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Identity in Online Education

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Learning outcomes

After completing this chapter, you should be able to:

• Understand the notion of learners’ identities and how it underpins all online communication.
• Be aware of the issues related to online identities.
• Know how educators can support learners as they establish their identities in the context of online education.

Introduction

“If I could wake up in a different place, at a different time, could I wake up as a different person?”
– Chuck Palahniuk (1999, p. 33)

The notion that we are who we are is not necessarily true as we move into the online world. Given that educators have a measure of control over, and vested interests in, how they represent themselves online, Lynn Kirkland Harvey’s wide-ranging discussion underlines the fact that learners’ online identities, over which educators exert quite limited control, deserve special consideration. The importance of identity-related issues looms even larger when we embrace the notion that identity is the base from which learners’ engagement with content, as well as communication with others, begins.

In the traditional classroom, a student’s identity is almost completely bound up—physically, kinesthetically, and linguistically—with the individual as he or she enters the classroom. In the online classroom, learners enter with only their words and perhaps selected images and create identities from those. Students may not be conscious of the myriad choices available to them, so it is up to teachers to help learners establish their identities. This is true of adult and higher education students, and even more so of younger students, whose identities are much more fluid.

As a window into what parameters identity may take, we turn to Tod Anderson’s summary of secondary student participation in online learning across British Columbia. Anderson provides a snapshot for technological understanding from a locale that might represent a best case scenario—or at least a fairly advanced one—in which he notes that the technologies in use have, to a large extent, been adopted from higher education, and that secondary schools face many of the same issues that tertiary and adult educators have been facing for several years.

It is worth bearing in mind that as the technologies that Anderson discusses trickle down through the educational system into younger people’s hands, his snapshot is potentially a portrait of the future for elementary educators. This underscores the necessity for considering learners’ identities from the very beginning of online work, rather than just as a concern of secondary and tertiary students.

As students establish their identities, they have to negotiate and engage with other students, and in online courses channels for negotiation and engagement are necessarily different from traditional classrooms. The power of online classrooms does not simply arise out of their time- and space-shifting potentials, but also from the potential of diverse sets of many-to-many relationships as students engage with each other. Many of the lessons we aim to teach students are not simply to do with mastering course content, but also involve understandings of issues involved in working with others and collaborating towards shared goals; online environments can help us realize these aims.

Finally, we examine identities through the lens of e-portfolios, which can be viewed as snapshots of learner identity at particular moments in time, created either to facilitate reflection or to allow evaluation by a teacher or consideration by an employer.

Online learners’ identities

by Lynn Kirkland Harvey

“If you establish an identity, you build a monster—and that’s right, you’ve got to live with it. Of course, you can enjoy it too.” – George Shearing (Tomkins, 1976)

Current discussions about online learning reveal that learners may have a sense of disorientation, isolation, and disembodiment when they first begin an online course. Research also indicates that a sense of anonymity can create a safe place for learner discourse (Blake, 2000; Burbules, 2002; Smith, Ferguson & Caris, 2002). Issues of age, gender, race, socio-economic background, and culture no longer determine how one’s comments will be received. Shy learners find their voices and experience the thrill of being validated by their classmates in public forums. Learners feel more inclined to challenge instructors and, as a result, become more empowered in their learning. The role of a teacher shifts from lecturer to motivator (Easton, 2003; Shale, 2003; Thorpe, 2001; Walker, 2003).

Nevertheless, attrition rates in online courses are significantly high, and studies suggest it is because students are not motivated (Easton, 2003; Hodges, 2004). It
is obvious that this presents a contradiction: How can we motivate learners if we are uncertain who they are and what they need? If we ask learners to provide personal information to help us help them learn, will that undermine the value of their anonymity? What role does the learners’ sense of anonymity and a perceived alienation from a community in the virtual classroom play in their success in online learning?

ANONYMITY
Being anonymous is how most Internet users think of themselves and others when using the Internet for collecting information, viewing websites, and playing online games. However, is being anonymous the best way to describe the online learning experience? At its most basic, anonymity refers to not being recognized or known. But in an online classroom, as teachers, we know who the students are by name, and eventually by their contributions and grades.

Anonymity in the online classroom may be better described as having some level of disidentification. Hodges defines disidentification as “a split between a person’s activities and their relations with participation, a rupture between what a person is actually doing, and how a person finds themselves located in the ‘community’” (as cited in Walker, 2003, p. 57). Learners perceive that, even with identifying names, they are still physically invisible and relatively unknown in the virtual classroom. This sense of anonymity in online learning has been found to have a positive influence on the learning experience (Blake, 2000; Burbules, 2002; Smith et al., 2002). Eliminating physical or auditory indicators of gender, age, ethnicity, disability, and physical attractiveness can influence interactions by reducing learner biases and preconceptions and increasing the focus on content.

In addition, learners can become empowered to determine the degree of their own self-disclosure. They can decide how much or how little to share about their personal selves, and they can construct the level of anonymity that best meets their own social and learning needs.

Anonymity also promotes more equality between students and instructors, divesting the teachers of some authority (Burbules, 2002; Easton, 2003; Shale, 2003; Singh & Pan, 2004; Smith et al., 2002; Walker, 2003). Students feel more confident in challenging their instructors and debating ideas. The environment becomes learner-centred, and the experiences and knowledge of all class members are reinforced and validated. Teacher-student and student-student relationships can be stronger online than in traditional classroom environments.

