ONE SIZE FITS ALL? - CULTURAL DIVERSITY REFLECTED IN INSTRUCTIONAL DESIGN MODELS

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Abstract: Online learning programs have become more accessible to a wide range of learners all over the world. This raises the question whether differences between various groups are taken into consideration in the design of these programs. While new devices and technologies make learning more readily available, ignoring cultural issues can lead to a total breakdown of communication. This study investigates how issues of culture should influence instructional design of online courses.

Keywords: cultural diversity, instructional design models

I. BACKGROUND AND CONTEXT OF THE RESEARCH

Globalization of education led to a need to consider cultural diversity as an important factor in the adoption and effectiveness of learning. This is enhanced by the fact that e-learning breaks time and space barriers, being available to students from any geographical area, interacting outside the boundaries of a common context. Learners have the opportunity to study anytime, anywhere. Universities are becoming more open to international students; some are setting branch campuses in different parts of the world. Multinational organizations have offices in different countries, staffed with local employees, who need to work in a similar way with their colleagues all over the world. Interdisciplinary teams are required to work together and find a common language. In all cases, instructional designers are creating courses for people from a different culture than their own, and often for heterogeneous audiences coming from a multitude of cultures, each student needing to transfer what they learn into their own circumstances.

Given the complexity of the context presented above, the present study investigates *how do models of instructional design take into account cultural diversity*, by answering the following research questions:

- Should instructional design take into account cultural aspects at all?
- Should instructional design strive for a culture-free product?
- How can the instructional design model incorporate awareness of cultural issues?
- What are the implications for instructional designers and their professional development?

The literature suggests a fairly wide range of responses and models, but the responsibility of choosing and applying them lies with the instructional designer. Since culture is a relatively new concern in the field of instructional design, few of these models were applied in contexts significant enough in order to generate solid recommendations or to indicate an obvious choice. This situation makes the decision of instructional designers even more difficult.

II. THE CONCEPT OF CULTURE

Culture was historically associated with nationality, with the assumption that each nation has its own way of thinking and acting, which is guided by common values, persistent in time and acquired through experience. Culture was defined by Hofstede (1996, p. 20) as "programming of the mind", collective patterns of thought, action, beliefs, feelings, which distinguish a group from another. Through his study conducted on IBM employees starting with the 1960s, Hofstede identified five dimensions on which national cultures can be compared: power distance, collectivism – individualism, masculinity – femininity, uncertainty avoidance, and time orientation. Hofstede´s theory was criticized on the grounds of not being methodologically sound (McSweeny, 2002), but the dimensions he identified are frequently used in studies investigating culture in education (Uzuner, 2009). Another dimension used in research investigating cultural influences in education is Hall's (1976, cited in Hall & Hall, 1990), who defines high-context and low-context cultures, according to the extent communication is done mainly through words (low-context cultures), or mainly through behaviour and the context that surrounds the coded messages itself (high –context cultures).

Apart from the national culture an individual was raised in, or has adopted, the culture of the organization plays a significant role. Culture is seen as the group´s "learned response" (Schein, 1990, p. 112) to a set of tasks. The group adapts to the external environment by deciding its goals, mission, means to achieve the objectives, how results are measured, and what are the recovery strategies in case things go wrong. The group remains internally cohesive by finding mutually accepted answers to questions regarding common language, boundaries, allocation of status, power and authority, personal relationships, allocating rewards and punishments, and ideology (Schein, 1990). These dimensions influence what people find relevant to learn, and how they learn. Within the same organization, departments or teams may differ in the response they give to the above issues, so multiple sub-cultures can coexist in the same organization. Some of these sub-cultures may be linked with the professional field of expertise, for example sales people may find common values and assumptions with sales people from another company or even industry. Having been trained in the specific discipline by insiders, the new specialist acquires not only the knowledge, but also the means of acquiring further knowledge specific to the domain. Furthermore, the regulations and practices of the field influence the choice and experience of further learning.

