The Contribution of University Environmental Elements in Nurturing Students’ Entrepreneurial Thinking: A Comparative Study

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Abstract: This study has two objectives, namely (1) to explore the level of entrepreneurial thinking among university students in Malaysia and Nigeria; and (2) to identify the contribution of university environmental elements in Malaysia and Nigeria in nurturing students’ entrepreneurial thinking. This study used a quantitative approach. The sample consists of 162 university students from northern state of Malaysia and 92 university students from Kaduna state of Nigeria. The findings shown that both Malaysian and Nigerian university students have a moderately high level of entrepreneurial thinking, where the mean score of entrepreneurial thinking of Malaysian university students was higher than the mean score of entrepreneurial thinking of Nigerian students. All dimensions of entrepreneurial thinking, namely opportunity recognition, risk taking, tolerance of ambiguity and creativity and innovation for both countries were at a moderate level with the same mean ranking. Among the five predictors hypothesized to influence entrepreneurial thinking, four predictors, namely, co-curriculum, lecturers, curriculum and support resources contributed to 55.7% of variation in entrepreneurial thinking among university students in Malaysia. The highest environmental elements of Malaysian university that significantly contribute to student’s entrepreneurial thinking were co-curriculum, followed by lecturer curriculum and support resources. In Nigeria only two predictors, lecturers and curriculum contributed to 44.3% of variation in entrepreneurial thinking, while lecturers contributed the highest, followed by co-curriculum. Both countries showed that campus did not give a significant contribution to student’s entrepreneurial thinking. The implication of this study showed that both countries need to take entrepreneurial actions in increasing the levels of entrepreneurial thinking among university students the campus for both countries have to be more entrepreneurial to help boosted student entrepreneurial thinking.

Keywords: Entrepreneurial thinking, opportunity recognition, risk taking, tolerance of ambiguity, creative and innovative, university environment

1. Introduction

Entrepreneurship plays an important role in the development of an economy. Hence, a country with numerous entrepreneurs is more advanced in its economic development. Thus, the development of entrepreneurs among graduates need to be implemented at higher learning institutions (HLI). Entrepreneurial thinking is one of the important basic elements that need to be cultivated among university students in an effort to develop graduate entrepreneurs (Armanurah, 2014). During the university studies period, students have been furnished with the skills in the field of their specialization. Hence, to produce entrepreneurs among graduates, university students need to be nurtured with entrepreneurial thinking during their studies at the university to help university students to blend and combine their expertise and skills with opportunities associated with the process of product creation or the creation of new business venture. Therefore, the early development of entrepreneurs in HLI through entrepreneurship education should be implemented by nurturing students with elements of entrepreneurial thinking.

Entrepreneurial thinking is one of the most important entrepreneurial element possess by entrepreneurs. Therefore, entrepreneurial thinking should be nurtured among university students to produce graduate entrepreneurs with a higher level of entrepreneurial thinking. Those with entrepreneurial thinking will facilitate the development of other entrepreneurial behaviors, including entrepreneurial attitudes and entrepreneur skills. Entrepreneurial thinking students will enable them to combine their expertise and skills with opportunities related to product creation or the creation of new business ventures. However, studies have found that the percentage of graduates who venture into entrepreneurship after graduation is very low in most of developing countries (Alnait, 2018; Armanurah, Norashidah & Awanis 2019; Norasmah, Hariyaty & Armanurah 2019) and this include both Malaysian and Nigerian graduates. Majority of graduates do not have interest to become entrepreneur as their career choice and most graduates prefer and hope to work with employers (AbdHalim et al. 2012; Kementerian Pengajian Tinggi 2010; Zolkafli et al. 2004). Graduates entrepreneurial attitude are much related with their mind set which is also partly being moulded with the university environment elements while they are learning at the university (Armanurah, 2014; Norashidah, 2009).

Therefore, the study has to be carried out to examine the level of entrepreneurial thinking among university students in developing country and the extent to which university environmental elements in developing
countries such as Malaysia and Nigeria contribute to students entrepreneurial thinking. In this regard, the study will attempt to answer two research questions, namely (1) what are the level of entrepreneurial thinking among university students in Malaysia and Nigeria? and (2) Do university environmental elements in Malaysia and Nigeria have a significant contribution in nurturing entrepreneurial thinking among students?

