

E-LEARNING AS A CULTURAL ARTIFACT

An empirical study of Iranian Virtual Institutions

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Abstract: Choice, design and use of technology in education settings can be dependent on culturally embedded norms, i.e., assumptions about the nature of knowledge, ways of communications, kinds of teaching and learning strategies and methods, etc. By discussing the culturally inscribed norms in this article, it is argued that on the design and use of e-learning in the perspective of globalization it is critically important to recognize, understand and thus take into account the cultural situatedness. Drawing on the literature, we present a model of cultural-pedagogical paradigms in higher education in general and e-learning in particular. We use this model to explore cultural-pedagogical orientations in Iranian Virtual Institutions as an instance of a developing country. This is done in a comparative perspective, looking for similarities of the teacher's and learner's points of view.

Introduction

Cultural¹ discourses play an important role in shaping educational practices. They are embedded in a specific culture at different levels, from the individual level, the interpersonal level, to institutional, regional and national levels. It could even be argued

¹ Culture has been alternatively defined as "Shared patterns of behavior" (Mead, 2001), "Systems of shared meaning and understanding" (Geertz, 1973) "... those learned rules of behavior which bound acceptable practice in a group environment" (Groseschl & Doherty, 2000) and a means of marking differences and establishing boundaries; and thus it can be said that culture concerns systems of meaning, ideas, and patterns of thought and behaviours (Goffman, 1974).

that education is important in “making” and “maintaining” culture. This is in specific ways reflected in policy documents, curricular documents, and teaching and learning.

When utilizing technologies or educational technologies in learning and teaching activities, it is important to note that these technologies are not a culturally neutral phenomenon; rather, they are cultural-specific ventures that are grounded and provided in a specific cultural context. By reflecting prevalent ideas of good practice,² the embedded cultural-pedagogical norms are seen as an “unanalyzed totality” (Dewey, 1925) that are embedded in every aspect of an educational system, and thus cannot be “ghettoized” (Henderson, 1996, p. 95). Cultural-pedagogical norms in this article refer to more situation specific of shared patterns of behaviors, norms, understandings and preferences in educational settings that determine the way the educators (teachers, students, and other actors) approach learning and teaching, or the way the educators prefer to tackle the educational issues in the light of the perceived demands.

These technologies fulfill an important mediating function across cultures and generations. ICT-supported initiatives in education, accordingly, are seen as ‘cultural amplifiers’ heightening the cultural voices and ordinations that transform the nature of human productivity and favor specific cultural and cultural-pedagogical patterns in terms of communication, teaching and learning strategies, etc. (cf. Crook, 1996; McLoughlin, 1999).

In this sense, unlike the technological determinism, technological tools in education appear to be the primary structure influenced and shaped by macro systems to be culture, ideological, political, and educational trends (Lipponen, 2002). The key is thus to see cultural and technological infrastructure as aspects of infrastructure that are embedded within each other, not as two separate entities, one built around the other (Guribye, 2005). In the same line of reasoning, e-learning services and products, e.g., platforms, and resources, built in line with specific norms, pose characteristics of the culture of its originators: from the types of pedagogies (how knowledge should be acquired), communicative preferences to cultural expectations and preferences (cf. Goodfellow & Lamy, 2010; Masoumi & Lindström, 2009; McLoughlin, 1999; Olaniran & Agnello, 2008). Thus, it can be argued that educational media cannot be passive structures, but rather evolve and develop a value and life of their own.

With rapid growth of ICT-based technologies, e-learning³ is becoming an important part of higher education across the globe in order to meet rising demands for higher education particularly in developing countries. In a similar way, international trade in educational services in terms of e-learning programs, platforms, learning resources, etc. in cross-cultural markets has expanded rapidly in recent years (Marginson, 2004; Rogers, Graham, & Mayes, 2007). These educational services and products mostly flow from the Western world to eastern countries (Mok, 2005).

² However, this does not mean that there are not conflicting ideas. For example, there is a tension between existing formal educational practices and media and alternative informal learning practices supported by social software. There are also differences between subjects regarding what counts as good practice.

³ E-learning is a contested concept that evokes a range of images and responses depending on the context in which it is used and who is using it. Having a broader approach in this article, e-learning includes the whole range of an educational institution’s procedures and activities and relates more to the totality of an institution’s processes and standards than to individual activities and tools.

