Electronic Portfolios as an Effective Tool for Learning and Skills Development with Omani Students

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Abstract:

This paper discusses the rationale for implementing electronic portfolio projects with Omani university students who are engaged in advanced English as a Foreign Language study at Sultan Qaboos University (SQU) in Oman. Electronic portfolios (EPs) are based on a specific software program which the students use to showcase their cumulative academic abilities, accomplishments and personal reflections. In the process, they develop a variety of academic, personal and social skills, and prepare themselves to compete for positions in a globalized economy. The use of electronic portfolios supports Wagner’s (2008) vision of how the development of critical skills for the 21st century can be achieved meeting educational, communicative and technological objectives. This helps students in their present and future academic studies, and later in the workplace. Capitalizing on the first-hand experience of two SQU English language teachers, this research explores students’ learning using high-tech media and specific application of electronic portfolios in their academic and professional world. It focuses on criteria for successful implementation and highlights the broad ranges of benefits for Omani students enrolled in classes that build EPs. A number of pedagogical, technical and organizational considerations are discussed. Recommendations, guidelines and solutions to potential problems are provided so that instructors in other educational institutions in the Sultanate of Oman who are new to this technology can receive advice about how to implement electronic portfolio projects.

Keywords: electronic portfolio, language learning, skills development
Introduction

Electronic portfolios (EPs) are tightly integrated, personalized collections of Internet documents – text and multimedia – that highlight the interests, qualifications and aspirations of advanced students on the university. Students collect, organize and publish these files by using a software application that posts them on the Internet, making them accessible to an audience that can include instructors, classmates and potential employers. Electronic portfolios are used in schools of higher education worldwide as a learner-centered tool for learning, development, presentation and collaborative work (Andrews & Dominick, 2011). Challis (2005) describes them as selective and structured collections of information gathered for specific purposes and evidencing one’s accomplishments and growth - stored digitally and managed by appropriate software - developed by using appropriate multimedia and customarily within a web environment - retrieved from a website. Hezen et al. (2011) further elaborate in saying that EPs “can develop students’ creativity, critical thinking and communication/presentation skills, they can have a chance of presenting collaborative works, they can develop using information and communication technologies skills…” (p.47). EPs present a promising solution to preparing students around the world for the educational, communicative and technological demands of the workplace in the 21st century. In addition to the classroom challenge of EP implementation, another major task is to inform, influence and get “buy-in” from fellow-instructors, and thus share the benefits of integrating electronic portfolios school-wide in the curriculum. For this purpose, the authors relate their personal experiences in using EPs and share thoughts on possible initiatives at the Language Centre, Sultan Qaboos University (SQU). The authors do not endorse a position of promoting “technology for technology’s sake,” but believe that using Internet applications – building, managing and employing EPs for various academic purposes – can help Omani students to learn skills that are needed for their “successful careers, continuous learning, and active, informed citizenship” (Wagner, 2012).

Reflections on integrating technology in higher education in Oman

Teachers in Omani schools of higher education work with increasing numbers of students who have been exposed to globalized 21st century media innovations and its digital devices. It is obvious that almost all of the students function quite well with the four primary types of ‘high tech activities’ that are available in their world today: conversing and texting on smart phones, and emailing and surfing the Internet on computers. A current appraisal of university-level students’ use of technology might lead one to exclaim: “All of our students are so technologically engaged – they’re part of the digital revolution!” And yes, they are busy with their mobile phones and tablets, PC’s or Macs. Most students in our hyper-connected world are digitally savvy – they have grown up taking in much of the available data and stimuli of the electronic world through these means, often while multitasking – listening to music, gaming, surfing or texting, and talking to friends. However, from the standpoint of sociology, technology, and communication, today’s students are simply ‘consumers’ – they know how to utilize these tools and access features, but are not ‘creative’ with them – they can’t create or build anything of significance for learning. Unfortunately, most of them cannot take their understanding of technology beyond the realm of accessing entertainment and communication. Subsequently, our students are not truly digitally literate.
One wonders: Are there true educational benefits from students’ engagement with gadgets and multi-tasking behavior? Do these activities in any way compliment the academic coursework – including English-language classes – presented by the Omani higher education system? (In contrast, one can easily observe that the non-university-educated segment of Omani society is engaged in the same behaviors, albeit with less expensive devices and fewer opportunities to connect to the Internet. One would ask if this somehow elevates their understanding of technology, just as one might expect for their university-educated counterparts. The obvious answer is “no.” People from all strata of life and educational backgrounds use these devices, and their proficiencies are limited to the devices’ features: primarily accessing and using software applications that entertain or connect them to other students and friends.)

If these technologies are used only passively, then the users are not able to capitalize on the educational benefits that technology can provide. The obvious challenge is to ‘take the students behind the scenes’ of how technology works and teach them ‘from the inside out’ - creating, authoring, and collaborating on Internet-based projects. This enriches their educational experience, technologically, interpersonally, professionally, and truly helps them to prepare for their future.