2. Literature Review

a. Entrepreneurial thinking

Entrepreneurship is a way of thinking, statement of reasons and actions that are influenced by the opportunities (Timmons & Spinelli, 2004). According to De Bono (2006), to change the ideas into opportunities, it requires thought which involves time and effort to think. Past studies and scholars in entrepreneurship have identified that the concept of entrepreneurial thinking consists of four dimensions, which include the elements of opportunity recognition, creativity and innovation, risk-taking and tolerance for ambiguity (Alnait, Armanurah&Awais, 2014; Almanurah, Norashidah&Awanis, 2019; Clouse, Goodin, Davey & Jeff, 2003; De Bono, 2006; Higdon, 2005; Norashidah, 2009; Nor Aishah, Salmah, Armanurah&Norashidah, 2018; Timmons & Spinelli, 2004).

An individual with entrepreneurial thinking has the ability to see and seize opportunities where other people do not see it (Alnait, 2016; Clouse et al., 2003; Higdon, 2005). Moreover, the main purpose of thinking is to formulate the idea of opportunity. Second is the ability to assess the benefit of opportunity, and third, is to ensure the feasibility of opportunities. A similar concept is also expressed by Norashidah (2009), entrepreneurial thinking is a cognitive aspect that helps entrepreneurs to identify opportunities, generate ideas, creative thinking and be able to manage and control resources. The difference in the process of generating opportunities among entrepreneurs is closely related to the situation of entrepreneurs, their past experiences and their social networking (Alsos&Kaikkonen, 2004). Entrepreneurial thinking is an unstructured thinking concept which is non-traditional and not straightforward, but it is a thought that focuses on making differences from others (Clouse, Goodin, Davey & Jeff, 2003; Higdon, 2005; Kuratko, 2009). Those who possess entrepreneurial thinking are able to think at high and complex stages. They are patient to learn something and have the ability to deal with complex and vagueness things effectively (Frederick, O’Connor & Kuratko, 2016; Higdon, 2005).

An individual who has an entrepreneurial thinking are also related to creativity and innovation. Individuals with entrepreneurial thinking have creative thinking and are likely to be able to see the world in a different way than others (De Bono, 2006). According to Rosli et al. (2009), creative and innovative individuals are those who can create new ideas and concepts and translate them into commercially-capable products. The creative individuals are entrepreneurs with a lot of ideas, farseeing and are able to produce new and unique products. Meanwhile, a person with innovative characteristics is an entrepreneur who always wants to grow and innovate or modify the existing products, improving or retrieving the quality of the product to create competitive advantage and always be in the frontline (MohdSalleh et al., 2005). These creative and innovative characteristics can be developed through appropriate educational programs.

Besides having ability to recognize and seize opportunities, being creative and innovative, individuals with entrepreneurial thinking are risk-taker and have the ability to manage the vagueness or ambiguity. Entrepreneurs make judgments and considerations based on the risk taken (Rosli et al., 2009) and able to transferred some of the risks and minimized it (MohdSalleh et al., 2005; Norita et al., 2010).

Entrepreneurs who have an entrepreneurs-minded also have a high degree of handling the situation of ambiguity and uncertainty and know how to minimize it (Norita et al., 2010). The dimension of entrepreneurial thinking which consists of four dimensions as discussed above, namely the elements of opportunity recognition, creativity and innovation, risk-taking and tolerance for ambiguity can be nurtured through relevant entrepreneurship education with the support of university environmental elements (Armanurah, Norashidah&Awanis, 2019). Nurturing students with entrepreneurial thinking is an early preparation for HLI students to explore their business venture during their studies and as a preparation to be on-campus entrepreneur and graduate entrepreneur after graduation or in the future. The finding in this study will help to identify which university environmental elements can contribute to entrepreneurial thinking among students.

b. University environmental elements
University environmental elements can support entrepreneurship education or entrepreneurship-related programs in developing entrepreneurs (Norasmah, Hariyaty & Armanurah, 2019). University environmental elements refer to the elements in the university that can benefit students during their studies. It includes lecturers, curriculum, co-curriculum, support resources, and campus. These elements can provide entrepreneurial readiness and influence university students in nurturing entrepreneurial thinking (Norashidah, 2009). The study by Armanurah, Syahrina, Norashidah and Awanis (2017) found that lecturers, co-curriculum, support resources, and campus contributed to entrepreneurial thinking among university students in Malaysia.