Such services and products are developed in alignment with the Western countries' cultural norms and preferences (cf. Olaniran & Agnello, 2008). These norms and preferences are often embedded and materialized in e-learning services and products, e.g., Learning Management Systems (LMSs) and digital resources (cf. Dakers, 2006; Olaniran & Agnello, 2008; Van Dam & Rogers, 2002). Introducing culturally embedded technological products and services in education thus can challenge and even restructure the education of other countries that are using those services and products.

Cultural and cultural-pedagogical challenges in some cases have resulted in failure of educational institutions to accomplish their intended goals (cf. Duncker, 2004; Ess, 2010; Postma & Postma, 2001). Similarly, there have been many examples of technological products and programs from North America, Australia, Great Britain, and Europe that were purchased but never used in Africa and Asia because cultural-pedagogical norms of providers become dominant, desirable, and used as the standard (Gunawardena & McIsaac, 2004). Such challenges and dilemmas can threaten the very survival of higher education institutions involved in e-learning (Coates, James, & Baldwin, 2005; Frand, 2000; Mok, 2005).

Culture, however, cannot be added onto to the e-learning services and products, rather than need to be built into. To build into and integrate cultural and cultural-pedagogical issues, initially, this phenomenon in terms of *what* and *how* should be explained and known to all of the actors in educational settings. In other words, to build in and integrate the cultural and cultural-pedagogical norms when developing and then using e-learning setting, one needs primarily to examine and determine the current cultural-pedagogical norms. We also find support for carrying out a cultural recognition before implementing quality frameworks or similar initiatives, in order to identify potential barriers and to help in designing and the adoption of such initiatives (cf. Davies, Douglas, & Douglas, 2007; McAdam & Welsh, 2000).

Despite increasing acknowledgment of the cultural and cultural-pedagogical issues, of fundamental *importance* in educational settings, these issues have hardly been addressed and thus may not be taken into account in the design and implementation of e-learning (Marginson, 2004; Olaniran, 2009; Remtulla, 2008). Similarly, a number of scholars point out that not enough is known about the ramifications of cultural inclusivity of design and use of e-learning systems and that further research is needed (cf. Dakers, 2006; Hase & Ellis, 2001; Olaniran & Agnello, 2008; Reeves & Reeves, 1997; Van Dam & Rogers, 2002; Wang & Reeves, 2006).

This study, therefore, focuses on exploring and understanding the cultural-pedagogical norms and assumptions in Iranian virtual institutions.⁴ Understanding the embedded norms in such institutions is critical not only for productive design and implementation of e-learning products and services, but also for formulating and refining the learning goals and outcomes.

⁴ There are a variety of definitions of what a virtual institution is, but in this article it is considered to be a "higher education setting that offers a conventional university's services (including teaching) through information and communication technologies." Other concepts, which are occasionally used interchangeably to imply much the same, are "online university" and "e-university".

Theoretical Background of the Study

The cultural norms and values in education are generally addressed in the work of anthropologists such as Hall (1976), Hofstede (1997), Trompenaars & Hampden-Turner (1998), who identify a number of dimensions of cultural variation to explain the ways members of different cultures communicate, behave, perceive time, or view themselves in relation to others and to the environment.

Considering this work, various models including Reeves's (1992, 1994) Interactive Multimedia Model, Henderson's (1996) Multiple Cultural Model, Reigeluth's (1994) work on drawing Industrial Age Paradigm Versus Information Age Paradigms, and also Collis (1996) work on "Flexible Learning") have been developed for exploring and understanding Cultural-Pedagogical dimensions in educational settings (cf. Masoumi & Lindström, 2009). It appears, however, that employing Henderson's Multiple Cultural Model which grounded on Reeves's (1999) Model, proposes a valuable framework for evaluating and judging an educational setting by plotting each of the dimensions on a scale and thus obtaining a profile of an e-learning program/virtual institution. Henderson's key addition to Reeves's model is the "idea of incorporating multiple cultural perspectives into an *eclectic paradigm*, so that multiple cultures maintain their identities and can have their respective cultures accommodated" (Collis, 1999, p. 205).

