Digital Citizenship Trends in Higher Education

Alicia F. Davis

Department of Education, Sul Ross State University

ED 6376 Inquiry Based Research Methods

Dr. Quintanilla

12/03/2022

Digital Citizenship Trends in Higher Education

Abstract

This paper examines trends in higher education's use of digital citizenship. We examine trends in behavior, values, social presence, digital divides, participation, and innovation related to digital citizenship in higher education in this conversation. Student groups from a private institution, a medium-sized university in the Midwest of the United States, and a college in China were examined. Men and women from diverse ethnic backgrounds, undergraduate and graduate students, as well as students from both urban and rural locations and different socioeconomic backgrounds, were all participants. The Digital Citizenship Scale and Cronbach's alpha were mostly employed in the studies to evaluate the data's dependability. The purpose of this investigation is to gain an understanding of the level of digital citizenship possessed by college students and to chart a course for the investigation of additional groups of participants who do not fall into the groups that were researched.

Keywords: College students, behavior, digital citizenship, digital citizenship scale (DCS), digital citizenship behavior (DCB), higher education, learning outcomes, socioeconomic

Introduction

Citizenship in the digital realm can imply something quite different to each individual (Manzuoli et al., 219). The term "digital citizenship" was first coined by Ribble (2015), who defined it as "the rules of proper and responsible behavior with relation to the use of technology." The nine components of digital citizenship were broken down by Ribble and Miller (2013) into three categories. Respect Yourself/Respect Others (RY/RO), Educate Yourself/Connecting with

Others (EY/CO), and Protect Yourself/Protect Others (PY/PO) are the three dimensions that were created to organize the nine different aspects of digital citizenship.

Choi, Glassman, and Cristol (2017) developed the Digital Citizenship Scale (DCS). The scale had 26 items, and the items in the DCS were built on the aspects of the four categories that served as the foundation for this study's conceptual framework: Ethics, Media and Information Literacy, Participation/Engagement, and Critical Resistance (Choi et al., 2017).

Digital citizenship has become a hot topic because so many people use communication and information technologies. Research on the topic frequently focuses on teachers or K–12 students (Kara, 2017). Because this literature review is meant to raise awareness of digital citizenship in higher education and because online courses are here to stay and will continue to expand, it is obvious that enhancing digital citizenship in higher education is an area worth researching.

Literature Review

The studies in this review suggest that strengthening digital citizenship in higher education is important because digital citizenship behaviors affect academic outcomes (Dunaway & Macharia, 2020). Internet users frequently encounter harmful online conduct like cyberbullying and harassment. Forty eight percent of younger persons between the ages of 18 and 29 have reportedly been targeted online, according to Pew Research Center (Vogels, 2021). The findings demonstrated a favorable relationship between digital citizenship and perceived learning outcomes (β=.240, p<.05) as well as a relationship between digital citizenship and cyberbullying perpetrator conduct (p<.000). Technical proficiency had little bearing on digital

citizenship. This conclusion may be explained by the fact that most student participants were between the ages of 18 and 30, a demographic often referred to as "digital natives."

The purpose of the next study was to learn more about the relationship between digital citizenship and creativity, and whether or not it enhances creativity. In total, 137 students between the ages of 18 and 30 (with a 64.7% female representation and a 34.6% male representation), 70.6% with bachelor's degrees and 29.4% with master's degrees, 83.1% from urban areas and 16.9% from rural areas, and all responding to an online survey, provided the data (Singh et al., 2021). Data was collected using the Online Student Engagement (OSE) tool and the Digital Citizenship Behavior (DCB) mean score, with a Cronbach's alpha of 0.79 (Singh et al., 2021). The four parts of the OSE were skills, engagement, performance, and emotional elements (Singh et al., 2021). The results showed that DCB and creativity among college students had a positive and statistically significant association, and that students who spent more time online also had higher levels of creativity (Singh et al., 2021). In addition, the findings supported the theory of social constructivism (Singh et al., 2021). While they can study or accomplish tasks alone, students learn more effectively when they collaborate. Students can show tasks and fill in one other's information gaps online (Singh et al., 2021).

Researchers were interested in whether college students from various socioeconomic backgrounds behaved differently when it came to digital citizenship and whether computer use had an impact on those behaviors. This research set out to assess the extent to which Chinese university students from different socioeconomic backgrounds are engaging in activities that promote responsible use of digital technologies (Xu et al., 2017). Both genders participated in the survey, which collected information on people's demographics and computer usage patterns. Socioeconomic zones covered by the study included villages, towns, medium-sized cities, and

large cities (Xu et al., 2017). The results showed even when students had identical amounts of computer usage, the results demonstrated that students from better socioeconomic regions of origin had more suitable digital citizenship behaviors than students from lower socioeconomic regions of origin (Xu et al., 2017). Interestingly, when just comparing students who use computers to a similar extent from different socioeconomic regions, the results suggested a case for second-level digital divide, in which users had different understandings of the significance and repercussions of their technology use despite having equal access (Xu et al., 2017) The results are consistent with Hargittai's (2002) proposed "second-level divide," which argues that as more individuals use computers and the Internet, the focus of the digital divide problem has changed from access to disparities in technology usage..

Using responses from online graduate students, the next study explored the relationship between digital citizenship and social presence. In this situation, the idea of "social presence" comes from studies that look at how students see themselves in online learning environments (Elcicek et al., 2018). According to the statistics, the participants' level of digital citizenship is 3.78, which is "high level (Elcicek et al., 2018)." This illustrates that online college graduates utilize the online learning environment in an ethical, valid, and deliberate manner. The participants' level of digital citizenship is not affected by their institution, age, or gender (Elcicek et al., 2018). The participants' level of social presence was 3.83, which is a "strong level (Elcicek et al., 2018)." This demonstrated that the participants in the online learning environment perceive themselves as emotionally and socially real people. The results of the study showed that students who completed their master's degrees online exhibited high levels of competence in the areas of digital citizenship and social presence and that social presence was a powerful predictor of their digital citizenship (Elcicek et al., 2018).

