

Ethics in educational technology: towards a framework for ethical decision making in and for the discipline

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Published online: 5 October 2016

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Abstract This special issue of ETR&D is devoted to ethics in the broad domain of educational technology. Many ethical issues arise involving the study and use of educational technologies. A well-known issue involves the digital divide and the degree to which the introduction of new technologies is increasing the digital divide and disadvantaging some students while benefitting others. The potential of educational technologies to improve learning and instruction is generally well known. Many of the problems associated with the successful implementation of educational technologies are also generally well known. However the ethical issues involved with educational technology implementation, use and research are not well explored nor widely known. This paper provides a preliminary framework for ethical decision making with regard to educational technologies.

Keywords Educational technology ethics · Ethics framework · Educatic oath · Ethics framework · Value-driven educational practice

Introduction

The definition of educational technology embraced by the Association for Educational Communications and Technology (AECT) is as follows: “Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources” (Januszewski & Molenda, 2007, p. 1). This definition, developed and approved by the AECT definitions and terminology committee is striking due to the inclusion of ethics as an essential aspect of educational technology. Given that emphasis by such a prominent international association of scholars and professional practitioners, it is worth exploring the role of ethics in educational technology. This

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article is a step towards creating a framework for the inclusion of ethical decision making in efforts aimed at facilitating, improving and supporting learning, instruction and performance. The discussion is primarily conceptual rather than being research based.

Professional practice, standards and values

As a precursor to the argument and framework to be presented, consider the broad domain of medical practice. There are many professions within that domain, within each of those professions there are specializations. Consider nursing, for example. A general definition of that profession is basically that it involves the practice of promoting health, caring for individuals and preventing illness, not unlike a parallel definition for physicians (see <http://www.icn.ch/who-we-are/icn-definition-of-nursing/>). The word ‘ethics’ does not appear in the definition of the profession or discipline. Rather, the International Council of Nurses publishes a separate code of ethics that emphasizes respect for the rights and dignity of individuals (ICN, 2012). That code begins with four basic value statements involving the promotion of health, the prevention of illness, restoring health and alleviating suffering. What follows those value statements are a number of elements comprising the code of ethics, which can be considered performance standards for ethical conduct as a professional nurse. One can find other such frameworks that distinguish professional practice, ethical standards and values. As a result, that general organizing framework that separates practice and ethics is adopted herein.

I believe that those who crafted the AECT definition of educational technology did so to emphasize the importance and centrality of ethics in the broad domain of educational technology. I share that general inclination but embedding ethics in what educational technology professional practitioners and scholars do glosses over the important distinction between performance and standards (ethical standards in this case but one could also include quality standards).

To make these distinctions concrete, consider a certified nurse performing a particular job task. The nurse is clearly a practicing professional and has gone through extensive training to become certified. Nonetheless, that nurse may be careless in drawing blood from a patient on an occasion. In such a case, a quality standard is relevant. If carelessness recurs, some kind of action or remediation may be required. On another occasion, a certified nurse may refuse to treat or interact with a patient on account of the patient’s race, religion or other characteristic. That is not a violation of a quality standard. It would be a violation of the nursing code of ethics and a failure to fully embrace the four values that guide nursing practice and ethical standards. While additional training may be appropriate for quality violations, ethical violations often require a different kind of response, including the loss of a job or certification.

One might then ask how far from such a framework is professional practice and scholarship in the domain of educational technology. Responding to that question is the specific task undertaken herein.

Defining ethics and values

The word ‘ethics’ is used by many people in a variety of contexts without an attempt to provide a definition. For that reason, many will separate ethics from morals, which this author believes is wrongheaded. Classically, ethics is a branch of philosophy that dates

back thousands of years. Modern philosophers often divide ethics into three categories: (a) metaethics that focuses on the origin and meaning of ethical principles, (b) normative ethics aimed at establishing standards to distinguish and regulate right and wrong conduct, and (c) applied ethics that tends to focus on difficult to resolve cases and issues (see <http://www.iep.utm.edu/ethics/> for an elaboration of these categories).

