefits associated with the study
- I may choose not to answer any questions that I would prefer not to answer
- The study may be written up for publication in a journal or presented at a conference; therefore raw data will be stored safely in a locked cupboard on campus.

_____ _____

Signature

Date:

Appendix B

Letter of Invitation

Dear Teacher

Because you have experience in distance learning and you have special insights in using ICT in Education areas and Digital Citizenship. For this reason, I would like to invite you to participate in my research study about Cultivating Digital Citizenship: Creating Effective Roadmap for New Generation of Distance Learning. I am a doctoral student at Near East University and am inviting teachers who have experience in using Technology in distance learning and teaching. I am interested in discovering your perceptions about how your students developed as digital citizens as a result of participating and engaged in technology integrated in distance learning.

We will use the Zoom for a 45 to 60 minute interview.

You will help us discover how students become digital citizens through technology integrated in distance learning which they participated. By sharing your experience, opinions and suggestions will help other stakeholders to have positive experience in using technology integrated in distance learning to cultivation digital citizenship. Moreover, you will have the benefit from this study

You may also benefit from this study by knowing that your efforts may make have a positive impact on others. When you reflect on your experiences during the interview, you may also explore new ideas or realign your perspective on integrated digital citizenship elements into distance learning environment. The result of this research study may help you to modify your current digital citizenship curriculum or establish new curriculum associated with distance learning methodology in your university.

Please respond with your intention of participating, if you are willing to participate in my study Cultivating Digital Citizenship: Creating Effective Roadmap for New Generation of Distance Learning. I'll provide you with the informed consent form with more information on my study and your rights as a participant.

Thank you for your consideration and I hope to hear from with you soon!

Mahmoud Hawamdeh

Graduate School of Educational Sciences

Near East University

Lefkoşa, KKTC

Appendix B

Teacher Interview Protocol

Introduction

Dear Participants**,**

Thank you for talking time to meet with me and agreed to help me understanding the digital citizenship as result of students participating in the technology integrated in distance learning.

It is expected that our interview would take around 45-60 minutes. Please note that all information is kept secret, and I encourage you to ask if you have any questions. You can drop out at any time because this research is voluntary.

At this stage, do you have any questions?

Permission to Record the Interview

I would like to record our conversation to transcribe the interview. May I get your permission?

Great! Thank you for your cooperation.

Time of Interview:
Date:
Method: Zoom

Interviewer:
Interviewee:
Interviewee Title:

Interview Questions

Let us start our discussion by focusing on your experiences, ideas and perception about digital citizenship in distance learning technologies.

1. Are you Familiar with the term of Digital citizenship?
2. Let me describe to you our definition of digital knowledge. Based on what I described and your own understanding, why it important for students in distance learning to be good digital citizens?
3. Do you feel that students are equipped to engage in digital citizenship responsibly when using distance learning technologies?
4. Do you think that there are a difference between the students practice of digital citizenship in distance learning based on their age, gender or study level?
5. How you define the digital citizenship knowledge of distance learning students?
6. How do you think that the teachers can teach their students to be good digital citizens in distance learning environment?
7. What do you think about integrating a digital citizenship into distance learning curriculum?
8. What resources are available to teachers to incorporate digital citizenship into the distance learning curriculum?
9. What are the tools do you think that already use or could use in distance learning to promote digital citizenship?
10. If distance learning students were properly educated on digital citizenship, what would you think that should be changed or updated for future education? We need your creative and descriptive response.
11. Is there anything else you'd like to say regarding digital citizenship?

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Appendix C

NEAR EAST UNIVERSITY EDUCATIONAL SCIENCES INSTITUTE

Informed Consent Form

I, hereby agree to participate in the research thesis of "**Cultivating Digital Citizenship: Creating Effective Roadmap for New Generation of Distance Learning (Digital Learning)**".

I have understood what participation entails as set out in the information sheet.

I understand that:

- Participation in this study is voluntary.
- No information that may identify me will be included in the research report, and my responses will remain confidential.
- I may withdraw information from the study at any time.
- There are no risks or benefits associated with the study.
- I may choose not to answer any questions that I would prefer not to answer.
- The study may be written up for publication in a journal or presented at a conference; therefore, raw data will be stored safely and destroyed when the thesis discussion is completed.

