Online Information Literacy Instruction: Challenges in an Arab Context

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There has been a dramatic increase in the development of online information literacy instruction the world over in recent years, particularly at the level of tertiary education. Zayed University in the United Arab Emirates (UAE), in the Middle East, is therefore not alone in extending its educational delivery from face-to-face to include online instruction, but is unusual in its endeavor to introduce this instructional design into an Arab context. This paper will describe an online information literacy course and discuss the impact of culture, educational experiences, and language skills in an online educational setting, with specific relevance to the teaching of female Emirati students in the UAE. It will conclude by making recommendations for the effective delivery of online instructional design in this context.

1. Information Literacy and instructional design

1.1.

The Association of College & Research Libraries (ACRL) defines information literacy as a set of abilities enabling individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information." (ACRL, 2006: p1) The ACRL goes on to describe information literacy as “the basis for lifelong learning…. [and] developing lifelong learners [as] central to the mission of higher education institutions. (ACRL, 2006: p1) Because information literacy supports students’ competency with evaluating, managing, and using information, it is now considered as a key outcome for college students by several American regional and discipline-based accreditation associations including The Middle States Commission on Higher Education (MSCHE), the Western Association of Schools and College (WASC), and the Southern Association of Colleges and Schools (SACS) (ALA, 2006).

Zayed University (ZU) was founded in 1998 in the United Arab Emirates as a liberal arts university for Emirati women, modeled on an American learning outcomes system. The university is government funded and teaches 2,200 students across two campuses, one in Abu Dhabi and one in Dubai, with an international, predominantly Western, staff. At ZU, there has historically been a strong support for information literacy, and it was in fact embedded in the university curriculum as one of six university learning outcomes. Between 2000 and 2003 an extensive Information Literacy component of the ‘Readiness Program’ (the English as a foreign language program which prepares students for admission to the university degree programs), as well as a first year English/Information Literacy course, were designed by librarians, and taught by both librarians and teachers of the Readiness Program in face-to-face format. While this was discontinued in favor of a concentration on English language skills alone, in early 2005 there was a commitment to

reintroduce a foundational Information Literacy course for each entire first-year cohort of students in the baccalaureate program, with teaching planned to begin in March of 2005.

Librarians at ZU decided to undertake this teaching in a blended-learning format, combining five contact teaching hours with the expectation of independent learning by students through use of web-based tutorials in between classes. It was the decision of the library team early in the development process to design online resources to be used in conjunction with a classroom situation, for the following reasons:

- to prepare students for the digital information-rich society in which they now live;
- to make content available 24/7 for students from all internet locations;
- to expose students to independent learning skills that they will need for lifelong learning (the web-based materials enable students to follow their own learning path at any time and place);
- to enable students and faculty to review the instructional materials at any time/place in the future; and
- to enable the sharing of international library web resources.

Worldwide, there were extensive examples of the development of online Information Literacy courses that were available as models, and in some cases, from which specific interactive Flash activities could be copied with permission. (*The Big Blue: Information skills for students*, 2006; *Internet Navigator*, 2003; Niederlander, 2003; *Research 101*, 2005). International standards for strategies and recommended content of Information Literacy programs delivered by libraries were also available (Bundy, 2004; Lau, 2004), though we determined from the outset that our instructional design would adapt these international models and standards to the needs of our Arab students as much as possible.

Most ZU students have attended local government-funded schools that reflect a traditional teaching and learning model involving a teacher-centric focus, rote learning and memorization, and very limited formats for learning resources (Mynard, 2003). In addition, students are often the first generation in their family to receive a tertiary education (Mynard, 2003; Richardson, 2004).

Most students have undertaken all of their previous education in Arabic. They speak English as a second language and display a range of English language proficiency. Most ZU curriculum and teaching is in English, however, and students are required to reach a reasonable TOEFL standard before gaining entry to the first year of the Colloquy program.

Within the context outlined above, a purpose-built web site was developed, titled **InfOasis** (http://www.zu.ac.ae/infoasis), which provides modular self-paced Information Literacy resources to

be used in conjunction with face-to-face class instruction. InfOasis was designed to be as interactive as possible, yet uncomplicated in language level and navigability. There was an endeavor to reflect best practice in online instructional design, by aiming for constructivist learning environments (Gunawardena & Zittle, 1996; Jonassen, 1998; Mayes, Dineen, McKendree, & Lee, 2001), including critical thinking, problem solving and student centered approaches (ACRL, 2005; Beaudoin, 1998; Collins & Berge, 1996; Gunawardena & Zittle, 1996; Jonassen, Davidson, Collins, Campbell, & Bannan Haag, 1995).