Despite the advantages of being anonymous, there is still a need to present a person’s authentic self, such as appearance and behaviour, to others. People feel uncomfortable if they cannot ascribe gender, race, class, and language to another person (Kirkup, 2001). One of the most common questions asked in online chat rooms is about age, gender or sex, and location, or “/a/s/i” (Subrahmanyan, Smahel & Greenfield, 2006). Many of my students often intentionally seek out the personal details of their classmates by asking where they live, what courses they are taking, their relationship status, and other personal and identifying information.

At its most creative, anonymity not only provides students with an opportunity to alter or suppress features of their identity or personality, it allows them freedom to construct a new identity. Burbules (2002) argues that these are not false or lesser identities but simply different versions of actual identities. He believes that, when engaged in online interactions, the aspects of our real embodied selves are not fully abandoned but are used in different and supplemental ways.

So how does a learner develop an online identity? Inherent in the virtual learning environment are three main influences that will help create a learner identity: textual identity, visual identity, and behavioural identity. From the convergence of these influences, one composite learner identity emerges.

TEXTUAL IDENTITY
Deemphasizing a physical identity can encourage the emergence of a more substantial writing identity (Blake, 2000). The quality of the student’s writing can give us many clues. We can tell what they’re thinking, what they understand, and what their biases are. We can also get a sense of their social and cultural backgrounds. Moreover, since textual identity is the primary academic identity, having students create more substantial writing identities provides springboards for more academic modes of discourse.

Academic identity
An academic identity gives us insight into the student’s learning (Blake, 2000, p. 191). Students often feel more comfortable contributing to online discussions than they would in classroom discussions. When students realize that their thoughts will be exposed to others, often semi-permanently, it inspires a deeper level of discourse and more profound learning in this safe and somewhat anonymous classroom (Burbules, 2002; Smith et al., 2002; Walker, 2003).
Given that much of online learning is text-based and predicated on writing and language skills, students with language difficulties find that posting carefully edited perspectives can be more effective to their learning and to that of others than speaking in front of a class. Conversely, there is a problem with relying on a student’s writing identity. When writing is the only mode used to demonstrate knowledge in online courses, poor writers may be given an academic identity that does not accurately represent their level of understanding or ability.

Smith et al. (2002) also found a person’s consistency in writing and expressing ideas and attitudes helped instructors not only get a sense of the student’s identity, but it was strong enough to help minimize the issue of online cheating (p. 66). In my courses, it is easy to spot a student’s work when I compare their writing style in their postings with their more formal assignment submissions.

Social identity
Social identities are not completely anonymous in the online classroom, as they might be in other online activities. For example, students’ names can indicate gender, race, or nationality (Blake, 2000).

Writers’ word choices and modes of discourse, such as slang and humour, can also suggest social identities (Blake, 2000). As in face-to-face interactions where the receiver perceives an unintentional non-verbal message from the sender, in online communication the writer’s personality is evident in their word, punctuation, and grammar choices.

VISUAL IDENTITY
If writing gives us some clues to a person’s personality and identity, the same can be said about how writers portray their physical selves online. The issue of the visual representation of a learner’s physical appearance in an online learning environment centres around three possibilities: whether or not to include a photograph, the choice of an image to represent the learner, or the construction of a new image.

Learners are often asked to post biographies or pictures of themselves as a way to create a social community in the virtual classroom. Most demonstrate that they are familiar with the technical process of uploading a picture to the website, and they appear to be keen to do so. In my seven years of teaching online with over 600 students, there have been only a handful of students who have not had an available digital photograph to use in their course. Even more surprising, only one student has refused to put up a picture. Given the value of being or feeling anonymous, I would have expected more students to resist presenting their physical identities to the class.

One of the most perplexing decisions for learners may not be whether or not to include a picture, but how to choose one that best represents who they are. It is the choice that is significant. The picture that learners choose to share may say more about them than the actual photo (Kirkup, 2001; Hawisher, 2000). Do they choose a picture with their family (secure and traditional), or one cavorting with friends (fun and likable), or one engaging in a sport (outdoorsy and active)? I always am intrigued by the depth of detail that they share with us, such as the student who described his recovery from cancer and posted a picture of himself that showed his cancerous skin lesions.

It is also possible for learners to create an authentic online identity by constructing representations of themselves through altered photos, cartoons, avatars, and animations (Hawisher, 2000). The technology can be used to represent who the learners think they are, or who they’d like to be. This blurring of their physical and virtual selves into something creative might send a clearer message of their identity. One of my students was a police officer who was uncomfortable posting his picture, so he chose to post a picture of a highly identifiable character from the police series NYPD Blue. It was a powerful image of the police detective, Andy Sipowicz, standing in front of the precinct, with his arms folded, and his gaze straight at the camera. I got a tremendous sense of who this student was as a result of his choice of photo.

