

**A STUDY ON FACTORS RELATED TO INTERNATIONAL STUDENTS'
PERFORMANCE AT THE MANDARIN TRAINING CENTER IN THE
NATIONAL TAIWAN NORMAL UNIVERSITY**

by

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ABSTRACT

For recent years, number of international students coming to Taiwan in order to pursue their studies is growing rapidly. A significant part of them come to acquire mandarin language skills. These students utilize services offered by language centers all over the island. However, approximately one fourth of all learners of Chinese enroll in the Mandarin Training Center (MTC), which is affiliated to the National Taiwan Normal University. Its location in the heart of capital city Taipei as well as long history and reputation are intriguing.

Despite the long tradition of teaching mandarin as second language, MTC is an organization that is still adapting to international students' expectations and needs and is improving its services in order to provide environment in which international students can achieve their goals. This research was conducted in order to learn, what are the international students' points of view (about the MTC services and other topics) and what do they perceive as most significant factors related to their performance and satisfaction at MTC. The methods of data collecting were semi-structured interview and a questionnaire, which used snowball sampling method. SPSS software version 16 was used for data analysis.

This study tested six hypotheses. The statistical results showed that only relation of satisfaction and hygiene and situational factors is highly significant. Therefore it could be concluded that variables of hygiene and situational factors are not motivating or demotivating for international students' at MTC, however, they still play a significant role in their everyday lives.

Keywords: International students, international students' performance, satisfaction, adaptation, cultural shock

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CHAPTER I. INTRODUCTION



Chapter Overview

The opening chapter of this study presents the topic. Background of the study introduces the history and development of Mandarin training centers and provides the rationale for the study. Further, the problem, which lies in the focus of this research, is introduced and research hypotheses and the expected outcomes are stated. Chapter one also defines terms that are used throughout this paper as well as its limitations and delimitations.

Background of the Study

Since the end of 20th century, the growing interest in learning Chinese language is remarkable. The demand of Chinese speaking people is rising every day and thus there are thousands of foreigners coming to Chinese speaking countries to pursue their language studies. The first group of 33 students from East European countries came to China in the year 1950. By the end of 2000, the number of international students in China has risen to 407,000. Students are coming from more than 160 different countries. Among them, 88, 000 students are granted with Chinese Government Scholarship. Number of self-financed students reached 317,000. (The Department of International Cooperation and Exchanges, n.d.) No number of solely Chinese learners in People's Republic of China was available, however, the researcher assumes that at least on third of students goes to China to study language and even with such meagre assumption the rise of the number is obvious.

The number of international students in Taiwan in the year 2007 (including degree-level, exchange, and language study students) reached 17,742. This means grow of 3,263, compared to the 14,479 count in 2006. From the total number, 9135 international students in 2006 and 10,177 students in 2007 studied in the language centers in the universities. The

increase between these two years amounted to 1042 persons. (The Number of Foreign Students Studying in Taiwan Exceeds 17,500 in 2007, 2008) The rise in number of coming foreign students in Taiwan is also evident from the abovementioned data.

In a reaction to such trend, many public as well as private universities around Taiwan founded special language centers, which are regarded as extension programs of the core university studies. Such establishments provide courses on daily bases and make students reach their desired level of language ability in a fast and convenient way.

One of the well-known institutions of that kind is Mandarin Training Center (later only MTC) of National Taiwan Normal University, located in the capital city of Republic of China, Taipei. With its origins being traced back to the year 1956, it is also the oldest one in Taiwan. Since then, it grew to become the biggest Chinese language center of the island as well. Figure 1.1 shows all mandarin training centers in Taiwan and the number of their students in the academic year 2007.

Table 1.1.