Kara (2017) revealed that while students at private universities excel in areas such as critical thinking, technical proficiency, networking, and local/global knowledge, they are less likely to be politically active online. According to the results of the survey, students are more interested in group projects that may be completed through the Internet (Kara, 2017). Since the vast majority of individuals online don't act ethically or morally, they think a set of guidelines for conduct should be implemented (Kara, 2017). The results of this study showed that college students recognize the benefits of digital citizenship behaviors like better time management and less stress, but they are also aware of the potential drawbacks like security breaches and increased antisocial behavior (Kara, 2017).

Conclusion

This research study on the topic of digital citizenship among college students is crucial since it sheds light on the beliefs, behaviors, involvement, creativity, and digital divisions among various groups. In discussions on how to best teach students to be responsible digital citizens, higher education is often overlooked. These studies will serve as a foundation for future research on trends in higher education related to digital citizenship by providing a benchmark of digital competence among college students. It can also be used as a resource for instructors teaching courses on digital citizenship in higher education.

The Pandemic of 2020 brought to light differences in socioeconomic status and patterns of behavior among various groups of people. How do undergrad students, age 18 and up, who attend schools designated as Hispanic Serving Institutions (HSI) do in terms of emerging aspects of digital citizenship, such as conduct, participation, and innovation?

References

Choi, M., Glassman, M., & Cristol, D. (2017). What it means to be a citizen in the internet age: Development of a reliable and valid digital citizenship scale. *Computers & Education*, *107*, 100–112. https://doi.org/10.1016/j.compedu.2017.01.002

Dunaway, M., & Macharia, M. (2020, November 30). *The effect of digital citizenship on negative online behaviors and learning outcomes in higher education.* Journal of Information Systems Education. Retrieved November 20, 2022, from https://eric.ed.gov/?id=EJ1323723

Elcicek, M., Erdemci, H., & Karal, H. (2018). Examining the relationship between the levels of digital citizenship and social presence for the graduate students having online education. *Turkish Online Journal of Distance Education*, *19*(1), 203–214. https://doi.org/10.17718/tojde.382801

Hargittai, E. (2002). Second-level digital divide: Differences in people's online skills. *First Monday*, *7*(4). https://doi.org/10.5210/fm.v7i4.942

Kara, N. (2017, November 30). *Understanding University Students' thoughts and practices about digital citizenship: A mixed methods study.* Educational Technology & Society. Retrieved November 19, 2022, from https://eric.ed.gov/?id=EJ1165955

Manzuoli, C. H., Sánchez, A. V., & Bedoya, E. D. (219AD). Digital Citizenship: A Theoretical Review of the Concept and Trends. *TOJET: The Turkish Online Journal of Educational Technology*, *18*(2), 10–18

Ribble, M., & Miller, T. N. (2013). Educational leadership in an online world: Connecting

students to technology responsibly, safely, and ethically. *Online Learning*, *17*(1).

https://doi.org/10.24059/olj.v17i1.310

Ribble, M. (2015). *Digital citizenship in schools: Nine elements all students should know*.

International Society for Technology in Education.

Singh, A., Bharti, A., Rathore, A., & Sinha, N. (2021). Digital Citizenship Behaviour and Online

Engagement fostering Creativity among Students of Higher Education. *Explore-Journal of*

Research, *XIII*, 277–282.

Vogels, E. (2021). *The State of Online Harassment*. Pew Research.

https://www.pewresearch.org/internet/2021/01/13/the-state-of-online-harassment/

Xu, S., Yang, H. H., Zhu, S., & MacLeod, J. (2017). Understanding the digital citizenship

behaviors of college students from differing socioeconomic origins. *2017 International*

Symposium on Educational Technology (ISET). https://doi.org/10.1109/iset.2017.50

Appendix A

Article Analysis

Digital Citizenship Trends in Higher Education

Dunaway, M., & Macharia, M. (2020, November 30). *The effect of digital citizenship on negative online behaviors and learning outcomes in higher education.* Journal of Information Systems Education. Retrieved November 20, 2022, from https://eric.ed.gov/?id=EJ1323723

Internet users frequently encounter harmful online conduct like cyberbullying and harassment. Forty eight percent of younger persons between the ages of 18 and 29 have reportedly been targeted online, according to Pew Research Center (Vogels, 2021). There is evidence that cyberbullying lowers academic achievement and increases absenteeism and truancy. Understanding the connection between ethical online conduct and academic success in higher education institutions is important. The importance of digital citizenship in higher education settings has been suggested by several studies, although there is little available data on the subject. The goal of this study is to investigate how student digital citizenship behaviors affect academic outcomes and hazardous online behaviors, as well as how learning outcomes affect cyberbullying behavior in higher education settings. The purpose of it is to strengthen the case for the necessity of digital citizenship teaching in higher education.

The study therefore addresses these three questions. What effects does digital citizenship have on inappropriate online conduct and learning outcomes? Does the perception of learning outcomes affect the association between digital citizenship and undesirable behaviors? What are the most important digital citizenship actions among college students?

An online survey was given to college students at a mid-sized university in the Midwest of the United States during the Fall 2019 semester. Scales that had already been created, tested, and published in the information systems sector were used to create the survey instrument. Students were given background information on the study and asked to provide feedback on both their general Internet use and the Management Information Systems (MIS) class they were taking at the time. It was voluntary to participate. Additionally, they were questioned regarding their perceptions of learning results, weekly web usage, digital citizenship components, and experiences with cyberbullying. Responses were anonymousized using the Qualtrics platform after the data was gathered over a two-month period. Students that took part in the research study received additional credit points from each information systems faculty member.

Information Systems students from a Midwestern university made up the sample. One hundred seventy-three undergraduates (94%) and 11 graduate students (6%) at a large Midwest institution participated. Mean age was 22, with a range of 18 to 55. There were 106 males (57.6%), 77 females (41.8%), and 1 other. The sample included 137 Whites (74.4%), 25 Asians (13.5%), 9 Blacks (4.89%), 10 Hispanics (5.43%), and 3 others (1.6%). The participants predominantly majored in subjects offered by the School of Business (160, 90%) or in other academic fields (24, 10%). Most students said they used the Internet for more than 14 hours a week.