What seems most appropriate for this discussion is the notion of normative ethics, as that category is typically associated with codes of conducts and distinguishing good or acceptable behavior and practice from unacceptable or harmful behavior and practice. The representative ethical statements presented in the next section clearly fall into the category of normative ethics. Normative ethics represent the specific behaviors and practices that a community, culture, institution, or profession expect all members to follow. In some cases, failure to adhere to an ethical principle is also a violation of the law. For example, delaying treatment of an individual in need of immediate attention may result in that patient's death. In such a case, the medical practitioner who delayed treatment not only committed a violation of a basic ethical principle (e.g., do no harm), but may also be guilty of involuntary homicide. Regardless of the legal implications, ethical violations should be regarded as serious and reported to the responsible authorities, as a general rule (and perhaps also an instance of a normative ethics statement). The honor code at the United States Air Force Academy states that "we will not lie, steal, or cheat nor tolerate among us anyone who does" (see <http://www.academyadmissions.com/the-experience/character/honor-code/>). The implication of that code is that not reporting a violation is also a violation.

Codes of conduct and ethical principles can be found for many professional associations and communities of practice. A few are presented below. Such normative ethical statement cover a wide range of behaviors, including such things as taking unfair advantage of others, misrepresenting relationships, overlooking evidence, violating trust and confidentiality, and much more. Such statements are generally representative of the values of an association, community, or profession. That leads to several questions: (a) What are the basic and central values of the educational technology professional community? (b) How were those values established? (c) How are those values to be interpreted?

AECT's TechTrends; Linking Research and Practice to Improve Learning periodically has a column on professional ethics written by Andrew Yeaman. Those columns provide insight into a number of aspects of normative and applied ethics in educational technology practice (see <http://link.springer.com/journal/11528>). For example, in a recent issue, Yeaman (2016) presented a scenario about problems in a training department that lead to a decision with regard to whom responsibility should be delegated to improve the situation. The value involved is commitment to the profession, and the ethics involved focus on fixing the situation rather than assigning blame.

One way to conceptualize values is in terms of a hierarchy of responsibilities and obligations. One interpretation of Plato's early dialogues that recount Socrates' trial and last day, is that Socrates had such a hierarchy which proceeded from self to family to state to the voice of the oracle. The reason a hierarchy is needed is that values can conflict. One may value one's own well-being or prosperity, but that would be superseded by the well-being of family or community or profession or society if there should arise a conflict. The most difficult cases when there are conflicts at the same level within such a hierarchy. Jonassen (2007) calls such ethical dilemmas the most challenging kind of problems because there is essentially a lose-lose aspect to such dilemmas—whichever choice is made, an ethical principle will be violated.

As an example, consider a professor who is supervising a doctoral student with a severe disability that prevents the student from writing and speaking clearly. The student's speech

is difficult to understand, and the writing often incoherent. Nevertheless, with support from the professor, friends and the medical profession, the student has managed to successfully complete all of the required coursework for the degree. The problem now is completing a dissertation. The student is passionate about completing the degree, and the professor wants to help the student succeed. However, the level of support from the professor to complete a dissertation given the student's condition appears challenging (as much as 10 h a week based on recent experience). In spite of having spent a great deal of time with the student, there has not been much progress, and the date for the dissertation proposal defense is approaching. Failure to defend the proposal on that date will result in the student being put on probation; a previous extension has already been granted to avoid that outcome. Being on probation means that the student's financial aid will be discontinued. Another extension could be requested, and that would support the professor's commitment to the student. However, the professor believes that will only postpone the inevitable, which would violate the principle of being honest with students. What to do? Such decisions are not easy, and intuitions can often be misleading. Passionate and dedicated students can often far surpass one's expectations.

The framework of ethical decision included herein is encapsulated in the Educatic Oath (see below). While specific categories and contexts are not mentioned, the general notion of doing no harm and respecting individual rights includes (a) not being persuaded by money but being persuaded by evidence, (b) recognizing that not every solution helps every student, (c) being fair to all while providing as much support for individual initiative as possible, (d) considering what is best in the long run for learners, teachers and the institution, (e) recognizing the impact of introducing any change into an educational context. In other words, this is intended to be the basis for a broad ethical decision-making framework.

