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Long term orientation: A comparative study amongst engineer and tourism students

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ABSTRACT

Objective: To investigate differences amongst the LTO (Long Term Orientation) profile of graduate students of two academic programs: tourism and engineer.

Design/methodology/approach: A total of 66 students participated in the study. The items of each construct corresponded to the two dimensions established by the original LTO scale. The validity test for the measurement scale was based first on exploratory and then on confirmatory factor analysis. The internal reliability consistency of the multi-item scales was assessed with Cronbach's alpha. Independent sample t-tests were applied to verify the hypothesis.

Results: The eight-item LTO scale performed reasonably well, lending support for its internal validity for the sample. The engineering students (6.16±0.65) had higher levels for the planning dimension compared with the tourism students (6.10±0.56), still there were no significant differences in the estimates ($t=-0.391$, $p=0.697$), and students of the tourism program rated significantly higher ($t=3.557$, $p=0.001$) for the tradition dimension (6.12±0.59) compared to the engineering students (5.42±0.90).

Limitations/implications: The study focus only in one personality trait. Education providers can draw upon these findings a better understanding of their students, becoming relevant for the curriculum.

Findings/Conclusions: Students of the tourism academic program score higher in the tradition dimension of the LTO profile. On the contrary, there was no difference regarding the planning factor of the LTO profile. Therefore, LTO scale might be useful for understanding students' decisions and personal orientations, allowing for academic programs to better focus their curriculum.

Keywords: Tourism education, engineer students, student profile, construct validity, planning, tradition.

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INTRODUCTION

Many studies have shown the relevance of long term orientation (LTO) amongst people as a cultural trait (de Mooij and Hofstede, 2010). National cultural models are patters that have repercussions in how groups and individuals work, such as its relationship towards

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authority, self-conception and conflict dilemmas and how to solve them (Kluckhohn and Strodtbeck, 1961). One of the cultural dimensions most studied has been the long and short them orientation, which is the measure by which a society exhibits a pragmatic perspective towards the future instead of an historical view or a conventional short term one. The values considered in the long term orientation (LTO) are: perseverance, status, saving and having a sense of shame. The contrary is the short term orientation that includes: firmness and personal stability, as well as respect for tradition. The attention is placed on the search of happiness more than mental peace. The long term orientation implies investing on the future (de Mooij and Hofstede, 2010). It can be said that the conceptualization of the long term orientation is a prospective vision, meaning by that a long term or future one; still, it also considers a past vision, that is to say a short term, with two sub-dimensions: tradition and planning (Arli and Tjiptono, 2014). Long or short term orientation has implications in the individual's actions, as those that present a long term orientation will seek productivity whist those with a short term orientation will focus on tradition.

One of the main critics to the national culture models is that they are based on a study carried out as an aggregated level and not an individual level, therefore, values could be attributed to individuals or groups and not of a national culture or subculture. Due to this criticism, Bearden *et al.* (2006), developed and validated a measure to evaluate short and long term orientation regarding time in a scale known as long-term-orientation (LTO), which has two dimensions: planning and tradition.

The effect of the individuals LTO has been previously analyzed in different studies, such as: entrepreneurial behavior of family businesses (Lumpkin *et al.*, 2010); customer relationships management (Olavarria-Jaraba *et al.*, 2018); and, ethical values (Nevins *et al.*, 2007). Some studies followed a gender approach (Sreen *et al.*, 2018), others focused on the national level (Fang *et al.*, 2013; Lortie *et al.*, 2019). Many studies are from the marketing area (Abubakar and Mokhtar, 2015; Olavarria-Jaraba *et al.*, 2018), whilst others are more interested in understanding its effects in business management (Ryu *et al.*, 2007; He and Sun, 2020).

LTO and education, has also been studied previously. For example, Fang *et al.* (2013) found that national culture played a role in the success or lack of it of young learners. Rodríguez-Gázquez *et al.* (2021), compared national values amongst nursing students of Spain and Colombia, noticing that there were significant differences due to country culture. Whilst Cidral *et al.* (2020) found that students' long-term orientation positively influences the use of e-learning systems' and its net-benefit perception. Therefore, LTO seems to be relevant for understanding students' decisions and performance (Kvan and Jia, 2005).

To the best of our knowledge no literature in the Mexican context has studied LTO amongst graduate students of different orientation programs. This research intends to cover this gap by applying LTO scale to compare students belonging to two different graduate programs: tourism and engineering. Our aim in this research is to investigate the differences amongst the LTO profile of graduate students in two academic programs. Our findings will benefit academic programs to better focus their curriculum.

Conceptual background and hypothesis development

To assess time orientation, Bearden *et al.* (2006) developed and validated LTO, a scale that assess differences in long and short term orientations regarding time, a main difference with other scales is that this has a holistic view of the future and the past and no merely focuses on "here and now". Therefore, viewing time holistically can be considered as a cultural value. The scale is constructed as a two-factor, where tradition and learning from the past is considered as the short-term value and persistence is the long term value.