Furthermore, her Multiple Cultural Model comprises particular elements from the modernist, postmodernist, and interconnectivity world views which is informed by Vygotskian learning theory (Henderson, 1996). This model, thus, can be considered as somewhat comprehensive, which has been undertaken as framework in numerous studies including Collis (1999), McLoughlin (1999) and Gunawardena et al. (2003). It could be said that, Henderson's *eclectic* multidimensional approach provides a pragmatic typology of cultural norms, which might work as a tool for considering cultural norms when designing and implementing e-learning. In Henderson's (1996) model two paradigms are described as polar extremes on a continuum from externally mediated reality (objectivism/instructivism) to internally mediated reality, i.e., constructivism (Jonassen, 1991). The extremes on each end are reminiscent of the continuum used by Hall (1996), Hofstede (1976), and Trompenaars and Hampden-Turner (1986, 1997).

This model is restructured by Edmundson (2004) in which dimensions were merged into a singular dimension by combining certain dimensions or features (see Table 1). These dimensions give a picture of possible values in educational settings.

Table 1. Cultural-pedagogic dimensions.

UNDERLYING EDUCATIONAL PARADIGM	Instructivism: (Behavioral, Reductionist, Sharply Focused	Constructivism: Cognitive, Constructivism, Unfocused Goals
EXPERIENTIAL VALUE	Abstract: To what extent the learning activities are undertaken abstractly? (removed from real world)	Concrete: To what extent learning activities are concrete, experiential (apprenticeship) indicating relevance to the learner's real world?

ROLE OF INSTRUCTOR	Teacher Proof: Are the lecturers regarded as the “authoritarian” source and provider of knowledge? (teacher centered)	Facilitative: Does the teacher facilitate learning activities along with students without controlling outcomes?
VALUE OF ERRORS	Errorless learning: Ideal learning involves no errors. So students learn until they make no errors (like programmed instruction)	Experiential learning: Students have opportunities to learn through trialing; they also get opportunities to learn from their mistakes (as part of the learning process)
ORIGIN OF MOTIVATION	Extrinsic: Does motivation originate from factors separate from the learner’s interest, needs and so on (like the need to get an ‘A’)?	Intrinsic: Does motivation comes from within, from a true desire of students?
ACCOMMODATION OF INDIVIDUAL DIFFERENCES	Non-existent: Are learners’ individual differences (affective and physiological factors) accommodated in learning environments?	Multi-faceted: Is knowledge and learning presented in a variety of ways so that learners can utilize what best suits their affective and physiological factors’ preferences?
LEARNER CONTROL	Non-existent: Do the learners learn along a predetermined path (complete program control)?	Unrestricted: Do learners have unrestricted control of the path? Learners are allowed to choose what section, and/or what paths to follow.
USER ACTIVITY	Mathemagenic ⁵ : Do the learners access various representations of content (along a predetermined path)?	Generative: Do learners engage in the process of creating, representing, and elaborating knowledge?
COOPERATIVE LEARNING	Unsupported: Do the learning environments support Cooperative Learning? (learners work independently of others)	Integral: Are collaborative and cooperative learning embedded in learning environments?

These cultural-pedagogical dimensions can address the whole educational sphere and how learning and teaching practices can be built in educational settings. It needs to be mentioned that the range and quality of these core cultural-pedagogical dimensions

⁵ Mathemagenic environments enable learners to “access various representations of content,” whereas generative ones “engage learners in the process of creating, elaborating, or representing knowledge” (Blanchard, Razaki, & Frasson 2005).

can vary from one context to another. It should also be noted that there may be other cultural-pedagogical dimensions that still need to be delineated.

Method

METHODOLOGICAL DEPARTURE

By addressing the main actors' understandings, i.e., students and teachers about their educational settings, procedures, expectations, and preferences, the cultural-pedagogical orientations in Iranian virtual institutions are uncovered. In this sense, these actors are seen as mediators who mediate the voice of the institution.

DESIGN OF THE EMPIRICAL STUDY

The cultural and cultural-pedagogical issues as multifaceted and multilayered constructs can be investigated in different levels from personal levels to institutional, national or even regional levels. The focus of this study, however, is situated in the institutional level, which is focused on portraying the facts and procedures (*status quo*) in the Iranian virtual institutions. It is assumed that what key actors, i.e., teachers and students in these virtual institutions "desire" is more likely to reflect a desired norm or what they *actually do* than what they consider "desirable." . According to Hofstede (1997), a statement or question that asks participants to express what is "*desirable*," , implies a request for what they view as ethically correct or reasonable; consequently, their answers are less likely to reflect the everyday practices they actually pursue.

To have a big picture of this complex phenomenon, the requested data were collected from different sources and by means of a variety of research methods (surveys and interviews with students and teachers).