Another significant issue in observing how Omani students chose to use their time pursuing technology is social media – and specifically applications like Myspace, Facebook, Google+ and Twitter. Informal polls show that students overwhelmingly prefer Facebook over other applications for self-education; electronic portfolios, blogs, websites, and the like. Today, Facebook is immensely popular in every culture and major language group around the world because it addresses students’ needs for meaningful social engagement, self-expression and high tech connection. (Twitter is also gaining popularity rapidly, but for different reasons.) Unfortunately – in the eyes of the authors – neither entertainment nor communication (including social networking) make significant contributions to improving English-language skills, or understanding the technology behind the devices – skills necessary for the workplace in the future. People may talk about how technology engages students, but from the authors’ viewpoint, only select types of meaningful, constructive engagement with technology leads to enlightened forms of literacies – in language, in computing and in specific survival skills for the 21st century workplace.

Recent initiatives of the higher education authorities in the Sultanate of Oman to introduce technology and electronic services into education have been met with enthusiasm. Reporting on Oman’s attempts to use modernization to boost educational outcomes, Dr. Hussein Shehadeh (2012) contends:

The Network Readiness Index of the Global Information Technology Report 2012 reveals a lot about the advancement of the IT and telecommunications sectors in the Sultanate. The Sultanate, through its policies, has shown that it does not want to be among the countries that have been left behind by time. In every area, the stress is on modernity. All the policies formulated over the years bears testimony to this truth. Foremost among them is the policy in the sphere of education. It’s based on the principle that education is for all. Literacy is the platform on which any country can achieve development. Hence, many millions of rials were spent over the years to ensure that...
people even in the remotest corners of the Sultanate had access to education. Schools – from the primary level upwards – were opened in every nook and cranny of the Sultanate. So were colleges and universities. Technical institutions were started. IT education was given due importance with enough institutions imparting knowledge in the subject. Besides the public sector, the private sector was given a major role to play. As a result, thousands of students are graduating every year from them and entering the job market, which is flush with vacancies. Statistics reveal that scores of youth are finding lucrative employment in the public and private sectors. In fact, the private sector has of late started playing a major role in providing employment. Building a modern nation on firm ground is the aim of Sultan Qaboos. In other words, this means equipping the people with everything that is modern even in the sphere of education and thought. This policy has certainly succeeded as Omains are a people with a modern outlook that is based on the firm foundation of a rich and ancient past (n.p.).

While all these developments are welcome and point to the fact that higher education in the Sultanate of Oman is on the right track, there are also some challenges and concerns. Vytautas Vitkausas, president of the Association of Information Technology, Telecommunications and Office Equipment of Lithuania, who visited the Sultanate of Oman in May 2012, observes:

…though Oman has taken huge strides in the way it uses information technology, there remains a need for proper strategic planning on improving connectivity and proper application of the solutions available (Muscat Daily, May 7, 2012).

In addition, relatively few technology programs inside the schools of higher education in Oman provide students with opportunities to be co-creators of learning, which minimizes the educators’ overall effectiveness in preparing students for the competitive world that awaits them. At the same time, students report that some computer-assisted language learning activities in the normal university curriculum are often boring and repetitive. Thus, the success in preparing students for the competitive world that awaits them is reduced – a complex world where there are seemingly ambiguous directions, tasks, methods, and training in their workplaces. With regard to the implementation of technology in education, young Omains should be provided with more opportunities to excel in various aspects of the real world, exercise their agency, make meaningful actions and see the results of their own decisions and choices (Warshauer, 2000).

The authors are concerned with how administrators and instructors in Omani schools of higher education can prepare their students for the educational, communicative and technological demands of the workplace in the 21st century. Leading thinkers in education and the social sciences are grappling with issues of student readiness and how to improve the capabilities of educators and institutions. Although it is difficult to predict what the world will look like in ten or twenty years, we teachers are nevertheless entrusted with the task of preparing students to function successfully in that world. Emerging technologies, globalization and changing business practices have resulted in great complexity, more difficult and sophisticated tasks and perplexing problems in the workplace. These should be taken into account by educators, and used as valuable data to help them steer a course of improved curriculum development and teacher
engagement. The graduates of SQU who are destined to enter the global workplace should aim at not just surviving, but making a significant impact, based on their preparedness. Therefore, the authors have taken up that challenge by investigating and employing technological approaches – specifically student electronic portfolios – in the midst of teaching English at the Language Centre of SQU.

Electronic portfolios in higher education

Taking advantage of the developments in technology, and the associated changes in educational pedagogy, many schools of higher education worldwide are now actively promoting EPs or PLSs (Personal Learning Spaces) in their programs as tools that can establish a students’ lifelong journey in a protective environment and have a positive effect on students’ development and their digital literacy (Chesney & Dalziel, 2011, p.67).

Educational portfolios have been employed by universities and colleges in a number of countries since the early 1980’s to replace earlier paper format “systematic collections of student work selected to provide information about student’s attitudes and motivation, level of development and growth over time” (Kyngore, 1993, p.3). Since their inception, EPs have been used as:

1. A site for students to deposit their work, get feedback (Muir & Murray, 2011, p.27) and document their learning over a long period of time. In this regard, EPs can feature a student’s specific skills area, an overview of academic accomplishments, or display a student’s life objectives.

