Education for Digital Citizenship

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At 12:30 pm in a classroom full of middle-school students, a teacher launches the first round of a computerized learning activity using Kahoot, a free game-based platform. The teacher has designed a game to suit her educational objectives. Students get out their smartphones to begin, and the teacher turns off the lights and the techno music of the game fills the room [as in many video games, there is a countdown prior to the game]. The questions are multiple-choice. The game is a contest between students. After each question, there is an indication on the screen of how many students selected each of the possible answers. Importantly for teacher control of the game, students do not see the questions on their smartphones. The questions are screened on the board for several seconds, and the answers have different colors and shapes. The students see on their smartphones the shapes and the colors (not the answers), and based on what they see on the screen, they click the answers (which are signaled by a color and a shape). Some students stand on the tables as they play the game; others gather in the center of the classroom. They are clearly enlivened by the game, laughing, screaming, happily dancing when they get more points, or expressing frustration when their answers are wrong. By 12:45, the teacher concludes Round 1 of the game by reminding the students that this is a way to review some of the words that they will need to learn for the test. In a

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few weeks, they will need to know 132 words for this unit.[1]

INTRODUCTION

In 2010, the U.S Department of Education launched a policy plan entitled *National Education Technology Plan 2010* (NETP). The plan covers several important areas including learning goals, teacher preparation, school infrastructure, promoting productivity through digital tools, and more. In respect to learning goals, the plan states: "All learners will have engaging and empowering learning experiences both in and out of school that prepare them to be active, creative, knowledgeable, and ethical participants in our globally networked society."[2]

The plan raises important issues regarding the potential of digital technology to promote social values, such as creativity and ethical participation. Yet in attaining these goals as they relate to or promote values of citizenship, it is vital to balance the technical and the social elements of digital technology curriculum integration. In this regard, Andrew Feenberg argues:

> A good society should enlarge the personal freedom of its members while enabling them to participate effectively in a widening range of public activities. At the highest level, public life involves choices about what it means to be human. Today these choices are increasingly mediated by technical decisions.[3]

In light of Feenberg's critique, this article explores the epistemological assumptions for teaching and learning in the age of digital technology. More specifically, we ask, in state-supported schools where social media technologies are used as tools for teaching and learning, what epistemological assumptions are shared and communicated that are implicitly constructing meanings of digital citizenship?

Following critical theoreticians, the first part of this article examines the concept of digital technology in light of its increasing incorporation into teaching and learning practices in state-supported schools. We then discuss the potential of digital technology to enhance civic and social aims. Throughout

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we examine selective examples from a qualitative study of digital technology pedagogies conducted in US and Israeli classrooms to provide exemplars of current digital teaching practices, such as the Kahoot game example described above, which is taken from an Israeli middle school classroom. We argue that constructing meanings of digital citizenship requires reconsideration of the epistemological assumptions that ground current educational practices and policies; namely, the notions of neutrality, the technical, and objective rationality, which so strongly shape digital technology use in classrooms. Conceptual revision is a step towards galvanizing discursive and teaching practices that will help students, as digital citizens, to participate actively and effectively in a democratic society.

PRELIMINARY ASSUMPTIONS

The concept of digital citizenship involves complex meanings, and different interpretations. The NETP defines digital citizenship as:

> The ability to evaluate and use technologies appropriately, behave in socially acceptable ways within online communities, and develop a healthy understanding of issues surrounding online privacy and safety … Students should take responsibility for their own lifelong learning and should practice safe, legal, and ethical use of information and digital tools.[4]

Whereas this understanding of digital citizenship provides general positive guidelines, it misses the complexities that are evolved from this concept. To highlight the idea of digital technology, it is important to explore the nature of digital technology, meanings of citizenship, and the complex relationships between the two. Before turning to these concepts, we first examine some fundamental assumptions about technology.[5]

The first assumption that structures much school-based usage of new digital technologies relates to the deterministic belief that technology is neutral. In today's classrooms, computers are typically understood by designers and teachers to be neutral tools that are used for learning the content that will be assessed, to enliven instruction with competitive games or puzzles, or to

foster cooperative activity. This article's opening scene, a Kahoot game in a public middle school classroom, is a prime example. Educators treat personal computers as a means to be put to the ends chosen by curriculum designers. In U.S. and Israeli classrooms, those ends are often based on the demands of the standardized curriculum assessed by high-stakes tests. As the scene makes vivid, the memorization of 132 new vocabulary terms organizes the purposes to which the teacher directs the learning tool.

