PAPER

University Students' Perceptions and Practices of Online Co-construction of Digital Citizenship Competencies

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ABSTRACT

Preparing students to engage in global discussions is essential in today's world. As a result, instructors are increasingly interested in developing ways to enhance university students' digital citizenship skills. This qualitative study explores methods to foster these skills through asynchronous online discussion activities, focusing on students' behavior and feedback during and after the activities. Thematic analysis was used to evaluate data collected from the posts of 64 students in 10 groups and the transcript of focus groups and interviews. The findings highlight instructional strategies that enhance students' digital citizenship, showcasing how they interact with instructors and peers. Students developed key skills such as resilience in handling conflicts, self-motivation, peer learning, and professional communication, including justifying claims and providing evidence. The study also reveals that students demonstrated a deeper understanding of digital citizenship and were eager to apply their skills in various digital contexts. These results offer important insights for higher education institutions on promoting digital citizenship and guiding instructors in integrating it into curricula.

KEYWORDS

digital citizenship, asynchronous online discussion, motivation for learning, academic resilience, pedagogical design, higher education students

1 INTRODUCTION

In a contemporary context characterized by "the ubiquity of digital devices and practices in the physical space of the campus" [1, p. 406], and extending beyond that to workplaces and collaborative settings, universities must have a central role in advocating for the cultivation of students' digital citizenship skills and attributes. It is widely acknowledged that the impact of online communications and activities, either "doing things with words or saying words with things" [2, p. 1], has deeply penetrated our daily existence, making digital citizenship a global reality. Digital citizenship refers to more than responsible, ethical, and safe use of technology. In today's interconnected world, teaching and practicing digital citizenship becomes

essential for navigating and engaging in the online landscape. It includes a variety of know-how and practical skills to help university students locate, assess, and distribute information responsibly; engage in constructive conversation with other individuals from diverse backgrounds; and ensure that their online activity is moral, legal, and safe. Higher education institutions have a significant role in preparing graduates for the high demands in modern societies and workplaces by designing learning opportunities that facilitate access to rich content, diverse interactions, and novel connections to contribute towards acquiring these skills. As a result, many educators, researchers, and educational authorities began to consider and search for best practices to integrate and merge digital citizenship in education.

2   LITERATURE REVIEW

Since the mid-2000s, there has been an increased and widespread use of the Internet and digital tools. Educational systems responded by going beyond teaching students to type and use specific software; they are focusing on student safety and well-being in digital environments [3]. A survey conducted among the youths in the US in 2010 revealed that nearly half of the students (45%) have received Internet safety education in schools [4]. The accumulation of these efforts leads to the development of the digital citizenship concept.

Digital citizenship is defined by Ribble [5, p. 15] as "the norms of appropriate, responsible behavior with regard to technology use." Different frameworks have been developed to address the components of digital citizenship. Ribble [5] developed the nine elements framework that provides the base for appropriate technology use. It includes digital access, digital commerce, digital communication, digital literacy, digital etiquette, digital law, digital rights and responsibilities, and digital health and wellness. Another framework is published by the Council of Europe (2022) entitled 'Digital Citizenship Education Handbook' to provide a guide for teaching digital citizenship. The handbook divides digital citizenship competencies into three sections: being online, well-being online, and rights online, which include 10 dominoes: access and inclusion, learning and creativity, media and information literacy, ethics and empathy, health and well-being, e-presence and communications, active participation, rights and responsibilities, privacy and security, and consumer awareness. Finally, the Digital Citizenship+ (Plus) framework developed by Cortesi et al. [3]. It is expanded to include 17 areas: artificial intelligence, civic and political engagement, computational thinking, content production, contextual understanding, data management, digital access, digital economy, digital literacy, identity exploration and formation, information quality, law, media literacy, positive and or respectful behavior, privacy and reputation, safety and well-being, and security. It can be observed that some frameworks are broader and more detailed than others. However, in general, they encompassed the necessary skills to fully participate academically, socially, ethically, politically, and economically in the rapidly evolving digital world.