2. A medium of learning and self presentation (Andrews & Dominick, 2011, p.65). A number of so-called” artifacts” are inserted into an EP: writing samples, photographs, videos, completed projects, reflections, observations and evaluations from instructors. It is through collecting, evaluating, and inserting these items into the EP that the students participate in their own learning.

3. A learner-centered developmental tool or “progress file” with the intent of enabling students to provide written reflections of their current knowledge level and learning needs (Nielsen et al., 2011, p.14; Aikaterini & Fotini, 2011, p.73) and increasing active participation in their own learning (Purnell & Holland, 2011, p.32). Important considerations for choosing portfolios for these purposes include promoting the student’s own reflections on the contributed pieces of evidence, the motivation for choosing them, and what learning the EP creator has gained in the process of creating and assembling it.

4. A tool for joint working between the students and other stakeholders of the educational process (Nielsen et al., 2011, p.14), identifying students in who are having difficulty (Muir & Murray, 2011, p.27), and supporting students’ active learning and future job applications.

Building and using EPs is a complex process that combines a number of components, socio-cultural, educational and technical issues (Stefani et al., 2007, cited in Aikaterini & Fotini, 2011, p.74). There are numerous pedagogical factors that support the implementation of electronic portfolio projects, all based upon developing the 21st century learner. These include widening participation, lifelong learning, personalization of learning, and meeting employment and skills
requirements (Aikaterini & Fotini, 2011, Dew, 2011; McLeod & Lehmann, 2011; Wagner, 2008). However, a variety of challenges and problems arise in providing learners with access to technology, creating and selecting the appropriate form of the EP (Lai & Chan, 2006); structuring the curriculum in a way that favors using EPs at the expense of learning traditional skills (Neilsen et al., 2011, p.15); and engaging and motivating all the stakeholders of the educational process to use EPs (Aikaterini & Fotini, 2011, p.74).

Some specific problems that arise when implementing electronic portfolio projects can be attributed to the lack of well-defined guidelines and helpful examples of previous portfolios. This can lead to confusion and anxiety among administrators, teachers, and students about the scope, nature and value of the task (Darling, 2001; Smith & Tillema, 2003). Concerns are also expressed over the difficulty of assessing portfolios. Smith & Tillema (2003) have noted a lack of harmony between assessment criteria and the goals of the program of study; when student competencies lag, a tension is sometimes revealed between a push for higher academic standards and a desire to promote the creative process, which comes through student engagement when using software to develop web pages and reflect on the content.

Evidence from research shows that the following elements are necessary when implementing EP projects: a clear statement of the EPs’ purpose, content, fulfillment of curriculum, expectations of various stakeholders and decisions about the software, platform or tools chosen. In addition, the commitment and encouragement of the teaching staff, and helping the students take control over their learning can contribute to making the project interactive and interesting (Purnell & Holland, 2011; Aikaterini & Fotini, 2011; Coolin et al., 2011). Any shortcomings with these or other actions can lead to challenges in implementing and using the EPs, leading to unsatisfactory educational experiences for some students (Purnell & Holland, 2011).

Existing research about electronic portfolio projects in schools of higher education consistently shows that they have been successful. Through the process of portfolio construction, students are able to plan creative layouts, gain a broader sense of what they are learning and reflect on their own practices, while identifying strengths and weaknesses. They also act in an independent and a self-regulated manner (Abrami et al., 2008; Jones et al., 2007; Grant, 2009; Jafari & Kaufman, 2006; Purnell & Holland, 2011; IMS, 2005). Engaging students in building portfolios promotes a pedagogical model that strengthens learners’ competencies and enhances skills needed to solve complex problems and meet real life challenges (Aikaterini & Fotini, 2011).

**Seven Survival skills for 21st Century Students**

One innovative movement - ‘21st Century Education’ - has made significant progress in identifying and prescribing solutions to the challenges of student readiness for the future world of employment. Advocates strongly maintain that today’s schools of higher education are largely ill-equipped for addressing students’ educational, communicative and technological needs. Because the world has changed so much, and schools have not, they maintain that much of the educational experience is now obsolete, or at best marginally effective. Indeed, the myriad of complex educational, business, and socio cultural problems in the 21st century call for entirely different solutions. One forward-thinking individual, Scott McLeod, has issued a challenge to the educational community in his personal blog – calling for a plan to get us from "here" to "there" – from our current place of educational stagnation to an undefined place in the future where our students’ personal, computing and professional skills will intersect with the inevitable and non-
negotiable requirements of the 21st century workplace. McLeod & Lehmann (2011) state, "Whether it is the expansion of social networking technologies, the power of digital media creation tools, or the ability to publish to the world instantly, our students and teachers have access to more information than ever before. We all possess the ability to interact with learning networks much wider than at any other time in history. We all now have the unprecedented ability to create powerful artifacts of learning. It is an exciting time to be a teacher and a learner." (p. vi)

Computer-assisted language learning (CALL) programs which are now presented as a part of the normal university curriculum seldom provide students with opportunities to be co-creators of their own learning experience. In fact, students often maintain that many CALL activities are boring and repetitive. Thus, the overall effectiveness in preparing students for the enormously competitive world that awaits them is minimized – a world where there are seemingly ambiguous directions, assignments and methods – necessitating the type of thinking that a relatively easily attained by mastering Internet applications like electronic portfolios. When students puzzle over how to format an html document, create a powerful visual effect, or embed a Youtube video, the need for these Web 2.0 Internet skills is readily apparent. The authors also believe such skills are also transferable beyond the realm of digital media to the students’ future high tech work realm, as well.