Acknowledging all these perspectives, culture will be defined in the present study as the "acquired behaviours, perspectives, and values characteristic of a particular group or community" (Uzuner, 2009, p.2). The restriction to the national cultures will not be necessary, since people can be part of more than one culture at any given moment (Collis, 1999).

III. CULTURE REFLECTED IN THE INSTRUCTIONAL DESIGN MODELS

The influence of cultural aspects on learning is not disputed, being accepted as a general truth (Wild, 1999). Culture determines not only what we learn, but also how we learn, how we are taught and assessed, what our expectations are, and how we relate to our peer learners and our tutors. However, in 1996, Henderson noticed a "deracialization" (Henderson, 1996, p. 5) of instructional design, meaning that minority cultures were not represented in online courses, due to several reasons, including blindness to cultural aspects, badly understood political correctness, perceived insignificance of culture for learning purposes, naiveté related to the cost ineffectiveness of such an approach (Henderson, 1996).

3.1. Should instructional design take into account cultural aspects at all?

Whether instructional design models should take into account cultural aspects is itself a matter of dispute. There are voices that assume this is necessary, although difficult (Rogers, Graham, and Mayes, 2007), while others (Sims and Stork, 2007; Perkins, 2008) maintain that it is the learners' responsibility to cater for their own needs, including the cultural ones. In contrast with Rogers et al (2007), who suggest that instructional designers should design activities that are relevant for the

particularities of the target group, Sims and Stork (2007) argue that instructional designers should provide learners with the possibility to select from resources and activities according with their own characteristics, and identified five components (prior knowledge, context and situation, learning styles / multiple intelligences, culture, and media preferences) that should be part of the learner-managed experience, instead of being just inputs in the analysis stage of the process. They maintain that it's not possible to accurately predict the characteristics of the target audience, especially for open courses delivered online. Therefore, a more personal learning experience can be facilitated by transferring the responsibility to "create the relevance" from the teacher to the learner. However, the instructional designer is still responsible to design the activities that enable learners to identify and construct their relevance of the content.

Wild (1999, p. 198) argues that it is not possible not to take into account cultural aspects, because the instructional designers are creating the courses within a cultural context. However, being influenced by cultural aspects, and being aware of how these influences work and what the effects are on the learners are two different things (Rogers et al, 2007). In conclusion, even if it is difficult and not very effective, instructional designers cannot ignore cultural issues. At the very least, they should be aware of their own cultural biases, and, if they embrace the view that responsibility lies with the learner, they should design activities to allow the learner to express their cultural characteristics.

3.2. Culturally free product or culture embedded in the product?

From a literature review of 27 studies, Uzuner (2009) draw several conclusions about the impact that culture has in asynchronous learning networks. The conclusions should be generalized with caution, since most of the studies he found and analyzed compare Western (North-American) students with Asian students, leaving a wide geographic space unexplored. The studies he reviewed use the cultural dimensions identified by Hofstede (1996) as some of the criteria for classifying and comparing results. Uzuner (2009) summarized the following findings and recommendations for the practice of designing and delivering learning for mixed audiences:

- Learning situations that are unclear and unstructured are not suited for members of some cultural groups, generating high levels of anxiety, so instructional designers should set clear expectations, rules and criteria for assessment.
- Being active in discussions is not viewed by everyone as the desirable behavior, some cultures preferring to be more reflective. Instructors should create a safe environment and encourage everyone to express views and opinions.
- Learners from high context cultures value social interaction. In order to facilitate relationship building, the instructor should encourage learners to get to know each other and interact face to face or outside the course as much as possible.
- Some student groups value instructor's feedback more than peer feedback. They see the instructor as an authority figure and consequently, they are more hesitant in approaching them.
- Instructors should take into consideration the difference in student experience and learning styles and avoid cultural references that are embedded in the dominant culture which learners cannot understand without background information.

These recommendations aim in providing opportunities for all students to engage with the course in ways that are culturally acceptable for them.

3.3. Culturally aware instructional design models

According to Henderson (1996), "instructional design and instructional designers do not exist in a vacuum; nor are they neutral" (p. 85), arguing for the necessity of a multiple culture approach, rather than a multicultural, neutral one, which she considers impossible.