All components in this investigation were operationalized using validated measures with good psychometric characteristics. The survey questions were scored individually. The concept of digital citizenship was characterized by four elements: critical resistance, participation/engagement, media and information literacy, and ethics. The four dimensions were quantified using a second-order construct made up of five components. In higher-order

modeling, the first-order constructs were consolidated into a single multidimensional model. First-order constructs represented only one degree of abstraction. Higher levels of abstraction could be used to operationalize some difficult study cases to capture more specific characteristics of the observed behavior. Consequently, the properties of the lower-order construct composed the higher-order construct.

Direct and indirect assessment strategies were used to evaluate the effectiveness of a course. When it came to indirect evaluations, self-evaluation was by far the most common technique. Cyberbullying acted as a proxy for negative online behavior. To detect multicollinearity, the variance inflation factor (VIF) was employed.

The potential for multicollinearity was examined across formative indicators of digital citizenship, reflective indicators of perceived learning outcomes, and cyberbullying perpetration items. Partial Least Squares-Structural Equation Modeling (PLS-SEM) version 3.3.2 was used to assess convergent validity by extracting all indicator items' factor and cross loading to their corresponding latent constructs. The data showed that the measures were reliable in terms of internal consistency, as measured by the composite reliability.

The findings demonstrated a favorable relationship between digital citizenship and perceived learning outcomes (β=.240, p<.05) as well as a relationship between digital citizenship and cyberbullying perpetrator conduct (p<.000). Technical proficiency had little bearing on digital citizenship. This conclusion may be explained by the fact that most student participants were between the ages of 18 and 30, a demographic often referred to as "digital natives."

Today's technologically connected society has seen an upsurge in cyberbullying and other undesirable online activities. College students are now being impacted by this trend, which

initially affected kids and teens in school. I believe that in order to counteract the negative

impacts of hazardous online behaviors, college students, particularly digital natives who are

meant to be computer aware, need to be trained on online conduct norms. With the purpose of

teaching students to be socially responsible when using the internet, I believe that digital

citizenship education should be mandated at the university level or incorporated into first-year

seminar courses. Students in a higher education setting can benefit from being urged to embrace

ethical and moral codes of conduct and social standards that will guide their behavior in online

contexts, enabling them to constructively contribute to discussions in online message boards,

support collaboration, and participate in online support communities.

The research project provided a substantial amount of information as well as statistical

data on digital citizenship in higher education. This work will, in my opinion, be beneficial to

future research on trends in higher education associated to digital citizenship. Additionally, it can

act as a guide for the instruction of students about digital citizenship in the context of university

courses.

References

Vogels, E. (2021). *The State of Online Harassment*. Pew Research.

https://www.pewresearch.org/internet/2021/01/13/the-state-of-online-harassment/

Article Analysis

Elcicek, M., Erdemci, H., & Karal, H. (2018). Examining the relationship between the levels of

digital citizenship and social presence for the graduate students having online education.

Turkish Online Journal of Distance Education, *19*(1), 203–214.

https://doi.org/10.17718/tojde.382801

The goal of this study is to find out how much digital citizenship and social presence

graduate students who get their education online have, as well as how these two factors are

related.

The research questions for this study are: 1) How do graduate students with online

education feel about their digital citizenship and social presence? Does it make a difference

based on age, gender, or institutes? 2)Is there a statistically significant link between how good

online graduate students are at being digital citizens and how active they are in their social lives?

3) Does the level of social presence of graduate students who get their education online show

how good they are at being digital citizens?

In this situation, the idea of "social presence" comes from studies that look at how students

see themselves in online learning environments. Digital citizenship means that a person is aware

of the different dangers that exist in the online world and uses online technologies and digital

platforms in a way that follows ethical and global standards.

Relational survey model, a type of quantitative research, was used in the study to find out

the levels of digital citizenship and social presence among graduate students who get their

education online, as well as the relationship between their levels of digital citizenship and social

presence. As the goal of the research model was to reflect the situation as it was, it was thought to be a good fit for the goal. Appropriate sampling method was used to choose the study group because it was easy to get to and it worked for the study. Appropriate sampling means that the method used on participants is one that they choose, is easy to use, and is close by. At the beginning of the data collection method, permission to use the scales was asked for from the people who made them. Also, the board of the Distance Education Application and Research Center at Karadeniz Technical University granted consent for the study to be done on May 2, 2016. The study was done with 50 women (35%) and 93 men (65%) who were in Karadeniz Technical University's master's programs for distance learning. Data was collected using an Individual Information Form, a Social Presence Scale, and a Digital Citizenship Scale. In the study, descriptive statistics were used to figure out the students' levels of digital citizenship and social presence. Researchers used correlation analysis to see how the variables were related to each other and linear regression to see how well researchers could predict the future.

Individual Information Forms based on a 5-points Likert type "Social Presence Scale" and a 5-points Likert type "Digital Citizenship Scale" were used to gather research data, including demographic information. The Cronbach Alpha value of the social presence scale, which has three parts called transaction, belonging, and emotional expression, was 0.84. Also, the Cronbach Alpha value of the digital citizenship scale, which has 9 sub-dimensions like digital freedom, digital law, digital rights and responsibilities, digital communication, digital security, digital access, digital dos and don'ts, and digital health, was 0.85. In this study, the Cronbach Alpha value for the social presence scale was 0.81, and it was 0.79 for the digital citizenship scale. This shows that both scales were good tools.

The results showed that college graduates in master's programs that were done online were very good at digital citizenship and social presence. Also, the mentioned levels were thought to have important and positive connections with each other. Even though there wasn't a big difference between men and women in terms of digital citizenship and social presence, there was a big difference in terms of social presence in favor of Educational Sciences Institute. Also, it was found that the level of social presence of the graduate students was a strong predictor of their level of digital citizenship.