The authors maintain that teachers of English in Oman should promote the use of building-creating technologies in conjunction with their language classes so that students can become truly media literate - researching, evaluating, analyzing, processing, and applying what they learn (Bloom's Taxonomy). Building electronic portfolios is one process that moves them toward these skills, and helps them to be more creative and competitive.

A cutting-edge approach to developing the necessary skills for the 21st century - interdisciplinary, integrated, and truly effective - focuses on seven survival skills advocated by Tony Wagner in his ground-breaking work, The Global Achievement Gap. First published in 2008, the book focuses on how educators in the United States should make changes to prepare their students for the competitive, globalized knowledge economy of the future. He maintains that the current approaches of ‘raising standards’ and ‘trying harder’ are not adequate to address the underachievement of schools and students, and argues that the old ways of thinking about education and classroom teaching are unsuitable and incapable. If educators are to close the gap between what’s being taught and what students need to know, then this must be accomplished by focusing on a core set of skills that he outlines.

Based on research, campus visits, and numerous interviews with high-level managers of leading companies, Wagner ‘backward engineer’s a new definition of literacy and explains what kind of thinking and what kind of changes will be necessary to produce sustainable change in the workplace.

The rapidly changing world of work requires a unique combination of “soft skills” (personal and interpersonal) - and “hard skills” (technical, problem-solving) that now distinguish 21st century corporate work culture. Here are some thoughts to consider in this regard:

• A “newly flattened world” – a phrase borrowed from Thomas Friedman (2005) – has already arrived, and the business, corporate and industrial world is now looking for employees with new types of minds and skills.

• What skills do today’s employers really want in their workers? Are these requirements ever communicated to administrators in high educational circles, and taken seriously by educators?

• Educators on the front line – new and experienced – generally don’t have time and desire to be concerned about abstractions like a ‘globalized world’ or ‘workforce preparedness.’ They are probably not aware that such needs exist. Most are genuinely and rightly concerned with how to increase English language fluency levels of their students in the classroom… and meeting the demands of curricula, overseen by administrators who have full agendas and only remote concern for the conditions faced in the working world beyond.

• One question arises in this context: “Are the advantages to the student who works on digital projects like building an electronic portfolio so attractive to teachers that they would change their pedagogical perspectives, lesson plans and in-classroom capabilities to incorporate it?”

• A second concern is: “Do most teachers today have enough technical savvy to integrate EPs into their curriculum and teach them effectively?”

• And, finally: “How do teachers develop convictions to believe that such efforts in the classroom are necessary and non-negotiable?”

Certainly, the same sentiment of these North American educators rings true in overseas environments, like in the Omani schools of higher education. The authors’ experience in introducing electronic portfolios based on available software applications, like Foliospaces, Weebly and Mahara, may provide part of the solution to these challenges.

Following is a list of the seven skills presented by Wagner (2008): 1) critical thinking and problem solving; 2) collaboration across networks and leading by influence; 3) agility and adaptability; 4) initiative and entrepreneurialism; 5) effective oral and written communication; 6) accessing and analyzing information; 7) curiosity and imagination. The authors maintain that at least five of the seven “survival skills” are addressed accurately by inserting electronic portfolios into the curriculum.

**Critical thinking and problem solving**

Critical thinking, problem-solving and asking good questions are qualities that most 21st century managers desire to have in their employees. Following orders and knowing the answers to questions are no longer adequate for being a successful, productive worker.
Employees have to deal with increasing amounts of ambiguity in the modern workplace, as things are no longer clearly defined – tasks, relationships, chain-of-command, and procedures. Problems change, and also the means to find answers to them. Simply asking straightforward, non-insightful, linear questions with supervisors and peers is no longer helpful. Instead, co-workers should ask nonlinear, counterintuitive ones. If our students, who become employees after graduation, lack confidence in themselves and their abilities, then it is likely that problems will arise based on their inability to think, perform and interact skillfully. The marketplace and workplace environments are now highly demanding and are changing rapidly, and employees must respond in kind to be truly productive.