Mandarin training centers in Taiwan

School	Number of students
Grand Total	10,177
Chinese Language Center, NCCU	531
International Chinese Language Program, NTU	205
National Taiwan University Language Center Chinese Language Division , NTU	359
Mandarin Training Center, NTNU	2,921
National Cheng Kung University Chinese Language Center	463
Chinese Program, Language Center, NCHU	53
Chinese Language Center, NCTU	93

(Continued)

Table 1.1. (Continued)

School	Number of students
Language Center, NCU	347
Chinese Language Center, NSYSU	309
National Kaohsiung Normal University Center of Language and Culture Teaching	183
Chinese Language Center at National University of Kaohsiung	16
Center for Chinese Language and Culture Studies	55
Chinese Language Center, Tunghai University	319
Language Center of Fu Jen Catholic University	442
Tamkang University Chinese Language Center	753
Mandarin Learning Center at Chinese Culture University	1,119
Fengchia University Language Center, Chinese Division	309
Providence University - Chinese Language Education Center	39
Chung Hua University Chinese Language Center	21
Mandarin Studies and Culture Center	423
Southern Taiwan University of Technology	116
Chinese Language Teaching Center	218
Kainan Chinese Language Center	136
Chinese Language Instruction Center, Fo Guang University	69
Center of Chinese Language, Wen-Tzo	199
Northern Taiwan Institute Of Science & Technology - Mandarin Language Center	127

Source: International Students in University Affiliated Mandarin Centers, 2008.

As it is stated on the websites of MTC:

The Mandarin Training Center represents one of the world's oldest and most distinguished programs for language study, attracting more than a thousand students from over sixty countries to Taiwan.....Courses in language, literature, calligraphy, art and martial arts are offered.....The center also sponsors travel, hosts speech

contests, and stages workshops and performances for a variety of East Asian arts.

(Mandarin Scholarship Taiwan, n.d.)

As above-mentioned, foreigners from all over the world come to MTC. They bring their traditions, customs and habits with them. Therefore, MTC becomes a salad-bowl of cultures and life-styles, which can result in positive outcomes, but also may negatively affect the running of such learning institutions. Chaney and Martin (2007) allege that all people incline to belief that their own cultural background, including ways of analyzing problems, values, beliefs, language, and verbal and nonverbal communication, is the correct one. (Chaney & Martin, 2007) Therefore, a multicultural group, especially of such scale, should be treated with respect and special care in order to function smoothly:

Willingness to compromise with other's way of living and cooperation in common tasks, these make living happy and fruitful.

Sri Sathya Sai Baba (Famous Quotation, 2009)

This study examined factors, which may be significantly related to students' performance and their satisfaction during their studies in Taiwan. Also, as there is always space for improvement, this paper tried to provide suggestions for MTC in order to bring its service closer to perfection, which was based on MTC's language learning program participants' opinion as well as on the researcher's analysis.

Statement of the Problem

As Swinger (1995) states, the benefits of studying abroad are tightly connected with the understanding that students show towards the foreign culture. According to her, studying abroad encourages personal flexibility. Thanks to that, students are able to elevate their comprehension of different lifestyles, variant approaches to problem solving and are able to recognize cultural differences in family relationships as well as time concepts. Swinger unfolds her idea even further by saying that studying abroad promotes political awareness and helps students to see politics in their own countries from a new perspective, that of the host country. Swinger proclaims that the benefits of studying abroad can only be won by understanding the foreign culture (Dekaney, 2008).

Swinger (1995) stresses how important it is to understand foreign culture. She gives a picture of ideal outcome of studying in a foreign country. However, it might be rather difficult to accomplish all aforementioned items.

A study by Allazi and Chiodo (2006) that focused on middle-eastern students coming to the United States shows many obstacles that causes the recession in reaching the ideal state of integration into a new culture. Their research pointed out problems in academic, language, socio-cultural and personal spheres of international students' lives.

Students, who come to different country, are facing many things that vary from their home. Some of such dissimilarities seem rather banal. Different food and eating habits, different clothing code or different weather conditions might be some of that kind. In Maslow's hierarchy of needs these will represent the physiological level of needs. (For more about Maslow's hierarchy of needs, see chapter II, p. 16) For students, who arrive to a country with a very different culture, language, communication and interaction problem are more than likely to arise. Such situation might subvert the self-esteem and confidence and might result in loss of feeling of safeness. For an adult learner, such drastic changes might cause physical as well as psychological problems.

Students, who come to diametrically opposite culture, where they do not have family or cultural base and have to face the culture shock alone, might feel stress and discomfort. The disillusionment phase of culture shock might be more than overwhelming and then performance of these students would mirror such situation more than obviously. Students might lose motivation, might not be able to keep pace with classmates etc.

In this stage, the school or – in case of this paper – a language training center, should take the role of a bridge between the newcomer and the host culture. The assumption was that students who are satisfied in their new environment and school are performing better than those who have to deal with above-mentioned difficulties.