2. Pedagogical and linguistic considerations

It became obvious in the teaching of this Information Literacy course in early 2005, that improvements in the instructional design could be made, particularly in an endeavor to tailor the content and delivery to Emirati students. From separate teacher and student opportunities for course evaluation, it can be concluded that while students found the online resources attractive and different, they did not like to read extensively, did not feel comfortable in finding their own way around the information resources, and did not exhibit effective independent learning skills. It was clear that most students had a very rudimentary understanding of Information Literacy and the research process, and that while students were usually computer literate in using email and limited searching of the Internet, they did not have the experience of engagement with an online or blended learning situation.

Many of the difficulties faced in implementing new online or blended learning courses were not unique to Zayed University. Lack of prior knowledge in the subject area (Jonassen, 1998; Manuel, 2001; Rubin, 1996), or of experience with online learning or appropriate technologies are common problems (Cifuentes & Shih, 2001; Huang, 2002; Reushle & McDonald, 2000; Rubin, 1996). There are many changes demanded in a move from traditional to online teaching and learning to accommodate student learning styles (Farquharson, 1989; Huang, 2002), language difficulties (Gunawardena, 1998), and changes to effective assessments for the online environment (AFLF, 2002; Hedberg & Ping, 2004; Samson, 2000).

Perhaps most critical to the success of online learning programs however, is the paradigm shift required in the roles of both teachers and learners involved, as the teacher becomes a guide through a shared learning process rather than an authoritarian disseminator of knowledge (Beaudoin, 1998; Gunawardena, 1998). As Jonassen et al. point out, this moves the "teacher from podium to sideline, from leader to coach, from purveyor of knowledge to facilitator of personal meaning making" (Jonassen et al., 1995: p8), and it is this change that is probably most difficult to accomplish in societies where the education system has traditionally been one of teacher-centric learning models, with emphasis on rote-learning and memorization.

Indeed, researchers in the UAE have identified "students' resistance to making the change to take responsibility for their own learning, [stemming] from their previous experiences in local Arab primary and secondary schooling where passive learning and memorization of tracts is the expected way of learning." (Richardson, 2004: p432) This summation reflects previous views of

authors on the subject (Bel Fekih, 1993; Brown, Walsh, & Webb, 2003; Farquharson, 1989), and is corroborated by Mynard, who says that students "frequently feel unable to adjust to a different system of education – one where they are expected to take more responsibility for their own learning and apply higher-level cognitive processing and problem solving skills. Students often feel ill equipped to make the move towards autonomy." (Mynard, 2003: p27)

Students undertaking the InfOasis blended learning course in early 2005 did not appear to look through or even access the InfOasis web resources, without specific direction to particular pages or sections for completion of an assessment. At times it was obvious that even seeking specific online information under specific direction was sometimes ignored. Our experience confirms the findings of earlier researchers, that teacher directed learning experiences based upon a limited range of information sources to be memorized and reproduced in exam conditions, strongly influenced the ability and motivation of our students to undertake and engage with an independent, online learning situation. Work will need to be done to identify ways to build upon the motivational influences and learning strengths of our students, in an endeavor to make the transition from more teacher directed and examination based learning to more autonomous learning patterns required for effective online learning.

2. The traditional educational background of most students is also reflected in their inexperience with online or blended learning situations. It became clear in teaching the March 2005 course, that students had generally not experienced online forms of teaching and learning in the past, and were not familiar with the structure of either the Blackboard interface, or anything similar to the InfOasis web site. Substantial effort will need to be made in all future courses, to include learn-to-learn-online activities in all online Information Literacy courses, to improve student proficiency, confidence and interest in this instructional media. As Bozarth points out, there is a need to "make students aware of and comfortable with new patterns of communication to be used in the course … [and] assist students in becoming familiar and comfortable with the delivery technology" (Bozarth, 2004: p89).

The strong influence of the traditional educational background of our students on their ability to succeed in online and blended learning is not uncommon, but should be acknowledged and accommodated within the instructional design. Together with the implications of cultural and language differences in the United Arab Emirates, these are important findings to be applied to revisions of the design of Information Literacy courses delivered in a blended and online learning format.

