Nationality as a Determinant of Learning Styles: 
Comparing Marketing Students from 
Bulgaria and the USA

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ABSTRACT

More than ever, college students vary in terms of nationality and cultural backgrounds, which raises the question: do these cultural differences translate into different learning styles? This study attempts to investigate how marketing students from different countries adopt certain learning styles using two samples of undergraduate students from the USA and Bulgaria, examining separate aspects of learning style preferences based on Kolb’s Learning Styles Inventory. Results indicate that only one out of the four Kolb’s learning styles dimension is different in the two samples, and even though students from the two countries differ in terms of learning styles, the majority seem to prefer the assimilation and convergence styles.

Keywords: Marketing students; cultural variability; learning styles.

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Introduction

While learning is one of the most universal of human activities, the ways in which knowledge is gained can differ across cultures (Hofstede 1997; Joy and Kolb 2009). The learning styles of higher education students differ as a consequence of the constraints different cultures place on human behavior (Katz 1988; Pratt 1992; Abramson, Keating, and Lane, 1996, DeVita 2001, Holtbrügge and Mohr, 2010, Hays and Allinson, 1988). Previous research also recommends the investigation of the effect of culture on learning styles as dictated by globalization and the expansion of the multicultural classroom (e.g., Auyeung and Sands, 1996; Holtbrügge and Mohr, 2010). For example, the number of international students enrolled in colleges and universities in the United States totaled 582,984 in the 2006/07 academic year, according to the Open Doors report, published annually by the Institute of International Education (IIE) with support from the U.S. Department of State's Bureau of Educational and Cultural Affairs. In addition, in an attempt to capture additional students, multiple universities have opened foreign-based campuses, e.g. the Texas A&M university campus in Qatar, and INSEAD’s in Singapore.

Realistically, marketing educators cannot be expected to develop different teaching styles to accommodate different learning styles of their students. However, educators can provide various learning experiences in the classroom, so that various learning styles are addressed. To do so, teachers and university administration have to be aware of the differences in learning style preferences of students with various cultural backgrounds.

Many educators realize that in order to increase the engagement in the classroom, they have to accommodate different learning styles especially when the composition of the student body is multicultural. This study investigates how marketing students from different countries adopt certain learning styles using two samples of undergraduate students from the USA and Bulgaria. Marketing educators can use this information to understand how to diversify their teaching styles and as a result to engage all students and provide an inclusive approach to the process of education. The paper will examine and identify differences in separate aspects of learning style preferences based on Kolb’s Learning Styles Inventory (LSI) across two different cultures. The results are of potential importance (1) for marketing educators in curriculum development and pedagogy and (2) for practitioners and researchers interested in the learning style preferences for students with different cultural backgrounds.

Kolb’s Typology of Learning Styles

Kolb’s (1984) experiential learning cycle, which has been extensively applied in the marketing education literature (e.g., Petkus 2000; Hagenbuch 2006), involves four stages of experiential learning: concrete experience, reflective observation, abstract conceptualization, and active experimentation. A person with concrete experience abilities should be able to engage fully, openly, and without bias in new experiences. Once students immerse themselves in a concrete experience, they engage in observation and reflection. Reflective observation involves watching, listening, recording, discussing, and elaborating on the experience. Observations are then used to form theories about the world. Finally, students should be able to use this information to make decisions and solve problems. Kolb argues that as a result of different factors of the environment and specific experience, students develop learning styles that emphasize given learning abilities over others. Thus, concrete experience and abstract conceptualization are two dialectically related modes of grasping experience, while reflective observation and active experimentation are two dialectically related modes of transforming experience (Joy and Kolb, 2009).
Based on combinations of these experiential learning dimensions, Kolb (1984) formulates four distinct learning styles. Diverging style is a combination of concrete experience and reflective observation. People that prefer this learning style are comfortable with looking at phenomena from different perspectives, they are sensitive, and prefer to watch rather than do. These people will perform better in situations that require idea generation instead of situations that require a hands-on approach. They have broad cultural interests, like to gather information, interested in people, emotional, imaginative. Their major strength is in the arts and they exhibit preference to work in groups, listen with an open mind, and to receive personal feedback (Kolb 1984). The assimilating learning style combines reflective observation and abstract conceptualization. They excel in inductive reasoning, in assimilating disparate observations into an integrated explanation, and in their ability to create theoretical models. They are more concerned with abstract concepts, than with the practical use of theories. The assimilating learning style often translates into a success in the information and social science careers. People with this style prefer readings, lectures, exploring analytical models, and having time to think reflectively (Kolb 1984). The converging learning style combines abstract conceptualization and active experimentation. People with this style are strong in the practical application of ideas. They seem to do best in those situations like conventional intelligence tests where there is a single correct answer or solution to a question or problem. They use hypothetical-deductive reasoning to focus their knowledge on specific problems. They have narrow technical interests, and usually specialize in exact sciences such as the physical sciences and engineering. Individuals with a converging style prefer to deal with technical tasks and problems rather than with social issues and avoid interpersonal issues. In formal learning situations, people with this style prefer to experiment with new ideas, simulations, laboratory assignments, and practical applications (Kolb 1984). Finally, the accommodating learning style is based on concrete experience and active experimentation. Its greatest strength lies in doing things; in carrying out plans and experiments and involving the person in new experiences. People with this style tend to be more of risk-takers than people with the other three learning styles. The style is labeled "accommodating" because people with preference for it tend to excel in situations where they must adapt themselves to specific immediate circumstances. When the facts contradict a plan or a theory they will go with the facts, exactly the opposite of the assimilator, who would be more likely to disregard or re-examine the facts. Accommodators are at ease with people and their educational background is often in technical or practical fields such as business. In organizations, people with this learning style are found in jobs that are "action-oriented" such as marketing or sales.