This paper analyzed how is the situation in MTC and if students are satisfied with that, in point of fact, how the current situation affects their performance.

Purpose of the Study

This study examined factors, which affect MTC students' performance. Better knowledge of those factors may help to see the role of MTC during foreign students' study period. Having clear understanding, MTC employees would be able to target the most problematic factors and so to improve services offered to their students by, for example, employing new means of communication and information transfer channels or improving the already existing ones.

Furthermore, this paper tested if there is any correlation between satisfaction and performance. This examination enabled the researcher to make the results more exact and clear and so the contribution to MTC may be greater.

In brief, the purpose of this paper was to study the MTC foreign students' performance and satisfaction factors in order to identify the most significant ones. Another reason to carry on this research was to examine students' performance and satisfaction factors

externally, out of the MTC. To the researcher knowledge, limited number of studies of such type was conducted in the past and thus the results of this paper may be interesting or even important for the MTC management. In order to get the whole picture of its students' situation, MTC may work with these results on improving its services, programs or teaching and learning methods.

The guiding questions of this research are:

- 1) What are the major factors affecting foreign students' performance and satisfaction during their stay in the MTC?
- 2) Is there any correlation between foreign students' performance and their satisfaction?

Significance of the Study

Language centers are generally not the frequent focus of explorers' interest. Mandarin training centers are left without much of researchers' attention. These institutions all around Taiwan do not have a very long history, excluded the three oldest centers (as highlighted in the table 1 below).

Table 1.2.

Selected mandarin training centers – years of operation

University	Location	Founded at	In operation for (years):
National Taiwan Normal university	Taipei	1956	53
National Taiwan University	Taipei	1984	24
National Chenggong University	Tainan	1982	26
National Central university	Zhongli	2001	7
National Jiaotong University	Xinzhu	2005	3
Providence University	Taizhong	1996	12
Foguang University	Yilan	2000	8

Source: Mandarin Training Center: About us, n.d.; Chinese Language Division, Language Center, National Taiwan University, n.d.; National Cheng Kung University Chinese Language Center: Introduction, 2007; National Central University: Chinese Language Program, 2007-2008; National Jiaotong Univeristy Language Center: Introduction, 2007; Fo Kuang University: Chinese Language Instruction Center, n.d.

Considering the above mentioned fact and also the other verity – the number of coming students has been growing rapidly only since during last two decades (as shown in table 2; data available for selected nations only), overlooking of this topic by the research field was quite understandable.

Table 1.3.

Numbers of Students Obtaining Student Visas from Foreign Nations between 1998 and 2007

	1998	2000	2002	2004	2006	2007
US	13,109	15,547	13,767	14,054	16,451	14,916
Canada	2,359	2,583	2,433	2,149	1,997	2,014
UK	6,173	8,567	9,548	9,207	9,653	7,132
France	342	552	529	580	690	723
Germany	305	313	400	402	512	606
Australia	2,092	2,104	2,894	2,246	2,862	2,570
New Zealand	342	496	740	534	538	618
Japan	1,649	1,753	1,745	1,556	2,108	2,424
Sub-total	26,200	31,907	32,016	30,728	34,811	31,003

Source: Numbers of Students Obtaining Student Visas from Foreign Nations between 1998 and 2007, Ministry of Education, Republic of China, 2008.

However, on the verge of new millennium, the situation changes and public as well as private universities located outside the capital Taipei are founding mandarin training centers. As was mentioned already, this is due to the rising demand for learning mandarin. Also, with growing number of coming students, the requirements on schools and expectations changes as well. Putting more pressure on language service providing organizations by stating higher demands should lead to improvement of teaching and learning strategies and enhancement of school environment.

Training centers may (in most of the cases) be the only institution foreign students are in everyday touch with. They serve as a base for improvement of one's own abilities and skills, for meeting people and also for dealing with obstacles in their everyday life. It is a space where foreigners should have a platform.