A critical consideration in the United Arab Emirates is the effect of language skills on students' ability to adapt to online learning. Most students at Zayed University speak English as a second language, speaking Arabic at home and having undertaken all previous education in Arabic. The text-based nature of online information has unique strengths and weaknesses, which need to be

considered in this context. For example, researchers have discussed the relative values of reflective interaction, the opportunity to compose and edit one's responses in computer mediated communication (as opposed to spontaneously respond in face-to-face situations), and the possible reluctance to post messages online in a discussion board (Gunawardena, 1998; Harasim, 1990). Consideration should also be given to the ways that culture influences language learning styles (Merrifield, 1996; Oxford, 1996; Reid, 1995), and the design of web sites to be used by ESL students (Drake Gobbo & Nieckoski, 2004; Serdyukov & Stvan, 2001).

One important area for revision of our InfOasis resources is the need to reduce lengthy textual areas, both because of a cultural aversion to reading, and the fact that English is a second language for most. Course evaluations from the March teaching of Information Literacy indicated that students do not like to read, and found some areas of the InfOasis web site much too wordy. The interactive components, graphics and exercises were enjoyed, but lengthy textual areas were not attempted.

This preference to not read extensively is a common characteristic in Arab culture, borne out in research findings: "One area that many Arab students have difficulty with is reading… (Osterloh, 1986) In fact, paraphrasing in Arabic is a relatively recent phenomenon. (Kharma, 1986) …In general he needs to develop new, more effective reading skills that also encourage critical and analytical reading and thinking" (Farquharson, 1989: p4). More recently, Brown reiterated this problem and its ramifications:

> It is well known among teachers in the U.A.E. that National students are particularly resistant to reading blocks of text of any real length. This can present a barrier to learning …. Overcoming the difficulty requires not just breaking the text into smaller, and hopefully more easily digestible pieces – which itself has the shortcoming that it can become more difficult to convey complex ideas within the appropriate context – but through the use of multimedia tools such as text-to-speech, streaming audio and video, and similar techniques. Learning how and when to use these kinds of techniques represents a significant investment of time and effort by teachers.
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> (Brown et al., 2003: p64).

Within the Information Literacy context, Shetzer & Warschauer (2000) discuss the importance of reading, scanning and critical evaluation skills in the use of resources such as the Internet. They argue that current use of the Internet requires complex reading, skimming, scanning, selecting, critical evaluation and analysis skills. "Thus, reading in the online realm by necessity becomes critical literacy – because those who cannot make critical evaluations cannot even find what they need to read on the Internet" (p.175). In a specifically Arab context, Kaylani asserts that "successful learners [from a culture whose educational system emphasizes rote memorization] will have highly developed memory strategies, but most learners from that background will probably have less developed problem-solving and comprehension strategies" (Kaylani, 1996: p79).

Undertaking an Information Literacy course in a culture reluctant to read, and certainly not skilled in critical evaluation of what is read, requires the recognition of a need to both develop and reinforce reading, scanning and evaluation skills. It also requires great care in the clarity and simplicity of visual page and resource designs. It is recommended that web and Blackboard pages include substantial 'white areas' and regular pictures or items that will 'break up' the page area, with shorter page lengths and short textual areas or bullet-point formats where possible
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There is a need to introduce more graphics, delete complex or unnecessary language, and attempt more consistency of language and page structure, in order to improve student use.

This variety of formats for the representation and delivery of information is also valuable in attempting to cater to the variety of learning styles of students. Emirati students have generally experienced a more teacher-dominated and rote-learning educational environment, and while our Information Literacy instructional design emphasizes and values more constructivist approaches, it could be argued that the widespread influence and integration of the constructivist paradigm into education in an Arab setting can be inappropriate, because of cultural factors such as those described by Hofstede, which are described in detail below.

3. Cultural considerations

It is widely recognized that the cultural background of students has a major impact on their attitude to education (Crossley, 1996; Farquharson, 1989; Gunawardena, 1998; Hofstede, 2001; Kaylani, 1996; Kayser, 2002; Magrath, 1981; Mynard, 2003; Reushle & McDonald, 2000; Richardson, 2004). As Lim states, "research on cultural learning studies have documented that the national and ethnic orientation influences students' learning and achievement. As a general finding, students' learning is significantly influenced by their beliefs and attitudes about learning" (Lim, 2004: p165).