The authors believe that students working “behind the scenes” on websites provides excellent practice in identifying ambiguity, and working through it. In the early days of their website-building experience, they often ask themselves: “What am I supposed to do?” or “How am I supposed to carry-out this task?” Although applications like Weebly.com rarely leave you “completely stranded” – without available answers – one still has to learn how to “think software” and pursue an answer, realizing it is probably somewhere close at hand. Such solutions posed by software problems, as every reader knows, don’t just “fall out of the sky.” Working with technology forces the students into a realm where questions demand immediate answers, and traditional thinking or reasoning is not always helpful. Once the students finally admit that they are stuck and can’t move on, they still have to know where to go to get solutions. Wagner (2008) argues:

One of the biggest issues facing corporations in America today is changing how we think about problems: ‘This is the way we’ve always looked at it’ versus understanding the problem from the perspective of a ‘flat world’. So we need to approach problems and challenges as a learner as opposed to a knower. We need to be curious versus thinking ‘I know the answer.’ Yesterday’s solution doesn’t solve tomorrow’s problem. (p. 16-17)

Teammates, both those physically present, and those in a virtual team may be the best source of good answers, but you still have to know how to ask good questions to both – in speaking and writing. Carefully thinking through issues and not simply responding with spontaneous answers is now required. This takes preparation and practice. According to Wagner (2008):

Work is not longer defined by your specialty; it’s defined by the task or problem you and your team are trying to solve or the end goal you want to accomplish. Teams have to figure out the best way to get there – the solution is not prescribed. And so the biggest challenge for our front-line employees is having the critical-thinking and problem-solving skills they need to be effective in their teams – because nobody is there telling the exactly what to do. They have to figure it out. (p.15)

One of the authors reflects: “So it is with using software for the first time. You are confronted with a flood of questions, and the answers are not necessarily at hand, especially if you lack experience and don’t know what to expect or how to make something happen. You can interrupt
your neighbor in Computer Lab and ask him or her questions only a limited number of times -
you must develop the skill of being patient, thinking though issues (systemically), and getting to
solutions.”

Another potentially troubling issue which faces unprepared workers in the Information Age is
sifting through an overwhelming amount of information and determining what is important and
what’s not. This is one definition of critical thinking. Learning to use certain Internet
applications can train you to do this.

**Collaboration across networks and leading by influence**

Communication via email and conference calls has now become the norm in the globalized
workplace, mainly due to technological advances and physical displacement or relocation of
employees. This creates so-called ‘virtual teams’, which are groups of employees separated by
time zones and space, and differentiated by project function and roles. They don’t work in the
same building, but they routinely collaborate on the same project, making valuable contributions
from their different work perspectives and physical locations.

Many of our recent graduates unfortunately display a naiveté about how work gets done in high
tech environments, and tend to believe that everything is clearly outlined, that the boss gives the
directions, and everybody works together until the job is finished. They don’t understand clearly
how to perform individually, and then collaborate with co-workers, near or afar, to contribute to
the solutions.

At Sultan Qaboos University, students have opportunities to work together on producing
websites in small groups in a computer lab. They learn to take on different roles and assist each
other in solving problems, based on their strengths. They have to
learn how to deal with
differences of opinion and decide collectively how to make decisions – demonstrating team-
based leadership.

In today’s corporations, senior leaders are no longer expected to have all the answers and solve
problems by themselves. They expect employees to contribute their expertise and help them
make decisions. Traditional top-down hierarchical structures are being rapidly replaced by
horizontal networks and teams.

**Agility and adaptability**

A shift away from this hierarchical authority in the workplace has resulted in the emergence of a
fast-paced, team-based work environment where workers now have to think creatively, be open
to change, flexible, and be adaptable to use tools and approaches that didn’t exist earlier.
Because jobs and work assignments change rapidly, and they have to be prepared to train-into

> To survive, you have to be flexible and adaptable and be a lifelong
> learner… And so some of the key competencies we hold employees
> accountable for include the ability to deal with ambiguity, the
> ability to learn on the fly, and strategic agility… You have to be
> able to take in all sorts of new information, new situations, and be
able to operate in ambiguous and unpredictable ways… You have
to thrive in this environment and deliver results. (p. 30-31)

Things are not as prescriptive as they used to be in top-down, hierarchical companies. Workers
are expected to perform, but they are not given the ‘instruction booklet.’ This seems to imitate
the way a new software program presents itself to beginners!

As mentioned earlier, current educational programs have difficulty finding time and reason to
identify and address such skills, especially while dealing with curricular and instructional
challenges. Agility and adaptability are necessary behaviors in the high tech world, and are also
required in building electronic portfolios.

**Initiative and entrepreneurialism**

Today’s leaders want their employees to take more initiative and be more entrepreneurial as they
do their work inside of companies. This means they should be self-directed and create new
opportunities, strategies and ideas for improvement.

Companies struggle when their employees display risk aversion or a lack of confidence. On-line
activities help educators to challenge their students to think as entrepreneurs. Giving students
freedom to create and collaborate provides these benefits.

**Effective oral and written communication**

Many young people around the world are not capable of expressing themselves in their own
native tongue, not to mention standard English, mainly because of factors such as their
educational background, mother tongue and other cultural factors. Wagner (2008) reports:

> The biggest skill people are missing is the ability to communicate:
> both written and oral presentations. It’s a huge issue for us… We
> are routinely surprised at the difficulty some young people have in
> communicating: verbal skills, written skills, presentation skills.
> They have difficulty in being clear and concise; it’s hard for them
to create focus, energy, and passion around the points they want to
make. (p.35)

The authors’ thesis centers on the feasibility of using EPs to promote language fluency. This is
based on the fact that students have wide exposure to an Internet audience with their EP, and not
want to be embarrassed by their writing mistakes. Furthermore, in their effort to use accurate and
correct text in their files, they may be tempted to “cut and paste” into their web pages.
Subsequently, instructors need to keep an eye out for copying, and establish a policy of
plagiarism.