While most digital citizenship discourse and literature revolved around challenges such as online safety, cyberbullying, and the development of professionally suitable online identities, recent discussions suggest a notable shift in focus [6]. The current narrative indicates that digital citizenship involves more than safety, civility, and identity. It emphasizes active involvement in online conversation worldwide, a facet demanding an advanced and nuanced skill set. Higher education institutions have a significant role in preparing graduates for the high demands of today's society and the workplace, creative and qualified workers, and highly connected

and socially engaged citizens by creating access to rich content, diverse interactions, and novel connections to help evolve these capabilities [7].

It is important to help university students evolve their skills and knowledge in digital technology beyond digital manners (netiquette), digital literacy skills, and online safety rules. However, this is not sufficient in today's world. In order to help and enable students to participate in the worldwide discourse and to have a voice and opinion in matters that connect to their lives and context, higher education should facilitate digital citizenship learning through practical experiences where students actively interact and participate in building knowledge and developing their perspectives and practices.

Several research studies focus on digital citizenship and the methods of teaching, learning, and practicing. According to Öztürk [8], studies related to digital citizenship focus on four main areas: the introduction of the concept of digital citizenship or the elements of digital citizenship, determining the participants' digital citizenship levels or perceptions, examining the curricula within the framework of digital citizenship, and teaching of digital citizenship and its elements. A research project conducted by Blaj-ward and Winter [6] explored the experience of students learning, teaching, and communicating through digital technologies in various undergraduate courses at a UK university and how the students conceptualize digital citizenship. The result showed that the students have a clear understanding of the meaning of digital citizenship. However, they have difficulties in linking the gained knowledge to personal and professional online practices. The study focused on the outcome rather than the interactions. The study gives the students a voice to express their understanding of digital citizenship, but it lacks the students' experience of learning processes and interactions. Similar to this study, Prasetiyo et al. [9] conducted semi-structured interviews with the students after digital citizenship classes enrolment to explore their knowledge of digital citizenship. The results indicate that students expressed some understanding regarding digital citizenship, including digital literacy, the standard of behavior, and moral guidance in an online environment. This study focused on the outcome of the learning process rather than the learning process. Also, a mixed-methods study was done by a and Al-Zahrani [10], and it focuses on investigating the effect of digital citizenship skills on the prevention of cybercrime among higher education students. The study revealed that digital citizenship has a crucial role in enhancing students' awareness and ability to prevent cybercrime by fostering responsible online behavior. Although the study sheds light on the importance of integrating digital citizenship in curricula and gives some recommendations, it lacks giving instructors guidance to do that. Furthermore, Myers' study [11] focused on analyzing students' posts in online asynchronous discussion forums to examine if the process of such engagements supports students' formation of the meaning of citizenship in a globalized world. The findings showed that students' engagement in discussion forums sparked conversations on the meaning of digital citizenship, with new knowledge being produced in some of the conversations. Although they negotiated stances and investigated the meanings of digital citizenship, students rarely reached the highest levels of knowledge construction. The main interest of the study is digital citizenship knowledge building, and it lacks examinations of students' ability to apply knowledge in a real-life or examined context.

While these studies contribute to the literature, they have a common problem, which is the lack of offering students the opportunity to practice digital citizenship skills in either real or examined situations. Furthermore, they do not provide pedagogical guides to help instructors facilitate an online learning experience to build the competencies of digital citizenship. Therefore, there is a need for more

investigation into how digital citizenship can be taught, emerged, and evolved in a formal educational setting, specifically a professional-oriented undergraduate environment. By focusing on exploring the interactions that happen between learners in the online discussion environment, investigating how learners conceptualize digital citizenship, and examining a potential pedagogical design that can facilitate learning, the research contributes to discussions on the links between theory and practice when it comes to teaching digital citizenship. This paper focuses on aspects of what knowledge and competencies university students need to practice digital citizenship and how instructors can scaffold the learning process and facilitate a practice. The study's importance lies in its engagement with a current issue related to preparing university students to be digital citizens in the era of great acceleration of technology utilization. Several studies on the educational context emphasize the importance of students' interactions and collaboration in promoting learning [12] [13] [14]. Thus, this study aims to facilitate a learning environment to encourage students to actively participate in building knowledge and practice about digital citizenship in a friendly learning online environment. The study objectives are to explore students' learning processes through an online environment by investigating how digital citizenship skills are reflected in the discussions. Also, it aims to capture the students' voice and their conceptions of digital citizenship. Moreover, the study sheds light on some teaching practices to help university teachers scaffold their students' learning process to be good digital citizens. The following are the questions that guide this study:

- How does university students' experience of learning and communicating through an online environment foster their development as digital citizens?
- How do students conceptualize digital citizenship at the sight of their learning experience?
- How can university teachers scaffold students' learning and growth as digital citizens?