Cultural differences in learning styles

Hofstede (1991) argues that there is a difference between learners on the opposing ends of the collectivism-individualism continuum and the way they perceive the purpose of education. In collectivist societies, education is accepted as a means for an individual to acquire the skills necessary for him to become an acceptable member of the group. In individualistic societies, education is perceived to be essential for coping with new, unexpected situations. Auyeung and Sands (1996) test this difference with a sample of accounting students from Hong Kong, Taiwan, and Australia and find empirical evidence that supports the hypothesis that learning styles vary with culture. Australian students preferred the accommodating learning style and the other two groups found the assimilating style more comfortable. In an extension of Auyeung and Sands’ (1996) work, Jaju, Kwak and Zinkhan (2002) used all four cultural dimensions from Hofstede’s framework. They investigated cross-cultural differences in the learning styles of undergraduate business students, using data from students studying business in the USA, Korea and India. The findings of their study provided empirical support to the claim that students’ learning styles are different across the four cultural dimensions- power distance, individualism, masculinity, and uncertainty avoidance.
Holtbrügge and Mohr (2010) also find learning style variations across cultural values, this time using all five cultural dimensions proposed by Hofstede, including the long-term orientation.

According to research by McKee, Mock, and Ruud (1992), US students can be classified as accommodators, while Jaju, Kwak and Zinkhan (2002) classified them as divergers. Chinese students’ preferences have been classified into different learning style categories as well (Holtbrügge and Mohr, 2010). Holtbrügge and Mohr (2010) explain these contradictions with the heterogeneity of learning style preferences within a country and try to avoid such problem by looking at commonly used cultural values from an individual perspective. Country-level constructs are not logically or empirically created the same way as individual-level constructs and as previous research has demonstrated (e.g., Hofstede, Bond, & Luk, 1993; Leung, 1989), the pattern of correlations at the national level is not replicated at the individual level.

When it comes to learning, some cultures are student-centric and some are teacher-centric. For example, the western educational system encourages active student participation in the learning process, more autonomy and initiative, learning through own experimentation and discovery, while the eastern system requires from the teacher to lead and provide structure (Ladd and Ruby 1999). Therefore, based on individual and cultural differences, some students will prefer less control and responsibility over the learning process and more passive learning tools such as lecturing while others will be more likely to learn through individual problem-solving projects or engage in active discussions as they welcome more control and personal responsibility (Rodrigues, 2005). If this is so, it may be easy to see why teaching techniques, learning tasks, and environments that are effective in some cultures may be ineffective and lead to frustration in others. Yamazaki and Kayes (2005) examined cultural differences in learning styles between Japanese and American managers and found significant difference in their learning styles. Japanese managers are more concrete and reflective, and thus more likely to prefer the diverging learning style, whereas American managers are more abstract and active embracing the converging learning style. There, undoubtedly, are differences within the western culture as well. For example, Lindahl and Fanelli (2002) found that students in France demand the ‘right’ answers when analyzing case studies, as opposed to US students.