Thus, the alternative hypotheses (Ha) below was built to test the contribution of university environmental elements (lecturers, curriculum, co-curriculum, support resources, and campus) in Malaysia and Nigeria in nurturing entrepreneurial thinking among students. Ha university environmental elements, namely lecturers, curriculum, co-curriculum, support resources, and campus contribute significantly to student’s entrepreneurial thinking of Malaysian and Nigerian universities.

3. Methodology

This study used a quantitative approach via survey using questionnaires to collect the data. The population of this study consists of university students from northern state of Malaysia and university students from the state of Kaduna, Nigeria. The sample consists of 162 university students from northern state of Malaysia and 92 university students from Kaduna State of Nigeria. The information from questionnaires was analyzed using descriptive analysis which consists of frequency, percentage, mean, standard deviation, and ranking to answer research objective 1 which is (1) what is the level of entrepreneurial thinking among university students in Malaysia and Nigeria? Interpretation of the mean score in Table 1 is used to determine the level of entrepreneurial thinking among students in both Malaysia and Nigeria. The mean score for entrepreneurial thinking is divided into four stages which are low, medium low, medium high, and high.

Table 1: Interpretation of Mean Score

<table>
<thead>
<tr>
<th>Mean score</th>
<th>Interpretation of Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 – 2.00</td>
<td>Low</td>
</tr>
<tr>
<td>2.01 – 3.00</td>
<td>Moderate low</td>
</tr>
<tr>
<td>3.01 – 4.00</td>
<td>Moderate high</td>
</tr>
<tr>
<td>4.01 – 5.00</td>
<td>High</td>
</tr>
</tbody>
</table>

Source: Norasmah et al. 2006; Armanurah 2014

Statistical inference, which is multiple regression, was used to answer research objective 2 which is “Do university environmental elements in Malaysia and Nigeria have a significant contribution in nurturing student entrepreneurial thinking? The contribution of the significant elements of the university environment towards students’ entrepreneurial thinking were formed through the regression equation model.

4. Findings

This section discussed a comparative result of the data analysis among Malaysian and Nigerian university students regarding profile of respondents, which include self and family background and entrepreneurship education background. This is followed by discussion on the level of entrepreneurial thinking among students of HLIIs in both Malaysia and Nigeria. Next, the results of the university environmental elements that contribute to the students’ entrepreneurial thinking for both countries are presented and discussed.

a. Profile of respondents

The discussion of respondents profile is composed of two sections which is self and family background and entrepreneurship education background at HLIIs.

- Self and family background

With regard to gender, the female respondents are more than the male. Table 2 reveals that majority (82.1%) of Malaysian respondents involved in the study were female as compared to male (17.9%). Meanwhile, majority (54.3%) of Nigerian respondents were male and 43.6% were female. The respondent’s age is grouped into five categories to capture all the age group within the universities. In Malaysia, the largest rate of 80.9% is among 21 to 23 years. The smallest percentage of category is among 18 to 20 years and 24 to 26 years with a rate of...
9.3%. In Nigeria, almost half of the respondents (54.3%) fell in the age category of 24 to 26 years. Those whose age falls within the age of 21 to 23 years were represented by 23.4%, while 14.9% were 27 to 29 years. Only 3.2% and 2.1% were 30 and above and 18 to 20 years.

In terms of position in the family, 27.2% of the Malaysian respondents were eldest child, 24.1% were second child, and 19.1% were youngest child. Additionally, 14.2% were others, 12.3% were from third child and only 2.5% of the respondents were the only child in the family. However, in Nigeria, the frequency of responses of the position in the family showed that most of the respondents, about 25.5% were the only child in the family, while 18.1% were the third child and the youngest child, 17% of the participants were eldest child, 16% were the second child and the rest of them, 5.3% are classified under others. With regards to the place grew up, the frequency distribution of Malaysian students shows that while 40.7% were from village and town area respectively, the rest, 17.9% were from city/capital city area. In Nigeria the majority of respondents were from town and the remaining, 26.6% were from village and city respectively.