3 METHODOLOGY

The qualitative approach was employed to fulfill the research objectives. Qualitative approaches can result in multiple realities or interpretations that can be applied to construct knowledge [15]. The epistemological approach that guided this study is based on social constructionism, which broadly holds the belief that "meaning is not discovered but constructed" [16, p. 9]. Thus, the action research approach is applied to facilitate a venue for the participants to dynamically co-construct the understanding and practice of digital citizenship. Ethical consent for the research was gained from the local approval committee.

The setting for the study is a unit from an undergraduate course in the College of Education at one of the universities in Saudi Arabia during the first semester of the academic year 2023/2024. The participants consisted of 64 students from different fields (Psychology department, early childhood education department, Media department and Biology department) and were enrolled in the 'teaching and learning' foundation course. This course covers various topics related to learning and teaching strategies and equips learners with thinking skills, problem-solving strategies, communication, and presentation skills. It is a mandatory course for early childhood education and psychology students and optional for media and biology students. Digital citizenship skills are crucial for all graduates; thus, part of the goals of this course is to encourage the development of core skills and abilities of digital citizenship.

As part of the assessment, the learners joined three online discussion forums aiming to facilitate a venue to collaboratively co-construct and enhance digital citizenship meaning and skills. The learners are divided into small groups, each comprising five to eight learners. The three discussion activities were conducted through Blackboard (a virtual learning environment (VLE)). The task design is aimed at increasing complexity and independence. The first task aims to build an understanding of digital citizenship. Thus, learners' main activities are to search for information and resources before sharing and discussing their findings with others. In the second task, the tutor provides the main recourses 'related to the current education situation in a local and international context'. The learners are asked to engage with these resources before critically discussing, analyzing and expanding upon the content. The third task requires them to define a local educational problem and then propose solutions to tackle that issue. While the first discussion task focuses on knowledge building, the second and third tasks focus on practicing the gained digital citizenship knowledge and skills by engaging learners in situations that encourage them to express opinions, judge resources, identify issues, and propose solutions. Thus, the complexity of the tasks increased in terms of cognitive skills, searching skills, the need for engaging in active collaborative work, and the possibility of having conflicting opinions. Moreover, the learners gradually have the responsibility to moderate their online discussion forum. The first discussion task is actively moderated by the course tutor to facilitate the discussion, encourage learners to participate, and provide feedback to improve discussions. Subsequently, the tutor's support decreases gradually, and by the third activity, the support is limited to answering procedural questions, if necessary. Therefore, the series of discussion activities is designed to promote independence. The educational setting is designed to facilitate an environment that encourages learners to actively develop and practice a variety of digital citizenship skills that they can take forward and apply in other online environments.

The data set contains the document analysis of the posts exported from the Blackboard discussion boards. This data can reflect patterns of interaction between group members and the behavioral changes of the individual and group that might occur over time. After the last discussion board, two focus groups were organized to facilitate a mutual environment to collect data about the learners' experience and perception of digital citizenship and the learning processes. Following that, semi-structured interviews were conducted, aiming to capture an in-depth understanding of the participants' reflections and perceptions of the learning experience. Twelve interviews were conducted, and the participants were chosen depending on their agreement to voluntarily take part in the study (convenience sampling strategy). Confidentiality was achieved by anonymously assigning a number for each participant (e.g., student 1). The discussion groups (10 groups) were color-coded (e.g., yellow group), and focus groups are referred to in the result as FG1 and FG2.

4 RESULTS

4.1 The development of digital citizenship skills through discussion (insights from the inside of the online discussion)

Each of the ten groups has the same starting points as each group has their own discussion forum (via Blackboard), the same learning resources, almost the same amount of moderation by the course tutor, the same time duration for each discussion task, and all learners knew that the tasks would be graded. These early decisions

reflect the tutor's judgments and reflect some of the institutional decisions, e.g., the use of Blackboard as the VLE and the need to assess the learning activities. Although all the groups have the same starting point, they each develop their own evolution and engagement with the tasks.