With regard to language learning strategies, Bedell warns that "if strategies being taught were opposed to learners' cultural backgrounds, disaster resulted" (Bedell & Oxford, 1996: p48), and Reushle & McDonald (2000: p353) apply this knowledge to the design of educational resources: "Designers need to be aware of how culture influences learning and understanding, interaction, communication and the interpretation of information … [B]y recognizing that learning is culturally and socially contextualized, the design process becomes grounded and located within communities and individuals for whom the learning materials were intended."

Arab culture in "the Emirates represents a stronghold of Muslim-Arab values which drive all aspects of life, as shown by the lack of separation between civil and religious law" (Richardson, 2004: p430). "It demands much conformity from its members, particularly through Islam, which dominates daily and spiritual life" (Farquharson, 1989: p2). As cultural factors have such a strong influence on student learning, it is important to analyze and understand the basic tenets of Arab culture, and the implications for effective educational design at Zayed University and in similar contexts.

Culture can be defined as "the beliefs, value systems, norms, mores, myths, and structural elements of a given organization, tribe or society" (Collis, 1999: p201), enabling "individuals to make sense of their experiences through the knowledge, beliefs, schemas and attitudes, derived from previous, culturally situated, experiences. It is these personally constructed meanings which directly affect their decisions to engage or not with learning" (Richardson, 2004: p431).

To facilitate an understanding of the Emirati culture, use has been made in this paper of the work of Hofstede (2001), who proposes four cultural framework dimensions by which to characterize and define the cultural nature of Arab people in comparison with other countries or regions of the world. While it is acknowledged that all Arab people are not homogenous in their culture, beliefs, history

or present societies, Hofstede does provide a model for definition of aspects of this culture which assists in our understanding of current UAE Arab students.

Hofstede's model is based on large-scale surveys of informants in a number of countries, and includes four cultural dimensions: power distance (the level of acceptance of an unequal distribution of power), individualism (the relative value of the individual compared to the group), masculinity (differentiation of males' attitudes to achievement and other task-oriented values), and uncertainty avoidance (the extent to which people are made anxious by situations they view as unstructured or unclear) (Hofstede, 2001).

Table 1 below shows Hofstede's four dimensions, with the index values he identified for the Arabic-speaking region and (for comparison) those for the United States. Hofstede concluded that Arab cultures were generally characterized by a high power-distance index (the Arab region ranked seventh highest out of 53 countries and regions on this dimension), collectivist rather than individualist, relatively high in uncertainty avoidance, and somewhat less goal/task-oriented ('masculine) than the West.

Dimension	**Description (Hofstede, 2001, p. xix – xx)**	**ARA**	**US**
Power distance	*"the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally".*	80	40
Individualism	*"the degree to which individuals are supposed to look after themselves".* *(*In contrast, people in a collectivist culture *"remain integrated into groups, usually around the family").*	38	91
Uncertainty avoidance	*"the extent to which a culture programs its members to feel … uncomfortable … in unstructured situations"*	68	46
Masculinity	*"refers to the distribution of emotional roles between the genders … it opposes "tough" masculine to "tender" feminine societies".*	53	62

High power-distance in a society means that the ideas of those in authority are rarely publicly criticized, with the implication for education that "the parent-child inequality is perpetuated by a teacher-student inequality that caters to the need for dependence well established in the student's mind. Teachers are treated with respect…. The education process is teacher-centered; teachers outline the intellectual paths to be followed. There is sometimes a need for rote learning" (Hofstede, 2001: p100). As Wilson et al. point out, "in this high-power-distance society, the information flow is from the teacher to the student and students are not expected to initiate communication or speak up unless called upon to do so" (Wilson, Gunawardena, & Nolla, 2000: p452). Within the UAE, "it may be difficult for the Emirati girls to form a comfortable relationship with her college supervisor, given the … expectation of high power distance between her and her supervisor. She expects the supervisor to be the 'expert' and should tell her where she went wrong and give advice, particularly if the supervisor is male" (Richardson, 2004: p434). Mynard similarly concludes that "Emirati women may be less likely to question information and techniques that they are introduced to in class than learners in contexts where they receive a larger degree of freedom at home" (Mynard, 2003: p32).