Edmundson (2007, 2009) proposed a Cultural Adaptation Process model with the goal of determining how a course should be changed before exporting it to another culture. In order to avoid the costs of ineffective e-learning programs, Edmundson (2009) recommends conducting a cultural analysis on the learners to compare and contrast characteristics of targeted learners across cultures, and on the course, to identify how sensitive is the content to context, assuming that pedagogical methods and media requirements become more complex as the content does. The process includes six steps. The first three steps analyze the characteristics of the course and categorize it in one of four levels: Level 1 – simple information, instructivist-objectivist paradigm (Edmundson, 2007, p. 270),

simple media such as lecture; Level 2 – low level content, cognitive hard skills, pedagogical paradigm closer to instructivism, transmitted by audio conferencing, television, recordings; Level 3 – some soft skills, complex knowledge, paradigm closer to constructivism – cognitivism, threaded discussions, online chat; Level 4 – mostly soft skills, attitudes and beliefs, constructivist – cognitivist paradigm, transmitted by web and video conferencing, web based training. The next two steps involve the analysis of the learner characteristics and course dimensions based on a model synthesised from Henderson's (1996) Multiple Cultural Model. In the last step, a strategy is chosen, out of four ways to adapt online courses to global audiences described. One is translation, meaning using language that trainees understand; even if they speak English, Global English should be used in order to avoid misunderstandings. Another way to adapt courses is localization by making visual and textual adjustments in order to take into account icons, symbols, and meanings relevant to the target cultures. Localization can lead to the exclusion of certain elements that are offensive to some cultures in favour of more neutral symbols, and to the personalization of examples and situations to the local context and practices. A third way to adjust the course is modularization, which means to identify the parts of the course that are culturally dependent and to include in the course a different reusable learning object for each different culture targeted. The most dramatic method is origination, when no adaptation is possible, and each course must be created from the beginning for each culture involved.

Several limitation of this model can be highlighted. If the assumption is that methods and media become more complex with the content, there is no need of three different steps to analyze each dimension, since they are, in fact, a single dimension comprising the three. Conversely, if the three dimensions are not dependent, the model is not very helpful in advising what to do with a course that has for instance level 4 content and level 2 methods. Another implicit assumption is that the course to be adapted has a sound and coherent design in the first place, which may be the case, but should not be taken for granted. The third element, choice of media, is influenced by many factors other than type of content, one of the most significant ones being the costs and availability of resources. In some cases, lectures can prove to be the most expensive method, if not unfeasible. It is also surprising that web based learning and associated technologies are considered to be more connected with soft skills training, which is traditionally associated with face to face activities. Another critique of the model is that simple content is connected with instructivist – objectivist paradigms, while complex context is connected with constructivist paradigm, implying that constructivism is superior to other paradigms. The way this factor is defined seems to be in itself culturally biased, since it assumes a degree of flexibility in changing and adapting learning paradigm that is not common to all cultures, or even desirable, while different degrees of complexity of the content exist in any culture. Another limitation of the study is that is heavily based on national cultures and Hofstede's measurements, which are not available for all countries, without taking into consideration organizational cultures and discipline cultures which are relevant when a course provider creates online courses for learners from various institutions or courses that are cross-disciplinary.

Thomas et al (2002) argue that instructional design should be systemic (i.e. take into account all elements and interactions between them), not just systematic (i.e. procedural and linear), and cultural aspects should be taken into consideration not only in the analysis stage, but throughout the whole process. The Analysis – Design – Development – Implementation – Evaluation (ADDIE) model used in instructional design evolved to incorporate an iterative approach to the five stages. Thomas et al (2002) propose to add a third, cultural, dimension, with three components: intention, interaction and introspection. Since culture is "at the heart of our thoughts and worldview" (p. 42), it is not possible to build a course that is cultural neutral. Intention is therefore defined as the purpose to build a course that is culturally appropriate for the target audience. Interaction between designers, subject-matter experts (SME), and the learner is believed to bring the learner's culture into the product, if it happens in all five stages of the ADDIE model. Introspection will help the instructional designer become aware of his or her thoughts, values, beliefs, attitudes toward the culture of the learner.