Burbules (2002) notes that a physical body is just one dimension of identity, and it should not be falsely prioritized as the most important. So what else is important? If some degree of personal anonymity and the ability to create a textual and visual identity have empowering and positive influences on learning, what else is needed?71

BEHAVIOURAL IDENTITY
Interacting as a member in a community is also pivotal to helping learners develop their online identity. A behavioural identity emerges as learners establish a sense of belonging, are motivated to learn and contribute, and achieve success in online learning. Even if it is via a computer screen, there is an inherent desire for human relationships where one can share identities, engage in discourse, and challenge values (Arbaugh, 2001; Kirkup, 2001; Wingard, 2004).

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71 This issue also arises with blogs.
Authors on the subject of education and e-learning basically refer to two types of online communities: the social community and the learning community. The social community is created when learners and instructors develop functional personal relationships, and it is from this sense of connection and belonging that an effective learning environment can emerge (Blake, 2000; Easton, 2003; Meyer, 2003; Robbin, 2001).

Social communities
In a study of online students and what they consider as distressing when taking distance courses, Hara and Kling (2000) discovered that students do not always consider themselves to be isolated if the class bonds as a community. So, how does an effective social community get established when the members never see each other face-to-face and personal characteristics can be obscured and mitigated?

The development of a social community can begin the moment a learner logs into the course and is welcomed into the virtual environment. Learners often can’t help but display their authentic and genuine personalities and beliefs online. I’m often surprised by how many learners will spontaneously post a generic welcome to the class as soon as they’ve logged in, demonstrating an outgoing and social personality.

In an attempt to include learners who are less social, ice-breaking activities work well. In my course, I ask the learners to create a homepage with a small biography and picture of themselves, to read through the homepages of other students, and then to post welcomes to two other students in the class. Through this activity, the course becomes humanizing, and we all have a better sense of everyone’s backgrounds, interests, and levels of experience. It’s interesting to me that students tend to welcome only those students who share a similar demographic dimension to themselves.

Yet, it is a paradox to have students post autobiographies and pictures to help establish a social community, because the disclosure may expose them beyond the safety of their anonymity. Perhaps it is of some benefit that I have no way of knowing if the information the students have chosen to share or the pictures they have selected are genuine, and it may not matter to the development of the social community if students are not exactly who they say they are (Burbules, 2002; Kirkup, 2001).

A successful social community requires regular contributions of all the class participants and the use of immediacy behaviours to establish a sense of camaraderie (Arbaugh, 2001; Meyer, 2003; Walker, 2003; Wingard, 2004). Immediacy “refers to the communication behaviours that reduce social and psychological distance between people; it includes both nonverbal and verbal behaviours” (Arbaugh, p. 43). This includes using conversational language in postings, using humour and personal experiences, and addressing each other by name. These contribute to the sense of being important and valued by another.

It is also interesting to note that in an online social community gender differences and gender-related assumptions still exist, as they do in regular face-to-face exchanges (Burbules, 2002; Kirkup, 2001; Meyer, 2003; Subrahmanyan et al., 2006). For example, males are more likely to post more questions, use concrete speech patterns, and assert their opinions online. Females are more likely to use polite terminology, empathize with others, and avoid disagreements online.

Once learners have established themselves in the social community, further behavioural identities emerge as they become motivated in the learning community.

Learning communities
Just as immediacy behaviours are important for establishing an online social community, motivating behaviours are important for the learners’ success in the course (Easton, 2003; Hodges, 2004; Robbin, 2001). The learning community is created when learners can explore new concepts through communicating with others. The role of motivator often falls primarily on the instructor, but learners can contribute to positive and energizing class discussions and can motivate others to participate. Within this transactional and dynamic discourse, explicit learning can take place.

The behaviours that learners demonstrate during this process provide more clues to their identities. Do they work well in groups or prefer to work independently? Are they willing to help others, or do they stay in the background? Often it is the same few learners who confidently post their answers first and, similarly, another group of learners who always read all the other postings and post their comments last. Also, learners may feel more comfortable demonstrating aggressive behaviours in the online environment than in face-to-face encounters (Smith et al., 2002).

Learner behaviour is the last component of the identity composite. Even if the behaviour has been adapted for the online environment, it still represents a valid aspect of a learner’s online identity.

SUMMARY
A learner in the virtual classroom follows a progression of initially feeling anonymous and experiencing disidentification, to developing an online identity. Through
membership in a social and learning community online, the learner’s behavioural identity emerges. A learner’s written discourse creates a textual identity that gives insight into his or her academic abilities and social background. Pictures or visual representations create a visual identity.

Once all these textual, visual, and behavioural cues are put together, like pieces in a puzzle, an online identity emerges. A learner’s online identity isn’t a brand-new identity, nor is it a false identity. It is simply a new version of an already existing identity, which has been tailor-made to maximize e-learning.

Secondary school participation in online learning environments

by Tod Anderson

As we delve into the exploration of what comprises a quality online learning environment, we quickly discover that we are exploring what makes up a quality learning environment.

OVERVIEW OF ONLINE LEARNING IN THE SECONDARY EDUCATIONAL SYSTEM

Between slaughtering aliens in Halo 2, downloading music to her iPod, updating her profile on myspace.com, and chatting with her friends online, a 17-year old grabs some information from the Web to enhance her essay on the role of Lady Macbeth in Shakespeare’s well-known tragedy about unfettered ambition. She takes one last scan of the essay and then emails the file to her instructor. It will be up to a week before she hears a response from her teacher about her writing. She simply moves on to her poetry unit, letting her copy of Macbeth fall behind her desk and into the realm of dust bunnies and unclaimed pencils. She will revisit Macbeth once more when the email from her instructor comes and she quickly scrolls to the bottom of the file to see her final mark on the assignment. With a grin, or a frown, at the result, she closes the file and picks up her poetry anthology. Macbeth is behind her and she is left to prowl the textual maze of poetry.