Students are facing international environment daily, however staff of language centers is local. This may cause trivial communication problems, frustration or even feeling of dislike or rejection towards the institution itself. In their study, Herzberg, Mausner, Peterson, and Capwell (1957) learned that the variables contributing to satisfaction are different from those contributing to dissatisfaction. Between the variables for dissatisfaction were for example unfair company policies, incompetent or unfair supervisors, bad interpersonal relations, unpleasant working conditions, unfair salary, threats to status, and job insecurity. Herzberg called them '*hygiene factors*'. This term was borrowed from medical science, in point of fact from epidemiology. Herzberg clarified this idea simply – good medicine does not make people healthy. It prevents illness. (Herzberg et al., 1959) Sachau (2007) provides another quite pertinent example by saying that public health officials might use pesticides to kill disease carrying mosquitoes. Pesticides do not make people healthier, but pesticides can prevent the spread of illness. "Herzberg and his colleagues noted that, similar to medical hygiene, fair pay, good interpersonal relations, fair policies, and pleasant working conditions do not appear to provide much long-term satisfaction, but they do prevent dissatisfaction." (Sachau, 2007)

If more business point of view would be applied, foreign students could be seen as customers, who pay for the services of language centers. In order to accomplish their needs to its best ability, any language center has to understand their students' needs.

You can't just ask customers what they want and then try to give that to them. By the time you get it built, they'll want something new.

Steve Jobs (Famous Quotations, 2009)

This study's significance lies in the examination of relationship between students' performance and hygiene factor (school facilities, classes' equipment, teacher's attitude etc.), situational factor (stress, different climate, dissimilar cuisine etc.) and adaptability factor

(openness, self-motivation, etc.) and between students' satisfaction and the three mentioned factors. It showed the space for improvement which can make foreigners' stay in Taiwan, during their studies at language centers, more effective.

Research Hypotheses

This research aimed to answer six hypotheses that tried to clarify the major factors related to foreign students' performance at MTC, National Taiwan Normal University.

First question that guided this research was, if there is any correlation between foreign students' performance and their satisfaction. Therefore, hypothesis one (H1) is as follows:

H₀: There is no correlation between foreign students' performance and their satisfaction.

H_A: There is a correlation between foreign students' performance and their satisfaction.

Second question was examining the major factors of foreign students' performance during their studies at MTC. The researcher split those into three groups of factors in order to achieve more clarity about their possible impact on students' performance. Therefore, four hypotheses were stated. Hygiene factor is tested at first as H2:

H₀: Hygiene factor has no significant relationship with foreign students' performance.

H_A: Hygiene factor has significant relationship with foreign students' performance.

In hypothesis three (H3), this paper looked at the problematic considering the situational factor and its possible effect on foreign student's performance.

H₀: Situational factor has no significant relationship with foreign students' performance.

H_A: Situational factor has significant relationship with foreign students' performance.

Hypothesis four (H4) tested, if region of origin (or continent) from where students came to Taiwan has significant relationship with their performance.

H₀: There is no significant relationship between international students' performance and their region/continent of origin.

H_A: There is a significant relationship between international students' performance and their region/continent of origin.

The researcher found it vital for the quality and validity of research to also involve the adaptability factor. Therefore hypothesis five (H5) follows:

H₀: Adaptability factor has no significant relationship with foreign students' performance.

H_A: Adaptability factor has significant relationship with foreign students' performance.

Hypothesis six tested whether hygiene, situational and adaptability factors are associated with international students' satisfaction with their lives in Taiwan. Therefore:

H₀: There is no significance relationship between hygiene, situational and adaptability factors and international students' satisfaction.

H_A: There is significant relationship between hygiene, situational and adaptability factors and international students' satisfaction.

The researcher also wanted to find out by using one way ANOVA test, if hygiene, situational and adaptability factors show significant results when sample is divided into groups according to 1) length of students' stay in Taiwan and 2) students' region of origin.

$$y_1 = b_0x_0 + b_1x_1 + b_2x_2 + \dots + b_kx_k + e$$

$$y_2 = b_0x_0 + b_1x_1 + b_2x_2 + \dots + b_kx_k + e$$

- where y_1 is international students' performance; bs are weights expressing relative degrees of influence of the xs in accounting for y_1 ; e is error
- where y_2 is international students' satisfaction; bs are weights expressing relative degrees of influence of the xs in accounting for y_1 ; e is error

Limitations and Delimitations

This is a pioneering paper about determinants of MTC foreign students' performance. Such initial studies usually examine the most obvious issues and may not work with all possible factors. Furthermore, only students were involved in the research. MTC personnel may provide feedback and sketch in the situation of environment of the institution. However, this research was limited by inaccessibility of organizational data and records as well as other constraints that did not allow the researcher to seek for answers in wider range.

