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Introduction

When talking to people who use technology on a regular basis, does it sometimes seem that they are speaking a different language? Do they talk about texting, Facebook and Twitter? Do their discussions of “friending”, smartphones and phishing confound and confuse? In 2001, an influential article by Mark Prensky identified two distinctive groups of technology users: “digital natives” and “digital immigrants”. Digital natives are identified as young people who have grown up around digital technologies and seem to instinctively understand the technology. Digital immigrants (those new to technology), on the other hand, may be fascinated by and may have adopted many aspects of the new technologies, but because they have not grown up with these digital tools, they don’t seem to use them as instinctively as the natives.

Students have grown up in a society surrounded by digital technology. As a result, many teachers see their students as digital natives who already know everything there is to know about technology. Additionally, some teachers do not feel competent as digital immigrants. But the truth is, not all students are as technologically savvy as teachers might assume, and not all teachers are as incompetent as they fear.

Even when students are comfortable using technology, they may not be using it appropriately. Likewise, educators of all skill levels may not understand how to use digital technology effectively. Both students and teachers need to find a common ground. They all need to become members of a digital citizenry.

Over the years, users of technology have come together to interact with one another, creating, in effect, a digital society. This digital society has forged new opportunities for education, employment and social interaction. A typical society would offer such advantages but also require that its citizens act in a certain way – with the rights of citizenship come responsibilities. Laws are made and consequences are established for not following those laws. However, although a multitude of people do work, play and learn through digital technology, many individuals still don't know how to be responsible citizens in this digital society.

What are the appropriate behaviours in a digital society? How can an individual learn what is appropriate and what isn't? These are core questions, and this book is an attempt to address them through a “teaching solution” called digital citizenship.

Through this teaching solution, information technology leaders can set the tone for technology use in their schools. Teachers and administrators – the so-called digital immigrants – can learn the norms of digital society. Parents can be provided information on the appropriate use of technology at school and in their homes. Together, these groups can then help the children of this digital age to become principled digital citizens of character and integrity.

But more than a teaching solution, digital citizenship is a way of life. Everyone – digital immigrants and natives alike – needs to understand the digital technology we currently use and prepare for what might be used in the future. Teachers, parents and students need to explore the frontiers while respecting the limits of these technologies, and recognise the possible effects on themselves as well as on others. And then, after these technologies are understood, users need to evaluate how they have used them. Students can be expected to make mistakes when using technology, but through modelling and direction students need not make the same mistake twice. To reach this outcome, the focus of technology education should not just be on the programs or on the technology itself, but also on the appropriate use of the technology. That is to say, technology education should promote digital citizenship.

Through this discussion of digital citizenship, all users of technology – natives and immigrants – can learn the fundamentals of acceptable use. This book offers a framework for asking what we should be doing with respect to technology. The goal of digital citizenship is to provide a consistent message to students and education professionals so that they can become productive and responsible users of digital technologies.

What's New in This Edition

In the few years since the first edition of *Digital Citizenship in Schools*, technology dependence in education has grown exponentially. Not only has the amount of technology changed, but the tools have changed as well. With the addition of smartphones the options have grown for all users. Social networking has also changed how and how much people communicate with each other. School administrators are rethinking the policy of simply blocking information; instead, they are looking for ways to use new technologies to educate students. This second edition begins to look at these changes and find ways to balance technology and appropriate use.

Also since the publication of the first edition, ISTE's National Educational Technology Standards (NETS) have been refreshed and my original co-author, Gerald Bailey, has retired from his work as professor and from co-authorship of *Digital Citizenship in Schools*. The professional development activities in Chapter 4, the foundational lessons in Chapter 6 and the guided lessons in Chapter 7 are now correlated to ISTE's *refreshed* NETS for Students, Teachers and Administrators. All three sets of standards are listed in Appendix C.

The Conclusion of this book includes a Lessons Learned Since the First Edition section that points out several changes in the relationship between education and technology over the past four years. Recent visits to schools all over the world have provided me with some perspective on how different educators are using technology. These changes do not seem to be slowing down. Quite the opposite; there seem to be new technologies and changes in the current tools on an almost daily basis. Some researchers are even seeing mini generation gaps between siblings born only a few years apart (Stone, 2010). All these changes will require educators to keep up with the new and changing skills. With these new digital technologies, digital citizenship is becoming more important than ever.

How to Use This Book

This book is intended as an introduction to digital citizenship and how it can be taught and supported in P–12 schools. Its purpose is to provide a basis for understanding digital citizenship, the current trends in this area and the potential needs students will face in the future. Written primarily for educators and technology leaders – superintendents, principals, technology coordinators, library media specialists, classroom teachers and teacher educators – this book is designed to help a team understand digital citizenship and how it can affect their curriculum and schools. Likewise, this book can help individual educators and technology leaders see the importance of digital citizenship and identify ways it can improve teaching and learning with technology.

The goal is not perfection in terms of technology use, but the support of staff and students in the responsible use of technology. The topic of digital citizenship covers a vast array of technology issues. This book breaks down the various elements and explains them in detail, then offers suggestions on implementing digital citizenship in schools. The discussion is organised into an introduction, seven chapters (contained in three sections), a conclusion and appendices.