As members of a collectivist society, Barakat says that "Arabs tend to interact as committed members of a group, rather than as independent individuals who constantly assert their apartness and privacy" (Barakat, 1993: p24). The family is the basic unit of social organization, where paternalism rules, and individuals typically subordinate personal aspirations to the good of the collective. In the collectivist classroom "the virtues of harmony and the maintenance of face reign supreme" (Hofstede, 2001: p235), and "students are not expected to call attention to themselves by calling out answers. Thus, group work is preferred when giving assignments. Neither the teacher nor the student should be put into a situation where they might 'lose face' " (Wilson et al., 2000: p451). This characteristic is also highlighted by Mynard in her study of UAE students: "a factor to consider when attempting to understand why Emirati learners may appear not to challenge rules or information presented in class is face-saving… - the fear of shame … This may be one of the factors to consider when investigating why Arab learners are reluctant to take initiative and risks when learning" (Mynard, 2003: p33).

To accommodate the characteristics of a collectivist culture, Information Literacy online learning should be designed to include paired and group work in classroom activities wherever possible, and in assignment work as appropriate. Individually competitive situations are not likely to be as successful as group work, which are enhanced by what Mynard (2003) refers to as a 'successful social element' in such tasks (p. 36). This experience is in keeping with the importance of the closely related concept of 'wajh' in Emirati society, or the importance of keeping face. Wajh is the strong belief that "self-respect depends entirely on respect from others" (Baalawi, 2005, December), and according to Baalawi group harmony, consensus and affiliation can actually rate higher for Arabs in a personal 'hierarchy of needs' than self actualization. Our experience supports this recent research: classroom enthusiasm was often maintained by the introduction of competitive group work. Our Emirati students were not reluctant to compete or to strive for the best answer, particularly to help their group, but were reluctant to succeed at the embarrassment or expense of other individuals. There is an obvious need for instructional design in this model for ZU to be more sensitive and responsive to this factor than in many other educational environments.

Through our content both in InfOasis and in classroom, however, we have attempted to design critical thinking and the exploration of different ideas into the instructional design, rather than provide one right answer. In evaluating Internet information, for example, students are led through an exercise to try to determine the relative validity and quality of the information provided on the Net. It is interesting to note that our Emirati students appear to give high credibility to anything written, and certainly to anything published in paper or electronic format. During the last iteration of this course, although students acknowledged at the beginning that 'anyone can publish anything' on the Internet, they were nevertheless surprised to see examples of blatant misinformation. While it is an embedded philosophy of Information Literacy to develop the critical thinking and questioning skills of our students, it must be noted that it is sometimes an uncomfortable activity for our students to embark upon the questioning of information provided either from published sources, or by the teacher.

In an educational context, "when **uncertainty avoidance** is relatively strong … both students and teachers favor structured learning situations with precise objectives, detailed assignments and strict timetables. They like situations in which there is one correct answer that they can find. They

expect to be rewarded for accuracy" (Hofstede, 2001: p162). According to Richardson, "Arab students prefer prescriptive learning environments where they are told exactly what to do and directed along a single path; … due to their aversion to risk and uncertainty, they would try to avoid experimentation" (Richardson, 2004: p432, 434).

Design implications for online or blended Information Literacy courses include the need for student learning to be more teacher-controlled and task-directed than would be usual in a Western university. The use of a course management system such as Blackboard or Moodle is recommended, which can document and retain all course information in one place. Our original design included some course information available on InfOasis, some in Blackboard, and much of the week-to-week instruction being handed out in paper format during class times. Students would however benefit from the whole course structure, tasks and assessments being clear and continually available, with weekly learning units set out in a sequential format. Similarly, tasks and assignments should be more prescriptive than normally expected, particularly at the initial stages, with clear questions to answer even in 'learning log' or 'reflective' assignments. Independent work expected during the week should be very explicit and task orientated.

Any website used should have short and clearly separated topics or modules, each dealing with a separate subject. Student access to an online subject should be introduced clearly in modules, and finish with both a short summative self-assessed quiz, and an identifiable end to modules. Students would also benefit from an online glossary easily activated by a mouse rollover when a student is reading through text, to enable them to clarify unfamiliar terminology quickly and easily, within the context in which the words are used.

Central to the effectiveness of any online education is the recognized value of computer mediated communication (CMC) (Gunawardena & Zittle, 1996; Harasim, 2000; Palloff & Pratt, 1999). The use of discussion boards has been included in the course design for the Foundational Information Literacy course, and have been particularly popular and successful. The use of discussion boards in this Emirati society however, must be viewed within the context of several of the cultural factors referred to by Hofstede, in particular the factors of high power-distance and masculinity tendencies in this society.