Conceptualizing computers as mere machines for our own ends ignores how computers are designed and marketed to youth, how educational software is developed by for-profit companies, and how it is taken up by teacher- and student-users. Neutrality of technology, for educators, implies that technology enhances efficiency. Yet technology use is never merely contingent on the technology itself, by itself, but on the cultural and social norms shaping the creation, marketing, purchase, and adaptation of the technology.[6] As Morimichi Kato writes:

> The challenge of information technology in our age is not simply a challenge of yet another new tool which requires some caution for the users; it is rather a challenge in so far as it puts into question such basic concepts as the world, the nature, the self, the other, and the real.[7]

If one follows the assumption of neutrality, one can infer that social media are neutral, but negative phenomena such as the now diverse forms of cyber bullying are initiated by one's values in interaction with an environment whose communicative mediums are overwhelmingly comprised of digital technologies. Feenberg rightly states that "more and more aspects of social life are conditioned by commonalities among people who share a similar relation to the vast technical systems that shape life."[8] The problem arises when there is a conflict between technological goals and social values. Social media and technological tools are designed by experts, who make rational managerial judgments about efficient ways of developing technologies. The technical considerations take precedence over the interests of the different groups or society members that are going to use that technology. In the case of Kahoot, there is an a priori

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thinking about knowledge as a discreet set of facts — 132 vocabulary terms, to be precise — whose memorization forms the purpose of the interaction with any activity designed using the program. Kahoot is both designed for and used by educators who have learned to teach in an era of high-stakes testing in the context of increasing public sector austerity. In this sense, Kenneth Saltman points out:

> As profit has become tougher to extract in the private sector, corporations and investors look to seize portions of the public sector, through lucrative contracts in for profit school management and a vast array of educational products and services … The standardized testing push of the 2000s was interwoven with the financial interests of test makers and textbook publishers, curriculum producers, and contracting companies, including technology firms. The standardization of knowledge through standardized testing and standardization of curriculum lends itself to the financial pursuits of market fundamentalists who want to treat knowledge as an industrial commodity and use private sector methods for "delivery," measurement, and control.[9]

Digital technologies, far from being mere tools for learning, promote certain forms of reasoning over others, including the idea that content subjects are isolated from everyday life, and practices of student data collection, as well as other individualistic values.[10] The bias of technology in favor of rational judgment relates to the ideological context in which technology has been designed. Unlike the promise of personal computers as liberating students for inquiry, exploration, and creative projects, digital technology use in classrooms is frequently governed by the interests of curriculum designers and marketized providers of digital learning products. As Saltman suggests, centralization of curriculum control has paralleled a "newfound embrace of a culture of control in classrooms."[11] Such concentration of control, specifically in democratic countries, is problematic since it based on managerial and technical frameworks.[12]

This is not to suggest that technology design is driven by malicious intentions, or by people indifferent to social goods. Rather, the conditions of the educational marketplace in which technology has been designed, and the presumption of neutrality of computational tools, lead to an over-reliance on instrumental reasoning. In this regard, it is noteworthy to recall Herbert Marcuse's argument about the transition from the rational individual to the objective rational. Whereas rational individuality is based on the idea that becoming an autonomous individual requires the use of reason, objective rationality refers to a priori judgments made by objective standards; or, potentially, where one's identity is being assimilated with the machine.[13] Under objective rationality, actions are focused more on instrumental and technical aspects, and less on the reason behind these actions.

