



Conceptualization and Measurement of Digital Citizenship

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Research Questions

(i) How has the nature and amount of research on digital citizenship (DC) changed over time?

How do researchers from different disciplines

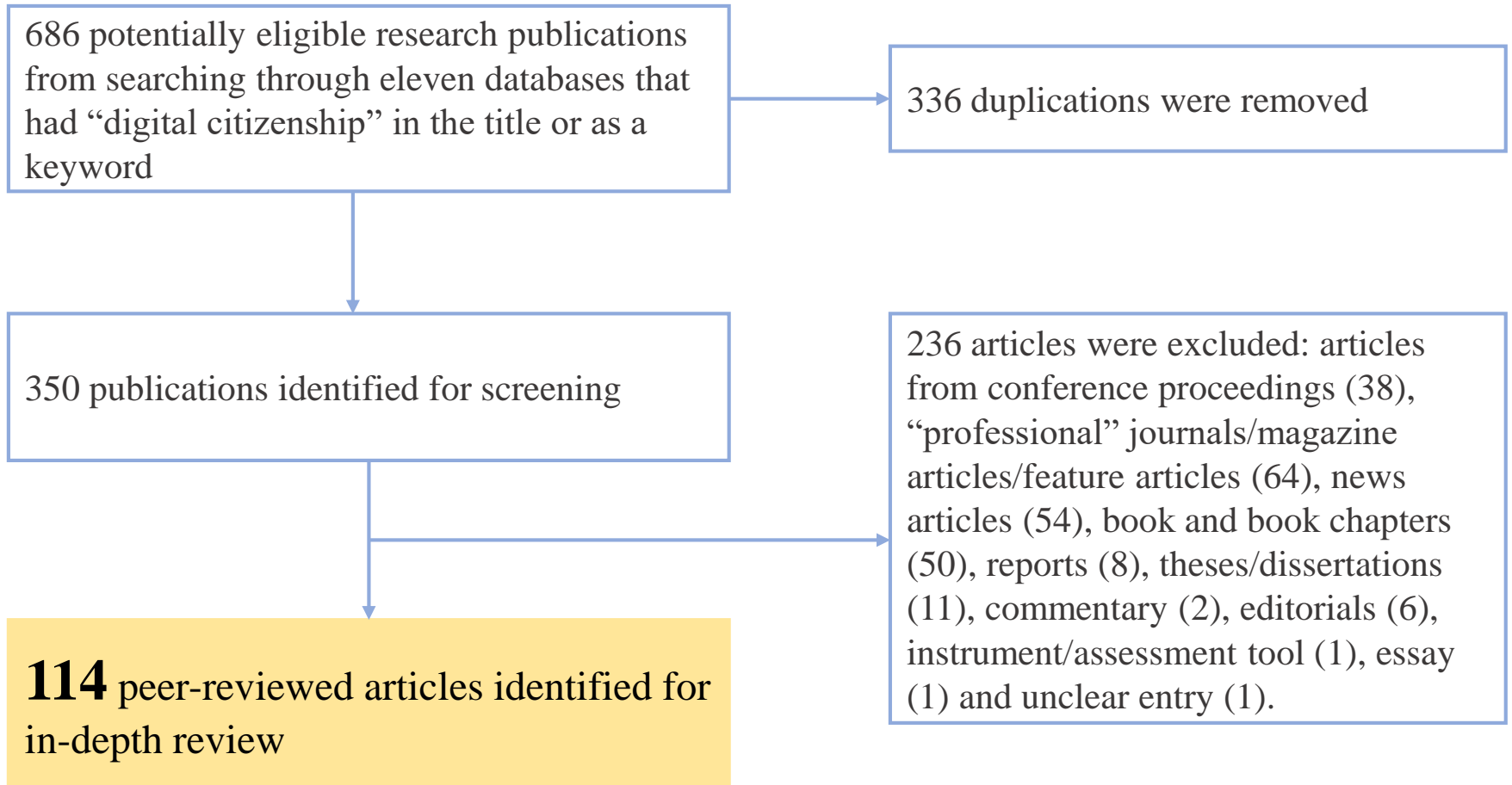
(ii) conceptualize DC?; and

(iii) measure DC?

Methods

- Integrative review (IR) is a review method that aims to achieve an **understanding** of the **state** of **development** in a research area and identify **gaps** in current research (Cooper, 1998; Russell, 2005; Whittemore & Knafl, 2005).
- 5 stages of IR
 - Identification of the research problems
 - Data collection
 - Data evaluation
 - Data analysis
 - Interpretation and presentation

Data collection



Data Evaluation

Quality appraisal criteria: only **peer-reviewed journal publications** were included.

