A heuristic model to assist the Chinese students studying in Australia

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ABSTRACT

Since the 1970s, many Chinese students have taken the advantage of the available opportunities to undertake their tertiary studies in English speaking countries. Although the People's Republic of China, their students and the host countries have enjoyed the mutual benefits, there have been challenges for all concerned too. This paper aims to address the research question of what these challenges are and how they be addressed. In order to address the identified research questions, an investigation utilizing the data collected from different cases was carried out. These cases dealt with issues and challenges facing the Chinese students studying at the Australian Universities. The case interviews were conducted separately and then the commonalities in issues were identified. These factors were grouped in six different categories of language skills, adjustment capabilities, effort, social pressure, financial situation and teaching support. Various scenarios relating to each group were provided and discussed. A heuristics model to measure an index value for the potential academic performances of the Chinese students was explained and presented. The heuristic model was applied to example cases and the users verified the results to be valid and compatible with their expectations. This model can also be utilized for the purposes of monitoring one's academic performance levels, in a manner, which allows carrying out a what-if analysis or a comparison with other similar scenarios.

INTRODUCTION

With the People's Republic of China's growing economic power, the Western-developed countries have witnessed that over 3 million Chinese students are in tertiary educational institutions since 1979. This growing Chinese student population has brought huge financial income to those host countries, besides of other social benefits of enhanced cultural exchange and attraction of skilled talents to those countries.

Nowadays, Chinese students are the biggest international student cohort in the Western-developed countries such as the United States of America, the United Kingdom,

Canada, Australia, and Japan. However, this growing Chinese student population has also created concerns over equity, pedagogy and quality issues in the tertiary education system within those host countries. For example, many Chinese students performed not so well with their university studies after arriving at their overseas universities because of inefficient language capabilities, lack of support, and difficulties to adjust from the traditional Chinese teacher-centered learning habits to the different Western-student-focused learning culture.

The research problem therefore is on how to effectively help those Chinese students to improve their academic performance and to provide them with guidance towards more successful education. The main objective of this paper is to identify and present effective means of adopting suitable approaches and adjusting attitudes for the purpose of Chinese students' successful education in Australia. The main hypotheses include:

- Linguistic skills and adjustment capabilities are the principal causes of any problems;
- Formulation of the main contributory factors in a heuristic model can lead to opportunities for predicting the potential academic performance indicators for these students.

The investigation is based on different cases chosen from both Chinese students and educators. All participants in the study have been interviewed by the authors using the same instrument. The selected interviewees for the analysis were the most appropriate cases.

LITERATURE REVIEW

A number of research articles about this study are reviewed and the methodology used to collect, and analyze the data sample is outlined. A series of predictions are then presented based on insights from the articles and the interviews. The paper proposes a heuristic model for the purposes of predicting the Performance Index for a prospective Chinese student wishing to study work in Australia.

Differences between national cultures are topics of interest to many. Popular among researchers are the models that seek to explain and describe these differences (Hofstede, 1980, 1993).

He classified countries based on the survey data collected in early 1970s from over 100,000 IBM employees located in 72 countries. Initially, 40 countries were classified. Further analysis of the data allowed three regions and ten other countries to be classified according to four dimensions of culture, which he labeled as uncertainty avoidance, masculinity, power distance and individualism. Research conducted a few years later uncovered a fifth dimension that was termed as long term orientation. This last dimension refers to the acceptance by a culture of a long term and a traditional view of time. The extent to which stereotypical male and female characteristics are found in a culture was captured by the masculinity dimension. The degree to which inequality is accepted in a society was termed power distance. Finally, whether the interests of the individual or the group take precedence is referred to as individualism.

Originating with the ideas of sociologist, Talcott Parsons, a fellow Dutchman Franz Trompenaars (1994) used survey data from 28 countries to categorize national cultures according to five bipolar dimensions. He used questions that posed different dilemmas of everyday life. Achievement as opposed to ascription refers to whether status is given or whether we need to prove ourselves. Specific as opposed to diffuse refers to whether we handle ourselves in predetermined ways or whether our relationships are contextual and changing. Neutral versus emotional refers to whether individuals display or hide emotions.

Universalism, the opposite of particularism is concerned with whether rules or relationships take precedence. Finally, similar to Hofstede's model, individualism versus collectivism explores whether the needs of the individual or the group is dominant in a society. These two models or frameworks of national culture differences are well known and have been popularized in many management literatures.