Introduction

The introduction provides a roadmap for the chapters that follow. It discusses the importance of digital citizenship and tells where to find critical information.

Section I: Understanding Digital Citizenship

Section I is geared toward anyone interested in digital citizenship. The chapters in this section outline the technology issues discussed in the rest of the book. It also provides crucial background information of use to all technology coordinators and teachers.

Chapter 1: The Basics of Digital Citizenship

All technology leaders must have a solid understanding of digital citizenship before making changes to their curriculum. This chapter helps leaders understand the meaning of digital citizenship and what makes it so important.

Chapter 2: The Nine Elements of Digital Citizenship

Digital citizenship is comprised of nine distinct elements. To fully apply the concepts of digital citizenship to a given school, technology leaders should review these nine elements to become familiar with digital citizenship in its constituent parts and as a whole.

Section II: Digital Citizenship in Schools

Section II is designed to help technology leaders and administrators determine what they can do to create and support digital citizenship programs in their schools.

Chapter 3: Creating a Digital Citizenship Program

Once technology leaders understand the concepts of digital citizenship, they need a vehicle that allows them to work with the information. The audit in this chapter is designed to help technology leaders determine which elements of digital citizenship need to be addressed most urgently in their schools and which can be dealt with at a later time. This section also provides some ideas and examples of how other schools have implemented digital citizenship.

Chapter 4: Professional Development Activities in Digital Citizenship

Technology coordinators and other educators who use technology need some direction on how best to implement and use digital citizenship. These activities are designed to help technology leaders educate other technology users in their schools in implementing digital citizenship.

Section III: Digital Citizenship in the Classroom

Section III provides ideas and activities for teachers in the classroom.

Chapter 5: Teaching Digital Citizenship to Students

Chapter 5 helps teachers and library media specialists determine how to effectively incorporate the themes of digital citizenship into the curriculum.

Chapter 6: Foundational Lessons in Digital Citizenship

The lessons in Chapter 6 help teachers and library media specialists raise their students' consciousness of digital citizenship issues.

Chapter 7: Guided Lessons in Digital Citizenship

These activities help classroom teachers work with students to understand the concepts of digital citizenship. Although the lessons here are not as fully articulated as those in Chapter 6, they nonetheless provide resources to begin teaching digital citizenship.

Conclusion

The conclusion summarises the principles of digital citizenship and addresses topics not covered elsewhere in this book. This section identifies important issues and provides suggestions for how they may be handled as they arise. The section Lessons Learned Since the First Edition focuses on the changes that have occurred since the release of the first edition and on the importance of being prepared to meet those changes.

Appendices

Refer to Appendix A for terms and definitions relevant to digital citizenship. Appendix B lists the references cited in this book. ISTE's refreshed NETS for Students, Teachers and Administrators are presented in Appendix C. These standards were refreshed in 2007, 2008 and 2009, respectively.

Who Should Read This Book?

Technology leaders who will benefit from the principles and activities in this book include:

- Teachers and educators
- Planners and administrators
- Lead teachers
- Technology and curriculum coordinators
- Early adopters
- Instructional technology specialists
- Professional development personnel
- Site administrators and technical support staff
- Teacher educators
- Library media specialists

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ELEMENT 8

Digital Health and Wellness

DEFINITION: Physical and psychological well-being in a digital technology world

Students need to be aware of the physical dangers inherent in using digital technology. According to Alan Hedge, director of the Human Factors and Ergonomics Research Group at Cornell University, "... carpal tunnel syndrome isn't the only injury to worry about when working at a computer" (Manjoo, 2003, para. 10). Eyestrain and poor posture are not uncommon in digital technology-related activities.

Too often, technology safety concerns relate only to the security of equipment and not the physical well-being and security of students. Sometimes computers are set on tables that are too high or too low for younger users. Adults should not hope that students will simply adapt to the surroundings, nor should they think that students will stop using a given digital device before it causes problems.

ESSENTIAL QUESTIONS

How can students be physically affected by technology?

Are students aware of the physical dangers that can accompany the use of digital technology?

How else can someone become injured using technology?

In addition to the physical dangers, another aspect of digital safety that is receiving more attention is the topic of "Internet addiction". It's a double-edged problem: Not only do users become dependent on the online experience, but they may also irreparably harm themselves physically. Taken to its extreme, Internet addiction can cause both psychological as well as physical problems. This is an issue that is being recognised around the world. Some addiction experts are finding that the withdrawal symptoms associated with Internet addiction are similar to those of alcoholics.

To prevent various technology-related physical injuries, educators need to encourage students to use technology in a responsible way. Making sure that all computer workstations are ergonomically sound is one way to protect students from long-lasting problems related to technology use. But even beyond the physical aspects, adults need to be aware of the amount and type of technology used by students.

Digital Health and Wellness Issues

- Using proper ergonomics and avoiding repetitive motion injuries
- Becoming addicted to the Internet or to video games and withdrawing from society