A survey method was, initially, adapted and developed on the basis of Edmundson's work (2004). In this survey, clusters (a set of two or three) of questions representing different cultural-pedagogical values were applied. Every one of the cultural-pedagogical dimensions is represented by at least two or three questions. Each question comprises two statements examining different dimensions in a two-fold continuum, i.e., instructivism or constructivism.

Two versions of the questionnaire were supplied: one for students and one for lecturers (see appendix for a copy of the questionnaire). The surveys were administered among students and faculty members of three Iranian virtual institutions including IUST virtual institution, Shiraz virtual institution and Hadith Science virtual institution in late of 2008 and early of 2009. In the administered surveys, the participants were asked to choose one of two possible statements that characterize their ongoing procedures (*status quo*), rather than what they considered desirable.

Participating Institutions and Individuals

Participants in this study were students and faculty members of three Iranian virtual institutions including Iran University of Science and Technology (IUST) virtual institution, Shiraz virtual institution and Hadith Science virtual institution. A total of 70 individuals (40 students and 30 faculty members) took part in this study. The

participating students were enrolled in an e-learning program and completed at least two semesters (25 percent of his/her program) in one of these virtual institutions.

Almost all of the students who participated in this study from two virtual institutions were below 24 years of age. Seventy-two percent of them are perusing their studies in the field of "Information Technology" and 28 percent in "Industrial Engineering." A few more male students (68%) participated than female students. More than 80 percent of the respondents were Bachelor students. Moreover more than two thirds of the respondents had already fulfilled around 60 percent (five semesters) of their program.

AN EXAMPLE OF AN E-LEARNING COURSE IN AN IRANIAN VIRTUAL INSTITUTION

To bring in a broad picture of how an e-learning course is run in Iranian virtual institutions, an outline of a typical course is portrayed in this section. Such a picture is drawn based on the one of the researcher's direct experiences in two Iranian virtual institutions.

The objectives and goals of the courses in these institutions were predetermined. In this sense, students should pursue a logical path to learn what they were expected to learn. This means that the learning resources and course materials are pre-packaged and delivered on a regular basis.

In e-learning courses, as in the case of conventional courses, there were synchrony sessions during the semester (once/twice a week depending on the course's higher education credits). Lecturers usually gave their lectures at these synchrony meetings (see Figure 1 for a sample of the virtual environment). One-way interaction between lecturers and students often occurred during these virtual meetings.

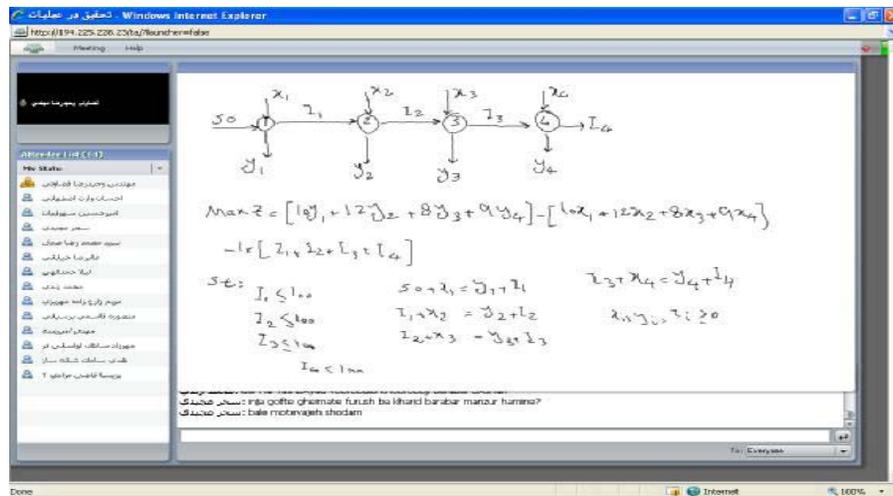


Figure 1: A sample of the virtual environment in IUST virtual institution.

Similarly, students were not expected to make any contribution during the course. The frequent interruptions due to poor infrastructure may partly explain this one-way

interaction. Most of the students' comments were concerned with the frequent interruptions and inadequate interaction between students and lecturers, such as missing audio, slides, etc. during these virtual sessions. On some occasions, students were given an opportunity to bring up (write) their questions or comments in synchrony sessions. However, there was no interaction between students in the given virtual settings.

Lecturers in the classroom environment were regarded as sources of knowledge and expertise from whom students should learn. In the same vein, the lecturers' authorities were not challenged in any of these virtual sessions. It can be noted that the students were usually asked to follow the course and complete the course assignments according to instructions.