Professional ethics statements

The international board of standards for training, performance and instruction (ibstpi) periodically conducts large-scale surveys of practice in a number of education professions (e.g., evaluation, instructional design, instructor, online learner, training management) that form the competencies and performance standards for the discipline. With regard to instructional design, there is one competency statement in the foundations area that ibstpi included in spite of lack of strong support from surveys – namely, identifying and responding to ethical, legal, and political implications of design in the workplace (Koszalka et al., 2013). It is worth noting that while AECT and ibstpi place strong emphasis on ethical practice, that emphasis is not as evident in other educational technology associations (see, for example, the standards of the International Society for Technology in Education at <http://www.iste.org/standards/standards>).

The American Psychology Association has a set of principles and code of conduct that begins with five principles or values: (a) beneficence and nonmaleficence, (b) fidelity and responsibility, (c) integrity, (d) justice, and (e) respect for people's rights and dignity (APA, 2010a). Section of the APA code of conduct pertains to education and training and has been considered in developing the educational technology ethical framework to be presented below. The APA publication manual (APA, 2010b) also has ethical guidelines pertaining to authorship—namely, authorship should include all those who have made a primary or significant contribution to the data collection, concepts, and interpretation of

work to be published, including those who do not do the actual writing. Unfortunately, there are far too many violations of that ethical standard pertaining to authorship in the educational technology professional and scholarly community.

The Educative oath

There is a great deal of commonality among the various ethics statements just reviewed. They bear a remarkable similarity to the Hippocratic Oath (attributed to a Greek physician who lived in the fifth century BCS; see https://www.nlm.nih.gov/hmd/greek/greek_oath.html for the original version and <http://guides.library.jhu.edu/c.php?g=202502&p=1335759> for a modern version). While the first principle of the Hippocratic Oath is often cited as “do no harm,” that statement did not appear in the version attributed to Hippocrates. Nonetheless, that phrase does capture a general of medical practice in ancient Greece that still exists today.

Based on an interpretation of the Hippocratic Oath and the kinds of ethical principles reviewed above, Spector (2005) proposed a similar oath for educators, the Educative Oath:

(1) do nothing to impair learning and instruction; (2) do what you can to improve learning and instruction; (3) base your actions on evidence that you and others have gathered and analyzed; (4) share the principles of instruction that you have learned with others; and, (5) respect the individual rights of all those with whom you interact. (p. xxxvi).

The Educative Oath has not been widely embraced, nor has any other such ethical code for educators. As a result, Spector (2015) decided to move from principles, such as those in the Educative Oath, to a more general concern with values. Figure 1 represents the values that might be associated with a learning environment effort.

One could take each of the values statements in Fig. 1 and develop specific principles that might represent how that value could be articulated. Regardless of agreeing or disagreeing with the values in Fig. 1, that framework is incomplete in many ways. First, it primarily represents an instructional design perspective. Second, it does not take into

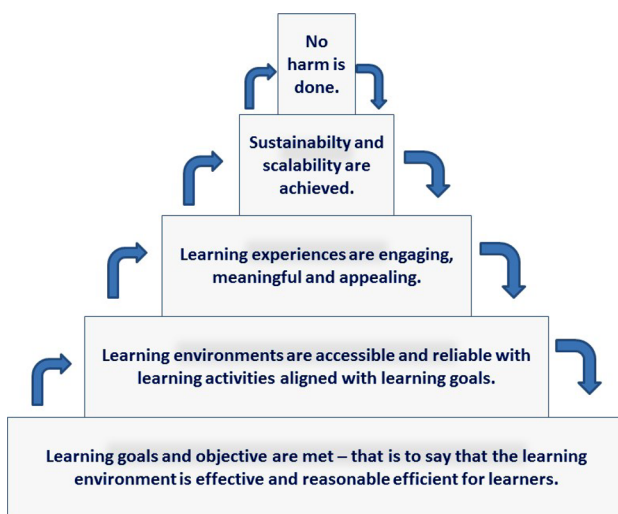


Fig. 1 A values hierarchy for learning environments (adapted from Spector, 2015)

account the many activities in which instructional designers engage, nor does it take into account those with whom instructional designers interact nor any of the technologies involved. The next section takes up these shortfalls.