Data Analysis

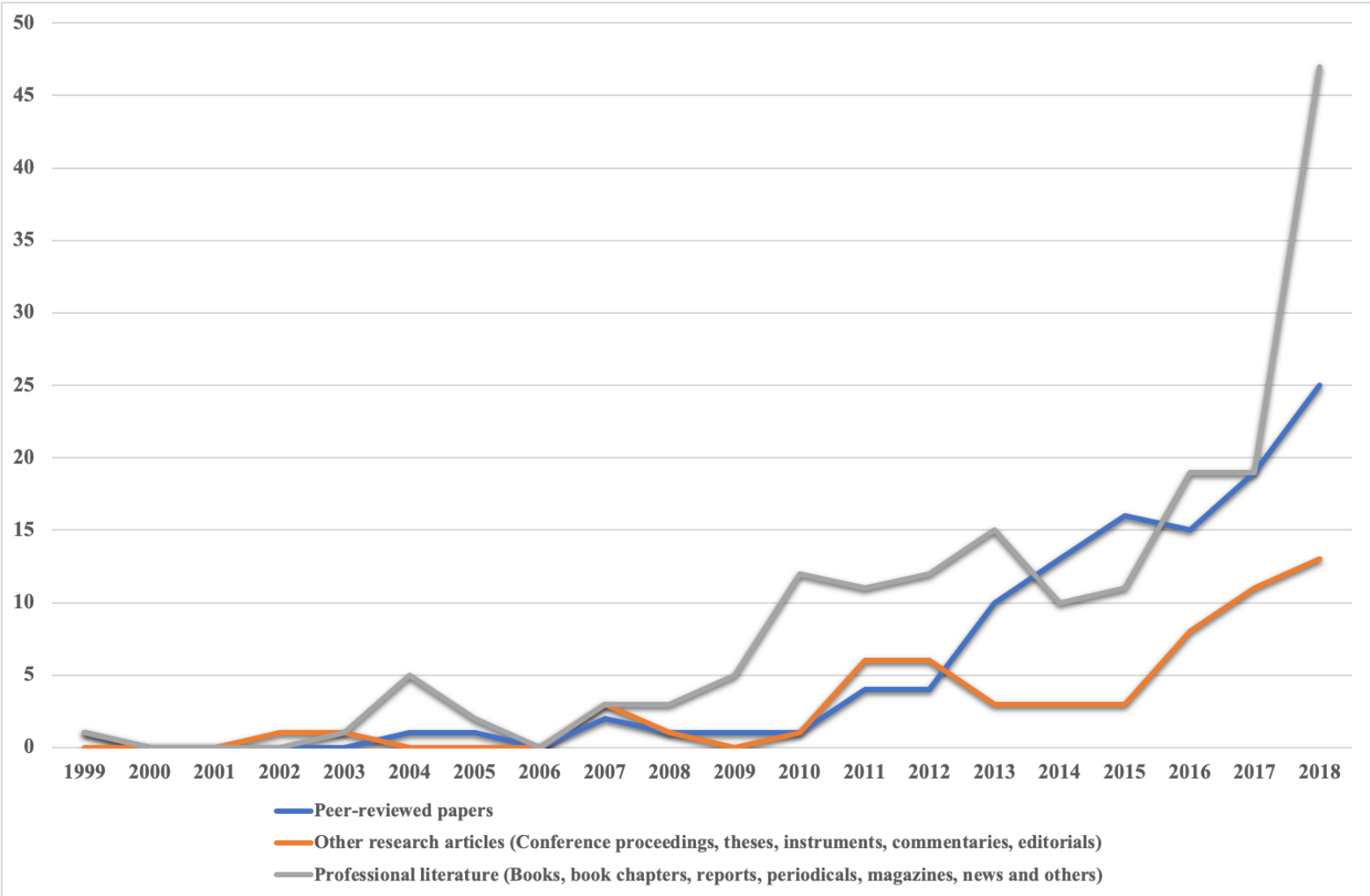
2-Step content analysis

- A coding scheme of the **conceptual structure** for all included articles
- A coding scheme of the **research methodology** for the empirical studies

Results

1. How has the nature and amount of research on digital citizenship changed over time?

Distribution of the three types of publications over time (n = 350)



Distribution of journal disciplinary background (n = 114)

Disciplinary background of journals	Number
Education/Higher education/Educational technology	61
Political/Society/Community/Democratic participation/Law	27
Media/Communication	11
Others:	
Business/Business education/Business technology	3
Ethics/Philosophy	4
History and sociology	2
Sciences and arts	3
Social sciences	3

Keys to Question 1



The volume of research into digital citizenship has **increased remarkably** from all disciplinary backgrounds



Little evidence shows **interdisciplinary interactions** or **influence** across disciplines exists.