**Accessing and Analyzing Information**

In today’s digital world there is so much information available that it may be simply
overwhelming to the user. If our young people, newly graduated, are not prepared to access, sort
and process the information effectively, they may be rendered ineffective in their positions.
According to Wagner (2008):
In a very short period of time, with the advent of the Internet and the increasing availability of fast connections, we have evolved from a society where only a few people had limited information to one where all of us experience information flux and glut – and can look up almost anything imaginable on our computer in a search that takes nanoseconds. (p.35)

Young people in Oman and around the world need to be trained to use digital information and search engines, and not simply copy into their documents. Learning how to think about text and meaning, and exercise mastery over it is an enormous challenge for all instructors.

They also learn to actively pursue answers and solutions under pressure, by themselves or with the help of other students. The tasks teach them to be efficient, time-sensitive, flexible, and eager to change.

**Curiosity and imagination**

Many students are surprised and pleased to discover that they have the power to unleash creativity and imagination within themselves – and in their website. This category represents some of the qualities that are most closely addressed by this electronic portfolio project. As in creative writing, they must first envision what they want to create visually and aurally, and use the EP software to capture it and reproduce it.

**EP projects implementation in Omani context**

One important factor in the development of an EP is the quality of reflection spent in the process of building it – the student should ideally spend an adequate amount of quality time conceiving, pondering and producing content materials, as this is an area where a great deal of learning takes place. A number of specific content files or contributions - so-called "artifacts" - are inserted into an electronic portfolio - writing samples, photographs, videos, completed assignments, reflections, observations and evaluations from instructors. It is through collecting, evaluating, and inserting these items into the EP that it provides an opportunity for the students to participate in their own learning.

Neither collecting nor selecting the components that are to be incorporated into a portfolio constitutes worthwhile learning activity without being accompanied by reflection. An instructor should provide plenty of opportunities for continuous reflection, which undergirds the entire process of portfolio development and its supports its pedagogy.

As mentioned earlier, electronic portfolios have been used by universities and colleges in many countries since the early 1980’s. They encompass a broad range of functions based on the software that supports them:

- promoting digital literacy
- boosting students’ online presentation skills
- providing a forum for reflective learning
- documenting academic progress or achievement
- helping students develop basic technology skills
- promoting an awareness of design
thinking critically and reflecting
considering how to best present their accomplishments to an audience

Popular software applications that are currently used to construct EPs are Foliotek, Weebly, Mahala and Google+ docs. All of these have the same attributes: they are simple to set-up, edit and publish. Students no longer need to have a knowledge of a computer language (including html), nor a sophisticated application like Microsoft Publisher or Dreamweaver.

Criteria for successful implementation

A number of pedagogical and technical issues are critical to the successful adoption of electronic portfolios in a classroom or lab setting for university students. Following is a list of recommendations that could be made for a program implementation with Omani students – these things have been proven necessary, through experience:

- Clear guidelines explaining the overall purpose of the project, its evaluation and on-going value
- The immediate benefits to the students – how it will help them with their job search, teach them about the “behind the scenes” of the Internet, web development, graphic art and html
- Familiarity with the EP concept, and an understanding of both the process and what the finished product should look like
- The right balance of structure and freedom, maximizing the prescribed project software for individual, creative expression
- Availability of on-going feedback and assistance during each stage of the development process
- Understanding of how reflection and personal expression play important roles in reaching a particular audience
- Understanding how EPs contribute a favorable impression in a job search
- Motivation to increase understanding of digital design, websites, graphics and other media
- Implications of students taking ownership of the electronic portfolio
- Implication of students making connections between their content placed in the EP on the Internet and the outside world and the outside life of the student
- Learning how to write to a digital target audience

Electronic portfolios provide a valuable learning experience because they include the student’s own reflections on the contributed pieces of evidence, require motivation for choosing them, and demonstrate what he or she learned in the process of creating and assembling them.

Benefits for students

Through the process of portfolio construction, students “get the bigger picture” of the Internet for the first time, and receive insights into how hypertext mark-up language (html) functions. They become excited, as their learning and creativity unfolds, and receive an awareness of their strengths. Electronic portfolios help to focus the students’ thinking, provide a means to translate theory and tangible work into digital media, and document a learner’s progress over time. They
have the potential to improve students’ communication and organizational skills and are a way of identifying and recognizing prior learning, leading to new learning outcomes.

Depending on which type of electronic portfolio software has been chosen, several benefits are available to students who actively pursue the development experience. These benefits can be divided roughly into four main categories: Technology, Linguistic, Intrapersonal\(^2\) and Social. The chart in Appendix 1 highlights how these benefits are distributed based on the authors’ use of the Weebly.com platform:

**Engaging and motivating learners**

Simply using high-level technology can be a motivational factor for students creating portfolios, especially if instructor makes the process enjoyable and rewarding for the learners. Instructors should give them an opportunity to express their own voice and unleash their own creatively in their portfolios without outside interference. As schools implement EP projects, it will be important to do more than replicate a simplistic blog-style system (text and photos) that limits students’ flexibility on the web. The entire digital world is moving toward multi-media, and educators should make every effort to encourage the incorporation of sound and video files in the students’ repertoire of abilities. As an example, EP’s can provide a terrific opportunity for storytelling in a colorful, multimedia digital format.