The participants' level of digital citizenship is 3.78, which is considered "high level." This demonstrates that college graduates who get their education at a distance use the online learning setting in an ethical, valid, and thoughtful way. This result matched the data from Sakalli and Ciftci's (2016) study that was done with people who want to become teachers. Statistics show that the level of digital citizenship of the participants is not different based on institute, age, or gender. The fact that the level of digital citizenship didn't change based on gender was in line with what was also found in the study by Sakalli and Ciftci (2016). The level of social presence of the participants was 3.83, which is a "high level." This showed that the participants in the online learning environment see themselves as real people, both emotionally and socially. In another study by Kilic, et al (2016), it was also found that people who took part in online environments had a high level of social presence. Statistically, the level of social presence of the participants does not differ. However, because of age and gender, the level of social presence does vary considerably with the variable of Educational Sciences Institute enrolled. The R=0.768 value shows that there is a strong and positive relationship between the levels of digital citizenship and social presence. This result shows that digital citizenship and social presence are

strongly linked in a good way. In other words, students have a better sense of their social presence the more they know about how to use technology responsibly.

As a result of the regression analysis conducted to determine the perceptive power of graduate students' social presence level on their level of digital citizenship, R^2 is computed as 0.589, meaning that social presence impacts level of digital citizenship by almost 58%

Since the topic of the paper is graduate students, it offers a fresh perspective on the topic of digital citizenship in the context of higher education. A relational survey approach was utilized by the researchers so that they could obtain answers to their inquiries on the past, the present, and the future. According to the findings of the study, good digital citizenship and an active social presence are inextricably linked when looking at graduate students. Because the level of social presence is such an important component of today's rapidly expanding online learning environments, the environment that is now being constructed must contain components that raise the level of social presence. I am currently a graduate student, and I can connect to the findings because the requirements for our distance learning courses make it very obvious that we are expected to maintain a social presence and good digital citizenship. This research study was beneficial in that it provided an excellent viewpoint on graduate students level of social presence and digital citizenship.

Resources

Sakalli, H., & Ciftci, S. (2016). Examination of the relationship between digital citizenship

    patterns and cyberbullying tendencies of prospective class teachers. Educational

    Technology Theory and Practice, 6(2).

Kilic, S., Cakiroglu, U., & Horzum, M. B. (2016). Investigating teaching, social and cognitive

    presence of students in synchronous online environments. Turkish Journal of Computer

    and Mathematics Education 7(2), 350-364.

Article Analysis

Kara, N. (2017, November 30). *Understanding University Students' thoughts and practices about digital citizenship: A mixed methods study.* Educational Technology & Society. Retrieved November 19, 2022, from https://eric.ed.gov/?id=EJ1165955

The purpose of this study is to comprehend how college students feel and behave about digital citizenship. Research on digital citizenship frequently concentrates on teachers or K–12 learners. This study intends to bridge this gap in the body of knowledge regarding digital citizenship for college students. The research was organized around four themes: "digital citizenship as ethics," "media and information literacy," "participation/engagement," and "critical resistance".

Because so many people use communication and information technologies, digital citizenship has become a popular issue. People's use of digital technologies in their personal and social lives may help them become better digital citizens. Literature shows that people who have access to the Internet were more likely to take part in economic and political activities related to digital citizenship.

"Digital citizenship" might mean different things to different people. The term "digital citizenship" refers to a set of guidelines for safe and ethical use of digital devices. Online platforms have enabled people to engage in a wide range of activities, including commerce, communication, employment, consumption, recreation, and learning. Several disciplines were included in the concept of digital citizenship, including Psychology, Education, Technology, and Security.

A survey about digital citizenship was given to 435 students at a private university. The survey consisted of demographic data as well as questions using a 5-point Likert scale. The students were interviewed using a semi-structured format. A revised version of the Digital Citizenship Scale (DCS), with 26 items organized into four categories and rated on a 5-point Likert scale, was provided to the participants. After the scale was converted, its content was translated into Turkish. The scale was reviewed by two professionals: one specializing in English Language Learning, and the other in Instructional Technology. As a measure of internal consistency, Cronbach's alpha for the entire scale was 0.88. Data from the survey were analyzed using both descriptive and inferential statistics. In order to identify variables based on the information obtained from the DCS scale, factor analysis was done. In order to compare the groups and get statistical data, T-test and Analysis of Variance (ANOVA) were also used. The required analyses were carried out using the Statistical Package for the Social Sciences (SPSS) Statistics 20 program. Based on the 26 elements in the original DCS scale, five factors were discovered. Online political activism, technical proficiency, local and global awareness, critical perspective, and networking agency were all factors. In order to determine whether the same components showed up, an exploratory factor analysis (EFA) was also carried out. There was only one item that loaded into a different factor as compared to the initial factor loadings.

The results included: (1) 57.2 percent of college students online don't work for a political party or candidate. Half of students don't join online political or social groups. Only 29% of people contacted government authorities online, while 45.7% signed petitions. (2) 57.65% of college students think that discussing political or social problems online has value. More than half of students (55.9%) think that using the Internet makes them rethink their opinions and 50.7% of people think that the Internet can be used to change unfair or unjust situations. (3)

Technical skill items scored above average. For example, most university students are proficient with technology. Ninety-three and a half percent of pupils can use the Internet to download apps and 95.6% of the students can utilize smartphones, tablets, and computers. (4) 73.7% of college students find online interaction enjoyable, while 60.9% comment on posts made by others. 61.8 percent of students express themselves through the posting of messages, audio, video, and other multimedia. Only 23% of students say they prefer online collaboration to offline. (5) Most college students rely on the Internet as a primary source of news about the world and the world outside their campus. While only 74% of students say they are better informed about political or social issues as a result of their Internet use, 76.1% say they are more aware of global issues.