2. How do researchers define and conceptualize DC?

“the **norms** of appropriate, responsible behavior with regard to technology use”
(Ribble & Bailey, 2007, p. 10).

“ the **ability** to **participate** in society online”
(Mossberger et al., 2007, p.1).

Emerging spaces of interaction across conceptualizations

Cyberspace is a set of **social relationships** and **practices** facilitated by a digital infrastructure that is a **continuation/extension** of the interactions and relationships in physical space (Isin and Ruppert, 2015; 2020).

Therefore, citizens' **digital social and political participation** inevitably connects with **digital activism**.

Emerging spaces of interaction across conceptualizations

A full spectrum of digital citizenship (Cortesi et al., 2020):

Competence + **Activism**

Footnote: To be elaborated in the next presentation by Law & Lee.

Keys to Question 2



Generally, there are **two** major strands **of conceptual foci** in the literature.



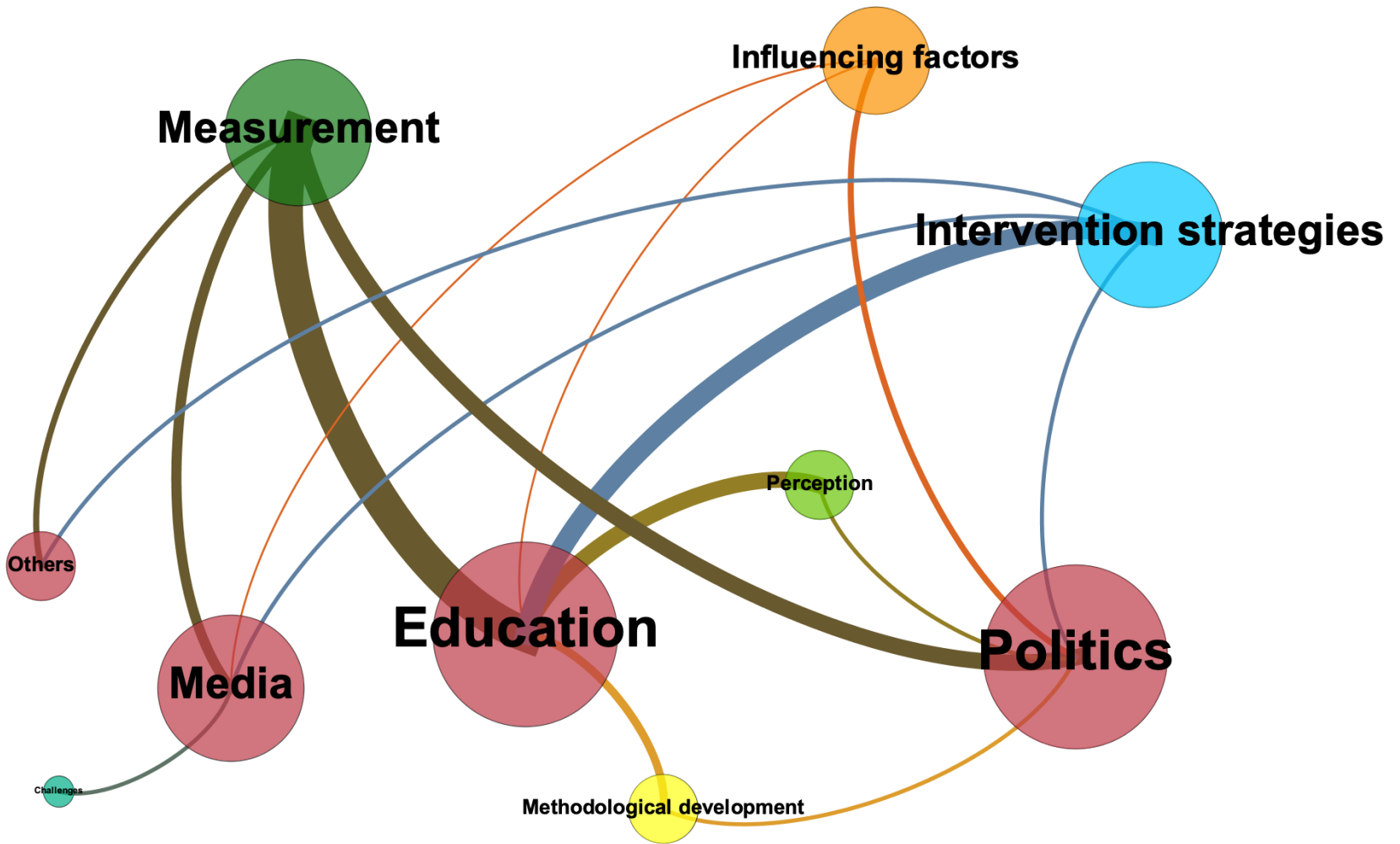
The fact that just over **half** of the papers provided an explicit **definition** for DC as a conceptual underpinning for the reported research shows a **weakness** in the DC literature.