Both Marcuse and Habermas challenge the presupposition that the meaning of human existence refers narrowly to the idea of the human as rational actor.[14] Marcuse's theory has been scrutinized and elaborated by Habermas, who suggests that a better understanding of social development, in particular in the context of science and technology, requires an examination of human communication. In short, Habermas distinguishes between the technical and the practical realm. The technical realm (or, the system) refers to the skills and knowledge that enable us to use tools, and to control the objects around us.[15] For instance, learning to operate a computer, writing an email, or completing an assignment belong to the technical realm. The practical realm (or, the lifeworld) refers to humans' ability to communicate within their community and their cultural context.[16] Namely, the lifeworld involves everyday actions, in which people communicate, understand, and act through a broad range of developed social norms and cultural understandings.[17] Habermas argues that the technical realm has colonized the practical realm.[18] This statement seems to ring true for the digitized technology used in the American and Israeli classrooms observed for this study. In these classrooms, students — who in their non-school lives are immersed in colorful, creative, highly social, and sometimes dangerous lifeworlds via their use of powerful computers and hand-held devices — in school jump through technical hoops designed by educational web companies, and modu-

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lated by overwhelmed educators, to serve standardized forms of knowledge.

Digitized technology's potential to enhance an active, agentic digital citizenship is severely limited at present. If technology shrinks public and educational debates to technical issues, then the ontological questions of what it means to be a human being becomes a second-order question, as does the question of what it means to be an effective citizen in a democratic society. In the context of our discussion about digital technology, relying on the technical realm limits students' abilities to fully participate in political and social life.

COMMON UNDERSTANDINGS OF DIGITAL CITIZENSHIP

We use these premises as a starting point to analyze the notion of digital citizenship. To clarify this term, recall the definition of digital citizenship from the U.S. Department of Education's *National Education Technology* Plan (NETP): "The ability to evaluate and use technologies appropriately, behave in socially acceptable ways within online communities, and develop a healthy understanding of issues surrounding online privacy and safety."[19] While this definition is clear and concise, it begs the question: What counts as *appropriate* evaluation and use of technology?

The common understanding of appropriateness concerns behaving correctly, or according to rules of etiquette; for example, Mike Ribble argues that to develop a sense of digital citizenship, one of the most important elements for schools is to develop a digital etiquette.[20] The NETP echoes this view. Technology etiquette may educate or may indoctrinate students, but in itself it misses the importance of helping students to develop an individualized self through reflection upon actions, and to consider their role as actors within social and political life, on- and off-line. [21]

One way of evaluating digital content is to incorporate critical media literacy. David Buckingham suggests that developing critical media literacy involves a curriculum that can: (1) focus students' attention to the ways in which digital content is represented; (2) develop student understanding of the language used in the digital media, such as its rhetoric, conventions, and lingual structures;

(3) build student awareness of the forms of production of digital technology, such as commercials, and the influence of corporations on internet content; and (4) help students recognize the forms of targeting different audiences for websites and social media.[22] Buckingham's framework is useful for our argument, as it suggests that attaining digital citizenship requires moving beyond technical frameworks, such as etiquette, into demystifying the ideological dimensions of digital technology. Rather than thinking about digital technologies merely as sources of information, it is crucial to consider the different aspects and contexts in which students use digital technology.

While the NETP definition considers primarily individuals' technical capacities and etiquette, it overlooks the revitalization of critical and intelligent public debates as inherent tenets of digital citizenship in a pluralistic democratic society. Galvanizing the practical realm, namely, the communicative abilities among people, requires educators to revive the notion of critical public debate, as Buckingham rightly argues: "As a public sphere institution, the school should provide a forum for open public communication and critical debate that is equally accessible to all. It should stand between the citizens (in this case, the students) and the operations of both the market and the state."[23]

Educators could be using digital pedagogies to enable students to make connections between their work with digital technology and the political and social aspects of its use. In observing the use of digital technology in science, English, and social studies classes in both the U.S. and Israel during 2016, no such uses were evident. With well-conceived classroom lessons and assignments, however, students can become more attentive to how people employ language and symbols online to communicate through their arguments and rhetoric. Students can develop meaningful understandings of issues related to online privacy and safety in order to become critical users and producers of content who can reflect on the social tensions, conventions, and cultural narratives that lie beneath the surface.[24] Rather than conceptualizing digital citizenship as set of individualized skills and rules, educators ought to stimulate student participation in public activities, and to help them realize what counts as digital democracy, citizenship, and freedom.