Extending this rich body of knowledge, the current investigation will attempt to uncover and understand possible new associations between nationality and students’ learning styles, focusing on two countries--Bulgaria and the USA. Bulgaria is a country on the crossroad between the East and the West and as such it has elements of both cultures. Its culture has also been influenced tremendously by more than 40 years of communism and thus, it is close culturally to other Eastern European countries. Based on the Hofstede’s scores for the country, it is relatively high on Power Distance and Uncertainty Avoidance, low on Individualism, and moderate on Masculinity. These factors makes the cultural background of its citizens quite different from the one of the US citizens as US has the highest scores on Individualism, very high Masculinity scores and low Power Distance and Uncertainty Avoidance scores (http://www.geert-hofstede.com/). Based on previous research on culture and cross-cultural differences in learning styles, it is hypothesized that significant differences in learning style preferences between Bulgarian marketing students and US marketing students exist.
Methodology

Instruments
In 2011 Kolb’s LSI was administered to undergraduate marketing students in two universities, one in the North-East of the United States and the other in Bulgaria. For the Bulgarian sample of marketing students, Kolb’s LSI was translated to Bulgarian using the backtranslation method. Kolb’s learning style inventory has been selected for this research because it has been validated and recommended for future research not only by Kolb himself and his colleagues but also by Carlson, Keane, and Martin (1979), Ferell (1983), Katz (1988), Atkinson (1988), Certo and Lamb (1980), and Vince (1998). It has undergone two revisions since it was originally proposed in 1979, and the last modification of the instrument has significantly increased its validity and reliability (Mainemelis et al., 2002).

Kolb’s learning style inventory measures students’ relative emphasis on the four learning modes, CE, RO, AC, and AE. It contains twelve statements each of which have four endings that correspond to the four learning styles and respondents rank the endings according to their preferences for each of them. The rankings for each of the four modes are added up so that an overall score is computed. The higher the score on the mode, the greater the emphasis placed on that learning approach. In addition to those four scores, two composite scores are computed by subtracting CE from AC and RO from AE. These scores demonstrated emphasis on abstractness over concreteness and active experimentation over reflective observation respectively. A positive composite score means more emphasis on abstractness and action, while a higher negative score translates into an emphasis on concreteness or reflection. The scores are consequently used to classify each respondent into one of the four learning styles we discussed earlier.

Sample and procedure
A total of 187 Bulgarian marketing students and a sample of 109 US marketing students participated on a voluntary basis in the research. A number of questionnaires were not included in all analyses, as some parts of the questionnaires were not completed, or not filled in correctly. The major misunderstandings came from the part of the questionnaire that listed items measuring learning styles. Therefore, for each of the consequent analyses we specify the number of respondents. In the Bulgarian sample, the majority (78%) of the respondents are females with 22.5% freshmen, 26.2% sophomores, 28.3% juniors and 23% seniors. In the US sample, the two genders are more equally represented with 40.6% females and 59.4% males. However, the majority of the marketing students in the US sample, 70.3%, are seniors, with 27.7% juniors, and 2.0% sophomores. The average age for the Bulgarian sample is 20.9 years and for the US sample is 21.5 years.

Several nonparametric tests are used to examine the difference between the two samples in terms of all four LSI dimensions –CE, AC, AE, RO, two composite scores AE-RO and AC-CE, as well as the four learning styles- accommodation, divergence, convergence, and assimilation.

Results and discussion
Table 1 shows the learning style dimensions for the total sample and separately for Bulgarian and US marketing students.
Table 1: Learning Styles: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Sample</th>
<th>Bulgarian Sample</th>
<th>US Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Respond’s</td>
<td>Mean</td>
<td>St. Dev.</td>
</tr>
<tr>
<td>CE</td>
<td>282</td>
<td>25.07</td>
<td>5.75</td>
</tr>
<tr>
<td>AC</td>
<td>282</td>
<td>32.89</td>
<td>6.41</td>
</tr>
<tr>
<td>AE</td>
<td>282</td>
<td>30.13</td>
<td>5.53</td>
</tr>
<tr>
<td>RO</td>
<td>281</td>
<td>31.18</td>
<td>6.05</td>
</tr>
<tr>
<td>AE_RO</td>
<td>281</td>
<td>-0.96</td>
<td>9.46</td>
</tr>
<tr>
<td>AC_CE</td>
<td>282</td>
<td>7.82</td>
<td>9.96</td>
</tr>
</tbody>
</table>

