

Exploring Digital Citizenship Through the Lens of Game-Based Learning

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Received: 16-05-2025

Revised: 22-07-2025

Accepted: 02-08-2025

ABSTRACT

Socrates, a prominent philosopher from ancient Greece, asserted "I am a citizen, not of Athens or Greece, but of the world" (Peter, 1977 as cited in Suppo, 2013). His utterances suggested a level of citizenship that transcended beyond his ties to his home country. A similar result has been seen in our lives with the introduction of the Internet into our lives, as it caused a significant shift in our habits. The alterations are the most pronounced in the areas of communication and life perception. As a result of this occurrence, researchers began focusing more closely on the idea of digital citizenship (Corporation, n.d.). The notion of digital citizenship is critical for encouraging students to exhibit responsible and ethical behaviour while using technology. Game-based digital learning gives students an opportunity to experience a range of scenarios around issues that they may face in daily life. Education instills values, rights and responsibilities of a good citizen. As a 21st century learner it becomes essential to teach students about citizenship that is global in nature and has no boundaries. A meta-analysis has been conducted to explore the potential benefits of game-based learning in order to understand digital citizenship in an academic setting.

Keywords: Game-Based Learning, Digital Citizenship Education (DCE), Global Citizenship

The evolution of digitisation in society has led to a host of opportunities in the fields of social interaction and employment making it essential for education as well. The advantages of digitisation are expected to be offered in a typical society but it is essential that the citizens follow certain behavioural guidelines. There need to be laws regulating the behaviour, the breach of which must result in consequences. Use of digital technology for learning, playing and working is common, a large proportion of its users are not aware of their responsibilities as a member of the digital society. It is imperative that we understand the rapidly changing technology and its impact on our present and future. While it is important to delve into technology to expand its scope, it is important to respect its limits and recognise its impact not just on our lives but also those of others. We must evaluate our use of technology to check if we have used it

in the most effective way possible. If a mistake has been made, a lesson must be learnt and it must never be repeated. Errors are acceptable in a controlled environment, such as one where the students are learning, but these also need to be minimised and slowly eliminated through modelling and direction. For this to be achieved, it is important to teach technology along with an equal focus on its appropriate usage. Technology education, hence, must also include Digital Citizenship.

DIGITAL CITIZENSHIP

Digital citizenship addresses "the norms of acceptable behaviour with regard to technology use"

How to cite this article: Kaur, S. (2025). Exploring Digital Citizenship Through the Lens of Game-Based Learning. *Educational Quest: An Int. J. Edu. Appl. Soc. Sci.*, 16(02): 211-216.

Source of Support: None; **Conflict of Interest:** None



(ISTE, 2011, p.2) The importance of nurturing digital citizenship among students has been stressed upon by educators. In terms of education, its objectives include nurturing the students to exhibit the right behaviour around the usage of computers and digital communication tools. At the same time, it teaches prevention of unacceptable online practices or behaviours such as identity theft, cyberbullying, footprints, ethics, harmful contact and harassment. By doing so, digital citizenship strengthens the constructive facets of technology to allow everyone to work and play in the digital environment.

Hollandsworth *et al.* (2017) also suggested that digital citizenship needs to be inculcated in children at an earlier age (before they attain adulthood) to foster good online conduct. There are several aspects that must be covered to ensure students make responsible use of digital resources.

Westheimer & Kahne, (2004) defines a good digital citizen as someone who is conscious of his/her duties towards digital community, that is, he/she is consistent in demonstrating online behaviour that combines normal etiquette while being responsible, safe and protecting oneself. A digital citizen with these attributes is probably going to show greater critical and digital literacy as well as civic responsibility when using digital technology

Cyberbullying has been considered as a serious problem by scholars, particularly for secondary school children in the age group 12-14 years (Sittichai, 2013; Tokunaga, 2010).

Jones & Mitchell (2016) recommend that digital citizenship be considered separate from digital literacy. The focus of digital citizenship must be on respectful and tolerant behaviour towards others on the internet and increased civic engagement activities. Ribble & Miller (2013) state that K-12 education needs to incorporate lessons on appropriate usage of online communication with special focus on avoidance of cyberbullying or threatening Jones & Mitchell, (2016) mentioned that digital citizenship is that part of digital awareness that carries out courteous online conduct and civic engagement. It helps in reducing cyberbullying and in increasing upstander behaviour.