Other limitation of this study was the fact that it only focused on the Chinese language center of National Taiwan Normal University. This institution is the oldest in Taiwan and invites the biggest number of foreign students to join its courses. Also, MTC, being located in the capital of Taiwan – Taipei, may have different conditions and resources than institutions in other cities and more remote areas. Therefore, results of this research may have limited applicability outside of MTC.

The delimitation of this study is that only MTC students participated in the research. This research used snowball sampling method; therefore the result tended to be general and further research should be carried on in order to get more precise answers about learners divided into more particular subgroups, for example according to the specific regions, etc.

The study was based in Taiwan and worked solely with local conditions. This limitation implies that the results can only be used by Taiwanese mandarin training centers.

Definition of terms

International students: Students enrolled in the Chinese language training program at Mandarin Training Center (MTC) at the National Taiwan Normal University, who do not possess R.O.C. citizenship.

International students' performance: average score of all tests, quizzes, in-class activities and participation given by MTC teachers on weekly or monthly basis.

International students' satisfaction: describes whether students are happy and contented with their life in Taiwan and whether they fulfill their desires and needs within their lives.

Hygiene factor: job factors that can cause dissatisfaction if missing but do not necessarily motivate employees if increased. (Herzberg, 1968) In this research, hygiene factors are applied in school environment and hence stand for factors within school that can cause dissatisfaction or de-motivation (administration personnel' attitude, teachers' attitude, school equipment, teaching materials, hygiene maintenance, etc.).

Situational factor: factors of everyday life or situations caused by everyday life in unknown

environment (communication, transportation, cuisine, stress, homesickness, etc.)

Adaptability: the ability to change in order to fit in different environment, culture or situations.

Adaptability factor: personality traits that can ease or aggravate the process of adaptation of an individual.

Chapter Summary

Chapter one introduced in detail the topic of this research. Six hypotheses, which were stated in order to test the collected data, were given. Furthermore, the author clarified why only the Mandarin Training Center of the National Taiwan Normal University was chosen as the locus of the actual research. The following chapter focuses on theories and other existing works that were studied carefully and later used as framework of this study.

CHAPTER II. LITERATURE REVIEW

Chapter Overview

Chapter two presents the findings of previous studies that were used as a framework for this research. The following theories were referred to during the process of questionnaire designing. The structure of following literature review starts with more general concepts in order to explain the issue of cross-cultural adjustment, hierarchy of personal needs and motivator-hygiene theory. The later topics focus on more specific research areas that are applicable for this study.

Cross-Cultural Adjustment

When people arrive to a foreign country, they need to adjust to many things that differ from their culture of origin in order to stay there for a period of time not for purpose of traveling. Process of adjustment might be uneasy and can be even frustrating. This happens especially in the case when the new culture is remarkably variant from the primary culture.

Interactions between cultural groups are situations fraught with difficulties for the person concerned. These difficulties arise due to the phenomenon of ‘culture shock’ that describes the emotional response to new or unfamiliar cultural acts or symbols that have little or no meaning.

(Adler 1975; Pawanteh 2000, p.20)

Pawanteh (2000) further alleged, that a person may be exposed to a various emotions such as anxiety, excitement or provocation related to the loss of all familiar cues that form the basis of his/her understanding of reality.

One of the most important studies that concerns about international students and their adjustment in new surroundings was conducted by Sveere Lysgaard in the year 1955. Lysgaard’s study questioned 200 Norwegian students who went to the United States to pursue their studies on various university levels. In his paper “Adjustment in a Foreign Society: Norwegian Fullbright Grantees Visiting the United States”, he offered a model of a U-curve of adaptation. This well known model is shown below to further illustrate the main idea of the theory. At the beginning of stay in foreign country, sojourners are excited and feel satisfied (the honeymoon phase of cultural shock). However, this state changes into dissatisfaction over the time and leads to the second phase of cultural shock – the disillusionment phase.

