World Culture and ICT use – a Study from Bhutan

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ABSTRACT
The HCI community has recognized the importance of culture and to be culturally sensitive when designing interaction. Local culture should not be overlooked when designing. On the other hand, recent advances in theorizing of cultural patterns have reported that in some sectors, World Cultures has permeated institutions across the world. Such cultures can be said to consist of a dynamic system of values, beliefs, behaviours, norms, rules, tools and technologies, and show similar patterns across the world. If such a culture is present to the degree argued by World Culturalists, the scope for mutual understanding in international projects and global appropriation of technology may be larger than the current theorizing implies. In this paper we investigate the ICT use, with emphasis on World Culture, in higher education in Bhutan. We find a remarkably strong presence of World Culture among faculty members, and discuss the significance from the perspective that Bhutan ought to be a case with relatively weak presence of World Culture.

Author Keywords
Culture, Bhutan, World Culture, Internationalization

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION
For some time, Human Computer Interaction (HCI) has recognized the importance of culture and to be culturally sensitive when designing interfaces. In cross-national and intercultural projects, it is common to pay attention to the local culture among the user populations. It is important to remain open to the possibility of diversity. The argument for user-centred design is partly because we expect universal cultural models to be incongruent with local interests.

However, what has not yet been studied in HCI is that diversity can be surprisingly small. An emerging theory, called “world culture”[1], states that some practices remain largely isometric across continents. If this is true, development of interfaces is less problematic than many HCI studies, that employ cultural explanations have conjectured.

In this paper, we outline how world culture may be present, which will beg the question on how common it is, in an ICT use context. We address that question, by taking a case organisation in Bhutan. Bhutan is suitable to challenge the thesis of world culture, since it has historically speaking been isolated, allowing local cultures to flourish and develop into unique forms of being. Hence, the presence of a “world culture” should be relatively unlikely (as compared to other nations), or weak if present. Thus in order to see whether “world culture” can be said to be present there, we have chosen what Flyvbjerg calls a “black swan” case [6]. The research question on the empirical level is thus: Is the World Culture present in the use of ICT at the Royal University of Bhutan? On the theoretical level it is: What implications may the presence of World Culture have for explaining ICT use and appropriation?

This is an important question to resolve. Paying attention to cultural differences is resource-consuming, and even when resources are spent on this matter, there are many dimensions where cultural issues can arise. Furthermore, there is a risk for reification of cultural differences that will become barriers to ICT appropriation. An invention in a country that is perceived as different may be rejected or at least biased.

Thus this paper contributes by qualifying the tension between the need to be sensitive to the local culture and case specificity on the one hand, and to recognize the opportunities and specificity of world culture on the other. This will serve two goals. Firstly it will be useful for those who work with the methodological design of educational technology research projects where some of the partners perceive the ‘others’ as presumably quite culturally unfamiliar. Secondly, it will serve as a critical appreciation of ‘world culture’ into the field of design of ICT (and in particular our own field, educational technology).

BACKGROUND LITERATURE
The Culture-sensitive Stream of HCI
The HCI and Information Systems discipline are not ignorant to culture [8,16]. [11], making a meta-study of
ICT and culture, summarizes the field by saying that differences in culture results in difference in use and outcome of ICT. These studies are typically on the national level, comparing populations with each other. Generally, the work, especially within Information Systems, have treated culture as a homogenous concept [11]. We want to open up for two possibilities here, which much earlier work glosses over: a) the variety within a population b) an individual do not have a uniform behaviour in ICT. He/she can be “high-context” at home, while “low-context” in profession.

[11] point out the usage of information technology being influenced by ‘culture at various levels’ (national, organization and group) and that ‘cultural resistance’ to IT has been attributed to failures of technology. [7] claim that the technology would come in conflict with local culture in developing countries since the technology has been designed and developed in western countries. Their study done on Arab women revealed the conflict of Arab culture with culture of virtual relationship which is not their accepted culture.

It is well-established within the HCI literature that ICT constitutes a use space where culture leads to variation in use and non-use. The key roles that artefacts play in culture, the primacy of culture over raw biologist, and how culture and artefacts shape each other has also been thoroughly theorized, not least within Activity Theory [8]. On the empirical level, [16] reports on cultural differences in how people coordinate and schedule activity online. The question is, however, how common, determinant and salient are cross-cultural phenomena?