Signature

Date:

Appendix D

The scale used in my research

What it means to be a citizen in the internet age: Development of a reliable and valid digital citizenship scale

- Moonsun Choi, Michael Glassman, Dean Cristol
- Published in Computers & Education 2017
- DOI:10.1016/j.compedu.2017.01.002

*Table 4.*The digital citizenship scale for adolescent items and the respective factor loadings Items	F1	F2	F3	F4	F5
Factor 1					
24. Students should respect other people in the online environment and not engage in bullying behavior.	0.959	0.038	0.075	-0.013	-0.035
8. Students should be responsible for their own online activities.	0.819	0.04	0.027	-0.037	0.029
20. Students should be aware of the order of others in the online digital environment and should obey the order.	0.752	-0.102	-0.122	0.211	0.01
Factor 2	-0.002	0.935	0.068	0.061	-0.105
3. Students should use digital technology to achieve various goals.	-0.01	0.697	-0.016	0.1	0.035
15. Students should immediately manage unnecessary files and programs on their computers.	-0.088	0.512	-0.182	0.016	0.059
11. Students should use the Internet to access more information about domestic and international issues.					
Factor 3	0.047	-0.061	0.909	0.049	-0.08
6. Students should express their emotions reasonably through communication when problems or inconveniences arise in the online digital environment.					
2. Students should express their opinions online and learn and share their expertise.	0.051	0.013	0.754	-0.02	-0.059
14. Students should purchase legitimate goods during e-commerce activities.	0.045	-0.029	0.662	-0.008	0.059
Factor 4					
21. Students should be aware of their own health problems	0.147		0.15	0.026	0.881
caused by the abuse of digital devices, such as addiction and stress.					
34. Students should establish their own beliefs and values about the digital environment.	0.026	-0.042	-0.025	0.879	0.058
9. Students should immediately delete emails from suspicious senders.	-0.084	-0.056	-0.011	0.868	-0.019
Factor 5					
39. Students should present their feelings, thoughts and opinions while	0.009	-0.049	-0.046	0.038	0.779

posting text, photos, music, or videos online.					
31. Students should belong to an online community related to social or political issues.	-0.032	0.022	-0.108	0.056	0.667
18. Students should always check the price on the Internet when purchasing goods.	-0.044	-0.045	0.099	-0.051	0.57
36. Students should work with others online to solve regional or school problems.	0.073	0.038	0.036	-0.008	0.547
19. Students should take care of the computer immediately if something goes wrong.	0.02	0.006	0.107	0.011	0.473
10. Students should be active in SNS such as KakaoTalk and Facebook.	0.035	-0.058	-0.16	-0.095	0.466

Permission request and approval to use and modify scale

From: "Choi, Moonsun" <choi.811@buckeyemail.osu.edu>

To: mhawamdeh@qou.edu
Sent: Tuesday, July 30, 2019 4:32:11 PM

Subject: Re: Permission to use the digital citizenship scale
Hi,

Glad that you are interested in the digital citizenship scale I developed. You can use and/or modify it for your research. Feel free to contact me if you have any questions.

Thanks,
Moonsun
---------- Forwarded message ---------
From: **Mahmoud Hawamdeh** <mhawamdeh@qou.edu>
Date: 2019년 7월 30일 (화) 오후 8:17
Subject: Permission to use the digital citizenship scale
To: <Choi.811@osu.edu>