The interaction between students and lecturers was often interrupted due to poor ICT infrastructure. In some courses, the lectures were recorded and presented on the institution's platform, which meant that students could access these recorded learning resources asynchronously after the session. Students found this very helpful for keeping the track of the courses (see Figure 2 for a sample of recorded and presented courses in the institution's LMS).

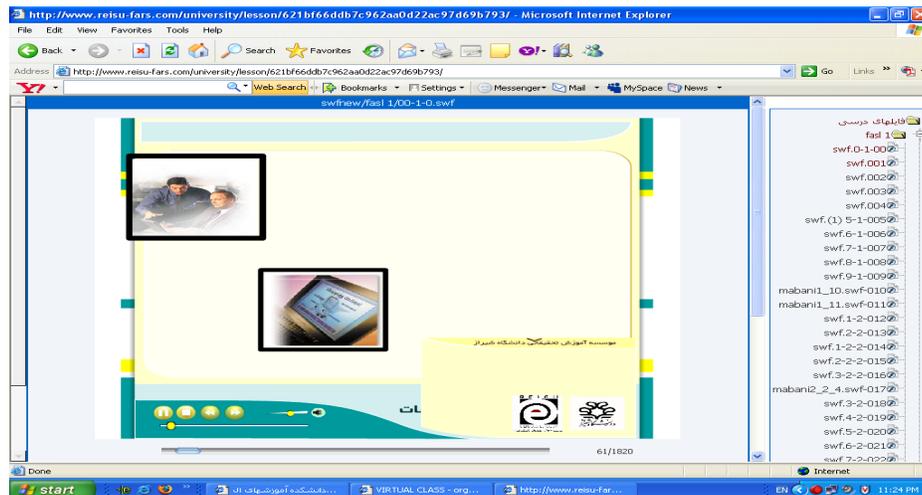


Figure 2: A sample of learning resources for a course at Hadith virtual institution.

As in conventional university procedures, the students at the virtual institutions were also asked to present a paper/complete a task, etc., as part of the midterm examination. At the end of the semester, however, students were also tested in the form of paper-based examinations. These examinations were held in virtual universities' off-campus locations or their local offices.

Results

The results presented herewith are related to questions posed in the main study. The distribution of both students' and lecturers' answers concerning the current cultural-pedagogical constructs in the given virtual institutions are reflected in Table 2.

Table 2: Comparison of Responses on Pedagogical Paradigm

QUESTIONS ^α	STUDENTS		LECTURERS		Chi-square p-value
	Instr ⁶	Constr ⁷	Instr	Constr	
1	16(64%)	9(36%)	18(95%)	1(5%)	.017*
2	18(72%)	7(28%)	13(68%)	6(32%)	.528
3	24(96%)	1(4%)	16(84%)	3(16%)	.207
4	17(68%)	8(32%)	9(47%)	10(53%)	.143
5	19(76%)	6(24%)	12(63%)	7(37%)	.276
6	21(84%)	4(16%)	14(74%)	5(26%)	.320
7	18 (72%)	7 (28%)	14 (74%)	5 (26%)	.588
8	19 (76%)	6 (24%)	17 (89%)	2 (11%)	.229
9	12 (48%)	13 (52%)	7 (37%)	12 (63%)	.333
10	25 (100%)	0 (00%)	11 (58%)	8 (42%)	.000**
11	22 (88%)	3 (22%)	11 (58%)	8 (42%)	.027*
12	14 (56%)	11 (44%)	10 (53%)	9 (47%)	.533
13	22 (88%)	3 (22%)	17 (89%)	2 (11%)	.632
14	21 (84%)	4 (16%)	14 (74%)	5 (26%)	.320
15	20 (80%)	5 (20%)	13 (68%)	4 (32%)	.537
16	21 (84%)	4 (16%)	17 (89%)	2 (11%)	.475
17	23 (92%)	2 (8%)	18 (95%)	1 (5%)	.604
18	18 (72%)	7 (28%)	14 (78%)	4 (22%)	.475
19	17 (68%)	8 (32%)	12 (66%)	6 ⁸ (34%)	.591
20	12 (48%)	13 (52%)	11 (59%)	8 (41%)	.365
21	19 (72%)	6 (28%)	12 (63%)	7 (37%)	.276

* Correlation is significant at the 0.05 level.

