Cultural aspects related to motivation to learn in a Mexican context

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Abstract. The development of motivationally intelligent tutoring systems has been based on a variety of motivational models from the psychology field. These models mainly consider characteristics from de areas of values, expectancies and feelings [1]. However, this paper proposes to take into account some cultural aspects when operationalizing such models. The basis of this proposal is presented from the perspective of some cultural aspects that effect career choice, in particular for a Mexican context.

Keywords: Motivation, career choice, Mexican cultural context

1   Introduction

Research in motivation to learn when using educational technology has operationalized different motivational models found in the psychological literature in order to develop motivationally intelligent tutoring systems. According to these models, motivationally aware tutoring systems should combine expertise and knowledge about user's cognitive, affective, meta-cognitive and meta-affective levels in order to appropriately react and be able to favor user's learning [2, 3]. That is, these models should mainly consider characteristics from the areas of values, expectancies and feelings [1].

However, this paper argues also for the inclusion of other aspects that have been seldom taken into account so far. We refer to cultural aspects inherent to each group of individuals from a certain background. Since there is evidence that students from different cultural origin react to the same motivational strategy in a different way [4, 5, 6] or have different attitudes for online assessment [7], the cultural aspect of learning with technology becomes an important issue. For instance, if a female student from a highly gender-stereotyped cultural background is asked to attend a course considered to be strongly oriented to men, then she might perceived to be in the wrong course and probably will not exert her maximum effort. Or even she might believe that her role in society is to be protected by someone, and she attends courses just to be in the possibility to meet that expectation. It will not matter what motivational strategy the teacher uses, since the female student's cultural belief is in an apparently superior level and she will only be concerned to learn at the minimum, just to continue studying until meeting her protector [8].

In order to develop the arguments to support the inclusion of cultural aspects in the design of motivationally-aware tutoring systems, the following sections describe some of these elements within a Mexican context from the perspective of career choice, based on the findings that instrumental motivation is an important predictor for course selection, career choice, and performance [9, 10]. That is, students may pursue to perform well in some tasks because they are important for future goals, even if the student is not interested on the task.

2   Motivation, career guidance and cultural context

Motivation is related to the student's desire to participate in the learning process. Current research findings suggest that motivational constructs do change over time [11, 12, 13] and/or contexts [14, 15, 16]. In particular, it is well documented that cultural differences affect achievement motivation [4, 5, 6].

We believe that if teachers truly want to promote the success of all students, they must recognize how achievement motivation varies culturally within the population it serves.

Similarly, career counseling must incorporate different variables and different processes to be effective for students from different cultural contexts. Career counseling is defined as "the process of assisting individuals in the development of a life-career with focus on the definition of the worker role and how that role interacts with other life roles" [17].

According to Rivera [18], there are characteristics that prevail among Hispanic/Latino American children and adolescents, such as: A) Restraint of feelings, particularly anger and frustration; B) Limited verbal expressions toward authority figures; C) Preference for closer personal space; avoidance of eye contact when listening or speaking to authority figures; D) Relaxation about time and punctuality; and immediate short-term goals; E) Collective, group identity; interdependence; cooperative rather than competitive; emphasis on interpersonal relations. To certain extent, these characteristics can be considered part of one of the four sources of information, social persuasion, included in the model of the Socio Cognitive Career Theory [19], (see Table 1). This framework conceptualizes career choice as a process with multiple stages and different sources of information. We propose that cultural aspects of the Mexican context might have an impact not just the process of choosing a career, but on the way students undertake their learning activities as described in the following paragraphs.

Table 1. Sources of information proposed in the model of social cognitive influences on career choice behavior [19]

Source of information	Description
Performance accomplishment	Success in performing the target task or behavior
Vicarious learning or modeling	To watch others who could perform the target behavior successfully.
Emotional arousal	Anxiety when performing the target behavior
Social persuasion	Support and encouragement from others in the process of performing the target behavior.