From the earliest stage of the first discussion, the learners reflected on various ways to engage with the learning task. The following are three examples from three different groups to illustrate the former remark.

> [Silver G, S 43]: *"I will start by talking about online relationships. from my experience in this type of relationship, I noticed and learned many things, so I do not need to search to know what to write … ."*
> [Emerald G, S 52]: *"Hello everyone. As we earlier agreed we will start our discussion with one of the basic topics and skills of dealing with the digital age which is Digital law, security and privacy…"*
> [Yellow G, S 1]: *"Salam Alaikum I will talk about cyberbullying … ."*

These quotes represent more than discussion board posts; they demonstrate different ways of engagement and understanding. In the silver group, Student 43 played the 'starter' role and began the discussion by reflecting on her understanding of the task by sharing some personal experiences. Following this post, similar posts were shared by others. In the second example (emerald group), Student 52 demonstrated some social skills by starting with a warm welcome before reflecting on an earlier decision made by the group members related to choosing one of the digital citizenship elements that they intended to discuss. The following posts reflect collaboration and mutual knowledge building. In the yellow group, Student 1 began by greeting others before having a direct discussion on the topic by sharing some of her research results on one of the digital citizenship elements (cyberbullying). The following posts are also similar to Student 1 in terms of sharing as each learner posts some information about their research results. From these examples, it is noticeable that the effect of the 'starter' upon shaping the rest of the group members' style of engaging in discussions. Laurillard [17] defined various roles that learners can play in discussion activities; some of these roles are reflected through the discussion's 'starter', 'moderator', 'source researcher' and 'summariser' [17, p. 154]. Although the starter has an important role in initiating the discussion and influencing others, the other roles also helped in evolving and enriching the discussion.

Students, firstly, introduced new sources of information, and their subsequent engagements in the dialogues were reflected through the introduction of various types of resources, sharing self-experience and emotions, knowledge exchange, validation, and providing inquiries. The following are some of the extracted posts from the first discussion (building an understanding of the digital citizenship concept). They demonstrate that the learners began to reflect on their active engagement with others' posts by:

- Reflecting on their active action, for example,

> [Silver G, S 42]: *"After I read all the previous posts about online relationships I want to share… ."*;

- By using some of the "peer facilitation techniques" such as admiring and validating others' posts [18, p. 477] (Ng, Cheung and Hew, 2009, p. 477),

> [Silver G, S 44]: *"I like this video thanks student 10 for sharing it"*;

- By building on an earlier post,

    [Silver G, S 40]: *"I agree with you guys, and I want to add …"*.

In addition, the learners introduced new sources of knowledge, raised some inquiries, and reflected on some emotions.

    [Silver G, S 37]: *"Your discussion caught my attention and I wanted to share this video as I realized most of the threads are written posts* (*link*)*…. also, I would like to ask you what you think of what he said in the video, Is it true? Do you agree with him or not?"*

The results show that, through the process of validation, expressing emotions, providing access to external content, sharing information, stories, and personal experience, and raising inquiries, the discussion has sustained and evolved, and the process of knowledge-building has become more focused and collaborative. Scardamalia and Bereiter [19] argued that the development of knowledge-building emerges from the interaction of simpler elements. Thus, all the interaction that occurs inside the group accumulates and participates in advancing the process of building an understanding of digital citizenship.

Subsequently in the following discussion tasks, the learners demonstrated higher discussion skills. As stated before, the second and third tasks were designed to encourage the learners to practice their gained knowledge from the first discussion about digital citizenship. Starting with the presentation of some posts from the second activity, which encouraged the learners to engage critically with some resources, express intellectual opinions, and enrich the discussion forum with resources.