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The narrow view of digital citizenship enshrined in NETP, with its individualist notions of citizenship, mirrors most common-sense approaches to citizenship education. Many educators rely upon dominant, and fairly shallow, understandings of citizenship to shape both non-formal and formal curricula, and the digital technology integration advocates who shape K-12 policy and practice are no different. Dominant understandings of citizenship are captured by traditional liberal and civic republican meanings and tropes of the citizen and her/his relationship to the state.[25] Liberal conceptions of citizenship invoke individual rights and freedom from tyranny; these discourses view citizenship as a process of protecting individuals' liberty to shape their own lives and futures. This notion of citizenship is captured in the NETP's explicit naming of "online privacy and safety" issues as key factors of digital citizenship.[26] Digital citizenship education can be narrowly interpreted here as pedagogy that enables students to protect themselves online, safe-guarding their rights to privacy as well as well-being. This is an individualist notion of safety in keeping with the liberal focus on the rights of the individual in the political realm.

As dominant as the liberal conception of citizenship in the discourses of contemporary western nation states, if not more so, is that of civic republicanism. Emphasizing values of loyalty and service to political community, citizenship advocates working in this realm seek to foster "a civic identity among young people characterized by commitment to the political community, respect for its symbols, and active participation in its common good."[27] These discourses also shape the notion of digital citizenship embraced by the U.S. Department of Education. The NETP document states: "Students … should practice safe, legal, and ethical use of information and digital tools."[28] Digital citizenship in this discourse takes on meanings of "being a good citizen" online; knowing the etiquette and laws of good behavior, the rules for using information and sources.[29]

Neither of these dominant meanings of citizenship challenges the status quo of most citizenship education more broadly; the meanings of citizenship seen in the NETP perfectly reflect the common-sense notions of citizenship as they are understood by most educators and policy-makers. Yet the ways in

which digital technology has come to school, and the ways in which it is emerged as an allegedly neutral tool for 21st century "lifelong learning," in a context of neoliberal policy-making in education requires some distinct notions of the citizen beyond what liberal and civic republican discourses offer.

AN ALTERNATIVE CONCEPT OF DIGITAL CITIZENSHIP

An alternative approach to digital citizenship can enhance a public discourse that challenges technical approaches to educational technologies. We suggest that cultural and reconstructionist discourses are necessary if we are to develop inclusive, social concepts of digital citizenship, and advance our conception of digital technology beyond its functional means.[30] Cultural citizenship discourses attempt to challenge hegemonic norms of white nationalism, promote the rights of marginalized cultural groups, and vitalize a multicultural, pluralist discourse.[31] Reconstructionist discourses of citizenship raise civic concerns and issues of social justice by revealing social structures that serve the interests of the elite rather than the interests of the majority of citizens. The precondition for creating social change inherent in reconstructionist civic conceptions requires people to be aware of their life conditions, and to become informed, critical agents.[32] Such educational purposes are not evident in digital technology policies or pedagogies practiced in the classrooms observed for this research.

As discussed, one of the limitations in the current, dominant understanding of digital technology in education is that devices are perceived merely as tools that serve instrumental ends. As one teacher noted in the study, "the problem is that the fabric of the internet is not congruent with our schooling structure, which is very didactic. Indeed, ICT helps us in illustrating things more easily, … but I believe that we have not yet fulfilled its potential."[33] Advancing a critical discourse of digital citizenship requires demystifying the social, cultural, and political contexts in which technology operates, and developing one's understanding of the potential of digital technology beyond its instrumental goals.