** Correlation is significant at the 0.01 level.

EDUCATIONAL APPROACH

With respect to the *Pedagogical Approach* - which is addressed through three questions - the collected data, i.e. two-thirds of the students and almost all of the lecturers indicate that the students in their educational settings follow a well-defined, logical path to learn what they should (see Table 2). The lecturers' answers are distributed slightly differently; such difference between students' and lecturers' standpoints could be explained as due to some of the students possibly exploring different paths to learn beyond their formal education.

⁶ Instructivism

⁷ Constructivism

⁸ One of the teachers did not answer this question.

Similarly, almost two-thirds of both students and lecturers pinpointed that “students are usually tested with questions that are based on the stated goals and objectives of the course.” One-third of the participants, however, indicated that the “students are tested by applying what they have learned from the course to different situations.” Such a difference between participants could be explained by considering the field of study and type of course where some of the courses could be conducted in the laboratory.

Similarly, almost all the students and 84 percent of the lecturers stated that in their learning context “students are given predetermined learning goals (behavioral objectives).” However, 26 percent of the lecturers believe that “students learn as they go, depending on their own learning goals” in their educational settings.

EXPERIENTIAL VALUE

With respect to *experiential value*, both groups, particularly the students, expressed that their learning is a function of the lecturers’ expectations. Similarly, fulfilling the teachers’ expectations is not in line with students’ real life, and thus it is hard to employ what they have learned in their educational settings.

This is aligned with other cultural-pedagogic dimensions such as *Teacher Role* and *Motivation*, in which students see lecturers as a source of knowledge that could identify their needs and thus supply them with relevant knowledge. On the other hand, it can relate to what motivates students to process their learning activities in a virtual institution.

Similarly, participants (76 percent of students and 63 percent of lecturers) indicated that students are not expected to relate learning activities and resources to their past or potential experiences (applying new knowledge and skills to the real world) and activities in their learning environments. As reflected in Table 2, 76 percent of the students pinpointed that the learning environments put emphasis “more or less on memorizing learning materials in reality and they are not expected to relate learning resources to their past or potential experiences.” There is a significant difference between the students’ and lecturers’ perceptions on this dimension. This variation among the participants’ approach could be traced back to their definitions of learning. Some of them may have adopted traditional definitions of learning, involving ideas such as banking and transmission of knowledge, and some of them may have adopted more of a pragmatic approach to learning.

INSTRUCTOR ROLE

As to the “*Instructor role*,” the sampling data indicate that students follow a path of learning determined by the instructor/course designer, as they believed that such a person (an “expert”) usually knew what the students needed to learn. Interestingly, lecturers (89 percent) strongly highlighted their role as “expert,” “source of knowledge” and a recognized authority who should teach (transfer) knowledge to students, not as a “facilitator” (Table 2).

Similarly, students wished to be taught by an “expert” in the field, rather than to be guided by an instructor toward learning activities. This is in line with the “Power Distance Index” in the Iranian context, in which the indicted figure is considerably higher than the European countries.

VALUE OF ERRORS

With respect to the “value of errors,” the students believed that their learning environments are strongly oriented to the instructivist thoughts in which students learn until they make no errors on the test or learning activities. Under an errorless learning approach, the interventions are validated and standardized and students learn until they make no mistakes, or the instructional method does not allow for errors.

However, lecturers expressed a mixed reaction on the addressed questions. They pointed out (see Table 2) that in their learning environments they use undertaken errors and mistakes as part of the educational process to some extent (giving opportunities to “learn from their mistakes”).

However, both groups indicated that lecturers or course designers are satisfied when they take a test without making any mistakes. There was a significant difference between the students’ and lecturers’ perceptions on this dimension as well as between lecturers’ thoughts and deeds. This variation could be because of their different perspective to the learning environments or might be due their different interpretations of errors in given questionnaires.

ORIGIN OF MOTIVATION

In terms of the students’ “origin of motivation,” both groups (students with 56 and lecturers with 53 percent as presented in Table 2) indicate that the students mostly take part in e-learning programs when they have no other *options* (as in conventional programs).

This implies that if students had had other options in conventional universities, they might not have chosen e-learning programs. Correspondingly, it can be claimed that the motivation of the majority of the students for selecting an e-learning mode cannot be intrinsic (Masoumi, 2010). These results are in line with the gatekeepers’ arguments that most of the students in their e-learning programs are keen to earn a degree or higher education, particularly in some field such as engineering or medical science, but not necessarily to acquire new knowledge or skills (cf. Masoumi, 2010). In such contexts, earning a higher education diploma per se is an end in itself for most of the students, which may not be in line with the intended learning outcomes. It needs to be mentioned that this issue in which students view education as a way for earning higher social status and prestige rather than individual development can be considered as one of the blocking factors in the success of the virtual institutions.