Perkins (2008) analyzes some of the challenges of contextualizing materials, raising the question of how much context is really necessary. He makes a case against efforts to contextualize arguing that resources are limited (budget and time allocated to the development of instruction), there are other forces at play (the editorial decisions of the relevant stakeholders, intellectual property implications, hidden curriculum in representing the minority views). He contends that general

usefulness of the process is low because learners are globally aware anyway, it is their responsibility to take the content to their context, and contexts change all the time therefore the effort becomes futile.

3.4. Implications for instructional designers and their professional development

Rogers et al (2007) acknowledged that instructional designers "are not immune from the influence of their own cultural blinders" (p. 198) and investigated how instructional designers creating courses for culturally different target audiences manage this assignment in practice. The issues investigated were: level of awareness of cultural differences, how the instructional designers became aware of these differences, what the importance they place on them is, and how this awareness influences instructional design practice. They found that even though instructional designers are aware of the existence of cultural differences, this does not necessarily imply they know which those differences are. Mostly, the instructional designers became aware of these differences due to personal cultural circumstances, and some by formal training. Concerning the importance they place on cultural concerns, they feel there is not enough space in their job activities to be sensitive to cultural issues due to an overemphasis placed on content development in the detriment of the context and learner.

A case study analysis conducted by the author revealed corresponding results. Three instructional designers creating courses for target groups belonging to different organizational and occupational cultures acknowledged that, even when they can identify the cultural differences between themselves and their learners, it is very difficult to determine what course of action should be taken. Anecdotal evidence suggests that trying to be neutral has a lesser (positive) impact on learning than remaining context dependent and asking the learner to make the effort to be flexible, especially when teaching and learning expectations are concerned. However, this is an avenue to be further investigated.

In order to explain how to include the awareness of cultural differences in the instructional design practice, Rogers et al (2007) use the metaphor of "building bridges" (p. 210) between principles that are universally valid, and their local, context dependent application. For instance, many instructional designers may see problem-based learning as not suitable for Asian culture, but apparent rejection may happen because the strategy is expected to work in the same way as it does in the Western world, where people are accustomed to it. Differentiating between universal principle and local application requires reflective thinking and examination of one's own practice. Involving stakeholders in the process and conducting formative evaluations is also seen as a good way to find the contextual applications of the principles.

IV. CONCLUSIONS

The first research question, "Should instructional design take into account cultural aspects", received mixed responses. However, there are implications even for the instructional designer who, like Sims and Stork (2007), believes that it's the learners' responsibility to cater for their own needs, since it's the instructional designer who needs to embed in the design of the course such activities that enable the expression of learner cultural characteristics. How this should be done it's a matter for further research.

Whether efforts should be made to remove or to embed culture in the learning product is also undecided. There are models that prescribe what should not be included in courses to make them more accessible to various audiences (such as idiomatic language, specific symbols, etc). What lacks representation in the literature is the impact of this neutrality on the instructional value of the course.

Regarding the models of incorporating (or removing) cultural influences in the instructional design, Young (2008) observes that although some models were proposed (such as Thomas et al, 2002; Henderson, 1996), none has a significant adoption in the field.

Although cultural implications are seen as relevant to learning and instructional designers are generally aware of the existence of cultural differences (Rogers et al, 2007), in practice there are significant obstacles in implementing culturally-sensitive designs: needs analysis is sometimes done in a hurry because of content requirements and organizational pressures, evaluation is also lacking in

practice, and opportunities to pilot programs are low, low profile role of instructional designers in the organizations means they are often not involved in the initial analysis, nor they are a part of the implementation and evaluation of the program. These circumstances results in a total disconnect from the students they are supposed to design for.

The answers to the third question, "What are the implications for the professional development of instructional designers", highlight a need for a deeper awareness of the instructional designer's own cultural characteristics and assumptions, a necessity of being reflective regarding cultural aspects, getting to know deeply the culture for which the course is designed, preferably by immersion, involving learners and asking for feedback at all stages of design.

Acknowledgements

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