In conclusion, the results showed that while critical thinking, technical abilities, networking, and local/global knowledge are generally strong among university students, online political activism was low. Students prefer collaborative Internet-based activities, according to the study. They believe online surroundings should include ethical and moral principles because most people don't follow them. This study indicated that while university students find digital citizenship practices valuable for time management and making life a little easier, they also know the downsides, such as safety risks and increased antisocial behavior.

This study's focus on university students' attitudes and actions related to digital citizenship is important, in my opinion. Higher education is typically disregarded while looking towards digital citizenship in education. This quantitative research project thus offered significant information and statistics on digital citizenship in higher education. Future research on trends in higher education connected to digital citizenship will, in my opinion, benefit from this study. It can also serve as a guide when educating students about digital citizenship in college courses.

In addition to that, there are a few limitations to this study. At first, there were just a few students who were questioned about it. Second, everyone who took part in this research attended a private college or university. In conclusion, the researcher was primarily responsible for all transcriptions as well as the data analysis that followed.

In my view, this research provides a useful benchmark for private university students' digital citizenship. There is a deficiency in this study due to the fact that private universities are distinct from state universities. The findings will still be beneficial when comparing statistics of sample groups.

Article Analysis

Manzuoli, C. H., Sánchez, A. V., & Bedoya, E. D. (2019). Digital Citizenship: A Theoretical

Review of the Concept and Trends. *TOJET: The Turkish Online Journal of Educational*

Technology, *18*(2), 10–18.

The article presented seeks to draw connections between the various theories and

methodologies used to examine the topic of digital citizenship during the past decade.

The problem presented in the article is that the use of technology in social life has resulted

in problems that are difficult to understand from an academic and policy standpoint.

Cyberbullying, sexting, and "grooming" have spread beyond the personal setting and into school

and work settings. But because there is so much information and so many different points of

view on the subject, it is hard to find a single focus or to bring ideas together. In the same way, it

is not clear which parts of digital citizenship are the most important and which ones should be

strengthened. In light of this, it is important to review the theoretical and applied studies of

digital competence that have been done over the past decade.

The purpose of the study was to locate and investigate previous papers on the topic of

digital citizenship that had been published between the years 2007 and 2017. To accomplish this

goal, various tools that allow for the collection of information from various databases, including

Science Direct, Proquest, Scopus, Emerald, Dialnet, and Ebsco, were used. The databases were

searched using an advanced search technique, which brought up articles in both Spanish and

English on responsible use of digital technologies). During this initial stage of the research

project, a total of 734 bibliographic references to previous scientific and academic studies were

identified. The purpose of the search was to acquire as many sources as possible that dealt with matters pertaining to digital citizenship.

The second step was to look for possible articles. During this step, the titles of the articles were looked at one by one to find ones that fit the search criteria and find out what the topics were. By using this first filter, the search was narrowed down to 100 bibliographic references. All the information was saved in a database so that it could be looked at and analyzed later. After that, the same process was done again, but this time the abstracts and conclusions of each article were looked at. This brought the number of possible articles down to 90.

According to the literature review, the term "digital citizenship" can mean different things to different people, and there are a variety of ways to explain the impact of information and communication technologies (ICTs) on expanding people's access to information on a global scale. Various initiatives, such as programs centered on citizen involvement, aim to foster digital citizens. Education, society, the public, and the private spheres are all considered in studies of digital citizenship.

The concept of digital citizenship has permeated society and, as a result, the relationships that arise because of it. Digital competencies have enabled society to express itself in response to various social, political, and academic phenomena. More research on the relationship of technologies to societal phenomena is required.

In developing countries, not everyone has access to technology, which makes it harder for people to get information and participate online. Digital citizenship training and skills are likely to be easier to get in developed countries where the government already helps and where

databases are open to the public. Still, the connection between government, citizen engagement, and ICTs has not been talked about enough. Only a few parts of digital citizenship, like access, rights, and communication, are looked at in these studies. It makes you wonder if training in these areas has covered all aspects of digital citizenship, including netiquette, communication, education, access, commerce, responsibility, rights, ergonomics, and risk. There is no doubt that more research needs to be done on digital citizenship.

The authors of this qualitative paper, set out to do two things: highlight the various perspectives on digital citizenship, and analyze the various research fields that have done so. After collecting responses from participants on their thoughts on digital technologies, the researcher noticed two distinct groups. Two groups were identified, and from those, five general themes emerged. The results of the research indicate three general tendencies among the public in terms of their educational requirements. The first was familiarity with democratic principles for citizen engagement and the regulations governing citizen behavior. The second movement emphasizes soft skills including the ability to think critically, communicate effectively, and create new ideas. The third development was the rise of digital literacy, which encompasses Internet navigation, data manipulation, and social media usage. There were two overarching themes visible in the methods employed by this research. The first focuses on the Internet's role as a public engagement mechanism, with the goal of increasing citizen and activist engagement. The second trend involved thinking about the tools used to evaluate civic learning and citizen engagement in online forums.

The researchers' ability to start with a broad issue and then narrow it down to underscore the wider meaning of the data was fascinating, as was the range of perspectives they covered

when discussing digital citizenship. The results of this study can be used as a guide for future studies of higher education trends.

When the researchers set out to evaluate various studies that had been written in the past, I believe that this study did a significant amount of the background work that was needed. My impression is that they did the groundwork necessary to connect the diverse approaches to digital citizenship theories and practices.

Article Analysis

Singh, A., Bharti, A., Rathore, A., & Sinha, N. (2021). Digital Citizenship Behaviour and Online

Engagement fostering Creativity among Students of Higher Education. *Explore-Journal of*

Research, *XIII*, 277–282.

The goals of this study were to find out how engaged students are online, how well

students behave as digital citizens, what the relationship is between digital citizenship behavior,

online student engagement, and creativity among university students, and how digital citizenship

behavior and online engagement affect students' creativity.