Educational technology practice

Recalling AECT's definition of educational technology will provide pointers to those involved in educational technology and what they do. Those who facilitate learning and performance are involved (e.g., teachers, tutors, teaching assistants, coaches, etc.). Those who create technology recourses and processes are involved (e.g., instructional designers, graphics artists, media specialists, writers, web designers, etc.). Those who manage those resources and processes are involved (e.g., lead instructors, department chairs, deans, technology coordinators, information specialists, etc.). Those who make use of the resources are involved (e.g., students). Those who conduct studies about the design, development, deployment, use and evaluation of the processes and resources are involved (e.g., researchers and evaluators). The educational technology community includes a number of sub-communities, disciplines, and people with different backgrounds, training and interests. Given the complexity of the AECT definition, as elaborated above, there is no such person as a representative educational technologist, just as there is no such person as a representative nurse. There are emergency room nurses, oncology nurses, pediatric nurses, neonatal nurses, and so on. Nurses interact with other nurses, physicians, patients, family members, and others. Educational technology is at least as complex in terms of sub-disciplines and specializations as is nursing. The implication is that the ethical principles and kinds of ethical decision making involved are likely to be specific to a particular context.

If one considers the sub-discipline of instructional design and what has been written about instructional design practice, one will not find much with regard to ethics other than AECT's ethical standards and the one ibstpi competency referred to earlier that also includes adherence to legal standards as well as ethical standards (Koszalka et al., 2013). The importance of values is emphasized in Spector's (2005, 2015) works and values are mentioned briefly in a few chapters in the *Handbook of Research on Educational Communications and Technologies* (Spector et al., 2013). However, in major treatments of instructional design practice, there is very little discussion of ethics or values (see, for example, Dijkstra, 2004; Larson & Lockee, 2014; Merrill, 2013; Reigeluth, 1983). In the influential roadmap for education technology (Woolf, 2010), there is no mention of ethics or values. Yet the digital divide remains a reality and is prioritized in the 2016 National Education Technology Plan (see <http://tech.ed.gov/files/2015/12/NETP16.pdf>). Surely the digital divide involves ethical issues due to the fact that some students (especially those without access to new technologies or with little experience in using advanced learning technologies) are falling further and further behind as new technologies are integrated into teaching and learning. While educational technologists are generally well-intentioned and seek to promote learning and improve instruction, it often happens that the introduction of a new technology will have a negative impact on some students as well as some teachers. Planning to minimize negative impact and properly supporting both students and teachers when introducing a new technology should be a high priority for educational technologist.

As new technologies emerge at an increasing rate, an educational technologist may decide to try something new just because it can be done. The operational outlook should

not be “because we can.” The educational technologist’s motto should be “because we can do better for all involved.” Adhering to that creed requires taking an evidence-based approach rather than one based on fads and fancies.

A preliminary educational technology ethics framework

Figure 2 provides a somewhat deeper framework for thinking about ethical issues involving educational technology. This framework is intended to be a starting point for further development and exploration of the usefulness of such a framework for educational technology ethics.

There are three interacting dimensions in this framework: values, principles and people. Two additional dimensions are relevant but not depicted: context (e.g., school, university, workplace, culture, country, regulatory environment, etc.) and technology (e.g., specific technologies and their intended use and purpose). If the simplified framework presented here gets those involved with educational technology to think more seriously about the ethics of practice and research involving educational technology, then this framework is perhaps a step forward.

To encourage the progressive development of this framework, an elaboration of the intersection of these three dimensions is provided: (a) students in the people dimension, (b) evidence in the values dimension, and (c) the ethical principle of being fair and open in assessing and evaluating progress. The intersection of these three dimensions in the framework is one that is commonly encountered and, as a consequence, perhaps useful as a starting point for further elaboration.