3. How do empirical studies measure DC?

Nature of research reported in journal articles (n = 114)

Type of Publication	Number
Non-empirical articles	48
Theoretical/definition paper	26
Literature review	5
Reports on programs of intervention/instruction	8
Combination of the above/does not fit into above categories	9
Empirical articles	66
Quantitative	32
Qualitative	26
Mixed methods	8
Samples studied	66
Adolescents	5
Undergraduate college students	20
Adults	23
Multiple stakeholder groups included in one study	3
Unclear/not reported/non-specific (e.g. social media data)	15

A network graph visualizing the distribution of the 66 empirical journal papers across research foci and disciplinary background of the publication venues



Summary of the types of instruments adopted in the 40 empirical papers that used quantitative or mixed methods

Discipline	Type of instrument	Frequency*
Education	Newly developed instruments	17
	adaptations of Ribble's nine-dimensional instrument	7
	Kim and Glassman's Internet self-efficacy scale (2013)	3
	adoptions of 4 other published instruments, two instances each.	8
	adoptions of published instruments, each with one instance.	15
Media/Communication	Newly developed instruments	4
	adoptions of published instruments, each with one instance.	2
Politics	Newly developed instruments	2
	adoptions of published instruments, each with one instance.	3
Others	Newly developed instruments	1
Total		62

* The frequencies are separately reported for those adopting instruments from the literature and those that were newly developed by the research team.

Keys to Question 3



There is a lack of appropriate measures to compare **DC development** across time and across different cultures and community sectors.



Extant research are primarily siloed **within disciplinary confines**.



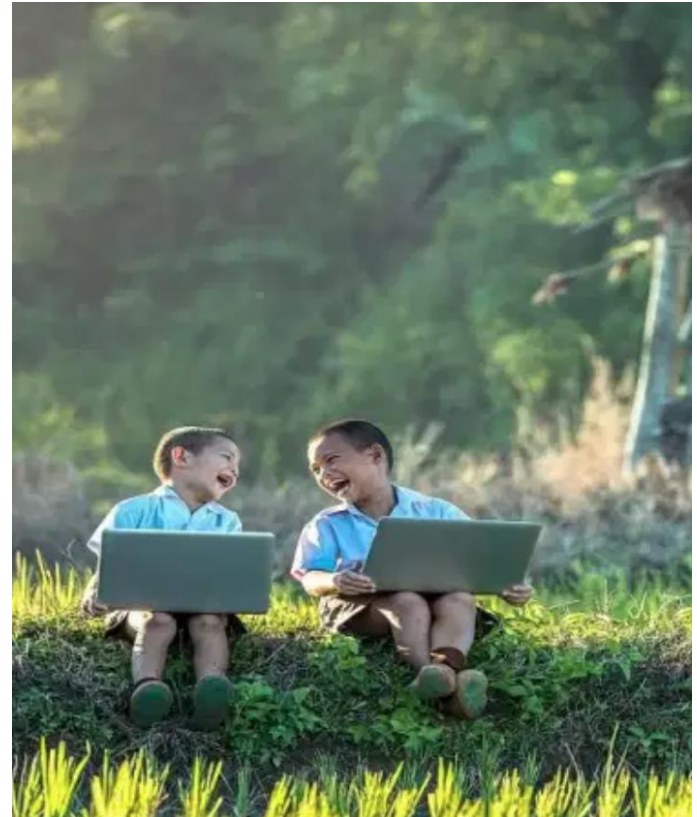
Current studies of DC have not taken explicit account of **age** or **other contextual factors** in validating instruments for use in different stages in the human lifespan and settings.

Recommendations for research

- ✓ A call for more research in this growing field, particularly studies in **diverse contexts**
- ✓ **A Delphi study** for experts in the field to convene and develop **a joint definition and framework** for the emerging study of digital citizenship
- ✓ The **formulation** of **guidelines** for high quality reporting of research
- ✓ A need for **methodological innovations** in the study of DC to leverage digital methodologies

Other contextual factors: More emphasis on what DC means in the early years

- Children have the **right** to the **protection** and the **opportunities** to thrive in the digital world.