**Purposes and guidelines**

Several decisions should be made on an administrative level before implementation, such as how training is to be conducted, what skills are necessary, and what constitutes a completed project.

Zeichner & Wray (2001) generated the following list of questions for those considering implementing a portfolio:

- What is the school’s vision for the portfolios?
- What is the purpose of the portfolio: for learning…?
- Who decides what should be included in a portfolio: the teacher compiling the portfolio, the students for whom it is being created, or both?
- How prescriptive should guidelines for creating a portfolio be?
- How should the pieces of evidence in the portfolio be organized: around themes chosen by the student, around program goals, or around achievement standards?
- What kinds of artifacts are acceptable as pieces of evidence? What should, and should not, be included in the portfolio?
- How frequently should students be expecting feedback on their progress?
- How should the portfolios be assessed: through very specific evaluation criteria and grading rubrics, or should a more informal methodology be put in place?
- What should happen to the portfolio after it is finished? Is the process ongoing?

\(^2\) One of the skills identified within the theory of Multiple Intelligences, developed in the early 1980's by Howard Gardner. It refers to self-reflection and the capacity to respond appropriately to others' moods and emotions. It includes self-awareness and being in tune with feelings, values, beliefs and thinking.
Problems and issues

A variety of challenges and problems arise when implementing electronic portfolios projects in academic settings. In this particular case at SQU, the purpose of the EPs is to be a tool for self-reflection and self-presentation in employment searches.

- EPs can cause confusion and anxiety among administrators, teachers, and students based on the scope, nature and purpose of the project
- Students may be hesitant to get involved during the initial stages of the project. One of the authors remarked: “I find that the students approach EPs like young children approach swimming lessons in deep water at the swimming pool: a few jump in without hesitation, most stand on the side of the pool waiting for some form of encouragement, and a few avoid it. It’s like a bell-shaped curve.”
- Concerns are also expressed over the potential issues of confidentiality and accessibility for outside users. Some students want to know that only those people they designate can view their work.
- A lack of congruence between what students produce and the original goals of the project. Some students want to include their own ideas and ‘artifacts’ that represent their own agenda.
- Lack of competencies or skills that the students need to develop in order to perform
- A tension between the fulfillment of project standards established by the instructor and presented by a particular software application, and promotion of creativity and reflection
- Learning and reflection may be compromised if the slower learners struggle to develop competencies

Support and technical considerations

Administrators and instructors who plan and implement electronic portfolio systems must consider a number of technical issues. Software that builds electronic portfolios is currently available in the following categories: a) web-building tools (templates and web-editing software), b) stand-alone commercial products, c) Open Source Portfolio software, d) university designed software, e) virtual learning environments, f) learning management systems and g) Web 2.0 technologies (Aikaterini & Fotini, 2011, p.74).

Before the primary software application is chosen, the purpose of the project, who will use it, how support will be offered to the students, and who is the audience need to be considered (Appendix 2 features an emailed invitation to the students to build their own electronic portfolio; and Appendix 3 contains specific information with technical support documentation for the students).

Following are some of the reasons why the Weebly.com software program was chosen:

- Attractive GUI (Graphic User Interface)
- Low cost – students did not have to pay to use the software
- Capability of storing large amounts of data
- Ease of use – “drag-and-drop” technology, with simple menus and tabs
- Ease of critiquing, storing and publishing files
- Recognition and use of graphic file formats
Conclusion

Schools of higher education in Oman should make adaptations to respond to the changing realities and imperatives of the 21st century—“driven by profound social, political, economic and technological changes… continual increases in computing power, the spread of e-commerce, the rapid diversification of the workforce, the globalization of the economy, and the relentless ratcheting upward of the pace of business—all at an ever-accelerating rate of change” (Goldman et al., 2002, p.246).

The authors believe that skills our students need for the 21st century can be developed through flexible, technology-aided curriculum, based on the Internet, inquiry and well-devised projects. Electronic portfolios can serve this purpose.

Teachers intending to implement EP projects should have “a clear sense of intended purpose from the start” (Barrett, 2006, p.4), and conduct electronic portfolios projects in conjunction with their classes. They should develop their own hands-on, practical experience in building (teachers’) electronic portfolios. Otherwise, they will lack credibility and the necessary knowledge to guide the students and trouble-shoot when problems arise.

Perhaps the most fundamental reason for implementing electronic portfolio projects is to provide the students with an opportunity to take charge of their own learning (Tan, 2003). An instructor’s role is to maintain this motivation by facilitating student interaction with technology, exercising competence and building relationships an eagerness to see the students develop as they make their own decisions and release their creativity.

As the students explore their own learning space and gain confidence to present themselves to the public in the Internet, they develop resourcefulness and independence—solving problems and becoming self-sufficient.