While much research and effort has been devoted to the creation, implementation, and deployment of distributed, virtual, and online learning at the tertiary level, less time has been devoted to the secondary education system, though in teenage bedrooms and at kitchen tables across the country those same students have taken up the technology with a vengeance.

In an attempt to understand the impact on the school systems of increasing teen digital usage, we take a look at the Canadian secondary school system as an example of the range of methods available for delivering content for online learning, and the challenges of delivering a meaningful educational experience to students with a huge scope of needs, experiences, and motivation.

“Learning takes place not in an institution, but in social networks and communities.” (Downes, 2006)

The real key to learning (whether online or not) is the students’ level of interaction with the content, the instructor, and their peers. Creating the opportunity for this varied interaction in an online environment is the greatest challenge for designers and teachers of online courses for secondary school students.

My discussions with online secondary school teachers from across Canada have revealed that there are four main categories of online learning environments in use in secondary education:

- **Self-paced asynchronous**: Students work through the material at their own pace and at times and places of their choosing.
- **Paced asynchronous**: Students work through the material at a pace set by teachers, but at times and places chosen by students themselves.
- **Paced synchronous**: Students work through material at a pace and at a time set by their teachers. This most closely mirrors a classroom situation and may include live video feeds of teachers in classrooms delivering lessons.
- **A combination of both synchronous and asynchronous**: Students are required to meet online at set times, but can also work independently at times of their choosing.

Each one of these methods has strengths in regards to pedagogical approaches and learning. For instance, asynchronous communication (e.g., using online discussion boards) often provides venues in which students engage in more meaningful discussion, because they have a greater chance to reflect on their contributions and have an equal opportunity to voice their thoughts (Murphy, Drabier & Epps, 1998). Synchronous communication can often be less teacher-dominated than in a face-to-face environment, and it provides a social presence and sense of community for the students (Walker, 2006).
Online secondary school instructors and those working to put such systems in place must be familiar with the strengths and weaknesses of their styles of delivery in order to anticipate the best ways to support student learning and engagement. Table 29.1 summarizes the benefits and challenges of each category.

In general, synchronous courses allow for increased interaction, particularly among peers, but they also decrease the flexibility of courses being offered. Synchronous courses reduce the control students have in regard to choosing the time and place to study and also impose more traditional time limits on student responses. Thus, synchronous courses may not take advantage of the greater opportunities for student reflection afforded by asynchronous courses. Understanding these differences can help teachers and administrators appreciate the differing challenges of each.

**CANADIAN EXAMPLES**

As discussed previously, secondary online learning has many different methods of delivery. An important factor affecting choice of method of delivery is the provincial or territorial approach to online learning. Even a technologically advanced country such as Canada shows wide variations as each province and territory deals with online learning in a way that is unique to its population and educational philosophy. These approaches can be viewed on a spectrum. For example, we have a market-based approach in British Columbia, which has individual school districts developing their own distributed learning programs. These can then be used to attract students from outside the school’s catchment area, and students are free to enroll in such institutions while concurrently enrolled in a brick-and-mortar school, while Nova Scotia and Alberta have adopted a more centralized approach.

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**Table 29.1. Benefits and challenges of online education**

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<thead>
<tr>
<th>Categories</th>
<th>Benefits</th>
<th>Challenges</th>
<th>Engagement with</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>content</td>
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<tr>
<td>Self-paced asynchronous</td>
<td>Student as independent learner has greatest control over time, place, and pace of studies.</td>
<td>The motivation needed is often lacking in adolescents. Delayed feedback from the instructor is often no longer relevant to the student. Students don’t have immediate access to teacher or peers.</td>
<td>significant</td>
</tr>
<tr>
<td>Paced asynchronous</td>
<td>Allows for more structure. Teacher dictates how much time should be spent in particular areas. Group work becomes possible. Student still controls time and place of studies. Teacher feedback often occurs more rapidly and thus may be more relevant.</td>
<td>Places restrictions on the pace of the program. Students who cannot keep up get left behind. Students must start the course at the same time. Students don’t have immediate access to teacher or peers.</td>
<td>significant</td>
</tr>
<tr>
<td>Paced synchronous</td>
<td>Allows immediate interaction with teacher and peers. Teacher plays a much larger role. Feedback can be immediate as well as delayed.</td>
<td>Student choice of time, place, and pace is limited. Technology often plays a larger role.</td>
<td>fair to significant</td>
</tr>
<tr>
<td>Paced combination of both synchronous and asynchronous</td>
<td>Provides structure and flexibility. Harnesses more direct communication (real-time audio, video, or text), and indirect communication (discussion boards, email, wikis) with teacher and peers.</td>
<td>Places restrictions on the pace of the program. Students who cannot keep the pace get left behind. Varied technology needs. Students must start the course at the same time.</td>
<td>fair to significant</td>
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</table>
BRITISH COLUMBIA IN FOCUS
Given that British Columbia has the most diversity and activity in terms of online learning, the province lends itself to closer observation. Online teachers in British Columbia overwhelmingly view teacher-to-student interaction, teacher feedback, troubleshooting, assessment, and questioning as all very important for student success, though they are split on the notion of whether peer-to-peer interaction is also important for success. We should note that this division stems from the type of learning environments in which students are working, where self-paced, asynchronous courses preclude peer-to-peer interaction due to the independent nature of the courses, even though most teachers value such interaction and try to create opportunities for it.