In line with this, the online giants like Facebook, Twitter and Google, in partnership with certain external organisations, have initiated promotion

of digital citizenship on their platforms. Google has developed a digital literacy and citizenship programme in partnership with iKeepSafe.org, a US based NGO. This programme consists of lesson plans and educational materials on subjects relating to critical literacy, managing digital reputation and cybersafety. The Digital Citizenship Research Grants programme launched by Facebook in 2011 supports research projects that highlight digital citizenship trends. Its initial focus was on prevention of bullying, the use of social media to encourage constructive online behaviour and learning opportunities on effective, efficient and safe usage of ICT. More measurable hard skills are insufficient for being an effective digital citizen. One must also possess soft skills that cannot be easily quantified. These are covered by UNESCO's global citizenship education which aims to inculcate concepts such as "sense of belonging to a common humanity", "sharing values and responsibilities" and "attitudes of empathy, solidarity and respect for differences and diversity" (UNESCO 2015).

Being a digital citizen, one must know how to effectively use the internet and media while being conscious of their rights and responsibilities They must also have the skills to remain safe and still empathise with others at a social level.

RESEARCH METHODOLOGY

This study systematically reviews studies on Digital Citizenship and game-based learning that have been conducted in the past and analyses research trends, topics, methodology, and contexts related to these studies.

RESEARCH QUESTIONS

- ❑ What are the trends and focus of DC and GBL?
- ❑ How are DC and GBL theoretically aligned?

GAME-BASED LEARNING

With game-based learning, the users can experience citizenship in an interesting and immersive way while enjoying the game itself. The experience could be available in a formal or informal settings. This approach uses tools like video games that need the player to actively participate in the game, hence results in discovery and sharing of skills. The benefits of game-based learning are acceptance

of new ideas, primarily in the young players and improved motivation. Simplicity is a good example where simulation strategies are used to elicit creative problem solving skills. The concept of game-based learning ties in with the trend of gamification found in MOOCs, where game-design elements are combined with other serious contexts and activities to enhance motivation and attention.

THEORETICAL LENS

“Learning by doing” or constructivism for the current digital era can be put into practice through game-based learning giving the students an opportunity to find solutions and take decisions independently while playing a game. . “Learning is a social activity and it is through dialogue” (Vygotsky, 1978). And as Alan Amory says, “we don’t learn from games, we learn *through* them.” Computer games can be considered as effective tools for learning if they are able to integrate “social interactions and dialogue among learners and between learners and teachers” and “performance [of students] can [consequently] be improved” (Foko, 2008). Game based learning reinforces social constructivism by providing the users with opportunities where they can call upon their prior experiences and knowledge and integrate them contextually (Amineh & Asl, 2015). This emphasizes the role played by context in the process of learning, The students need to have real, interactive contexts to associate their experience with their lessons.

DIGITAL CITIZENSHIP X GAME-BASED LEARNING

- ❑ Interland, a browser-based game developed by Google, was introduced in 2017 to teach youngsters the fundamentals of online privacy, safety, security, and respect in digital communications.
- ❑ Digital Passport for grades 3 to 5, and Digital Compass for grades 6 to 8, are two titles published by Common Sense that expose youngsters to the foundations of digital citizenship and how their online behaviours affect their personal safety and relationships.
- ❑ Factitious, PolitiFact and Project Axon are examples of indie games that test players’ ability to distinguish fact from fiction and comprehend how false information spreads.

- ❑ Connected Camps runs a virtual camp where children interact in a Minecraft world with adults who educate them about creativity, coding, and teamwork.
- ❑ Roblox, a virtual community where students can create and share games, is also a popular platform for educators to hold camps and guided sessions on digital citizenship.

Scholars have recommended contextual and interactive GBL (game-based learning) for digital citizenship as one of the technology-integrated learning strategies that has helped in improving the chances that a student can genuinely solve authentic challenges (Komalawardhana & Panjaburee, 2018; Johnson, 2002). The notion of digital citizenship might be regarded a crucial component of educational curricula, given the diversity and progress of technology. During the school years, kids must build competency in digital citizenship. The adoption of game-based learning can benefit DCE, and can be used to support the skills central to DCE. Educational institutions shoulder a key responsibility of ensuring that their students gather the essential skills to perform well as global citizens of the present and the future. (Engin & Sarsar, 2015).

Junko & Ananou (2015) summarised the impact of technology on the learners of today at social, ethical, emotional and cognitive levels. This was done to show how education can alleviate negative results and deliver students with a well-rounded personality. When educators choose to give priority to digital citizenship in the classroom, it results in a display of correct online behaviour by their students. (Chou, Block, & Jesness, 2012).