As can be observed in Table 2, with respect to mother’s education, the majority of respondent’s mother in Malaysia is from secondary school with a relatively large percentage of 57.4%. Mother education from university/higher institution were approximately 23.5%, while from primary school were 14.8%. The smallest percentage of the category is no formal education with a rate of 3.7%. Similarly, the same trend were showed in Nigeria with majority of them were from secondary school which represents 53.2%, then followed by university/higher institution which represents 25.5%. primary school about 12.8% and lastly no formal education about 1.1%. In terms of father education, the highest percentage in Malaysia (59.3%) represents fathers that have been in secondary school. Next are fathers from university/higher institution which constituted 23.5%, followed by fathers that were from primary school constituting 15.4% and lastly father whose have no formal education constituting 1.2%. Meanwhile, the results in Nigeria reveals that a high percentage of the father education were from university/higher institution, representing 36.2%. This followed by father education from secondary school representing 21.3%, while 20.2% were from primary school and the rest of father have no formal education representing 8.5%.

The parent’s primary job was gathered through seven categories. Apparently, in Malaysia most of the respondent’s mothers were housewife with 46.3%. Private sector workers represent the second largest group with 16.7%, followed by government employees with 15.4%. Meanwhile 6.2% of the respondent’s mothers were already retired, while business person and farmers (commercially) recorded 5.6% respectively. In addition, the largest percentage of mother primary job in Nigeria (23.4%) were farmers (commercially) and business person. This was followed by 18.1% of mothers who worked as commercial farming while 8.5% of mothers worked as private sector workers. 7.4% of mothers are housewife and retired and the remaining of 2.1% were government employees. With respect to father primary job, the majority of respondent’s fathers were from university/higher institution which constitutes 23.5%, followed by fathers that were from primary school constituting 15.4% and lastly father whose have no formal education constituting 1.2%. Meanwhile, in Nigeria most of the respondent’s fathers worked as private sector workers, 20.4% as government employees, 17.3% were retired and 15.4% worked as farmers/village work. Additionally, 12.3% of the respondent’s fathers were business person and the remaining 2.5% worked as farmers (commercially). In Nigeria, most of the respondent’s fathers worked as private sector workers with 30.9%, 18.1% owned a business, 16% worked as government employees, 9.6% already retired, 8.5% worked as farmers (commercially), 6.4% worked as farmers/village work and the rest of 3.2% are unemployed.

This study has also taken into consideration the business owned by respondent’s parents as an element in the family background analysis. Majority of the respondent’s mothers in Malaysia (67.3%) did not run any business while only 14.8% respondent’s mothers run a business in full time or part time. Seemingly, most of the respondent’s mothers in Nigeria (59.6%) also did not run any business and the rest of 34% are running business as full time or part time. Moreover, the same trend also happened in father’s category in Malaysia which 64.2% of respondent’s fathers did not run a business; only 21% fathers owned a business as full time or part time. However, compared to Nigeria almost half of respondent’s fathers (54.3%) were running a full time or part time business.

<table>
<thead>
<tr>
<th>Table 2. Self and Family Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Table 3 showed respondents' entrepreneurship education background at HLIs. Majority of Malaysian students (88.3%) have taken a subject related to entrepreneurship, while in Nigeria only 52.1% of students have taken a subject related to entrepreneurship. However, in Nigeria it was noted that a majority of students taken co-curricular subject/activities related entrepreneurship representing 60.6%. As compared to Malaysia only 28.4% students have taken co-curricular subject/activities related to entrepreneurship. Subsequently, the students participate in entrepreneurial development activities such as seminars, training and entrepreneurship workshop in Malaysia and Nigeria were at 60.5% and 63.8% respectively. On the other hands, 50% of Nigerian students are a member of the club related with business/entrepreneurship, compared to Malaysian students only 21.6% of them were a member of the club related with business/entrepreneurship.

### Table 3: Entrepreneurship Education Background at HLIs

<table>
<thead>
<tr>
<th>Subject related to entrepreneurship taken</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>143</td>
<td>49</td>
</tr>
<tr>
<td>88.3%</td>
<td>52.1%</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>40</td>
</tr>
<tr>
<td>11.7%</td>
<td>42.6%</td>
<td></td>
</tr>
</tbody>
</table>
The level of entrepreneurial thinking among Malaysian and Nigerian university students