Suppose the context is a public high school course that involves history. A major portion of the grade in that course is a student-authored paper analyzing and discussing the causes of World War II. The technologies involved include the internet, media and word processing. Students are required to (a) include links to at least three internet sites that provide different analysis of the causes, (b) include a figure or diagram that represents the resolution of the differences among a variety of perspectives, and (c) submit the final paper as a PDF file to an online learning management system. The instructor has provided

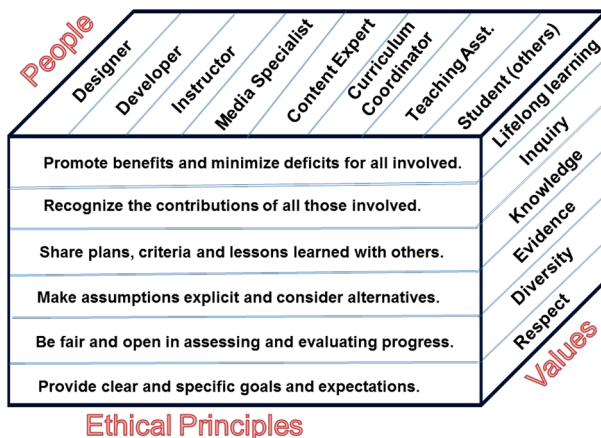


Fig. 2 A preliminary educational technology ethics framework

students with a rubric that indicates how the paper will be graded. The rubric includes requirements such as due date, length, format, required components (e.g., overview, perspectives explored, differences and similarities among those perspectives, etc.), how the quality of each requirement will be determined, and the weight assigned to each of the requirements. Additional notes in the syllabus are provided with regard to plagiarism and other related matters.

The rubric is in the course syllabus and students have been given frequent reminders. Specific drafts of the major components (overview, internet sites found, etc.) have been assigned along the way and feedback on those drafts provided to students. In short, the instructor has created a clear and coherent course plan that includes emphasis on evidence to be used in assessing the final paper.

Student Y has received a failing grade based on making use of another's work without credit or citation. The student claims it was a simple oversight and is asking the instructor to be given another chance to correct the problem in order to get a passing grade that is required for graduation. What specific ethical issues and principles are involved?

There is the value of making evidence-based decisions, and the evidence of plagiarism in this case is clear. There is the principle of making open and fair assessments. The rubric was well known in advance as was the penalty for plagiarism. Other principles are also involved. The instructor did establish clear and specific goals and expectations. The student failed to recognize the contributions of others. More fundamentally, the instructor has an obligation not to disadvantage others who may want a second chance to improve a grade.

The decision of the instructor to stand by the grade seems to be ethically defensible and perhaps obvious. However, there is a consequence for the student that may be harmful—namely, failure to graduate. Due to the failing grade, the student may be severely punished by a parent or drop out of high school. This instructor happens to know the student's parents and is aware of some abusive treatment. In addition, the instructor knows with whom the student associates and how well the student has done in other courses. The instructor believes this student could be successful in college and would like to see the student continue education after high school.

Given that knowledge, the instructor now confronts an ethical dilemma—namely, promote benefits and minimize deficits for this student or make fair and open assessments for all students. As Jonassen (2007), ethical dilemmas are challenging. For some, this situation may not seem like a dilemma, but for others it may well be a difficult decision-making process. Regardless of how one may perceive this imagined situation, it is clear that the instructor should not decide based on what is easy or convenient for the instructor. What is best for this and other students should be the primary consideration. What might be good for oneself is seldom the primary ethical perspective. Ethical decision making is often other directed rather than being self-directed. There is a self-directed aspect to ethical decision making, however. Basically, that aspect involves reflecting on the kind of person one is becoming on account of the decisions and choices one is making.

Concluding remarks

Some will be inclined to say that this approach to ethics in educational technology is unnecessary or is making something that is quite simple more complex than it needs to be. Ethical decision making in any aspect of life is quite challenging and complex. Ethical decision making should be introduced early and often in the development of a child.

Simply adhering to a law, rule, policy, or guideline involves no ethical decision making. Recognizing the many interacting aspects of a situation is a step toward understanding how different people, values and ethical principles might guide desirable behavior and the responsible conduct of using and studying educational technologies. A suggested earlier in this paper, the attitude that might inform values and ethical principles is the notion that we can do better with regard to supporting learning, improving instruction and understanding how best to make effective use of educational technologies. We can do better.

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