There are some differences and similarities that we can observe at this point with major divergences in terms of AC and RO dimension along with the AE_RO score. There are differences in terms of preferences for a specific learning style—accommodation, divergence, assimilation, and convergence. Table 2 shows the frequencies of the four learning styles in the total sample as well as their separate distribution in the two countries. The most preferred learning style among marketing students in Bulgaria is the convergence (47.6%), followed by assimilation (38.4%), accommodation (8.1%) and finally, divergence (5.9). American marketing students show highest preference for assimilation (46.3%), followed by convergence (30.5%), divergence (12.6%), and accommodation (10.5%) learning style. A chi-square test for the difference in preference for learning style based on the nationality of the respondent is significant (Chi-square= 9.15, p<.027).

Table 2: Learning style preferences distribution

<table>
<thead>
<tr>
<th>Learning Styles</th>
<th>Total Sample</th>
<th>Bulgarian Sample</th>
<th>US Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Accommodation</td>
<td>25</td>
<td>8.9</td>
<td>15</td>
</tr>
<tr>
<td>Divergence</td>
<td>23</td>
<td>8.2</td>
<td>11</td>
</tr>
<tr>
<td>Assimilation</td>
<td>115</td>
<td>41.1</td>
<td>71</td>
</tr>
<tr>
<td>Convergence</td>
<td>117</td>
<td>41.8</td>
<td>88</td>
</tr>
</tbody>
</table>

A Mann-Whitney U test is performed to compare the means of the two groups of students for each of the four learning modes, the AC-CE dimension and the AE-RO dimension because according to the results from Levine Test of Equality of Variance, the assumption is violated. The normality of some of the variables is also problematic. The results from the test are summarized in Table 3. Significant differences between the two samples are found in two cases—RO (Z=-4.07, p<.000) and AE_RO (Z=-2.78, p<.005) differ for Bulgarian and US marketing students. US students are more likely to engage in watching than their Bulgarian counterparts. However, both groups are equally likely to rely on feeling (for variable CE: Z=-.061, p<.95), thinking (AC: Z=-1.54, p<.12), or doing (AE: Z=-1.10, p<.27) in their learning process.

An emphasis on RO dimension means that US students focus more on reflecting on an experience and understanding its meaning, they need information to learn as opposed to practical application. This is in line with previous research (e.g., Mohr and Holtbrügge 2009) that students from individualist cultures (USA) will have higher preferences for RO compared to people from collectivist cultures (Bulgaria).
Grasping (AC-CE) or how individuals prefer to acquire information- through abstract conceptualization or concrete experience: concrete experience focuses on direct involvement and feelings, while abstract conceptualization means using logic and theoretical concepts. According to our results Bulgarian and US students have similar preferences for general theorizing. Transformation (AE-RO) or how individuals handle information- through active experimentation or reflective observation: Bulgarian students place more emphasis on doing as opposed to observing relatively to their American counterparts.

Table 3: *t*-test on Learning Style Differences: Scale Scores and Composite Scores

<table>
<thead>
<tr>
<th>Learning preference</th>
<th>Bulgarian students</th>
<th>US students</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean Rank</td>
<td>N</td>
</tr>
<tr>
<td>CE</td>
<td>187</td>
<td>141.71</td>
<td>95</td>
</tr>
<tr>
<td>AC</td>
<td>187</td>
<td>146.83</td>
<td>95</td>
</tr>
<tr>
<td>AE</td>
<td>187</td>
<td>145.30</td>
<td>95</td>
</tr>
<tr>
<td>RO</td>
<td>186</td>
<td>126.91</td>
<td>95</td>
</tr>
<tr>
<td>AE_RO</td>
<td>186</td>
<td>150.63</td>
<td>95</td>
</tr>
<tr>
<td>AC_CE</td>
<td>187</td>
<td>144.67</td>
<td>95</td>
</tr>
</tbody>
</table>