    [Blue G, S 20]: *"I quote the writer "Education does not make a person more moral or happier." you can find it on page 3, indeed this is a radical opinion, as lots of research show the major role of education in enhancing knowledge and ethics and you can look at this research study as an example (link)."*

Another post from the same group replied to an earlier post:

    [Blue G, S 19]: *"I agree with some of your points and disagree with others, yes there are some issues with the education system, not the education itself, however, some of the issues are related to the learners' commitment or teachers. For example, look at the social studies curriculum for grade 8, it encourages a high level of thinking which helps in improving lots of skills (link)."*

In the green group, Student 25 replied to an earlier post with:

    [Green G, S 25]: *"I agree with you about the importance of education and there is also a Hadith that explains the benefits of education, and encourages people to be educated, prophet Mohammed peace be upon him said*: (…)"

These posts illustrate the improvement in the learners' learning behavior as they increased their engagements with others' posts, which made the learning process more mutual and collaborative. Also, learners gave reasons and supported their opinions with evidence, which is a sign of critical thinking. Moreover, some disagreements were raised and supported by reasons. Furthermore, new types of

resources appeared in this discussion activity, such as quotes from authors, research articles, links to curriculums, and some religious quotes.

In the third activity, the learners were asked to choose an educational problem and propose solutions to solve this issue. In this activity, the learners reflected more advanced research skills, and their discussion was more focused around the topic. For example, in the green group, the Student 24 posts:

[Green G, S 24]: *"Hello again, friends I propose to focus our research on the problem of the lack of teaching aid resources. So, Identifying the problem: the lack of teaching aids in schools, especially electronic devices. The importance of the problem: the role of teaching aids in advancing learning and understanding."*

Replying to that, Student 26 posts:

[Green G, S 26]: *"I agree with this topic, and it is noticeable the lack of them in schools, here is a link to a podcast for a teacher explains the importance of teaching aids (link)."*

Student 28 replied with

[Green G, S 28]: *"... here is a link for a research study that emphasises the problem and suggests some solutions (link)"*

Subsequently, many students share various resources, website articles, and research articles to emphasize the importance of the problem or to propose solutions. Such methods of engagement with research articles and applying the process of problem-solving occurred in other groups. For example, in the silver group, the learners reflected more intellectual discussion and deep engagement.

[Silver G, S 41]: *"The chosen problem is (the application of distance education in schools), and it is chosen among the problems facing education recently, and we will begin with a scientific study that confirms the importance of this problem. The study: A study was conducted by Alkondari in 2022 aimed to identify the reality of e-learning in secondary schools during the Corona pandemic period, as seen by teachers and students studying.*
Methodology: ... .
Research sample:
Research result:"

Replying to that:

[Silver G, S 44]: *"I agree with S 41, and I would like to add another study to support our claim ... ."*

After many posts, Student 39 volunteered to summarize the result of their discussion in one post:

[Silver G, S 39]: *"OK, I will summarize the most important points in our discussion, and you are welcome to add to it if you want... ."*

The discussion learning activities became deeper, more focused, and more collaborative over time. The results show that, through the online discussions, learners developed and practiced various discussion skills, and they used the affordances of digital tools to support and clarify their utterances. These skills vary between engaging actively in a discussion, expressing an opinion, giving reasons and evidence to support an opinion, making informed judgments, disagreeing politely with others, using various information sources, organizing and communicating information, and citing the source of information. All these skills are components of being a citizen in a digital world [20] [21]. The results showed that participating through respectful and guided discussion stimulated a venue that can help students understand their roles and play active roles in digital communities.

4.2 Digital citizenship skills are crucial for any university student (insights via students' voices)

After the discussion activities were done, the learners had the opportunity to reflect on the learning experience by conducting interviews and focus groups. Most of the participants described themselves as 'digital natives' who "*do not experience life without technology* [FG 1]". Moreover, the participants revealed that digital technology is a main part of their daily lives as they use it for learning, entertainment, and socializing. "*We use technology all the time for learning, communicating, taking photos and videos, and gaming* [FG 1]"; "*Everything I do at university involves technology for example, contacting tutors, communicating with colleagues, submitting my work, finding information, paying for my coffee or lunch, even finding my classes, and a lot more* [FG 2]." Thus, technology is used within and outside of campus for personal and academic reasons. In addition, the participants stated their understanding of the importance of digital citizenship and their familiarity with its theoretical understanding.