DATA COLLECTION AND DISCUSSION

One must remember that the People's Republic of China is a society in which people are ranked according to their social status or position at organizations. Hence, a totally different kind of relationship between people should be expected. As pointed out by Hofstede (1980), the fact that not all individuals in societies are equal, it expresses the attitude of the culture towards these inequalities amongst us. Hofstede (1993) also suggested that societies like China could be regarded as hierarchical. The hierarchical feature of the Chinese society does not imply inequity. China is a rapidly developing country with its strong beliefs in their traditions and the traditional religions have also had similar effects on the Chinese attitude in terms of equity and equality of human beings in their society. According to Taka et al (1994), "In the case of Buddhism, every living creature is said to have an equal Buddha-hood, a Buddhahood which is very similar with the idea of numen and microcosm."

Respect for others, in particular, people who are older or have a higher status in the society or the organization is definitely observed in China. Respecting the superiors is extremely important. For instance, the person-in-charge of the Chinese society would practically decide how the subordinates should behave or even appear in their presence. Unlike the western societies, the superior can even charge the subordinates with various tasks outside the written duties of the position. One must remember that this kind of general attitude should not be perceived in a negative manner as it certainly functions well and effectively for a traditional society like China. Perhaps, some of the other societies may start learning how to re-introduce this important attitude, which is unfortunately being gradually phased out. One must accept the fact that, unlike Australia and Europe and North America, China is not regarded as a universalist, rule based society but it is classed as a particularist society. For further reading refer to Trompenaars (1994). It should also be noted that, often language and culture are interrelated as one influences the other. Culture's roots are deeply established in the years of tradition, history and language. Hence, skills and knowledge in any language play an important role in fully appreciating the related culture.

Insight from the interviews suggested that a lack of adequate knowledge of the English language could create a solitary situation for the Chinese students who are trying to become part of the society. Hence, an attempt of learning to speak read and write English reasonably well, would allow the student to progress well both academically and socially in Australia and, ultimately, hold basic conversation with the locals.

Although the writing system can be quite overwhelming, the spoken Chinese language does not have many hard-to pronounce or very specific phonemes as in the Romance and other Indo-European languages. It, however, utilizes different rising, declining or flat intonations frequently. These intonations are quite unique to the Chinese language. Therefore, pronunciation of different sounds used in English may pose a challenge for a Chinese student in Australia. The Mandarin grammar is rather straightforward and very logical. Unlike English or the Latin-based languages such as French, or Germanic languages such as German, Chinese Mandarin has rather a simple way of conjugation. This difference can also create additional challenges for the Chinese students to construct different tenses correctly.

It should be noted that every aspect of life in the People's Republic of China (PRC) is different from the cultures that are closely associated with the English speaking societies. Fully understanding and appreciating the Chinese language and culture can be rather challenging. Accepting the differences and adapting attitudes to suit the Australian environment are essential in overcoming the obstacles for the students. Hence, it is important to adapt the traditional attitudes and try to adopt some local attitudes or at least, recognize certain situations related to the Australian way of life.

According to Jaivisam (2010), "Asian cultures are categorized to be the high-context culture. Opposite to low-context culture, the nonverbal messages are much more important and being used than the verbal communication in high-culture context." The Chinese, generally, utilize the body language in a slightly different manner from the Australians. For instance, a Chinese person would, very seldom, provide a negative response to a question. Often, a passive gesture with a readable reluctance in the facial expression would signal the unwillingness.

As well as being a hierarchical society, the Chinese society is relationship-oriented. Hence, the majority of young people aspire to climb the social status ladder. The Chinese, in general perceive education to be one of the most effective means of achieving this goal. With PRC's ever-increasing links with the western world and improving economy, it is becoming closer to the Western world. As a result, the Chinese students have the desire to study at English-speaking universities overseas. One of these popular destinations is Australia.

Most Chinese businesses are also very keen on connecting and networking with the western countries. Hence, they would be willing to adopt some western attitudes. The Chinese education systems are introducing western ideas into their formal curricula too.

Based on the above discussions, a heuristic model for predicting the Academic Performance Index for settling in Australia is proposed.

A Heuristic Model

The data analysis and evaluation of the selected cases noted above led to the identification of a set of issues, themes and topics, which in turn were grouped into a set of common factors. The groups covered aspects such as language skills, adjustment capabilities, effort (student's effort and commitment while studying), social pressure, teaching support, and financial situation for the students.

For the purposes of this paper, the possible problems or challenges have been classified under five main categories. The rationale for this grouping is based on the frequency of the issues mentioned in the interviews. The following are the main topics raised and discussed by the interviewees.