* p<.005; ** p<.000

As Table 3 demonstrates, almost half of the Bulgarian students are convergers combining abstract conceptualization with active experimentation, making them deductive learners that prefer to work on a technical problem than working with people. This is somewhat counter intuitive as Bulgarian culture is more collectivist. We should look at the peculiarities of the Bulgarian educational system as a whole, to explain our results. Bulgarian educational system, especially in the phase of elementary, junior high and secondary education, emphasizes deduction as a means of instruction and learning. Students are taught different theories and apply them based on logical conclusions and accumulated experience. The reasons for the persistence of this somewhat traditional method, are multiple and are beyond the scope of the current investigation. In the stages of post secondary education, deduction also exists, but recently has been combined with other active methods such as team discussion, case analysis, role playing, etc. In other words, we could speculate that the existing predisposition to deductive learning among Bulgarian students is a result of the educational system, but this hypothesis alone needs to be investigated further, because of its serious implications and challenging nature. Thus, Bulgarian students tend to hold the perception of education as devoid of practical implications regardless of the methods that are being used. One of the Bulgarian students, for example, made an interesting comment during the pretest of the the LSI instrument. He expressed his doubt regarding learning by doing, because he had always had to learn through conceptualization.

Almost half of the US respondents on the other hand are assimilators, meaning that they use a combination of reflective observation and abstract conceptualization. Assimilators are similar to convergers in a way because they are more interested in theories than in people. The majority of the US and Bulgarian students fall in either one of the two categories- assimilation and convergence. These results appear to be very surprising, as the majority of marketing students might be expected to have highly-developed interpersonal skills. The US sample, however, appears to have double the proportion of divergers compared to the Bulgarian sample. As divergers are more creative, people-oriented and culturally interested, they tend to be more common amongst marketing majors.
The most important result comes probably from the fact that even though we selected respondents from two countries that seem quite different culturally, fewer differences than expected were found. The only different dimension is RO, and even though students from the two countries differ in terms of learning styles, the majority of them seem to prefer one of the two styles, assimilation and convergence. That finding warrants further investigation. Future research should examine whether there is cultural convergence and flattening of the world that may lead to convergence of learning style preferences among students, or may be the convergence of university standards around the world leads to increasing similarities in university students despite some cultural differences. Some researchers (e.g., Inglehart and Baker 2000) argue for the dynamic shaping of culture as a consequence of changes in economic development. This may well be the case with Bulgaria, which has gone through some major political and economic changes recently as a consequence of joining the European Union. There also has been a move in Europe towards a uniform training and grading standards that are close to the ones in the US and that may explain student adaptation and convergence of learning style preferences.

Conclusion

An important implication from the findings relates to the international exchange programs or recruiting students from different countries, which lead to growing cultural diversity in our classrooms. Thus, one unified pedagogical approach seems ineffective in such diverse classrooms which may lead to integrating several approaches to teaching to better match the learning style of different learners. Students will be exposed to different learning environments without the stress of changing their learning style completely and this will make them better prepared for a future career in a diverse organization. This balance is important as some mismatch between learning styles and teaching methods can be beneficial to students helping them learn in different ways (Entwistle 1988); however, extensive mismatch may result in frustration and disengagement (De Vita 2001).

The results of the current study apply specifically to marketing students and compared to previous research they demonstrate that these students are different from other business students (e.g. accounting students). Thus, marketing educators who find themselves with a big proportion of students who prefer the convergence and/or assimilation learning styles, as was the case with the students in the current sample, should try to encourage them to be more open to communication and interaction instead of avoiding contacts. This will require implementation of team projects and exercises in and outside of the classroom. Such students could be engaged in more creative and hands-on exercises that will open them to experiences and practical applications of the material. However, these should be balanced with teaching styles such as lectures, using theories and models to match the preferred learning style of the students and make them feel more comfortable.

Limitations and Future research

The degree to which respondents may have been influenced by other cultures by traveling and participating in student exchange programs was not determined. Future research may look at difference between local students, international students and exchange students to investigate possible patterns of adaptation and convergence.

Future research should also look at specific cultural dimensions that may affect marketing student preferences for specific learning style. Since much of the current research on learning style variations across different cultures mainly focuses on measuring culture on a national level (using Hofstede’s cultural dimensions) while at the same time measuring learning style preferences on an individual level, results may be biased and unreliable. Using an individual level variable to measure cultural
differences could be a better approach to study the relationship between the two concepts.

Another limitation of our research relates to the instrument that was used to measure learning styles. The LSI has been a subject of critiques, mainly regarding its test-retest reliability but this criticism has been made about several other instruments and therefore hard to be avoided. It is possible that learning style preferences are unstable and dynamic, or students may vary the learning styles they use based on different factors such as the type of assignment, the environment, the context (e.g. online versus traditional, face-to-face), etc.

References