About the authors:

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Victoria Tuzlukova is the Head of Professional Development and Research Unit at the SQU Language Centre. She has been working in the field of English language teaching for 30 years. Her research interests focus on sociolinguistics, intercultural communication, foreign language acquisition and the role of culture in foreign language teaching and learning.
References


Appendix 1

Distribution of the EPs’ benefits and their brief explanation based on the authors’ use of the Weebly.com platform:

A. Learning - the project contributes learning in all four of the areas

B. Collaborating – this describes how students learn to work with others

C. Creating - building an EP increases creativity in all four domains

D. Thinking critically – students practice focused, purposeful thinking

E. Self-presentation - sharing with others for the purpose of making a positive impression or influencing them

F. Critiquing – students can learn a valuable lesson in revising or editing

G. Problem-solving - developing patience, overcoming ignorance and frustration

H. Reflecting – taking time to think thoughtfully about what is happening and why

I. Evaluating - students’ organizing, prioritizing, seeking the best procedure

J. Influencing – students thinking about their place in the world; measuring their impact on others; changing how they impact others
Appendix 2

An invitation to the students to participate in electronic portfolio project (email)

Dear Student,

I want to send you an invitation to participate in a project that could help you with your job search before you graduate. If you are not too busy this summer, and have a connection to the Internet, it may be a fun project.

This project is voluntary - it has nothing to do with our LANC 2160 Engineering class, and will not affect your marks. And, if I teach LANC 2161 (Engineering 2), and you're in my class, it won't help you with your mark!

I want to give you an opportunity to prepare for your future - specifically for getting a job – by building an electronic-portfolio or e-portfolio. E-portfolios are widely used in the English-speaking academic world. They have nothing to do with the project in the Language Centre in the Intensive Program. A Google search will turn up a large number of sites:

https://www.google.com/webhp?sourceid=chrome-instant&ie=UTF-8#hl=en&output=search&sclient=psy-ab&q=electronic%20portfolios&oq=&gs_l=&pbx=1&fp=51a6e4b639342c8a&bav=on.2,or.r_gc.r_pw.r_qf.,cf.osb&biw=1440&bih=837

NOTICE: If you didn't enjoy building a blog, you won't enjoy this, either - I suggest you not start it.

I made an Electronic Portfolio as a model for you and to let other teachers at the SQU know what I'm doing. I plan to keep it for the rest of the time I'm teaching at SQU. Please study my own sample which I built with software called “Weebly”:

http://clifforddemerson.weebly.com/

If you choose to work on this, I will send you some directions on how to get started. I have no rules - you can create what you want.

I will send you an invitation from weebly.com (I think this is the best software) after this email.

Dr. Victoria Tuzlukova is working with me on this project. Some of you might remember her from the Intensive Program.

Please send me an email if you decide to participate. If you are not interested, please do not contact me.
Appendix 3

Suggestions for Developing your own Electronic Portfolio

Dear SQU Student,

Thank you for your interest in building an Electronic Portfolio (EP). In case you need some brief instructions on how to get started with Weebly.com, please read this document. I have made some screen shots for you.

Web Page #1: There are two things to do on this page (above):

1. Watch the video (maybe even when you need some more help)
2. Sign up – it’s free!
Web Page #2: The “Log-in” page. You can see (above) I am building 3 websites. The program gives you a web address / URL (below the blue title). This is how you, or others (like me), access your web page. Click on the “Edit” button to start working.

Web Page #3: This is your web site’s Home page. It is the place where you start working. You will click on buttons or words on:

- Elements, Design, Pages and (rarely) Settings
- Basic and Multimedia
- Publish, Close, and (sometimes when it appears: Save)
- Don’t use the other menus or buttons, unless you want to explore
Are there specific ways to use technology at SQU to prepare the students to work and live in a technological world?

Ideas from some of the most progressive thinkers in education and social sciences today provide insights...

Quotes from The Global Achievement Gap, by Tony Wagner:

"... the global achievement gap — (is) the gap between what even our best... schools are teaching and testing versus what all students will need to succeed as learners, workers, and citizens in today's global knowledge economy."

The 7 Survival Skills:

1. critical thinking and problem-solving
2. collaboration across networks and leading by influence

Web Page #4: Always import (cut & paste) “unformatted text” from MSWord. When working with text already in Weebly, you select it and then the blue Tool Bar will appear. Weebly.com is very user-friendly, so be patient and try to figure-out how it works. Its “Drag & Drop” technology is fantastic, and also fun to use.

Web Page #5: Important: When you are finished creating something, click on the blue x button in the top, right corner of the “Website Published!” window to close it. Don’t click on the Facebook or Twitter buttons.
Building an EP involves creativity. Visit the following site and click on the sample EP’s for ideas: “35 Professionally Designed Personal Portfolio Websites”
http://www.webappers.com/2011/03/08/35-professionally-designed-personal-portfolio-websites/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+Webappers+%28WebAppers%29

Here are some additional websites about Electronic Portfolios:

http://www.youtube.com/watch?v=OWJqJ8NhQIc
http://www.jiscinfonet.ac.uk/infokits/e-portfolios

Or, you can Google the term: “Electronic (digital) Portfolios”.