The other reason for this division is more philosophical. Some teachers believe that you can learn the subject matter without peer-to-peer interaction, or that independent students do not value peer-to-peer interaction, so do not include interaction as part of their courses. Diaz and Cartnal (1999) found that independent learners were inclined to be less collaborative and dependent within online groups. This makes it difficult to ensure that the quality of content and teacher interaction is at a level that provides an engaging learning experience.

The challenges of achieving active student participation in an online course are myriad, but survey respondents in British Columbia felt that time commitments and increases in teacher workload were the two greatest challenges they faced. These challenges tie into Smith, Clark, and Blomeyer’s recommendation (2005) that professional development should be preparing “highly qualified” online teachers. This contradicts the notion that online teaching gives teachers more time and should be underlined when considering such programs.

CHALLENGES OF ADOLESCENT ONLINE LEARNERS
As noted earlier, research into adolescent online learners lags behind research into adult online learners. The research on adult learners may not be applicable to adolescents because the populations differ, especially in regards to at-risk learners, and when online education is not elective, but a choice of last resort. After dealing with issues involving at-risk learners, we present perspectives on the future of online learning.

At-risk learners
In the Canadian secondary school system, online learning still resembles a poor cousin of face-to-face education. For example, the funding for programs such as distributed learning is based on fractions of full-time equivalencies (FTEs), which allows funding only as a portion of the face-to-face budgeting levels. Supplementary grants are available, but only under special circumstances (BC MOE, 2007). Thus, we find that the students at our door are often those for whom the traditional brick-and-mortar system is unsuccessful. Funk (2006) states that at-risk adult learners are more likely to take online courses, which seems to apply to secondary students as well.

Students who are unsuccessful in the traditional classroom are often the first students to look for alternative methods of education. As Donnelly (1987) writes, “Family problems, drug addictions, pregnancies and other problems prevent them from participating successfully in school. As they experience failure and fall behind their peers, school becomes a negative environment that reinforces their low self-esteem.” If these problems end up channelling such at-risk students into online learning, it may serve to hide the true potentials involved. As Smith, Clark, and Blomeyer (2005) suggest, additional preparation or counseling of first-time online students for the express purpose of supporting the success of students should be built into student support systems.

The future of online learning
Currently, a great deal of research has gone into student motivation, and it seems likely that online students may need a higher degree of motivation than their traditional counterparts, as the distance from the instructor allows them greater freedom than in a traditional classroom setting. Tied in with motivation is the need for explicit instruction on time management, planning, and strategizing. As online students are freed from the schedule and strict time requirements of brick-and-mortar classrooms, it is naïve to assume that those frameworks will be magically replaced by frameworks created by the student, with no guidance from the instructor or teacher.

Predictive assessment is another area that should be considered, especially to make clear the potential deficiencies that online students may have. We tend to shy away from predictive assessment in the present face-to-face classroom to avoid creating self-fulfilling prophecies, yet these assessments may act as gate-keeping mechanisms to help ensure success or identify specific needs on the part of students.

CONCLUSION
While online learning in the secondary school system may still suffer from a general impression that it is a second-choice option, the increasing number of students choosing to study in this manner and the range of
options that exist across Canada indicate that online learning will continue as a viable alternative to brick-and-mortar schools. There is no single method to serve all students, but as we see more research being conducted, and best practices published, the quality of online learning will increase. We can hope that there will be a blending of traditional methods and online courses with the tools of online learning brought into the classroom to enrich the classroom environment, allowing students a much greater range of choice. In the next section, we examine the reification of that identity as it appears at the end of the education process through examining the concept of e-portfolios.

Introducing e-portfolios
by Karen Barnstable & Kathryn Chang Barker

An e-portfolio, in simplest terms, is an electronic portfolio of all learning; that is, knowledge, skills, and abilities acquired through formal, non-formal, informal, accidental, and incidental learning. E-portfolios can be used by individuals to demonstrate learning and personal achievement, by educators and employers to assess ability and employment suitability, and by agencies and businesses to show positive change and organizational achievement.

In broader terms, the phrase e-portfolio is used to encompass tools, products, and systems that can be used by individuals, educators, employers, and entire nations for the purposes of describing, assessing, recognizing, and using knowledge and skills acquired through all forms of learning with evidence that is digitally created, stored, and managed through practices that meet standards to assure transportability, usability, and security. At its simplest, an e-portfolio may resemble a personal homepage or an electronic resume and, at its most complex, it may become a person’s digital identity.