Academic orientations and LTO

Students on the engineer area are formed considering their abilities to generate research as well as being able to develop innovations in their area, following a science-oriented program (Valdés-Cuervo *et al.*, 2013). This discipline learning process is focused on logical and analytical thinking strategies and reproduction directed learning whilst social sciences, where tourism students belong, learning process focus on internal motivation, critical and holistic thinking strategies as meaning-directed learning (Vettori *et al.*, 2020). As the learning process as well as the academic paths are different for tourism and engineering graduate students, we state that their LTO profile should also be significantly different. As we used the Bearden *et al.* (2006) scale, which has two factors: tradition and planning, therefore we hypothesize that:

H1. Students of the engineering academic program might score higher in the planning factor.

Tourism is one of the most important industries in the world (Lu and Adler, 2009), still, tourism education suffers from poorer academic intakes often combined with low levels of aspiration and performance, which leads to low long-term engagement with careers in the industry. Tourism studies normally have lower entry levels than other subjects. And the choice to study tourism, is related to a personal interest in travel and personal circumstances and convenience, with little attention to subject relevance (Ramakrishnan and Macaveiu, 2019). Thus, we hypothesize the following:

H2. Students of the tourism academic program might score higher in the tradition factor.

MATERIALS AND METHODS

Sample and data collection

Data derived from a convenience sampling at one public graduate school campus in Veracruz, Mexico. Students taking a business course first responded the questionnaire, then they were asked to help in applying the questionnaire to their peers on campus in classrooms and public spaces. The students belonged to two programs offered at the same campus, the tourism program has a more practical application whilst the engineering program is research oriented. The first program has 13 generations of graduate students and the other one 18 generations, each generation has between 3 and 10 students, being

the tourism program the less populated, students belonging to four different generations participated in the study. A total of 66 students, mostly females, participated in the study (Table 1). The gender distribution is related to the overall distribution on both programs, which are mainly female students. No student of the two programs refused to take part in the research.

Measurement scales

All the measures used in this study were drawn from existing literature and adapted to serve the purpose of this study. The items were based from Bearden *et al.* (2006), they were translated from English into Spanish and using the back translation method to ensure the reliability and concordance of the translation process. The questionnaire had only two parts, the first were some basic demographic information, the second was the LTO section. It was adjusted by discussing it with five experts in the business area, and a pilot was tested with five engineering students. The items of each construct corresponded to the two factors established by the original LTO scale (Table 2). The responses were sought on a 7-point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree).

Table 1. Demographic of the sample (%).

Demographic	Tourism (n=27)	Engineering (n=39)	Total (n=66)
Gender			
Male	11.11	35.90	25.76
Female	88.89	64.10	74.24
Age			
21-26 years	48.10	59.00	54.60
27-31 years	33.40	30.80	31.80
32-36 years	7.40	5.10	6.10
37-46 years	11.10	5.20	7.50

Table 2. Items of the LTO scale.

Item	Total (n=66)		Tourism (n=27)		Engineering (n=39)	
	Mean	SD	Mean	SD	Mean	SD
Respect for tradition is important to you	5.98	1.21	6.48	0.13	5.64	0.22
You plan for the long term	5.82	0.83	5.74	0.15	5.87	0.14
Family heritage is important to you	5.44	1.52	6.19	0.17	4.89	0.27
You value a strong link to your past	5.40	1.31	5.63	0.22	5.22	0.24
You work hard for success in the future	6.42	0.66	6.33	0.12	6.49	0.11
You don't mind giving up today's fun for success in the future	5.88	1.23	5.85	0.22	5.89	0.21
Traditional values are important to you	6.03	0.88	6.19	0.15	5.92	0.15
Persistence is important to you	6.45	0.71	6.48	0.14	6.44	0.11

Data analysis

The information gathered was analyzed with the SPSS version 20.00 program (SPSS Inc., Chicago, IL, USA). A conventional validity and reliability tests were conducted (Clark and Watson, 2019). The validity test for the measurement scale was based first on exploratory and then on confirmatory factor analysis (CFA). The internal reliability consistency of the multi-item scales was assessed with Cronbach's alpha (Bearden *et al.*, 2006), in some cases average variance extracted (AVE) (Fornell and Larcker, 1981), and composite reliability (CR) (Vinzi *et al.*, 2010) values, were calculated. Independent sample t-tests were applied to verify the hypothesis.

RESULTS AND DISCUSSION

LTO for all students

In order to check for cross-loadings and to replicate the analyses of Bearden *et al.* (2006) an exploratory principal-axis factor analysis with varimax rotation was undertaken on the data for both program samples. The Kaiser-Meyer-Olkin value was 0.652, therefore, the application of the factor analysis was sufficient for these data set. In Table 3, results for both programs are presented. The first factor extracted was planning.

In this initial study, dimensions seemed to be similarly as conceived by Bearden *et al.* (2006). The eight-item LTO scale performed reasonably well, lending support for its internal validity for the sample, including students of both programs.