The first objective of this study is to explore the level of entrepreneurial thinking among students’ of HLIs in Malaysia and Nigeria. Interpretation of mean score shown in Table 1 was used to determine the level of entrepreneurial thinking of these HLIs in both countries. To measure the level of entrepreneurial thinking, 29 items consist of four dimensions have been used. These dimensions of entrepreneurial thinking are opportunity recognize (16 items), risk taking (5 items), tolerance of ambiguity (4 items) and creativity and innovation (4 items). As shown in Table 4 both Malaysia and Nigerian HLIs students shown a moderately high level of entrepreneurial thinking, where the mean score of entrepreneurial thinking in Malaysia is 3.86 with a standard deviation of 0.415 was higher than the mean score of entrepreneurial thinking in Nigeria of 3.72 with a standard deviation of 0.504. All dimensions of entrepreneurial thinking in both countries showed the same ranking of mean. For both countries, the highest mean score is risk taking dimension, followed by dimension of opportunity recognition, tolerance of ambiguity and creativity and innovation. Nevertheless, entrepreneurial thinking among Malaysian HLIs students shown a higher mean score than Nigerian HLIs students for all the four dimension of opportunity recognition, tolerance of ambiguity and creativity and innovation dimensions.

Table 4. Mean Score, Mean Ranking, Standard Deviation and Mean Score Interpretations for Entrepreneurial Thinking.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Malaysia</th>
<th>Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (Std. Dev)</td>
<td>Mean Level</td>
</tr>
<tr>
<td>Entrepreneurial Thinking:</td>
<td>3.86 (.415)</td>
<td>Moderate high</td>
</tr>
<tr>
<td>Opportunity Recognition</td>
<td>3.94 (.471)</td>
<td>Moderate high</td>
</tr>
<tr>
<td>Risk Taking</td>
<td>3.98 (.532)</td>
<td>Moderate high</td>
</tr>
<tr>
<td>Tolerance of Ambiguity</td>
<td>3.73 (.550)</td>
<td>Moderate high</td>
</tr>
<tr>
<td>Creativity and Innovation</td>
<td>3.56 (.635)</td>
<td>Moderate high</td>
</tr>
</tbody>
</table>

The university environmental elements in Malaysia and Nigeria that contribute to student’s entrepreneurial thinking

The second objective of this study is to identify the contribution of university environmental elements in Malaysia and Nigeria in nurturing students entrepreneurial thinking. These elements consist of lecturers, co-curriculum, curriculum, support resources, and campus.

The study hypothesis

Malaysian university environmental elements, namely lecturers, co-curriculum, curriculum, resources support, and campus contribute to students entrepreneurial thinking. Nigerian university environmental elements, namely lecturers, co-curriculum, curriculum, resources support, and campus contribute to students entrepreneurial thinking. The results of multiple regression in Table 5 shown that co-curriculum, lecturers, curriculum and support resources were the predictors that contributed to 55.7% (p < 0.05) of variation in entrepreneurial thinking among university students in Malaysia. The highest predictor of the university environmental element is co-curriculum (Beta = 0.254, t = 3.081 and p = 0.001) which contributes to 42 percent of the variation of entrepreneurial thinking. The Beta of 0.254 meant that when co-curriculum score increases by one unit, entrepreneurial thinking will increase by 0.254 units. The second highest predictor, the lecturer contributes 9.8 percent to entrepreneurial thinking (Beta = 0.258, t = 3.525 and p = 0.001). The increase of one
The Contribution of University Environmental Elements in Nurturing Students’ Entrepreneurial Thinking: A Comparative Study

A unit of lecturer will increase 0.258 units of entrepreneurial thinking among Malaysian university students. The other predictors of environmental elements that contribute to entrepreneurial thinking was curriculum (Beta = 0.221, \( t = 3.212 \) and \( p = 0.002 \)) and support resources (Beta = 0.178, \( t = 2.281 \) and \( p = 0.024 \)). Meanwhile the campus did not show a significant contribution on students entrepreneurial thinking (\( p = 0.424 > 0.05 \)).

### Table 5. Analysis of Multiple Regression (Stepwise) of the University Environmental Elements that Contribute to Malaysian University Students Entrepreneurial Thinking