[Student 53, interview]: "*Firstly this topic about digital citizenship is crucial for any university student, they need to know how to be good citizens in the digital world especially before they move to the workplace.*"

[Student 55, interview]: "*I learned previously about digital citizenship in terms of digital manners, cyberbullying and digital safety, however, this learning experience is totally new for me.*"

[Student 31, interview]: "*It was a unique experience for me, and I love it a lot as it helps me improve in terms of online communication … I learned a lot from the practice and the others.*"

The participants shared various skills that they have gained through the learning experience and linked them to digital citizenship. Such skills were a mixture of individual and social skills. In terms of individual skills, the following are quotes from different interviews:

[Student 37, interview]: "*The engagement in the discussion activities helped me in different ways, to search for information, organize my ideas before I share them, I learn how to write scientifically as at the first discussion board I used a slang language, also I fell my vocabulary is improved as I read different resources, also I have learned the right process to solve a problem.*"

[Student 64, interview]: *"These activities helped me to improve my personality in general, not just inside the discussion boards, and the most important thing that I am grateful for is I learned through the practice how to actively listen to others and accept others' opinions, how to disagree with others without feeling guilty or angry."*

[Student 41, interview]: *"I feel myself thinking like a researcher. For example, when I give an opinion, I support it with studies I did that a lot in the last discussion. As I am a person who likes to discuss a lot, I changed my way now to be more intellectual and I am so happy as I realise my arguments have become more accepted by others which gives me more confidence."*

[Student 55, interview]: *"To participate effectively, I needed to search for knowledge in the right places and differentiate them then organize my idea, then write and after that discuss, all that helped me improve my critical thinking, discussion and communication skills and writing skills. I feel this experience gave me the courage to express my ideas, it gave me a voice."*

These quotes reflect several skills: problem solving, critical thinking, information literacy skills, academic research skills, resource checking, expanding information resources, communication and discussion skills, and academic writing skills. These skills helped the learners to be more confident in expressing and communicating their knowledge and opinions. The learning experience gave them a safe forum to practice their voice.

In addition to the individual skills, learners reflected on some social skills that were developed through the learning experience. As stated in some of the quotes above, discussion skills were developed, such as interacting and accepting others' opinions and exchanging knowledge and ideas. Moreover, the participants emphasized more skills such as collaborative knowledge building, asking questions, and raising inquiries. All these skills can help in fostering various high-thinking skills, which are important for digital citizenship, such as adaptive thinking, collective action skills, problem-solving thinking, and holistic thinking [2] [22].

[Student 18, interview]: *"At the beginning of the discussions I tried to avoid disagreement as I was afraid to have arguments or misunderstandings with others, but later my discussion skills became better, I interacted actively with others' posts, I built on them, I asked questions and learned how to disagree respectfully."*

[Student 48, interview]: *"I read other's posts carefully and that helped me to understand others' perspectives and to widen mine as well."*

The participants revealed some understanding of the roleplay off these skills in advancing digital citizenship skills.

[Student 37, interview]: *"I learned lots of skills that can help me discuss and participate effectively and professionally in social media, this experience is so related to our daily life as university students as well, it helps to enhance knowledge-building skills, and the use of the resources around us in the digital world to be learning resources for example podcasts, photos, videos, also it helps me thinking scientifically I mean checking the resources the others' share and carefully choosing my resources and I think a lot before I share posts."*

[Student 5, interview]: *"Digital citizenship requires lots of skills which the discussion tasks offered us an opportunity to practice in a safe environment, for example, to be part of a group, to share and produce content, communicating my*

ideas with other, treating other respectfully through the Internet and practice the manners of the discussions."

Accordingly, the focus groups and interview data showed that the learners have gained different skills. Furthermore, they understand the relationship between these skills and being a digital citizen in a digital world. Skills such as content production, digital manners, positive/respectful behavior, having a voice in the digital space, communicating ideas, and understanding and appreciating different perspectives are crucial in digital citizenship [3] [5]. Furthermore, the learners reflected some understanding of the extension of these skills out of the discussion forum, such as the workplace, and their application of these skills in other contexts.

4.3 Linking threads together to enhance the competencies of digital citizenship in the educational context

There were two reasons for conducting focus groups: to collect data and to close the circle of action research by reflecting on the learning process. It helps the learners to understand the rationale of the decisions, such as setting the learning experience in three stages, the reasons behind the gradual drawback of the tutor's support and appearance, and the use of Blackboard as a venue to conduct the discussions and allows learners to reflect on those discussions. The data from focus groups can be divided into three main themes: the setting of the learning experience, the teacher's participation, and the conflicts between power and preferences.