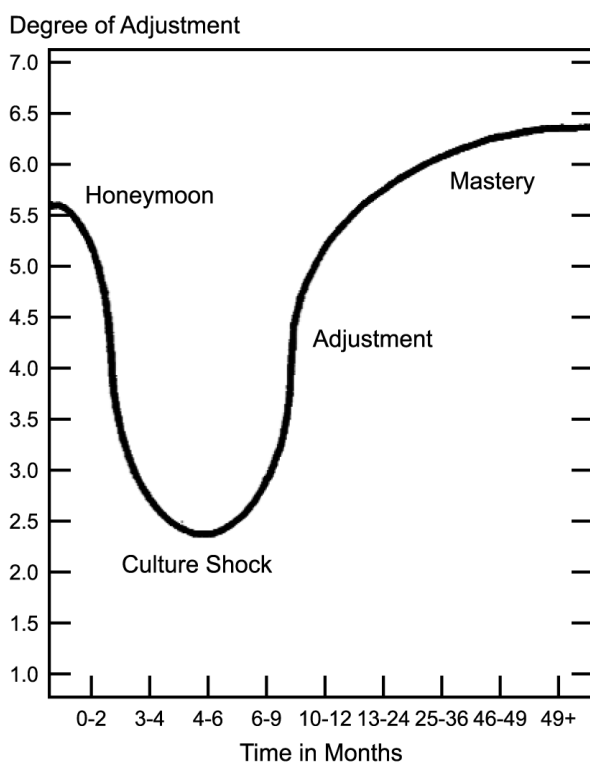


Figure 2.1. U-curve of adjustment

Source: A proposed model of expatriates in multinational corporations, 2008.

Originally, the hypothesis of cultural shock counted with three stages that the sojourner is going through:

- 1) The Honeymoon Phase
- 2) The 'Everything is awful' Phase
- 3) The 'Everything is OK' Phase

In the work of Varner and Beamer (2005), four stages of adjustment were introduced as the stage of integration (or mastery) was added (Tange, 2005):

- Euphoria
- Disillusionment
- Adjustment
- Integration

During this period, the differences between the old and new culture are seen in a romantic light, wonderful and new. For example, in moving to a new country, an individual might love the new food, the pace of life, the people's habits, the buildings and so on. (Wikipedia Foundation Inc., 2009) The first encounter with a new culture, euphoria or the holiday stage, is mostly exciting, but according to Beamer and Varner it normally lasts no longer than two weeks, and, they add; "some people skip it altogether." (Varner & Beamer 2005; Tange 2005, p. 3)

After a few days, a few weeks, or a few months, minor differences between the old and new culture begin to add up to become tiresome and annoying. One may long for food the way it is prepared "back home", may find the pace of life too fast or slow, may find the people's habits annoying, etc. (Cultural Shock, 2009)

In contrast, the second stage of culture shock is characterized by a general downturn. Sojourners find their constant exposure to an alien culture frustrating and may seek consolation in the company of countrymen in similar circumstances. The feeling of culture shock develops from the realization that one does not possess enough knowledge to manage in the new cultural setting. Its symptoms may be physical (illness and physical strain) as well as psychological (frustration, homesickness, depression).

(Varner & Beamer 2005; Tange 2005, p. 4)

Culture shock forces sojourners to open their minds and to confront members of the host culture in their search for inside information, which in the end will further their integration. (Guirdham 1999; Tange 2005) Again, after a few days, weeks or months, one grows accustomed to the new culture's differences and develops routines. At this point, an individual no longer reacts to the new culture positively or negatively, because it no longer feels like a new culture. An individual becomes concerned with basic living again, as they were in the original culture. (Wikipedia Foundation Inc, 2009)

The third stage of adjustment is characterized by Beamer and Varner as the ability to "cooperate more effectively with members of the host culture". (Varner & Beamer 2005; Tange 2005) Although they may not achieved the level of linguistic and cultural fluency that we find in the fourth stage of integration, sojourners possess enough insight into the host culture to navigate safely.

The last stage of integration is described by Beamer and Varner as 'going native'. At this stage, they reflect, business may worry "that they employee, who is now at home in different culture, does not totally represent them anymore". (Varner & Beamer 2005; Tange 2005) Guirdham (1999) refers to this stage as the "*establishment of an intercultural identity*" and, as opposed to Varner and Beamer, perceives it to be positive development.

The very last phase that is sometimes mentioned as a part of culture shock is the

‘Reverse culture shock’, which is referring to the stage after returning to the original culture. There, a person may undergo the whole process of culture shock again, as he/she already got accustomed to another culture and integrated it.