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
<th>( R^2 )</th>
<th>Adjusted ( R^2 )</th>
<th>Contributions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-curriculum</td>
<td>0.210</td>
<td>0.254</td>
<td>3.081</td>
<td>0.002</td>
<td>0.423</td>
<td>0.420</td>
<td>42</td>
</tr>
<tr>
<td>Lecturers</td>
<td>0.224</td>
<td>0.258</td>
<td>3.525</td>
<td>0.001</td>
<td>0.524</td>
<td>0.518</td>
<td>9.8</td>
</tr>
<tr>
<td>Curriculum</td>
<td>0.189</td>
<td>0.221</td>
<td>3.212</td>
<td>0.002</td>
<td>0.554</td>
<td>0.545</td>
<td>2.7</td>
</tr>
<tr>
<td>Supports</td>
<td>0.149</td>
<td>0.178</td>
<td>2.281</td>
<td>0.024</td>
<td>0.568</td>
<td>0.557</td>
<td>1.2</td>
</tr>
<tr>
<td>Campus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.962</td>
<td></td>
<td>2.946</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Nigeria as shown in Table 6, only lecturer and co-curriculum were the predictors that contributed significantly amount to 44.3\% (\( p < 0.05 \)) of variation in students entrepreneurial thinking. In Nigeria, the curriculum, campus and support resources did not show a significant contribution on entrepreneurial thinking (\( p = 0.154 > 0.05 \), (\( p = 0.183 > 0.05 \) and (\( p = 0.188 > 0.05 \). The highest predictor in the environmental element was a lecturer (Beta = 0.447, \( t = 5.332 \) and \( p = 0.000 \)), contributed to 33.6 percent. This is meant, when a lecturer score increases by one unit, entrepreneurial thinking will increase by 0.447 units. The second highest predictor, the co-curriculum contributed 10.7 percent to entrepreneurial thinking (Beta = 0.362, \( t = 4.322 \) and \( p = 0.000 \)). Hence, the increase of one unit of co-curriculum will increase 0.362 units in entrepreneurial thinking.

### Table 6. Analysis of Multiple Regression (Stepwise) of the Environmental Elements that Contribute to Nigerian Students Entrepreneurial Thinking

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
<th>( R^2 )</th>
<th>Adjusted ( R^2 )</th>
<th>Contributions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturer</td>
<td>0.449</td>
<td>0.447</td>
<td>5.332</td>
<td>0.000</td>
<td>0.344</td>
<td>0.336</td>
<td>33.6</td>
</tr>
<tr>
<td>Co-curriculum</td>
<td>0.326</td>
<td>0.362</td>
<td>4.322</td>
<td>0.000</td>
<td>0.455</td>
<td>0.443</td>
<td>10.7</td>
</tr>
<tr>
<td>Curriculum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.183</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.946</td>
<td></td>
<td>2.946</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In general, four variables of environmental elements in Malaysia that contributed to entrepreneurial thinking can be formed through the regression model equation as follows:

\[
Y = 0.962 + 0.210X_1 + 0.224X_2 + 0.189X_3 + 0.149X_4 + 0.276
\]

Where;

- \( Y \) = entrepreneurial thinking
- \( X_1 \) = lecturers
- \( X_2 \) = co-curriculum
- \( X_3 \) = curriculum
- \( X_4 \) = support resources
- Constant = 0.962
- Standard Error = 0.276
Based on the above regression model equation, this study showed that four environmental elements have contributed significantly to entrepreneurial thinking among university students in Malaysia, namely, lecturer, co-curriculum, curriculum and resources support. However, in Nigeria only two variables of university environmental elements contributed to entrepreneurial thinking, namely, lecturer and co-curriculum. These two variables of university environmental elements in Nigeria that contributed to students entrepreneurial thinking can be formed through the regression model equation as follows:

\[ Y = 0.946 + 0.449X_1 + 0.326X_2 + 0.376 \]

Where:
- \( Y \) = entrepreneurial thinking
- \( X_1 \) = lecturer
- \( X_2 \) = co-curriculum
- Constant = 0.946
- Standard Error = 0.376

5. Discussion and Conclusion

The purpose of this study was to examine the extent to which the roles of Malaysian and Nigerian HLIs environmental elements, namely lecturer, curriculum, co-curriculum, support resources and campus nurtured students with entrepreneurial thinking as a preparation for students in becoming entrepreneurs during their studies or after graduation. Overall, the entrepreneurial thinking among students of HLIs for both countries were at a moderately high levels. All dimensions of entrepreneurial thinking in both countries showed the same ranking of moderate high mean level. For both countries, the highest mean score was risk taking dimension, followed by dimension of opportunity recognition, tolerance of ambiguity and creativity and innovation. These findings were aligned with the study of Esteti’s (2012) which showed that entrepreneurial thinking among HLIs students in Padang Sumatera Barat, Indonesia was at a moderately high level with a mean value of 3.95 (standard deviation of 0.34). However, the findings of this study contradict with the study of Armanurah (2014), Armanurah and Awanis (2013), Habshah, Armanurah, Norashidah, Ooi and Syahrina (2012) and Razli, Hanum and Aizatul-Akma (2016).