2.1   Machismo

There is growing research supporting that achievement differences between genders are smaller during early years of school or being reduced [20]. The succession of career behaviors for women is far more complex than for men. In particular, in Mexican students, the complexities might lay in the cultural aspect of machismo. In Mendoza's review [21], machismo is defined as a strong sense of masculine pride, and it is suggested that machismo should be considered in any Latino study, but it is often forgotten. The social behavior pattern associated to machismo includes the expectation of men being caring, responsible, decisive, strong of character, and the protector of probably extended family. At the same time, negative aspects of machismo include aggressiveness, physical strength, emotional insensitivity, and a womanizing attitude towards the opposite sex.

Galanti [22], cited in [21], surveyed a group of Latino students who reported that the relationship between male and female would be of protector and protected. More specifically, according to them, the role of the traditional Hispanic woman is to look after the family; her job is to cook, clean, and care for the children. Other characteristics of a good wife include submission and obedience to her husband's orders without questioning him but rather standing behind whatever he decides, even if she disagrees. She must also be tolerant of his behavior. Taking into account these views it is understandable that women´s career choice might be influenced by the fulfillment of this profile rather than freely choosing a career that may imply a great amount of dedication. In some Mexican contexts, women may prefer to undertake studies that are less demanding. Women also must strive to overcome obstacles such as gender discrimination and sex stereotyping. For instance, Gallardo-Hernández *et. al.* reported the results of a questionnaire applied to 637 first-year medical nutrition, dentistry and nursing students

[23]. The findings suggest that among women of low socioeconomic strata, more traditional gender stereotypes prevail which lead them to seek career choices considered feminine. Among men, there is a clear relationship between career choice, socioeconomic level and internalization of gender stereotypes.

2.2   Social orientation

Cooperative learning is very important for Mexicans [24]. They do not seem to openly want to show what they know for fear of embarrassing those who do not know [25]. It is not common in a Hispanic family to encourage children to excel over siblings or peers but rather, it is considered bad manners. It is worth noting that most of the studies reported have taken into account the Mexican context around Mexican American students but no studies so far focus on comparison between this population and a Mexican population living in Mexico. Nevertheless, their findings can, to some extent, be considered valid for Mexican population. For instance, Ojeda and Flores [26] considered the educational aspirations of 186 Mexican American high school students to test a portion of social-cognitive career theory [19]. Their results indicated that perceived educational barriers significantly predicted students' educational aspirations above and beyond the influence of gender, generation level, and parents' education level. Similarly, Flores, Romero and Arbona [27] found that Mexican American men and women with high measures of ethnic loyalty might be at risk for perceiving social costs of pursuing a higher education.

2.3   Perception of time and career guidance

Mexicans are oriented toward present time; they are focused on "right now" rather than on the past or on future events or outcomes. They often live the phrase "Dios dirá" or "God will tell," that is, time is relative. To arrive late for an engagement is called in the southwest "Mexican time." This perception permeates career-counseling programs in the Mexican context, since its interventions start in the educational level just behind the university program [28]. Therefore, students have to decide in a relatively short period of time which career suits them best. Sometimes the students might have a great amount of career information, making it difficult to make a good analysis of each of the options. But it also might occur that there is little availability of information and students might end up making an inadequate career choice.

3   Discussion

Increasingly, researchers are calling for studies of change in motivation, rather than treating motivation as a static trait-like factor [1], [4]. However, those studies mainly consider motivation to be influenced by characteristics from the areas of values, expectancies and feelings [1], without taking into account that some cultural aspects like machismo, social orientation or perception of time might also be influencing how students approach to a learning activity. For instance, women could be avoiding pursuing a career that would not allow them to easily integrate their expected roles as mother and spouse with their future professional activity. Also, the perception of educational barriers, such as gender and ethnicity, nurtured by the social context could reinforce the idea of choosing a career according to the students' sex, which in turn might influence students' motivation to learn a particular area of study. Although there is little research evidence that establishes a direct connection between career choice and motivation to learn a particular topic, this paper reviewed some cultural aspects in the Mexican context that have an impact on students' learning behavior. Based on this, we consider plausible to do some research that consider these aspects when designing a motivationally tutoring system. For example, in a Mexican context, a tutoring system for Mathematics could emphasize women's capacity to solve problems regardless of their gender, like providing feedback including mentions to important contributions from female scientists, or listing the advantages of achieving personal professional success as a woman, or maybe using a very strong female character showing high IQ as the main avatar.

4   REFERENCES

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