LTO for each academic program

When an exploratory principal-axis factor analysis with varimax rotation was undertaken on the data for each program samples, data did not behaved as established by Bearden *et al.* (2006).

In the case of the students of the engineering program, three factors were found, the first one with the planning dimension, the second one had the tradition dimension, except

Table 3. Long-term orientation items with factor loadings and reliability values.

Item	Component 1	Component 2
Tradition		
Respect for tradition is important to you		0.658
Family heritage is important to you		0.631
You value a strong link to your past		0.782
Traditional values are important to you		0.636
Planning		
You plan for the long term	0.681	
You work hard for success in the future	0.845	
You don't mind giving up today's fun for success in the future	0.604	
Persistence is important to you	0.749	
Initial eigenvalues (29.92% variance explained)	2.394	
Extracted components (52.40% variance explained)	1.798	
Cronbach's alpha	0.624	0.626

for the item: "Family heritage is important to you"; that became another dimension (0.922) with "You value a strong link to your past" (0.676). The Kaiser-Meyer-Olkin value was 0.541, the initial eigenvalues (2.316) explained 28.94% variance, the extracted components (1.110) the 67.13%. However, the average variance extracted (AVE) value met or exceeded the recommended level of 0.5 for components two and three, and component one value was 0.44, still the composite reliability (CR) values for all constructs were all above 0.6. (Fornell and Larcker, 1981).

The tourism program sample had two components, the first one with six factors, and the second one was composed by the items: "Respect for tradition is important to you" (0.826) and "Traditional values are important to you" (0.787). The Kaiser-Meyer-Olkin value was 0.696, the initial eigenvalues (3.136) explained 39.19% variance, the extracted components (1.458) the 57.41%. Both AVE and CR values were adequate (Fornell and Larcker, 1981).

Differences in the number of dimensions can be attributed to the sample size (Kyriazos, 2018), but also, it can mean that the planning dimension was more solid contrary to the traditional one. This might be because both populations were students. The third component in the cultural dimension for the engineering sample can be attributed to the fact that the item "Family heritage is important to you" scored the lowest, distancing itself of the rest of the items in that dimension, therefore behaving as a different latent variable (Ziegler and Hagemann, 2015).

Academic orientations and LTO dimensions

Paired t-test were then computed to examine the difference between estimates of LTO dimensions: tradition and planning, and academic programs: tourism and engineering (Table 4). Though there was a small difference between both programs, with the engineering students with higher levels for the planning dimension, there were no significant differences in the estimates ($t=-0.391$, $p=0.697$). Therefore, results did not support H1. On the contrary, tests of H2 supported the predictions, as students of the tourism program rated higher for the tradition dimension compared to the engineering students ($t=3.557$, $p=0.001$).

Previous studies have shown that academic majors do influence students intentions because the knowledge it is provided to the students (Dao *et al.*, 2021), also, students of social sciences tend to have learning process focused on internal motivation more than being focused on local and analytical thinking as students of the technical sciences do (Vettori *et al.*, 2020). In this case, the students of the tourism program are oriented to understanding and preserving tradition, which is consistent with our findings.

Table 4. Dimensions of the LTO scale.

Dimension	Total (n=66)		Tourism (n=27)		Engineering (n=39)	
	Mean	SD	Mean	SD	Mean	SD
Tradition	5.70	0.86	6.12*	0.59	5.41*	0.90
Planning	6.13	0.61	6.10 ns	0.56	6.16 ns	0.65

*: T-test, $p<0.05$; ns: not significant.

Limitations and future research

One of the limitations of this studies is that if focus only in one personality trait: long term orientation; whereas other studies have showed that variables such as gender, learning approaches (Vettori *et al*., 2020), ethics (Nevins *et al*., 2007), could give a more holistic understanding of the students' decisions and performance. Therefore, a recommendation for further research would be to include other variables in the study.

Another limitation of this study was the sample size, which might influence the results, especially when each program was analyzed independently. This sample is justifiably as the general population of students in the program is small (between 4 and 10 per generation), therefore almost four generations participated in the study. Future studies with larger populations of students might produce more generalizable results. A study considering undergraduate students may yield interesting differences and similarities regarding long term orientation.

CONCLUSIONS

In this research, we have explored the differences amongst the long term orientation (LTO) profile of graduate students in two academic programs: tourism and engineering. Using empirical data from students of two graduate programs, we tested two hypotheses. Results support the proposed effects: Students of the tourism academic program score higher in the tradition factor of the long term orientation profile. On the contrary, there was no difference regarding the planning factor of the long term orientation profile. Therefore, LTO scale might be useful for understanding students' decisions and personal orientations, allowing for academic programs to better focus their curriculum.

Practical contributions of this research are twofold. Education providers, can draw upon these findings a better understanding of their students, students in the tourism orientation do care about tradition, still they do consider planning relevant, therefore this aspect should be relevant for the curriculum. This scale had never been studied in a Mexican population, as the two dimensions were verified, this gives support to Bearden *et al*. (2006) scale. Allowing for its use as a psychometric scale.

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