The great hope of digital technologies for civic purposes is that these

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devices can help us examine, untangle, and act upon complex problems. Habermas's theory has been helpful for recognizing the distortion of the relationship between the realms of the system and the lifeworld. But to harness the potential of digital technology to strengthen digital citizenship, it is vital that we follow the Habermasian notion of the emancipatory interest of reason, which combines the two realms. One-sided reliance on the system leads to a technocratic society. Conversely, relying on the lifeworld involves a romantic idealization of the culturally grounded rationalization that leads to social stagnation.[34] Nostalgic views of social reality deny the possibility of advancing cultural and social meanings. Moving beyond a one-sided understanding of reality requires us not only to be able to describe reality [by relying on the technical or lifeworld realms], but also to understand "why the social world is the way it is and, through that process of critique, strives to know how it should be."[35] In addition, it involves recognition of education not merely as individual development but also as a means for social reproduction, or social transformation.[36] Thus, it is critical that students develop a sense of digital technology beyond a simplistic functionalist, technical meaning that ultimately leads to objectification of knowledge and dogmatic reasoning. Rather, it is important to realize the dynamic aspects of digital technology as mediating and representing the world, and as means for developing creativity, imagination, communication, political action, and social life. Being a digitally-savvy citizen requires that students become fully informed and able to recognize the context of digital technology within those connections, and to understand how technologies can be used to communicate creatively around complex issues and conflicts of value, vision, and ideology.[37] Whereas most of the classrooms observed in the study did not move beyond a narrow understanding of digital technology as a neutral tool with which to enhance students' basic skills, there were a few cases in which the class activity demonstrated the potential for critical discourse. For example, in one 8th grade science class in Israel, the teacher discussed environmental protection. She reviewed the unit that the students had read in their digital books, and asked the students to offer some examples. After a short discussion, the teacher asked the students if they were aware of the debate regarding the new gas sources found in Israel's territorial waters in the Mediterranean Sea. The students explored

the subject, and discussed not only the environmental and scientific aspects, but also the political dimensions, which have both environmental and social ramifications. For example: Is the gas, as a natural resource, the property of the public, or the private company who found the gas? Should the government sell the gas to other countries, or preserve it for the benefit of its citizens? Alas, as the students started to vividly engage in the discussion, the teacher stopped it, as they had a lot more content to cover.[38] Though the discussion scratched the surface, and did not deal with some important issues (such as the danger of allowing private companies to take crucial decisions that affect the public), it serves as a good example of how every learning activity has the potential to advance critical reflection, and to encourage students to connect between the content and the lifeworld. How might students have engaged with Israeli lawmakers about some of these issues, through online avenues? How might this teacher have found other ways to channel these important questions into digital forums for public debate and inquiry? Just as it is important to understand the basic objectified concept (the system), it is important to recognize the socio-political dimensions regarding the topic (lifeworld). This claim is particularly important in times when the mediation of reality through digital technology, and particularly through social media, obscures reality and suggests "alternative facts" for understanding reality.[39]

Developing a better understanding of the varied socio-cultural connections of digital technology use requires an epistemological transformation in our relationships to digital technology. It will involve a deeper understanding not only of what we expect from technology, but also of what we expect from teachers, students, and parents. To see digital technology as a technical and neutral tool assumes that it is an objective and reliable solution for our need to acquire information, evaluate, and communicate. In this sense, Sherry Turkle astutely notes that "we expect more from technology and less from each other."[40] Reviving the notion of digital citizenship requires us to be present in the world; to intellectually be engaged in social life in both digital and non-digital fora; to realize the social conditions in which digital technology operates; to recognize its lack of neutrality; and to constantly explore new

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perspectives on the reality as mediated through digital tools. Finally, digital citizenship should not be assumed merely as training students in preparation for their working life. Rather, it should be perceived as an important element in helping young people to make reasonable decisions based on a cognized worldview; a worldview that connects and interconnects between contents, social, cultural and political life, everyday practices, and language.

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