Similarly, the vast majority of the students strongly indicated that they prefer to follow courses in which they are told what they need to learn. They prefer to pursue a defined and fixed way to pass the course or earn a degree rather than facing different challenges and exploring new ways. On the other hand the educational system poses its order (pre-defined program) to students that they should take e-learning courses when they were required to, not the in way that students want to (i.e., following predefined learning activities without any flexibility). This may signify that the control of the learning is mainly placed outside of the student.

ACCOMMODATION OF INDIVIDUAL DIFFERENCES

On survey items related to “accommodation of individual differences,” both groups, particularly students, strongly indicated that the e-learning courses are usually presented by means of a few learning methods/activities.

This indicates that when delivering the courses at Iranian virtual institutions, the students’ individual differences are usually not considered. Lecturers, though, pointed out that they employ several instructional methods or learning activities when delivering e-learning courses. Likewise, the responses to the second question in this set indicated that both groups believe that students’ interests and needs are usually not considered in designing and providing courses.

LEARNER CONTROL

In terms of “learner control,” both groups indicated that students are usually following learning activities sequentially in a fixed and timed frame, i.e., predetermined path. Students, thus, have little control on their own learning (pace of learning). Such approach is in line with the students’ and lecturers’ perception and expectations about what and how learning activities should be arranged.

In addition, both groups indicated that the course’s features and learning activities are chosen by the instructor or course designer without the students’ contributions. In line with other cultural-pedagogical dimensions, e.g., teacher role, students are seen as passive recipients who need to be taught by an authoritative expert.

USER ACTIVITY

With respect to “user activity,” both groups of participants strongly indicated that students have very little or no involvement in producing/representing the learning resources and activities. Accordingly, pre-produced and pre-packed learning recourses, activities, and/or skills are transferred onto the learner in as an efficient, predetermined and predigested way as possible.

Similarly, both groups pointed out (see Table 2) that students are not given any opportunity to apply course content in different activities or create their own uses for the information within the course.

COLLABORATIVE LEARNING

As regards the “collaborative learning,” more than half the students and lecturers stated that in their learning environments, students work and are encouraged to work with a group of peers on their learning activities or projects. This significant variation between participants’ perspectives can be explained by considering the participants’ field of study. As it was noted, the participants were from two Technical institutions and one social sciences oriented institution. Interestingly, students from technical fields indicated that they are working with a group of peers and classmates on learning activities or projects than other students despite the fact that there were little or no facilities to do so.

In addition, both groups (72 percent of students and 63 percent of lecturers) expressed that there are limited (technical) facilities and tools for cooperative and collaborative learning in their e-learning environments. Furnishing tools and facilities such as discussion forums, chat, file sharing, shared whiteboards, weblogs, wikis, etc.

for collaboration among students can support a social constructivism approach to e-learning. This implies that the figures for collaborative learning in the first question are not planned by the educational system but, rather, are regarded as contributions/initiatives from individual lecturers and students.

To provide an overview of students' and lecturers' perceptions of the cultural-pedagogical paradigms in Iranian virtual institution settings, a three-dimensional approach was taken (see Figure 3). In this triangle model, students' and lecturers' perceptions of their e-learning environments are plotted in on the basis of the cultural-pedagogical dimensions given.