The World Culture Argument
In education, the world culture theorists posit that there is a world culture in education, and provides explanations for the restrictions of the diversity in education. World culturalists claim that educationalists share many models. They tend to unfold in the direction of an increasing interest in active learning [13], small collaborative learning groups [15] and student-centred pedagogy [12], and which are commonly focused in teaching- learning approaches. If the world culturalists are right, many of the didactic principles and educational technology of the North will be possible to implement without much cultural analysis in many South countries (but still with attention to local organisation, just as in any organisation in the North). This is not unique to education, sports and in particular the Olympics is another case in point [10].

[1] mentions the global culture of schooling having propounded a theory stating that “…schools are converging toward a single global model”. But critics hold the view that people either create new culture due to global culture or diversification in a ‘new way’ [1]. Still [4] point out that there is “an increase in common educational principles, policies, and even practices among countries with varying national characteristics”. Thus the values and beliefs are being imbibed by people upon getting exposed to principles and policies practised in other parts of the world.

In order to be concrete, we can here state a few central claims that “world culture” proponents would agree with, which are non-trivial [1]:
- There are cultures (e.g. schooling cultures) that are relatively isomorphic in many parts of the world - despite that the members are neither circulating (i.e. the phenomenon cannot be reduced to individual learning) nor formally associated (i.e. formal rules can not account for the phenomenon).
- Culture has been converging over time, and this trend persists in education; it means that educationalists become more similar in their meaning-making and shared reference.
- As Ramirez puts it; there are levels of principle, models and practice. Principles are more isomorphic than models, which are more isomorphic than the practice, i.e. Bhutanese faculty may “have” principles similar to other faculty in the world, which are then translated differently into practice.
- Some things diffuse and become part of the world culture; others don’t. However, countries around the world have history of infusing an educational system from another country to one’s own country just as Bhutan started modern education in line with Christian missionary schools in India [3].

METHOD
This paper emerged from a larger research projects [5,9,14,17] where we addressed why some lecturers “lag behind” [as seen by technical evangelists and managers] in the use of ICT in their teaching approaches when ICT is increasing becoming available. Hence, the World Culture lens is applied post hoc, when we were surprised of that, intuitively, the problems arising seemed very similar to that of other places, and undertook to structure and formalize that analysis to see whether it was valid.

The data was collected from 27 interviews conducted in 8 colleges under Royal University of Bhutan (RUB). The data was collected to find out how ICT was used in teaching. However, upon analysing the data world culture themes emerged. The interviewees revealed norm and rules while using the ICT in their teaching. In one of the colleges workshop on the use of ICT was conducted.

The Procedure
1) Examine the transcripts from RUB lecturers and classroom observations.
2) We search for literature in places distant from Bhutan, and see of the same problem is persisting. If this is the case, and there is some degree of circulation of material between these places, the assertion that there is a world culture in Bhutan is validated.

We have also made observations (4 hours only), which to some degree validates the approach. This methodology cannot authoritatively establish whether the world culture
or the local cultures are more dominant. That is up to future research.

ANALYSIS

Context – Bhutan and ICT
In this paper, we study emerging themes from a case organisation in Bhutan. Bhutan is suitable to challenge the thesis of world culture, since it has historically speaking been isolated. It was in June 1999 that the ban on TV and Internet was lifted by the fourth King Jigme Singye Wangchuk. In the empirical material, we have investigated ICT use.

Faculty’s ICT Adoption through the Lens of World Culture
What follows here is an aggregation of the most prominent features of the ICT practices and its challenges in teaching. Space restrictions have made us prioritize the nature of the world culture rather than the chain of evidence, which will follow in forthcoming publications.

Using Others’ Models and Pictures in Teaching
In teaching usage of teaching aids or models is common, particularly is science subjects. Pedagogical consideration is an important aspect when using the models in the class. A lecturer points out that before she goes to the lab to carry out real experiment, a model is being shown familiarizing the students with what the concept would be about, what procedures and the expected results. The lecturer says that models and pictures from the net are being gathered and exposed to the students before they carry out any experiment. This approach is creating opportunities for students to analyse and comment on the models ultimately helping them to make sense of what they are doing in the lab during experiment. We find it superfluous to demonstrate that such practice is present outside Bhutan.

Teach how you were Taught
It has been observed that student teachers teach the way they were taught in the beginning of their teaching career.

Most of the present generation of teachers was taught by teachers when use of technology was not popular. A RUB lecturer thus states that, “it takes time to pick up” the skills of using technology in teaching. Some lecturers complain of forgetting passwords which reveals the slow pick up and lack of enthusiasm. Another lecturer said, “Truly speaking I used to use, but now I have forgotten my password and all then I have to go to the IT and revive my password.” Since some lecturers still follow traditional way of teaching, Virtual Learning Environment (VLE) despite the university wide training provided is used sparingly and inconsistently, but its use has not picked up very well among the faculty. Some have even stopped after the initial use.