PROCESS AND PRODUCT
The e-portfolio has been more formally defined as “a collection of authentic and diverse evidence, drawn from a larger archive representing what a person or organization has learned over time on which the person or organization has reflected, and designed for presentation to one or more audiences for a particular rhetorical purpose” (National Learning Infrastructure Initiative, 2003). We shall focus on two central concepts in this definition, the digital archive and the purpose-driven presentation.

Until recently, e-portfolio tools focused largely on the presentation of information, with an archive of digital data that derived from the associated purpose of the presentation. In other words, the archive was created with the purpose in mind. However, new e-portfolio tools include digital environments for assembling and managing documents and all forms of media in a digital archive, as well as software applications for assembling and sorting portions of that archive for a specific purpose such as applying for a job or seeking course credit. In the future, the archives will come first, with e-portfolios created when and as needed.

At this point, there are several tools for producing e-portfolios, but few for receiving and processing them. That is to say, tools are made available to students, for example, to present their acquired learning to teachers for assessment and credit, but processing those e-portfolios can be very labour-intensive. Currently, e-portfolio systems are being developed for use by their recipients, with software applications that may be used by both creators and processors (typically standards-based e-portfolios) or software applications that can pull what a processor might require from any e-portfolio tool; for example, through use of word search or a marking rubric.

In summary, the e-portfolio is about both process and product. E-portfolio tools help creators to identify and reflect on the outcomes of learning experiences and to produce archives and presentations. One particularly appealing part of the e-portfolio is the use of multimedia, for example audio files that can demonstrate language or musical competence, video files for demonstrating skills, and social networking and blogging for establishing references.

APPLICATIONS AND USERS
Individuals may use e-portfolios to demonstrate their own lifelong learning and achievements. Sometimes individuals create e-portfolios more as process than product, focusing on reflective learning than showcasing themselves. In their digital archives, they may assemble all the formal, digital records that exist about them and their learning created by themselves and/or created by others, for example health providers and police departments.

Educators may use student e-portfolios to assess student learning, the quality of courses, and entire institutions. Trainers may use e-portfolios to assess prior learning, target training, and provide alternative credentials. And, like all others in the employment environment, educators may use their own e-portfolios for learning management and career advancement. This is
becoming increasingly relevant to higher education faculty, as threats to the concept of tenure accelerate.

Employers may use e-portfolios for recruitment and placement purposes, especially in knowledge-based environments. More importantly, they can better use the entire inventory of skills and knowledge in their workforce in a practice known as human capital assets management.

Entire nations may provide the opportunity for citizens to have a digital archive. This is a complex public policy area to be explored. Visionaries argue that, in a digital world, each person must be able to present himself or herself digitally. Cautionary arguments are that our unofficial digital identities already present opportunities for identity theft and other forms of fraud. From this perspective, there is a great deal of digital information out there for every person, and the personal archive becomes a place to assemble that information and take ownership of it. Typing your own name into a tool such as ZoomInfo (http://www.ZoomInfo.com) may reveal to what extent your digital identity can already be assembled from documents found online.

From yet another perspective, e-portfolio tools provide for transparency of credentials and work experience to enable recognition of foreign credentials and to promote labour mobility. There is vast utility to creating and using both a digital archive and a digital identity for all citizens, as an opportunity and not a requirement.

THE NEW MANAGEMENT OF LEARNING

In the past, we’ve formally managed learning by awarding and expecting credentials; this has been the function of the formal education system and various professional bodies. Employers use credentials as a proxy for acquired skills and knowledge, and have, until now, had few other efficient tools for assessing actual skills and knowledge that individuals represent. We now understand that people acquire skills and knowledge from formal, informal, and non-formal learning in the workplace and the community, from accidental and incidental learning in travel and human relations. However, until comparatively recently, we had no tools for managing that learning effectively and efficiently.

The digital archive is the place to record learning in a range of environments over a lifetime; the e-portfolio becomes a presentation drawn from the archive for a specific purpose. This gives recognition to all forms of learning and, more importantly, the opportunity to use all forms of learning for the good of the individual, community, enterprise, or nation. While a purported e-portfolio that contains only formal learning is a simple digital transcript, the e-portfolio can be an alternative credential for those without formal credentials, such as early school leavers, and for those without recognized credentials, such as foreign-trained workers.

The process of creating both an archive and an e-portfolio is one of translating experiences to a set of skills and knowledge and providing supporting evidence. More explicitly, the process is one of collection, selection, reflection, projection, and presentation of learning. Without evidence of these processes, an e-portfolio is a simple digital resume.

PRINCIPLES OF E-PORTFOLIO SYSTEMS

Using e-portfolios, including digital archives and tools for end-users, requires attention to making them effective and efficient. The first time students are told they can’t take their e-portfolios with them to the next level of education, or to the workplace, they will question the value of creating a second e-portfolio. The first time employers receive a mountainous stack of e-portfolio applications for one position, they may question the wisdom of the process.