Tapingkae, Panjaburee, Hwang and Srisawasdi (2020) developed a computer game with a contextual decision-making approach to encourage digital citizenship. The findings from this experiment indicated a boost in digital citizenship behaviours ,motivation and perceptions of the students.

Chee, Mehrotra & Liu, (2013) developed Statecraft X curriculum with the conception that meaningful learning cannot be achieved through a digital game alone, but also on how students use it. A collaboration with peers and assistance from the teachers helps them make sense their experience and then link it to the issues and events of the real

world through contemplation. Kahne, Middaugh, and Evans(2009) observed that teenagers with civic gaming experience involving simulation of government processes or tackling social and moral issues, exhibit significantly superior civic and political engagement than their counterparts.

Raphael *et al.* (2010) shared their enthusiasm and advocated the use of games to promote civic education. They lay the groundwork for game design and research by establishing a conceptual framework and research agenda. They believe civic games can help players make connections between their individual actions and broader societal institutions, as well as compare and contrast ethical and expedient reasoning in the area of civic education.

Hill (2015) concluded that exposure to an immersive learning environment led students to successfully imbibed digital citizenship through collaboration, critical thinking, and formation of a virtual world. Marshall (2015) suggested that students have planned for their need to integrate game-based learning into digital citizenship. Erdogan & Tonga (2020) concluded that an individual's attitude toward technology is a strong predictor of their attitude toward digital citizenship. Anderson and Barnett (2013) found that video games can result in positive learning outcomes, as evidenced by the increase in test scores pre- and post-assessment.

Yilmaz & Doğusoy (2020) concluded that while the amount of time spent online had no effect on participants' digital citizenship levels, the digital citizenship levels significantly varied in terms of device ownership, computer usage time, time spent on social networks and using an active e-mail address. Tapingkae, Panjaburee, and Srisawasdi (2018) discovered that the proposed game for teaching digital citizenship showed higher levels of benefit for males than females in terms of motivation for learning, suggesting that the future versions of the game need to be geared to enhance with features to provide better motivation for females.

Kim & Choi (2018) developed a valid and reliable DC scale called S.A.F.E which takes into account multiple factors like intelligence, attitude and behaviour, as opposed to previous citizenship education, which concentrated exclusively on the single factor of digital literacy education.

Pedersen, Nørgaard and Köppe (2018) created a hybrid educational model with the goal of promoting digital citizenship through hybrid education. A discussion of hybrid education and hybrid citizenship concluded the workshop. It is critical to use hybrid education as a springboard for teaching and practising digital citizenship in schools. By adopting hybrid thinking and behaviour, education broadens its scope, making it more inclusive and conducive to the development of digital citizenship. Kahne, Middaugh & Evans (2009) suggest that educators should incorporate games into their curricula and classroom instruction to teach students about citizenship.

SOCIAL AND EDUCATIONAL IMPLICATIONS

Living in a digital society, the children need to be empowered with competencies to be able to participate actively. This is delivered by Digital Citizenship Education. It includes the skills, knowledge and understanding of cyberspace and online behaviour to make them capable of exercising and protecting their rights while promoting and protecting human rights, responsible behaviour and following the rule of cyberspace laws.

In other words, it aims to prevent the possible future marginalisation of the non-natives of the digital world, and also those who lack the opportunities to become digizens. The developments in the world of technology are making it more affordable and hence the resulting gap is less about access to technology and more about the skill set needed to use it in the best way possible.

Schools in many countries are making "Digital Citizenship Education" a part of their curricula to promote engagement, creativity and online proficiency in the younger generation along with making them aware of the results of their online actions.

Digital citizenship is a new aspect of education that teaches the users of digital space to share it constructively be it for work , entertainment or social interaction.

- ❑ Once trained in digital citizenship, the students will be able to Develop and control their digital reputation and identity while being aware of

the perpetuity of the actions taken by them in the cyber world

- ❑ Conduct themselves in a optimistic, ethical, secure and legal manner when using technology, particularly in their online social interactions and when using networked devices
- ❑ Understand their rights and duties when exercising and sharing intellectual property
- ❑ Keep their personal data private and secure while being aware of technology used to collect their online navigation data.

Digital citizenship aims to create a community that has all necessary equipment and knowledge to evaluate scenarios in the cyber world.

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