Perceived lack of IT skill is one dominating problem amongst the teachers (see also [5]. Lack of enthusiasm do not prompt them towards keeping constant touch with IT skills familiarized by ICT personnel or expert. A lecturer says that “... while presenting the power point [uhm] sometimes while making that what you call, making dark, using the graph and all that time I make find some errors myself that is why I find some difficulty”.

Using LCD and a Handout
LCD and handout are two resources that are used by teachers and students alike. Power point presentation (ppt) is generally done using LCD and to help students review the points or ideas handout is being provided. A lecturer says, “I use LCD and then I give the handouts”. we interpret this as a belief that providing handout in advance followed by ppt-files on LCD brings about closer attention in the class. If handout is given ahead closer attention from the students cannot be guaranteed. Again, we find it superfluous to demonstrate that such practice is present outside Bhutan.

Policy – Mandatory and Non-mandatory
A college it has made mandatory for the IT department to make use of ICT, when other colleges have to at least have module descriptor being uploaded on the Virtual Learning Environment. In the beginning of the semester every faculty member makes it a routine to upload the term plans on the VLE.

Resistance to Change
With the use of technology to enhance teaching and learning worldwide, colleges and schools have been adopting the ICT supported teaching and learning. However, it has been observed that certain lecturers resist the insistence of ICT usage in the class. An ICT officer points out the difficulty involved while imparting ICT skills. According to him, training older people is met with objections on the ground that they have been feeling justified maintaining with the traditional approach. A lecturer expressed that he finds “traditional way of teaching and learning process (to be) more comfortable than using VLE”. User resistance can occur due to local-cultural reasons, but we saw no evidence to that.

Use of ICT Encourages Plagiarism
“The other challenge could be the possibility of plagiarism when we use net based materials and when we ask them to come prepared with a PPT there are chances that they can copy without their own input there...Teacher may not be able to detect.”

A lecturer points out that “ in IT it is all copy and paste. One student does it and sometimes they forget to change their roll...sometimes we land up everybody getting the same answer. Cannot be. Until and unless they copy and paste”. Plagiarism is surely a cultural issue, but there is nothing local about it.
**An Instance of Local Culture: ICT brings GNH into classroom**

Finally, through the data one category emerged that actually can be considered local rather than World Culture.

The visual impact provided by use of ppt contributes to psychological well-being, community vitality and proper time use, which are domains of GNH. Use of ppt allows student to interact with lecturer and among themselves on the topics presented. An atmosphere where all the students take part in the learning is created as the materials are given to student in advance and the students come prepared and take part in the discussion. As a result the student understands the concept very fast and time is saved.

**CONCLUSIONS**

This paper has identified a number of themes pertinent to the usage of ICT in the case organization. To a major degree, they are all issues that manifest themselves also in other higher education institutions globally. Nation-idiiosyncratic issues, on the other hand, are much fewer.

There can be no doubt that Bhutan is a country with unique cultures, but it does not manifest itself in our chosen ICT context (with the exception of GNH).

Based on this, one may conclude that local culture ought not to be a major barrier for appropriating ICT in Higher Education in more advanced ways in some areas, despite the unlikely event of a Bhutanese World Culture. At the same time, there would still be a design space for local-culture ICT as well (e.g. in mindfulness [17]).

However, Benedict claimed that uniqueness is not a question of relative similarity. Difference e.g. between Bhutan’s version of “world culture” and the general World culture may “however small in proportion to the whole, turn its future course of development in a unique direction” [2]. This is a difficult question, since you can never a priori conclude that a difference has no importance to the design or appropriation process. HCI does not currently have a strong predictive theory of user behaviour that can explain which kinds of cultural differences that will lead to corresponding variation in appropriations. The outcome of such cultural tensions will be contingent in the beginning of design projects, and design methods must take it into account.

Note that we are not deemphasizing the importance of culture. We fully agree that culture is a useful way to understand human ICT use [8]. It is also important to study the development of culture, i.e. how one of the underlying design constraints are slowly morphing into new forms. What we thorough our study has come to doubt, is whether the Other is always so different from ourselves or from design context in our own country, and to tune attention to WHEN that is the case.

Note also that this is not a normative call to roll out the World culture at the expense of local culture. In the end, it is a descriptive study shedding light of possibilities and limitations of design in global contexts. This will weigh into the more political analysis of which cultures to design for, and when and where that can be done.

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**REFERENCES**