There are two main reasons to look into how engaged students are in online classes. The

first is that online courses are here to stay and will continue to grow, so it's important to do well

in them. The second reason is that getting students involved is one of the most important parts of

online teaching. There aren't many studies in the literature that show a link between digital

citizenship and online student engagement and creativity among students. Education research in

India rarely includes this notion. So, the goal of this study is to fill this gap by finding out if

taking online classes can help students become more creative.

The article's discussion led to these hypotheses (H):

H1: Online student engagement increases creativity.

H2: Digital citizenship and creativity are linked.

H3: Digital citizenship improves student creativity.

H4: Online student engagement boosts creativity.

The information was gathered using incidental-cum-purposive sampling from 137 students between the ages of 18 and 30, 64.7% of whom were female and 34.6% of whom were male, 70.6% of whom had earned degrees and 29.4% had earned postgraduate degrees, 83.1% of whom lived in cities, and 16.9% of whom came from rural areas. The current study used a field study method for testing hypotheses as a non-experimental design. The scales were used in an online survey to measure the variables. There were 17 items in the Digital Citizenship Behavior (DCB) survey. The items served as indicators of the five sub-constructs of digital citizenship, including digital etiquette (3 items), digital commerce (3 items), responsibility (4 items), digital wellbeing/safety (3 items), and digital security (4 items). Five response categories—1 for "Never," 2 for "Once in a While," 3 for "Sometimes," 4 for "Frequently," and 5 for "All the Time"—were used by students to rate their own use of digital devices. For inferential reasons, the DCB mean score was utilized. It was discovered that the scale's Cronbach's alpha was 0.79. Data gathering involved the use of Online Student Engagement (OSE). Skills, participation, performance, and emotional elements were the four components of the OSE. There were 19 items total. On a 5-point Likert scale, the respondent was asked to rate how well each action, idea, and emotion best described them or their actions. For additional study, the OSE's mean score was employed. The Cronbach alpha value was 0.86. Also, in this study, the mean score from the Creativity Style Questionnaire was employed for further analysis. The scale's items were collected from a research conducted by Bartram in 2002. With 33 items and a 5-point scale, it assessed creativity in the areas of producing and originating, challenging and taking risks, and modifying and shifting. The tool was an evaluation of behavioral style; it did not assess cognitive capacity. The survey's internal consistency was calculated to be 0.92.

An online survey was used to get the information. Google forms served as the medium for the scales. First, an overview of the criteria was given. The study was discussed to the chosen respondents, and with the respondent's permission, the link to the online form was given. The people who filled out the form were given clear instructions on how to do so. Respondents were told that their participation was indeed completely up to them; they were not forced to take part and could stop at any time. Also, the confidentiality of people's names and answers would be kept. From November to December 2020, one month, the information was collected. Version 26.0 of the Statistical Package for the Social Sciences (SPSS) was used to look at the data.

Students who spent more time online were also more likely to come up with original ideas, as suggested by the data for H1. This corroborated Akyol & Garrison's (2011) result that cognitive participation enhances students' thinking and conversation by exposing them to new ideas, investigating new material, integrating ideas, and solving problems.

As a result of this investigation, researchers found that H2 was supported, revealing a positive and statistically significant relationship between DCB and creativity among college students. Thus, the hypothesis "DCB and creativity would be positively connected" was therefore proven.

H3's results supported Simsek & Simsek's finding (2012). Their study revealed that technology has helped globalization by allowing people to join online communities through Facebook, Twitter, YouTube, Instagram, and LinkedIn. Throughout the past, knowing how to read, write, and do basic math was an indication of being an educated, successful, and useful member of society.

Bandura, Ross & Ross (1961, 1963) support H4's findings. Social constructivist learning theories emphasize social interaction. Students may study or perform actions alone, but they learn better while working with others. Online, students can fill up each other's knowledge gaps and demonstrate activities.

The purpose of this study was to investigate the connections between digital citizenship and creative expression using a variety of different technologies. In my opinion, the findings are useful in demonstrating how crucial responsible digital citizenship is in relation to increased levels of creativity and collaboration among college students.

Resources

Akyol, Z., & Garrison, D. R. (2011). Understanding cognitive presence in an online and blended

community of inquiry: Assessing outcomes and processes for deep approaches to learning.

British Journal of Educational Technology, *42*(2), 233–250. https://doi.org/10.1111/j.1467-

8535.2009.01029.x

Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of

aggressive models. *The Journal of Abnormal and Social Psychology*, *63*(3), 575–582.

https://doi.org/10.1037/h0045925

Bandura, A., Ross, D., & Ross, S. (2019). Imitation of film-mediated aggressive models (1963).

Crime and Media, 381–392. https://doi.org/10.4324/9780367809195-35

Simsek, E., & Simsek, A. (2012, November 30). *New literacies for digital citizenship.*

Contemporary Educational Technology. Retrieved December 3, 2022, from

https://eric.ed.gov/?id=EJ1105529

Article Analysis

Xu, S., Yang, H. H., Zhu, S., & MacLeod, J. (2017). Understanding the digital citizenship

behaviors of college students from differing socioeconomic origins. *2017 International

Symposium on Educational Technology (ISET)*. https://doi.org/10.1109/iset.2017.50

The digital citizenship practices of college students have not received much attention,
particularly in China. Therefore, this study's goal was to examine the state of digital citizenship
practices among Chinese college students from various socioeconomic backgrounds. The study
particularly addresses the four research issues below: (1) How do Chinese college students
behave in terms of their online conduct? (2) Do college students from various socioeconomic
backgrounds behave differently in terms of their digital citizenship? (3) Does computer use
affect how college students act in terms of digital citizenship? (4) What can be done to enhance
college students' digital citizenship behavior?

The nine components of digital citizenship were separated into three dimensions, including
Respect Yourself/Respect Others (RY/RO), Educate Yourself/Connecting with Others (EY/CO),
and Protect Yourself/Protect Others (PY/PO).