In their study, Alazzi and Chiodo (2006) learned what kind of problems students face when they decide to pursue their higher education degree in a foreign country. They focused on students of one nationality coming to the United States. However, in the end, they concluded that all students who become minority in foreign countries campuses might be facing the same problems.

They also proved and thus supported the idea of Varner and Beamer, that the Honeymoon phase (or the Euphoria phase) are skipped in the case of international students and they are immediately experiencing the second phase – disillusionment (or ‘everything is awful’ phase). Further, their results show clearly, that problems, which international students are facing, do not change over time. In their research, problems were reported from four different areas: academic, language, socio-cultural and personal.

Maslow’s Hierarchy of Needs

The above-mentioned research leads to other studies that deal with need theories of motivation. In 1943, Abraham Maslow introduced his study in the paper called *A Theory of Human Motivation*. Despite the fact, that this theory comes under the field of psychology, it is used even in today’s studies for explaining the human innate curiosity and need to grow in various spheres of research.

Maslow (1943) divided human needs into five levels: physiological, safety, love/belonging, esteem and self-actualization level. In the figure 2.1, Maslow’s hierarchy is represented as a pyramid, with the most primitive needs at the bottom. Such graphic illustration shows clearly the main idea of this theory. Maslow proposed, that human needs

are coming from the basic/essential level to the top of the pyramid and thus grows from the physiological needs, through safety and security needs to social and esteem needs to the last level that represents growth needs. “According to Maslow, once a need is satisfied, it no longer motivates.” (Cullen & Parboteeah, 2008)

Maslow also suggested that the achievement of one level is not constant. The moment a person loses the achieved need, he/she will go downward (in the scale of the pyramid) to a lower level, in order to re-achieve the needs that have been lost. This happens or is very likely to happen when a person (a student, an expatriate, a spouse of a student or expatriate, etc.) arrives to a different country. They come to a different environment and are exposed to the changes. Usually, friends (in case of students) or the company (in case of expatriates) will act as a bridge over the dissimilarities. However, to get to the stage of adjustment or integration (see Lysgaard’s hypothesis on adaptation, Chapter II, Cross-Cultural Adjustment, p. 13) takes considerably long time. Maslow’s hierarchy of needs can be used in order to explain, why stage of disillusionment (see Lysgaard’s hypothesis on adaptation, Chapter II, Cross-Cultural Adjustment, p. 12) might be rather long and what happen during that period of time.

Foreign students have to deal with changes in their hierarchy of needs. Suddenly, question of different food and all eating habits needs to be dealt with. Students have to face the question of housing and other resources. These needs are appearing on the lowest levels of Maslow’s pyramid. A considerably big number of international students, who come to Taiwan to start learning Chinese or to continue in their studies of Chinese language, obtained various scholarships. General idea about such students is, that they are very good students in their countries. Their feel motivated by gaining respect of others and thus confidence, enhancing their creativity and problem solving ability. Such needs are at the very top of Maslow’s hierarchy. To drop from the top of the pyramid to the bottom and suddenly deal with existential problems can cause feeling of frustration or depression. To overcome all obstacles in physiological and safely level and regain love/belonging and esteem level could

be time consuming.

This theory is also explaining why some foreign students might skip the first phase of Lysgaard's U-curve of adjustment – the honeymoon phase. As sojourners have to deal with existential problems in the first moment, they might not feel the excitement about experiencing new things.