INSTRUCTIVISM VERSUS CONSTRUCTIVISM

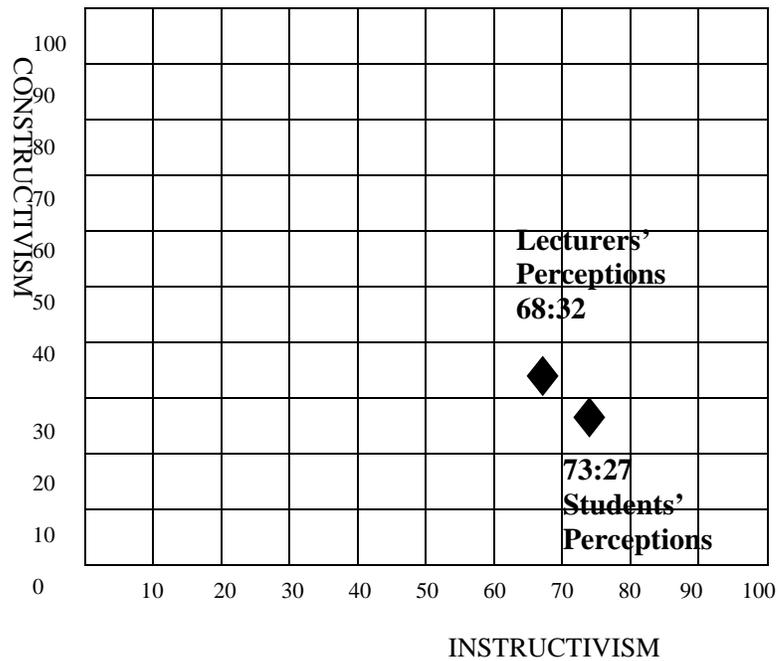


Figure 3: Dominant cultural-pedagogical paradigms from students and lecturers' perspectives.

As depicted in Figure 3, the participants believed that the educational system in Iranian virtual institutions placed a great deal of emphasis (mostly without being aware of doing so) on Instructivism principles when designing and holding e-learning courses. The position of lecturers' and students' perceptions of their learning environments in this triangle model could accommodate with what Anna Sfard (1998) called the Acquisition Metaphor. Her description of the "Acquisition Metaphor" corresponds closely with the description of the cultural-pedagogical constructs in the scrutinized virtual institutions. By introducing the concept "quadrant of Injection," Cronjé (2006), similarly, addresses the very similar mode of education in which pre-produced and pre-packed "knowledge, skills and/or attitudes are transferred into the learner in as an

efficient, predetermined and predigested way as possible” (Cronjé, 2006, p. 396). In such an approach, it was felt that learning could more readily consist of simple and shallow recall without real insight.

Discussion

To build in and integrate the cultural and cultural-pedagogical issues when developing, implementing and formulating and refining learning aims and goals learning products, one needs primarily to examine and determine the dominant cultural and cultural-pedagogical norms and avoid hegemonic premises and behaviors as well. Investigating such cultural-pedagogical dimensions in Iranian virtual institutions can inform and contribute to the knowledge of developing countries in general.

It can be concluded from the data that the educational system in Iranian virtual institutions placed great emphasis on Instructivism principles in the design and implementation of their learning activities. The majority of the students and teachers in these institutions expressed that the current norms and values in their e-learning environments are oriented towards instructivist notions rather than constructivist thoughts. In such an approach, it is felt that learning could more readily consist of simple and shallow recall without real insight. The findings of this study are in line with other studies in the developing world (cf. Edmundson, 2003; Fidalgo-Neto et al., 2009; Henderson, 1996; Hofstede, 2001; McCarty, 2006; Zhang, 2007).

This research also supports the findings in Hofstede’s (1997, 2001) study of national level cross-cultural values in terms of the dominant cultural norms. However, the participants’ comments on some of the dimensions were not in line with Hofstede’s findings. For instance, Hofstede’s studies have categorized the Iranians as collectivist rather than the individualist. However, the Iranian participants noted that they are also trying to be independent and everyone is looking after himself in virtual environments. This may indicate changes in some of the cultural values, at least among students.

Further, it can be said the cultural and cultural-pedagogical norms and procedural climate of conventional universities are relocated and transferred to virtual institutions. In this sense, digitizing the traditional learning resources and contents to e-content seems to be the only difference between traditional on-campus programs and their virtual (off-campus) counterpart. E-learning, however, is not just a neutral delivery medium along with other educational tools; rather, it ought to be viewed as a new approach to education, teaching and learning.

This may signify a number of the emerged challenges in implementing and running e-learning services and platforms in Iranian virtual institutions. Such challenges are that there does not appear to be a technological and cultural fit in the diffusion of e-learning services and platforms. In other words, they could not be completely decontextualized from their cultural background (McCarty, 2006) because the appropriate design of e-learning platforms and services are a critical element in their effectiveness.

Given these distinctions and variations in cultural-pedagogical premises and values, we think it is necessary to adopt a more culture-sensitive approach to design, implementation, and use of the entire e-learning structure and process. To have such culture sensitive approaches, one needs to initially address the cultural-pedagogical values and then take them into account in the design, implementation and use of e-

learning. It needs to be mentioned that cultural values are not a static entity but are constantly evolving, which means that they need to be continually investigated.

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