To avoid problems of this sort, e-portfolio practitioners worldwide have agreed on the following principles for e-portfolio initiatives:

- **Ownership**: Digital archives and e-portfolios are developed and owned by the individual or organization creating them. The use of both or either, and any changes to them, are under the control of that owner. Both are confidential and access is controlled by the owner.
- **Scope**: The e-portfolio can maintain a complete inventory of skills and knowledge acquired by the individual through formal or non-formal learning. The e-portfolio development process includes thoughtfulness about learning represented in the portfolio.
- **Usability**: An e-portfolio system lists and describes skills and knowledge in a way that is recognized and respected by educators, employers, professional bodies, and others who receive and process e-portfolios. Where possible, the e-portfolio system links to established competency standards but also allows flexibility to accommodate unique or non-specific competencies.
- **Accuracy**: The content of the e-portfolio is current, accurate, and verifiable. Methods of validating learning are flexible, appropriate, and credible.
- **Accessibility**: To develop the e-portfolio, there are explicit instructions with examples, a universally recognized glossary of terms, and professional assistance if required. The e-portfolio is easy to access, use, and modify by the owner.
• **Format**: The e-portfolio and archive can incorporate a variety of media.
• **Transportability**: The e-portfolio is portable and interoperable in a technical sense.
• **Purpose**: The e-portfolio service is multi-purpose, customisable, and adaptable to various uses that include assessment by teachers, learning through personal reflection, planning, and individual or community asset mapping.
• **Extensibility**: The e-portfolio system is seamless, allowing the individual to create many versions, from primary through higher education and career training to the workplace and lifelong learning environments.
• **Security**: The e-portfolio system provides secure long-term storage, privacy, access, and ongoing support.

**E-PORTFOLIOS IN FORMAL EDUCATION**

An e-portfolio provides both evidence of a person’s learning and of reflection on his or her own work. It is a record of learning, growth, and change; and it provides meaningful documentation of individual abilities. Examples of types of portfolios in formal educational settings include:

• **Developmental portfolio**: documents individual student improvement in a subject area over a school year and can be used for student evaluations and parent conferences.
• **Teacher planning portfolio**: uses an existing portfolio system, possibly commercial or online, to receive information about an incoming class of students.
• **Proficiency portfolio**: a means of determining graduation/completion eligibility, usually requires students to complete portfolios in certain areas of target proficiency.
• **Showcase portfolio**: documents a student’s best work accomplished during an entire educational career; may include research papers, art work, and science experiments.
• **Employment skills portfolio**: used by employers to evaluate a prospective employee’s work readiness skills.
• **College admission portfolio**: usually a showcase portfolio, used to determine eligibility for admission to college or university.

Portfolio assessment combines many innovations in the appropriate assessment of learning, including alternative assessment, authentic assessment, competency-based assessment, flexible assessment, and standards-based assessment:

• **Alternative assessment** refers to alternative means of enhancing educational assessment through techniques such as confidence measurement, analysis of self-awareness, and performance evaluation.
• **Authentic assessment** involves examining students’ basic skills, control of information, high level of understanding, personal characteristics, and habits of mind, and it allows students to participate actively in their own learning.
• **Competency-based assessment** is the assessment of competence against standards set for knowledge and skills in a particular area, typically used in vocational education and professional certification processes.
• **Flexible assessment** can include checklists, portfolios, performance tasks, product assessments, projects, and simulations; observation of the learner, questioning, oral or written tests and essays, projects undertaken in groups or individually, role playing, work samples, and computer-based assessment. Flexible assessment is intended to suit the learner’s pace and style of learning and to assess the individual when he or she is ready.
• **Standards-based assessment** is intended to measure achievements against stated learning outcomes or objectives.

Combining elements of all the above, portfolio assessment involves using the products in a portfolio as the evidence of learning for assessment purposes. The advantages of a portfolio for assessment purposes are:

• Portfolios provide a wealth of information upon which to base instructional decisions.
• Portfolios are an effective means of communicating students’ developmental status and progress.
• Portfolios can serve to motivate students and promote self-assessment and self-understanding.
• Portfolios contextualize assessment and provide a basis for challenging formal test results based on testing that is not authentic or reliable, as in the case of a single test score.

In terms of portfolio assessment, the single greatest concern has been validation or verification of the evidence presented. This has considerable implications for the development of learning records. A learning record, whether electronic or not, is of little use if the claims of skills and knowledge cannot be verified. Credentials are relatively easy to verify, and credentials have, in the past, served as a shorthand method of displaying skills and knowledge. However, if we are dealing with a learning record, we are not dealing with a final battery of tests, but with the gradual accumulation of knowledge. Thus,
the integrity of a learning record becomes a crucial issue. We need to consider exactly what evidence needs to be gathered and how we can validate that evidence reliably and in a way that is not so time-consuming as to be impractical.

What is the future of e-portfolio assessment? There is a trend towards technology-assisted assessment of learning at all levels of learning systems. Areas of interest to watch include:

- e-portfolios for formative assessment (a specific purpose);
- e-portfolios and reflective learning (assessment of one type of learning);
- e-portfolios as a transition tool (between grade levels);
- assessment of learning across subject matter “silos”;
- self-assessment of learning;
- assessment of lifelong learning.

GETTING STARTED ON AN E-PORTFOLIO
In this section, we offer some simple guidance to those wishing to assemble their own e-portfolio that summarizes, highlights, and validates:

- who you are as a person,
- what you know and can do, and
- what you hope to do.

It will be an evolving work as you add documents that demonstrate your most current skills or delete those that are no longer so relevant to who you are or what you can offer. With this in mind, you will want to follow a systematic process to help you identify what to include and how to present it. The CROS (collection, reflection, organization, and selection) system is a tried and tested system that has assisted many people with the development of their e-portfolio.