- Language Skills
- Adjustment Capabilities
- Effort
- Social Pressure
- Teaching Support
- Financial Situation (Negative)

It should be noted that the emphasis was placed on each category and the frequency of its occurrence in the interviews. As a result, the categories for the issues were ranked according to their importance. Language skills have the highest weighting and the financial situation aspects rank number six. It should be mentioned that the financial situation of the students is perceived to have a negative impact – the affluence of the parents has an inverse relationship with the child's academic success.

If we allocate weighting values of 6 to 1 to these categories, language skills will receive 6, adjustment capabilities 5, effort (student's effort and commitment while studying) 4, social pressure 3, teaching support 2, and financial situation 1. Now we may utilize these categories as factors contributing to what we have referred to as the "Academic Performance Index". In other words, these factors can be regarded as independent variables of our heuristic model and the Challenge Index will depend on these variables:

$$API = Function\ of\ \{LS,\ AC,\ E,\ SP,\ TS,\ FS\}$$

Where:
> *API – Academic Performance Index*
> *LS = Language Skills*
> *AC = Adjustment Capabilities*
> *E = Effort*
> *SP= Social Pressure*
> *TS = Teaching Support*
> *FS = Financial Situation*

Where, the independent variables in the model are assumed to have an additive effect on each other.

Therefore, a prospective student, by inserting values in the model, may approximate an Academic Performance Index for their experience in Australia. This process can be completed by substituting zero (0 being the smallest value of effect) for the absence of the factors (independent variables), or approximate percentages for the strength of the existing factors for each category. Note that in the case of the financial situation (negative factor), the perceived percentage would be subtracted from 100 (or 1). These percentages can then be multiplied by the factor rankings of (6, 5, 4, 3, 2 or 1). Finally, all the products (up to 6) can be added up to determine a figure, as a guide for the Academic Performance Index (API).

Mathematically, the Performance Index ranges between 0 and 21. Practically, however, the index value should be a figure greater than zero and less than 21, as zero or 100 percent performance levels for any category would not be realistic. Therefore, we may regard the band consisting of 10, 11, and 12 as a reasonable threshold for the performance level. It means, that for instance, an API of 18 leads to better success compared to an API of 7 or 6. It must be emphasized that this approach should be treated as a heuristic (close enough) rather than an optimization (exact) model.

Consider an example based on a real situation of one of the interviewees:

LS = 0.6 – the user of the model perceives her skill level with the language as 60%. In other words, this person has 60 percent confidence in her language capabilities. And;
> AC = 0.5
> E = 0.3
> SP = 0.4
> TS = 0.25
> FS = 0.7 (1-0.7) = 0.3

Now, we substitute these percentages into the model as follows:
API = Sum{6 X 0.6 and 5 X 0.5 and 4 X 0.3 and 3 X 0.4 and 2 X 0.25 and 1 X 0.3}
API = 9.3

The generated result of 9.3 is regarded as a lower performance index. In order to verify this result, it was checked and confirmed by the participant to be compatible with her

expectations. In other words, this particular student did not feel that she had a very high success rate in studying in Australia. The test experiment was repeated for several other students. They all produced very similar outcomes in terms of the accuracy of the heuristic model.

It should be noted that this model, as suggested above, provides a figure as a guide, which can be used for comparison purposes with other expatriates. It can also provide an opportunity for performing what-if analyses. Hence, the user of the model can relax a factor, increase or decrease its percentage and then determine some guiding figures. If the person in question, for instance, decides that they have made further progress with the language; therefore, the factor deserves a higher percentage, then they may choose a larger percentage than sixty. As this is intended to be a heuristic rather than a rigorous model, it is therefore suggested that larger increments such as 25 percent, 50 percent, and 75 percent are used.

CONCLUSIONS

The main objective of this paper was to identify the key factors, which make studying in Australia a challenge for the Chinese students. This objective was achieved by identifying the language skills, adjustment capabilities, effort, social pressure, teaching support and the financial situation as the main factors. The investigation was taken a step further by developing a heuristic model. The heuristic model developed can be also used as a means of what-if-analysis for comparison or exploration purposes.

The model was put to the test and the generated results were verified to be acceptable. The model has the potential for comparative or what-if analysis by someone who wishes to monitor and adjust the challenges and difficulties facing them in a different situation. The model requires further enhancements based on additional data for testing and further development. Hence, future research projects related to the enhancement of this model are envisaged.

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