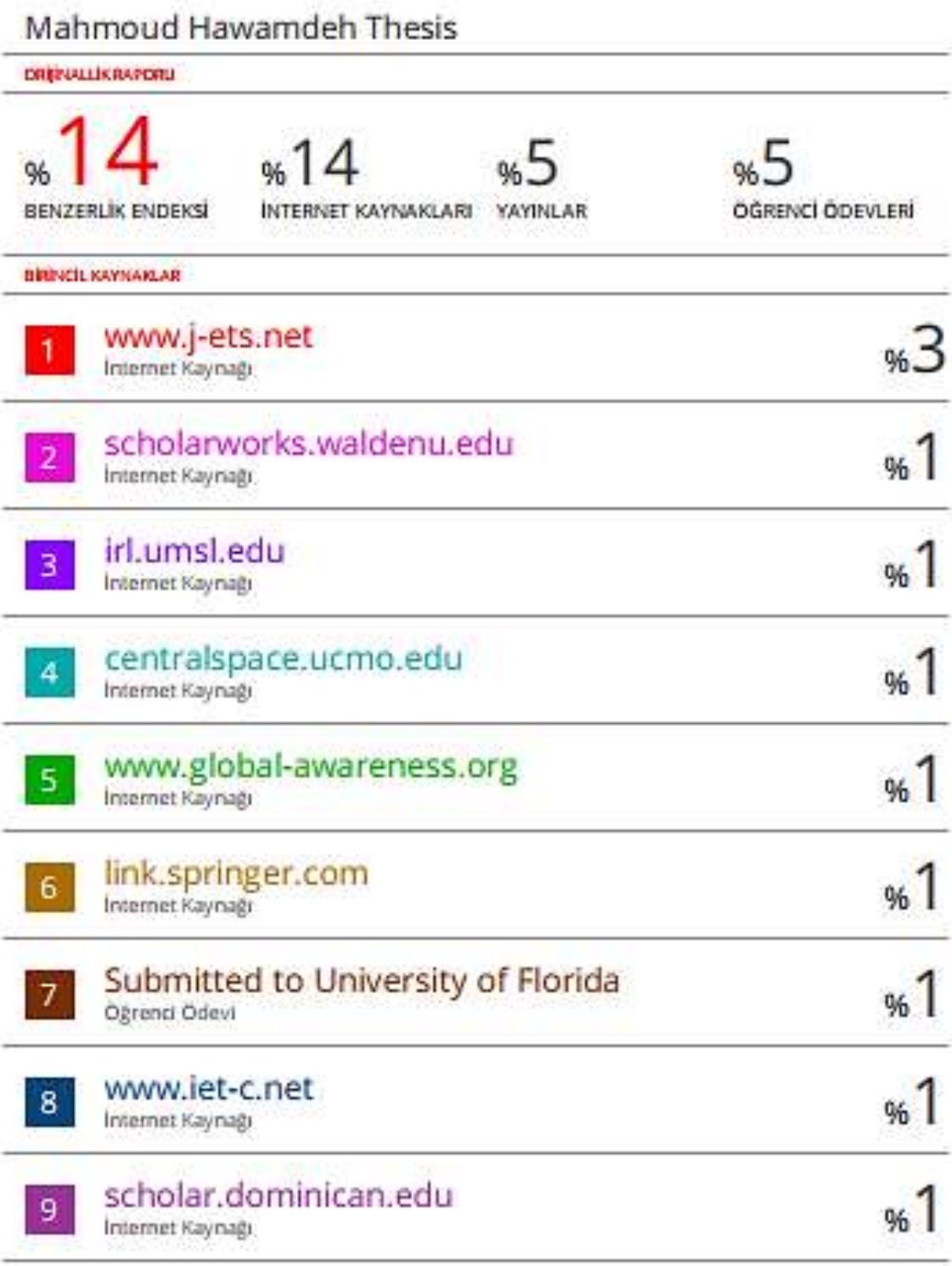
Dear Moonsun Choi,

My Name is Mahmoud Hawamdeh and I am studying Ph.D in Near East university , Nicosia, North Cyprus on the field of Computer Education and Instruction Technology. I am working on research for my PhD thesis about “Cultivating Digital Citizenship: Creating Effective Roadmap for New Generation of Distance Learning (Digital Learning)”. I have read with more interest your research (What it means to be a citizen in the internet age: Development of a reliable and valid digital citizenship scale) and the scale you designed it could be suitable to be used for my research. Therefore, I would appreciate if you give me a permission to use it.

Looking forward to hearing from

Best Regards**,**

Turnitin



Mahmoud Hawamdeh Thesis

ORİJİNALLİK RAPORU

%14	%14	%5	%5
BENZERLİK ENDEKSİ	İNTERNET KAYNAKLARI	YAYINLAR	ÖĞRENCİ ÖDEVLERİ

BİRİNCİL KAYNAKLAR

1	www.j-ets.net İnternet Kaynağı	%3
2	scholarworks.waldenu.edu İnternet Kaynağı	%1
3	irl.umsl.edu İnternet Kaynağı	%1
4	centralspace.ucmo.edu İnternet Kaynağı	%1
5	www.global-awareness.org İnternet Kaynağı	%1
6	link.springer.com İnternet Kaynağı	%1
7	Submitted to University of Florida Öğrenci Ödevi	%1
8	www.iet-c.net İnternet Kaynağı	%1
9	scholar.dominican.edu İnternet Kaynağı	%1