Nine hundred five college students enrolled in a regular college in central China made up
the study's participants. All incomplete surveys were excluded from data analysis since a total of
78.7% (n=712) of respondents gave complete answers. The sample covered a wide range of
fields and had a male-to-female ratio of roughly 3:7, which was typical of the demographic
makeup of the wider organization. In China, the proportion of female students at regular colleges
is often higher. Based on population and closeness to other areas, socioeconomic divisions were

made. Investment in public infrastructure, such as communication networks and educational institutions, varies greatly in China depending on the overall population that it serves. In other words, the most populous, provincial-style cities have significantly more advanced economic conditions than the less populous areas.

Two sections made up the questionnaire used in this investigation. The first component of the study gathered data on individuals' demographics and computer usage history, including years and daily hours used. The Digital Citizenship Scale (DCS) was used in the second segment to evaluate the digital citizenship practices of college students. The DCS had 46 items and three dimensions, which were RY/RO, EY/CO, and PY/PO, in line with the three dimensions of digital citizenship elements. The DCS scale's alpha coefficient was 0.89, indicating that it was a highly reliable tool for gauging the digital citizenship practices of college students. Every question on the survey was scored using a five-point Likert scale, with 1 being the strongest disagreement and 5 being the strongest agreement.

Department heads at the normal college were contacted to get permission to gather data before distributing the questionnaire. During a mid-class break, replies from students were voluntarily and anonymously gathered on paper. For data analysis, the replies from the students were first input into Microsoft Excel and then imported into SPSS. The college students' digital citizenship behaviors were analyzed and compared in relation to their socioeconomic region of origin, computer usage experience, and analysis of variance (ANOVA) tests.

The findings of this study offer a number of useful contributions about the digital citizenship practices of college students. First, it was shown that, compared to the RY/RO or EY/CO dimensions, all graduate students showed fewer suitable actions in the PY/PO

dimension. Second, it was discovered that, in the EY/CO and PY/PO dimensions, students from

higher socioeconomic areas of origin often exhibit more suitable digital citizenship behaviors

than students from lower socioeconomic regions of origin. Even when restricting the comparison

to only pupils who use computers to a comparable extent, this finding holds true.

This study taught me a new term that I had never heard before, and it is called the "second-

level divide." It means that as more people start to use computers and the internet, the focus of

the problem of the digital divide has shifted from disparities in access to differences in how

people make use of technology. This has provided me with a fresh viewpoint, and it will enable

me to question the necessity of conducting additional research regarding other research studies.

Annotated Bibliography

Choi, M., Glassman, M., & Cristol, D. (2017). What it means to be a citizen in the internet age:

Development of a reliable and valid digital citizenship scale. *Computers & Education*, *107*,

100–112. https://doi.org/10.1016/j.compedu.2017.01.002

This study proposes a comprehensive digital citizenship scale that may be used to assess

young adults' capacities, perspectives, and degrees of participation in online communities.

It is built on properly calibrated, overarching, inclusive components of digital citizenship.

An exploratory factor analysis (EFA) was used to extract the 26-item five-component

model from the Digital Citizenship Scale (DCS), and a confirmatory factor analysis was

used to cross-validate the results (CFA). The concept analysis of digital citizenship, the

expert panel review, the EFA, and the CFA all validated the DCS's respectable good

dependability and construct validity. Additionally, it was discovered that the DCS had a

divergent association with internet anxiety and a convergent relationship with internet self-

efficacy. This study will help comprehend people's perspectives of their talents and

trajectories as active and/or critical members of online communities as part of their

everyday lives on local, national, and global levels by providing a theoretically sound and

well-developed digital citizenship scale.

Dunaway, M., & Macharia, M. (2020, November 30). *The effect of digital citizenship on*

negative online behaviors and learning outcomes in higher education. Journal of

Information Systems Education. Retrieved November 20, 2022, from

https://eric.ed.gov/?id=EJ1323723

There has been a rise in the number of inappropriate online activities among college students, such as cyberbullying and online harassment, as a direct result of the widespread adoption of the Internet. Many students may experience anxiety, despair, feelings of loneliness, and feelings of alienation as a direct result of the negative behaviors that they engage in when using the internet, which can eventually have an influence on their well-being and interfere with their ability to learn. It is hoped that integrating behaviors of digital citizenship into educational environments will stop, or at the very least, assist attenuate, the influence of these unfavorable behaviors on the learning results of students. The results, which were derived using data gathered from 184 university students, reveal that perceived learning outcomes have an indirect impact on the link between digital citizenship and behaviors of cyberbullying.

Elcicek, M., Erdemci, H., & Karal, H. (2018). Examining the relationship between the levels of digital citizenship and social presence for the graduate students having online education. *Turkish Online Journal of Distance Education*, *19*(1), 203–214. https://doi.org/10.17718/tojde.382801

This research aims to assess distance learning graduate students' degrees of digital citizenship and social presence, and to shed light on the connection between these two factors. Fifty (35% female) and ninety-three (65% male) students from Karadeniz Technical University's master's degree programs via distance learning participated in the study. We used the Individual Information Form, the Social Presence Scale, and the Digital Citizenship Scale to gather this information. The study used descriptive statistics to evaluate students' levels of online participation and responsible behavior. We utilized

linear regression to analyze the ability to predict and correlation analysis to examine the strength of the link between the variables. Graduate students taking master's degree programs online scored very well on measures of digital citizenship and social presence. As a plus, it was understood that the aforementioned tiers all have important and constructive relationships with one another. Gender differences in digital citizenship and social presence were small, although there was a considerable difference in favor of Educational Sciences Inst. It was also determined that graduate students' social presence was a significant predictor of their level of digital citizenship.

Hargittai, E. (2002). Second-level digital divide: Differences in people's online skills. *First Monday*, *7*(4). https://doi.org/10.5210/fm.v7i4.942

A significant portion of the currently available literature on the digital divide, which refers to the disparities that exist between those who have and those who do not have access to the Internet, restricts its scope to a binary classification of technology use by only taking into consideration whether an individual uses the Internet or not. In order to make up for this deficiency, this paper investigates the disparities in people's abilities to use the internet. A random sample of people who use the internet in a suburban county were selected, and then they were given search tasks to complete so that their online skills could be evaluated. The findings indicate that people search for content in a wide variety of different ways, and there is a significant amount of variation in terms of whether or not people are able to find various kinds of content on the Internet and how long it takes them to perform activities online. There is an inverse relationship between one's level of Internet skill and one's age, a positive correlation exists between one's level of Internet skill and one's level of experience

with the technology in question, and differences in people's abilities to locate content online can only be partially explained by differences in gender.