The setting of the learning experience. As previously stated, the three discussion activities were designed to increase complexity in terms of the discussion topics and independence. The learners revealed positive attitudes toward this setting, and they reflected on the learning stages that they experienced and the skills gained in each stage. The following are two quotes from the participants' reflections:

[FG 1]: "*The first discussion activity was a new experience for me I did not know what I was supposed to write, so I searched and posted without even documenting my resources, and my posts were just written posts ... After that, in the second activity I gained some skills in what I was supposed to share, how to participate effectively, and I tried to advance my writing skills to share my opinion and research results ... Also, I started to ask questions to engage more with my colleagues and to help them think as well ... but the third activity was the best for me and indeed I enjoyed it. I learned to add quotes and to cite them correctly, I shared different sources of knowledge like videos, photos, Quran and Hadith verses to help others understand my points ... to discuss effectively, you need to respect others' opinions and also the discussion has a time limit, and we need to commit to it.*"

[FG 2]: "*... . The main thing I realised that has improved in my participation is that I moved from sharing to discussing, from posting opinions to intellectually communicating information and ideas and to being able to think critically.*"

The results show that the repetition of the discussion activity with increasing complexity can benefit learners as it offers them the opportunity to practice and improve their skills and competencies by learning from other participants' behavior and the tutor's feedback. The skills, as stated previously, vary between engaging actively in a discussion, confidently expressing an opinion, scientifically providing an argument,

purposefully expanding information resources, and other skills which are directly linked to digital citizenship and could be transferred to other digital contexts.

The teacher's presence. To increase the independence of the participants, the tutor played two main roles: at the beginning, a "guide on the side" role to provide constructive feedback to help learners improve their discussion skills, then "the ghost in the wings" role was applied to give them the independence to express and practice the gained skills [23]. The participants were satisfied and revealed positive attitudes toward this strategy:

> [FG 1]: *"At the beginning I was confused and I did not know if I was doing well or not but after I received a comment from the teacher, I felt more confident and I knew what was good or bad in my posts and I was excited to improve my participation."*
> [FG 2]: *"I used to wait for the teacher to participate and comment on the posts and the comments were constructive and helped a lot. After that, my colleagues and I depended more on ourselves when the teacher stopped commenting and we read the instructions that were provided at the beginning of each task carefully."*
> [FG 2]: "(in reply to the previous participant) *That is right this strategy is like a commander who trains the army then supervises them on the battlefield to see if they do well."*

The results indicate that the ways an instructor participates in the discussion forums can influence the learners positively. This participation can help to facilitate and moderate the discussion, increase the depth of discussions, and encourage learners to actively engage. This result confirms some previous studies, such as [24] and [23]. However, the results show that the dependency on the instructor's participation might negatively affect the learners' participation as they wait for the tutor's comments to engage. Thus, the gradual withdrawal from the instructor is an effective strategy to prepare the learners and then allow them to practice their skills.

The conflict between power and preferences. Students' practices, a growing sense of community, and collaborative participation and knowledge-building are not developed randomly but from "a nexus where various flows of information and power intersect" [25, p. 369]. One of the most direct influences is the tutor's authority, which affects and shapes the emerging practices, particularly due to the three discussion activities being assessed. During the reflecting process on the focus groups, the participants raised three factors – which can be considered as types of powers – that influenced the learning experience: the tutor's presence, assessment, and the chosen technology medium for discussion. The tutor's presence is already discussed in the above section. Therefore, the assessment's impact on the learners will be examined.

> [FG 1]: *"To be honest I do not like online discussion and I prefer face-to-face discussions, so my participation was mostly to gain marks but later especially at the last discussion activity I liked it and enjoyed it indeed because I felt how much I learned during this time."*

The idea of this quote was expressed several times during the focus groups and the interviews. Pai, Sears and Maeda stated that "structures, such as scripts, roles, and reward systems, have been found to be particularly important for promoting significant gains in group learning" [26, p. 80]. Although the assessment process had

a major impact on the participants, it is an important factor in promoting learning. The conflict between some of the learners' preferences, the power of the assessment, and the desire to gain academic merits has influenced learning positively.