CMC could be potentially problematic in this Arab culture, as gender roles can affect the ability of Emirati females to participate in electronic discussion groups. "The online discussion group environment encourages learners to discuss and challenge ideas presented by authors and other students, which may be considered inappropriate behavior for students from [some] cultural backgrounds…. people who come from societies where discipline and submission to authority is praised might feel uncomfortable taking initiatives, and accepting the scrutiny of peers" (Reushle & McDonald, 2000: p355). As Gunawardena also notes, "computer conferencing because of its essentially interactive group nature offers a challenge to these educators to move from teacher-centered learning paradigms that view the learner as a passive recipient of knowledge from an expert, to more learner-centered collaborative learning, that treats the learner as an active participant in the learning process" (Gunawardena, 1998: p106).

Computer mediated communication should not, however, thus be dismissed as too high risk, but adapted to take into account relevant cultural norms. For example, Kayser found that where "electronic and face-to-face communication was restricted to faculty members and students, [it was] culturally acceptable" (Kayser, 2002: p61). As Kayser also points out, "using computers communicatively for authentic projects in an all-female Middle Eastern setting presents a cultural challenge. Rather than viewing these cultural aspects as a barrier, they can be seen as an opportunity" (Kayser, 2002: p62).

Similarly, Internet use in online courses can be more directive and monitored to avoid accidentally encountering culturally inappropriate web sites. Of central relevance to Information Literacy skills, access to the Internet needs to be managed rather than avoided. Kayser (2002) notes recent research confirming that internet-based activities enable students to exercise more control over their learning, allows greater flexibility, and fosters independent learning. "Both teachers and students find this to be beneficial in improving information literacy skills" (p. 60).

4. Conclusion

While it is likely that students from this Emirati Arab culture will feel more comfortable in a controlled and task oriented environment (certainly at the time that they first move to the University from their school environment), this does not imply that constructivist pedagogies cannot be used. Indeed, a central tenet of good Information Literacy instruction is the development of evaluative and critical thinking skills in students, achieved through problem-based learning, interactive learning, collaborative learning, and the presentation of information in more than one medium (Dewald, 2000; Macklin, 2001). Like Clarke and Otaky (2006) in their response to Richardson (2004), our experience at ZU has been that our students, once introduced to and confident in the instructional medium, enjoy challenging, interactive, collaborative and multimedia learning situations, when they are set up in culturally appropriate ways. The independent learning skills of students are generally not well developed, but once guided, students relish the opportunity to learn through problem solving and the exploration of new issues.

As defined by Ewing (2000), "constructivism centers on the learner's internal mental actions or cognitive processing" (p.206), and involves the construction of new knowledge based upon new information being interpreted in the light of the learner's previous knowledge. As Ewing points out, a constructivist strategy can be put at risk "when there are insufficient experiences already stored in [their] past experience to enable construing to take place" (Ewing, 2000: p206). Certainly educational researchers in the UAE have documented a comparatively restrictive upbringing for many Emirati females.

It has been a recurring experience in our course to find that some of our students had no knowledge of some general words or issues, and therefore could not effectively participate in evaluation of the information. For example, students do not commonly know what 'Velcro', or a 'yeti' are, nor recognize that a 'tree octopus' or a 'holiday island for dogs' are likely to be fictitious, and therefore do not see any problem with bizarre information that is sometimes available on the internet. Effort continues to be made to identify culturally appropriate examples and information likely to be within the experiential background and understanding of our students.

Moreover, ZU students have usually experienced a system of education previously, in which they have not applied higher-level cognitive processing and problem solving skills. "[ZU and]…similar universities and colleges in the region recognize that the learners need substantial help with developing the capacity for autonomous learning" (Mynard, 2003: p13). The evolution of culturally appropriate but constructivist learning pedagogies will work effectively towards this development.

It is acknowledged that the cultural background of students has a substantial and direct influence on their perceptions of learning, and that in an online learning environment, "instructional design cannot and does not exist outside of a consideration of culture" (McLoughlin, 1999: p235). However, as Bedell points out, ""culture should not be seen as a straitjacket, binding students to a particular set of learning strategies all their lives" (Bedell & Oxford, 1996: p60). Certainly the UAE is undergoing a great rate of change at present, and it is interesting to note the apparent speed with which students at ZU assimilate new ideas and skills. Much research is needed in this region to define the changing cultural values, social, political and learning experiences of students in order to avoid imposing culturally-bound, inappropriate pedagogies on learners (Pennycook, 1997: p44).

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