C—Collection
Search through your file folders, boxes, and computer documents for any evidence that says something about you and your skills. Keep an ongoing list of what you have FOUND. This will help you to keep track of what you have so that it is not forgotten later. Other lists you will need are TO FIND, TO REQUEST, and TO CREATE, used to incorporate items that you have temporarily mislaid, for example, that you will need to ask former employers to provide, and that you have lost permanently when moving house or through a disaster such as a computer crash.

R—Reflection
Reflecting on our learning and our lives in general has become one of the most emphasized processes in education. It allows us to gain a better sense of who we are, what we have done, what we know, and what our goals for the future are. It may also help us to see patterns in our lives and to evaluate professional and personal growth.

You may want to begin by reflecting on your skills in general, using questions such as those listed below. This will also generate ideas for any further iterations of the collection cycle:

- What three words describe me best?
- What are my five top skills?
- What are my short- and long-term goals?
- What are my greatest strengths?
- What are my major accomplishments?

To help you determine the usefulness of each item that you have collected for your e-portfolio, you may want to make use of reflective questions such as the following:

- What does this item mean to me?
- What does this item say about me?
- What specific skills / knowledge / attributes are reflected in this item?
- How does this item relate to my short- and long-term goals?
- In what ways does this item demonstrate my strengths?
- What is the importance of this item/activity in relation to my personal or professional growth?
- What barriers or challenges did I have to overcome to realize this achievement?
- What were the results of this activity/project?
- What did I learn from this?

O—Organization
The e-portfolio tool that you choose may determine the organizational system that you use for presenting your evidence. If you have a choice in the organizational framework, there are several approaches to consider.

Chronological: This is an effective way of demonstrating career progression by clearly showing years or time periods. Just like a chronological resume, it is easy to follow and shows career steps by positions, job titles, companies, or organizations that you have worked for. Evidence of skills used or developed in each time period can be displayed.
**Thematic:** The thematic approach is a more common one. Common categories used include:

- skills/competencies
- education and training
- professional development
- accomplishments
- projects
- community/volunteer
- leisure/hobbies/travel

The simple STAR (skills, training, accomplishments, references) format is a useful way to organize your documents if you don’t have a lot of evidence to display.

**S—Selection**

The final step in deciding what to put into your e-portfolio involves selecting items that will be appropriate for your audience. Some questions to consider are:

- Who are the key people who will be viewing my e-portfolio?
- What exactly will they want to see?
- What is their familiarity with e-portfolios?
- Will they need assistance in navigating through this item of evidence or through the organizational format used?
- How might they evaluate my skills?
- What questions might they ask?

**E-PORTFOLIO RESOURCES**

We recommend the following sites as points of departure for educators and learners interested in further exploring the prospects, purposes, and possibilities of portfolios in education.

- Educause (http://www.educause.edu)—North American group focused on learning technologies
- FuturEd eLibrary (http://www.futured.com)—research company focused on learning innovations
- Learning Innovations Forum (http://www.lifia.ca)—non-profit agency sponsoring e-portfolio forums
- ePortConsortium (http://www.eportconsortium.org/)—portfolio research at the higher education level

**Summary**

“Slave is an Ephebian word. In Om we have no word for slave,” said Vorbis.

“So I understand,” said the Tyrant. “I imagine that fish have no word for water.” (Pratchett, 2000, p. 356)

Like a fish in water, we are so steeped in the notion of identity that we tend to take it for granted, and we feel that many online initiatives fail, or are not as successful as anticipated, precisely because of this oversight. Though we are seldom aware of the issue until it is brought to our attention, we feel that one of the primary challenges of online learning is the question of learners’ identities; how educators working in online environments address this challenge may determine the success or failure of an initiative. We also feel that identities are malleable as well as extensible, so, when we endeavour to foster co-operation and collaboration, we must keep in mind how learners’ (and educators’) identities have been established and how they can be stretched and adapted in ways to best facilitate online learning. We think it is useful to consider online classrooms expanding not only space (as distant learners can be incorporated into the classroom) and time (as asynchronous CMC permits time shifting), but also in terms of how much more flexible our views of online learners’ identities are, and how learners can consciously develop their identities in ways that facilitate learning. Harvey’s discussion emphasizes how the online environment is akin to a universal solvent, forcing us to reconsider concepts and ideas, and it is important for online educators to be aware of this when creating and maintaining learning environments.

We then looked at the state of play in a Canadian province, British Columbia, to gain an understanding of issues of learner identity and participation, and how they operate in this setting with relatively advanced online educational offerings.

As a practical example, and a possible end point for educators, we considered e-portfolios, the construction of which involves making a learner’s identity concrete not only for evaluation by educators, but also for learners to use to understand themselves and to make their way into the wider world. When viewed through the lens of learner identity, the organizational principles of e-portfolios take on an added significance. It is probably beyond the realm of possibility that the online teacher in lower elementary school classes would be able to teach while having a clear idea of what students will want or need to do 10 or more years in the future, but, by aligning the basic raw material of learner identity with the firmly practical notion of e-portfolio development, we hope to highlight the fact that the elementary educator is connected to final outcomes of online education in serious and meaningful ways.
References