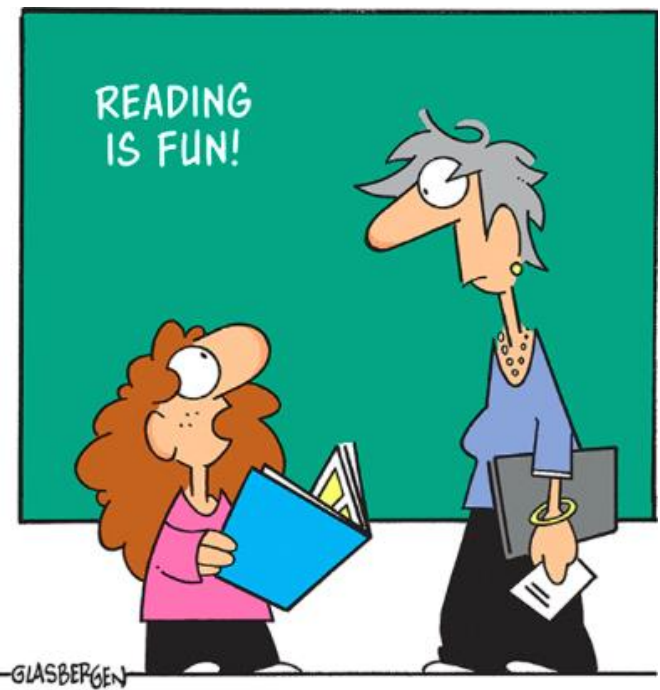
Other contextual factors: Roles of adults in the development of DC

- More research is needed on the role of adults in the development of DC.
- Adults need to:
 - Understand the **characteristics** of today's learners;
 - Help children move from digital literacy to digital citizenship



What do educators need to know?
Characteristics of today's learners

Digital Childhood:
How children **think** and **learn**



"I tapped the page, but nothing happened!"



"They're OK, I guess. I just wish I could change the font."

Implications for practices

Parenting 2.0



- Teacher and parent support for **socio-emotional** development, the development of **learning-related skills** and **self-regulation**.
- Emphasis given to the **home environment**
- Parents should be encouraged to **foster DC** at home:
 - Digital competences
 - Digital safety and resilience
 - Digital participation and agency
 - Digital emotional intelligence
 - Digital creativity and innovation

More Information

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Conceptualization and measurement of digital citizenship across disciplines

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ABSTRACT

A corollary to the exponential growth of digital technology is the increase in research interest in the construct of digital citizenship (DC) in diverse disciplinary areas. Although the term DC is used widely in research, scholars do not commit to a common definition. This integrative review investigates the conceptualizations and measurements of DC, across disciplines, in the extant literature. A systematic search of 11 databases identified a total of 350 unique items that contain "digital citizenship" in the title or keywords published by December 2018, with the majority published after 2010. Of these, 114 were peer-reviewed journal articles published in a wide range of discipline-specific venues, more than half of which were education-related. In-depth analyses show that each of the dominant conceptualizations of DC has been adopted by different disciplines, albeit with different popularities in adoption. Findings also revealed widely shared stakeholder concerns and research foci in DC research across the disciplines. However, there is a stark lack of empirical research on the young children, and an absence of commonly deployed research instruments in DC-related research. The present integrative review implicates the need for interdisciplinary collaboration for significant advances in DC research to address issues in policy and practice.

1. Introduction

Scholarly interest in the notion of DC has burgeoned in recent years and researchers from various disciplines have grappled with how to define, assess, and provide recommendations about digital citizenship. Citizenship has traditionally been defined as "the right to share to the full in the social heritage and to live the life of a civilized being according to the standards prevailing in the society" (Marshall, 1963, p. 74). According to this definition, citizenship consists of multiple domains, namely, the civil, political and social rights of membership. Cogan (2000) identifies five categories of citizenship attributes: a sense of identity, the enjoyment of specific rights, the fulfilment of relevant obligations, interest and involvement in public affairs, and the acceptance of basic social values. Such conceptualizations are grounded on the traditional association of citizenship with membership of geopolitical entities such as nation states. However, digital technologies, in particular the Internet and social media, have empowered people to participate in a broader range of societal activities that are not confined by geographic boundaries. In parallel, there is a burgeoning of literature on digital citizenship in recent decades.

An initial foray into this fast-expanding field reveals that it is a multi-faceted construct grounded in diverse disciplinary areas, such as education, psychology, political science, sociology, law, media and technology. The multidisciplinary interest in this construct

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Thank You!



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