Kara, N. (2017, November 30). *Understanding University Students' thoughts and practices about digital citizenship: A mixed methods study.* Educational Technology & Society. Retrieved November 19, 2022, from https://eric.ed.gov/?id=EJ1165955

The goal of this research was to evaluate the attitudes and behaviors of digital citizenship held by college students. The most straightforward explanation of the term "digital citizenship" is that it refers to the standards of acceptable and responsible behavior in relation to digital technologies. A survey on digital citizenship was given to 435 students at a private institution. The survey included of demographic data as well as questions based on a 5-point Likert scale. Interviews with students in a semi-structured format were carried out, and content analysis was utilized to make sense of the material gathered. According to the data, students responded that they do not choose to participate in political activities online because of the emotional disturbance, pressure from society, and a fear of negatively influencing their future lives in any manner. This worry is based on the fact that they do not want to participate in political activities online.

Manzuoli, C. H., Sánchez, A. V., & Bedoya, E. D. (219AD). Digital Citizenship: A Theoretical Review of the Concept and Trends. *TOJET: The Turkish Online Journal of Educational Technology*, *18*(2), 10–18

The purpose of this essay is to examine the ideas and patterns that have emerged from research on digital citizenship carried out over the course of the past 10 years. In order to

accomplish this goal, certain search parameters were devised and applied to articles stored in specialized databases. The categories of concepts, abilities, empowerment, instruments, programs, and technology that encourage digital citizenship predominated within the findings of the study. The most important discoveries include the fact that the concept of "digital citizenship" may be understood in a variety of ways and that information and communication technologies do help to increased access to knowledge, but not in the same way everywhere in the world. In addition, several initiatives, such as programs centered on citizen involvement, work to promote digital citizenship. Therefore, research on digital citizenship takes a cross-cultural approach in educational, social, public, and private spheres of activity.

Ribble, M., & Miller, T. N. (2013). Educational leadership in an online world: Connecting students to technology responsibly, safely, and ethically. *Online Learning*, *17*(1). https://doi.org/10.24059/olj.v17i1.310

As school leaders, parents, and members of broader social communities are coming to the realization right now, the current knowledge gap in technology and the absence of leadership training connected to digital literacy for school environments can cause major challenges for educational institutions. The authors discuss ways in which educational leaders can both prepare their stakeholder groups for a digital future and take steps to reduce the exploitation or abuse of technology. These techniques are directed toward educational leaders. This paradigm of digital citizenship should be considered by educational institutions as a possible new tool that might be used both on-campus and remotely for students, teachers, and staff members.

Ribble, M. (2015). *Digital citizenship in schools: Nine elements all students should know*.
International Society for Technology in Education.

As a result of the fact that technology has always been a part of the lives of today's students, many educators think that their students are capable users of technology; in fact, they believe that their pupils are more capable than they are. In point of fact, not all students are as adept with technology as their teachers may imagine, and not all teachers are as inept as their students fear they are. Even if students feel at ease utilizing various forms of technology, there is still a possibility that they are not doing it in an appropriate manner. In a similar vein, there is a possibility that teachers with varying degrees of experience do not comprehend how to make efficient use of technology. Students and teachers alike need to develop their skills to become responsible members of the digital citizenry. There are nine components that serve as a foundation for the effective application of technology and provide the framework upon which the digital society is built. These components will assist individuals in being more aware of the challenges that are associated with technology, which will lead to more acceptable usage.

Singh, A., Bharti, A., Rathore, A., & Sinha, N. (2021). Digital Citizenship Behaviour and Online
Engagement fostering Creativity among Students of Higher Education. *Explore-Journal of Research*, *XIII*, 277–282.

The purpose of this investigation is to determine whether or whether there is a connection between creative thinking, online student involvement, and good digital citizenship behaviors among higher education students. Using the means of an online survey, the information was gathered from 137 different students. In order to conduct the survey, we

utilized the usual questionnaires. For the purpose of putting the hypotheses to the test, the

Mean, Standard Deviation, Coefficient of Correlation, and Multiple Linear Regression

were all computed. The findings showed that there were strong positive relationships

between creative thinking, student participation in online learning, and good digital

citizenship behaviors. The findings also demonstrated that students' acts of digital

citizenship and their level of participation in online activities had a sizeable and favorable

impact on their creative potential.

Xu, S., Yang, H. H., Zhu, S., & MacLeod, J. (2017). Understanding the digital citizenship

behaviors of college students from differing socioeconomic origins. *2017 International*

Symposium on Educational Technology (ISET). https://doi.org/10.1109/iset.2017.50

This research was conducted with the intention of analyzing and comparing the behaviors

of digital citizenship exhibited by college students hailing from various socioeconomic

regions of origin. 712 college students located in central China were given the Digital

Citizenship Scale in order to collect data from them. The findings of this research give a

number of useful contributions, all of which are associated with the digital citizenship

practices of college students. To begin, it was discovered that all college students exhibited

less suitable behaviors in the Respect Yourself/Respect Others (RY/RO) and Educate

Yourself/Connect with Others (EY/CO) dimensions than they did in the Protect

Yourself/Protect Others (PY/PO) dimension. Second, it was found that students who came

from higher socioeconomic regions of origin tended to exhibit more appropriate behaviors

regarding digital citizenship in the EY/CO and PY/PO dimensions than students who came

from lower socioeconomic regions of origin. This was the case in both dimensions. Even

when restricting the comparison to those students who have a comparable amount of

computer experience, this observation still holds true indicating a second-level divide.