The third factor that affects learning is the chosen technology medium for discussion, which is the Blackboard discussion forum. As stated before, Blackboard was chosen by the institution. The participants showed their dissatisfaction with using Blackboard:

> [FG 2]: *"One of the main problems in the activity was the use of the Blackboard, it is annoying for many reasons, sometimes it suddenly stops working because it is under maintenance, and there is no notification which I think reduces the interaction and participation, and it is too formal."*

To solve this conflict between their preference and institutional decision, the participants revealed that they used other applications (Telegram and WhatsApp) as a second medium.

> [FG 2]: *"In my group, my colleagues and I agreed to use WhatsApp to facilitate the discussion on the Blackboard, for example, to notify each other when we post, to remind some of the group's members to post, as part of the mark is on the group work, also we used it to argue and negotiate until we become to an agreement, especially on the third activity to make an early decision about the educational problem before we discuss it in deep on the Blackboard."*

There are three important elements to be reflected here. Firstly, the manner in which students practiced self-authority to solve their problems with Blackboard. Second, it reveals students' self-discipline by trying to act in accordance with the tutor's expectations. Third, the participants played a disciplinary role toward other students by motivating them to participate in discussions. This shows "the way that the power within this environment is innately bound up with resistance" [25, p. 371]. The conflict between power and preferences leads to resistance, which is reflected in new practices such as resilience and self-discipline skills. Creating a learning environment that exposes learners to resist institutional power benefits digital citizenship education as it prepares learners for more real participation in other digital contexts by stimulating some of the situations they might face in the digital world, either in personal, professional, or academic life.

To link the threads together, a crucial pedagogical design challenge is to consider the organization of the learning activities to teach the learners how to be active and productive in the digital world and how to manage their presence, as that is the purpose of digital citizenship [27]. Structuring a learning activity in an educational context aiming to foster the competencies of digital citizenship can be designed in a way that provides learners with different levels of practice opportunities that increase in complexity and independence, scaffolding the practice with some guidance, and allowing learners to solve conflicts between power and preferences.

5 CONCLUSION

Digital citizenship can be manifested and practiced in various ways. Although most university students are digitally savvy in using technology for academic and personal purposes, university instructors have a role and opportunity to help their

students develop more competencies in utilizing such technology. This study reveals that university tutors can help their students enrich their digital citizenship skills by facilitating asynchronous online discussion activities. These skills can vary between enhancing learners' resilience skills and abilities to deal with conflicts, developing self-discipline and regulation skills, identifying and solving problems, learning from peers, communicating knowledge and ideas professionally by finding resources, justifying claims, providing evidence, and writing well.

The data shows that designing a learning experience to enhance the competencies of digital citizenship can be done by organizing discussion activities to gradually increase complexity and independence. Increasing the complexity allows learners to practice thinking skills, develop discussion and collaborative skills, engage with problem-solving, build knowledge, and deal with different perspectives. Moreover, the repetition with increasing complexity offers learners additional practice as well as the opportunity to express their voice on different topics and learn from other participants' behavior. The increase in independence benefits learners in different ways. In the beginning, having a tutor for support can help with the practice and enhance learning. Subsequently, the gradual withdrawal allows learners to independently practice their skills, which leads, as the data revealed, to increase the courage to express ideas, share voice, and play more effective roles to lead and moderate the dialogue. Furthermore, the conflict between the power of the tutor and the institute (assessment and using Blackboard) and the learners' preferences, which are reflected through resistance, "must not be seen as an undesirable outcome of the pedagogical design" [25, p. 372]. The resistance is reflected in the forms of new practices such as introducing new technological resources, encouraging collaborations, self-discipline, and playing disciplinary roles. Thereby, the resistance can contribute to the formation of practice. All these skills and practices that have evolved from the learning experience can help the learners with the skills and flexibility to deal with conflicts, which prepare them to contribute to various contexts and inform public dialogue.

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7 INSTITUTIONAL REVIEW BOARD STATEMENT

The research has been approved by the research ethics committee at King Saud University, and the reference number is KSU-HE-23-796.

8 INFORMED CONSENT STATEMENT

Informed consent was obtained from all subjects involved in the study.

9 CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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