According to Habshah et al. (2012), entrepreneurial thinking among UUM graduates majoring in Entrepreneurship was at a high level at a mean score of 4.11. The study by Armanurah and Awanis (2013) on HLIs students engaged in hands-on business in Women in Social Enterprise program (WISE) also found that overall students entrepreneurial thinking was at a high level. Students involved in the WISE program have high levels of entrepreneurial thinking on both dimensions of risk-taking and recognizing opportunity, with a mean score of 4.14 and 4.02 respectively. In addition, Armanurah (2014) indicated that entrepreneurial thinking towards 171 participants of the Siswaika Program, UUM was also at high level with a mean value of 4.19 and a standard deviation of 0.37. In this study all dimensions of entrepreneurial thinking were at high level, namely dimensions of identifying the opportunity, ability to take risks, tolerance of ambiguity and creative and innovative dimensions.

Those studies with high level of students entrepreneurial thinking have all respondents involved in entrepreneurial hands-on experience. The implication of this study showed that both countries need to take entrepreneurial actions by engaging students in entrepreneurial hands-on experience in order to increase the levels of entrepreneurial thinking among university students. All dimensions of entrepreneurial thinking, namely seeking for the opportunity, risk taking, creative and innovative and tolerance of ambiguity can be enhanced by improving the elements of university environment.

Both countries showed that campus did not give a significant contribution to students entrepreneurial thinking. One of the reason might be the university location, since both Nigerian and Malaysia universities for this study are located in quite rural area or small town and far away from big cities. According to (Pinkett 2007) campus environment also includes aspects of campus location either in large cities or in rural areas and student demographic factors (Pinkett 2007). and his location environment can also affect the entrepreneurial mind set of student and can shape the readiness of student to become entrepreneur (Armanurah, Norashidah, Awanis & Syahrina, 2018; Norashidah 2009). Moreover, according to Pinkett (2007), the position of the campus is important for the possibility of starting a business in the area and building a working network with local entrepreneurs and investors who can help as a mentor.

Even though both Malaysian and Nigerian campus in this study are not located in big city, both Malaysian and Nigerian campus can be more entrepreneurial by providing students with networking platform with outsiders.
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that are related to entrepreneurship, such as entrepreneurs, investors and private, government as well as non-governmental entrepreneurial agencies that provide entrepreneurial support, training and source of capitals. Such university efforts can help boosted students entrepreneurial thinking.

Moreover, the findings from this study suggest that, Nigerian university should put more entrepreneurial effort not only on campus but also on curriculum and support resources since these elements have not shown any significant contributions on students entrepreneurial thinking as compare to Malaysian university. One of the critical Nigerian university environmental element that need to be improved are the curriculum. According to Armanurah et al. (2019), university students have good potential to be entrepreneurs, therefore, the university needs to identify a comprehensive approach to develop these potential entrepreneurs. Norasmah et al. (2019) and Norfadhilah (2003) emphasized that the quality of entrepreneurship curriculum was able to give a positive impact to the entrepreneurship program. Norashidah (2009) suggested that the curriculum is one of the university environmental element that contribute in preparing graduates to become entrepreneur after graduation. Moreover, the study by Armanurah (2014) found that participants of the Siswauniaga Program believed that entrepreneurial training curriculum not only enhanced their entrepreneurial thinking but also can help them in starting a business. To enhance the entrepreneurial thinking among university students, Nigerian university need to take entrepreneurial elements into consideration and integrated it into the curriculum in all fields of study. The university curriculum which apply entrepreneurial elements in all areas of study can be a catalyst for the development of entrepreneurial thinking among university students.

To conclude, in order to nurture entrepreneurial thinking among students, the university environmental elements, namely, curriculum, lecturer, co-curriculum, support resources and campus should be taken into consideration seriously by both universities since these elements play a significant role in nurturing students entrepreneurial thinking. The university environmental elements do not only contribute to the development of students entrepreneurial thinking but also help to increase students entrepreneurial tendency, interest, and aspiration in choosing entrepreneurial careers. Thus, able to produce more entrepreneur among graduates.

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References