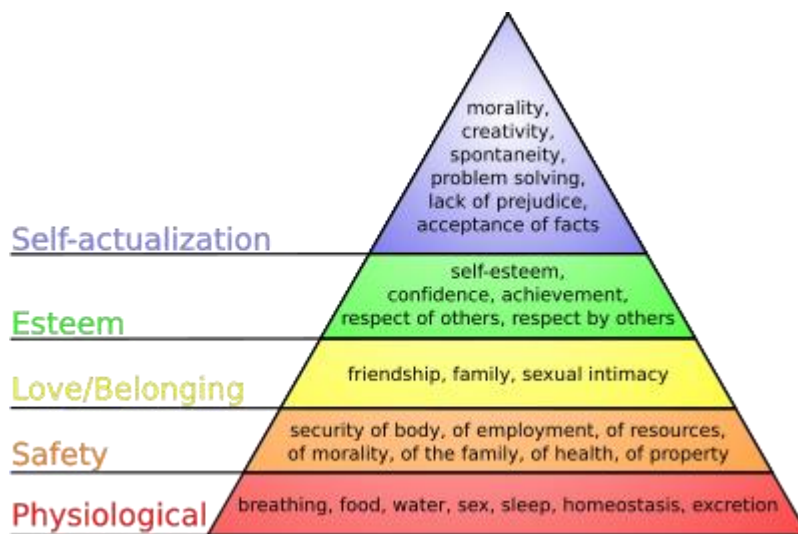


Figure 2.2. Maslow's hierarchy of needs

Source : Maslow's hierarchy of needs, 2009.

Motivator-hygiene Theory

A study conducted by Herzberg (1966) came up with a so-called motivator-hygiene theory, which assumes that a job has two basic characteristics – motivators and hygiene factors. The first mentioned include such characteristics that make employees satisfy their higher-level needs. On the other hand, hygiene factors allow employees to meet their lower-level needs such as security needs. This state can be reached for example by good benefits and working conditions (Cullen & Parboteeah, 2008).

Herzberg (1966) was the first researcher, who saw the importance of ‘hygiene factors’ at a workplace. This study assumes that motivator-hygiene theory does not apply only to workplace, but also to schools – from the students’ point of view. Students have to spend time at school mostly or almost every day, therefore the researcher assumes that they do care about the environment, facilities and classrooms equipment as well as faculty and staff attitude. It is not only a question of taste or delight for the eye; nice, clean and friendly environment supports human well-being and mental health. “It is widely acknowledged that a strong relationship exists between physical environments and human health and wellbeing. More specifically, various dimensions of person environment (PE) relationships have been studied relating to the psychological, physical and social aspects of human interactions and transactions.” (Suresh, 2008)

Well-being and Mental Health

Under this section, issues that are very hard to be measured, are discussed. According to the Webster's Online Dictionary, *mental health is the psychological state of someone who is functioning at a satisfactory level of emotional and behavioral adjustment* or, in other words, *the state wherein the person is well adjusted*. As for the precise meaning of well-being, the same dictionary defines it *as the psychical and psychological state that makes an individual well adjusted to his environment*. (Webster's Online Dictionary, n.d.)

Both terms refer to mental state and even for this fact they might be neglected by human resource management, by school staff and faculty etc. However, nowadays, it becomes a part of common knowledge that to take care of students/employees well-being and mental health is essential for success in business field and for sustainability of quality of services in schools and services sphere.

In order to foster these human needs, which more and more people try to reach in their personal life as well, organizations of any nature may provide special services. To narrow down this idea and to focus again on school environment, we may see only limited options of such service at first. However, such perspective may be constricted by our own experience when, in the past, the option of schools' assistance were minimal.

In present, students of higher education especially, tend to perceive schools as organizations providing service. This is easy to understand as students are paying tuition fees. Therefore we can say that the relationship of student and school is synonymous to customer and dealer, synonymous to demand and offer. It is a common knowledge for businessman that unless they will not be innovative, they will not make constant research on the market and will not care about customers' needs their business can hardly be prosperous. Even schools have to change their management and administration and involve means that will allow them to analyze precisely current trends and changes that may occur in the future. This need is even more crucial in an international environment of language centers, where foreign

students form a salad bowl of culture backgrounds, education levels etc. Such institutions “need to constantly evaluate the entire context into which they recruit and educate international students. It is insufficient to focus on the concerns they have as merely as expression of individual problems. Rather, attention must be given to the different parts of the social system that foster or inhibit these students’ adjustment.” (Poyrazli & Grahame, 2007, p.29)

To deal with mental health and students’ well-being, schools may establish counseling centers. Up to now, this may be the best solution for both sides of participants. However, there may be a big gap between founding such center and between its fully utilization.

First thing, that may come up in everybody’s mind is the ordinarily negative perception of counseling. For many people in general, seeing the counselor may be apprehended as a sign of weakness or immaturity, as loss of face or as a conclusive indicator of defective mental health. Somebody may feel fear of ludicrousness and shame. Some people may also be afraid of unveiling their thoughts because these may be stigmatized as socially unacceptable or wrong in the host culture. “Critical cultural differences in basic beliefs about mental health problems have been a hindrance to international student’s use of services.” (Mori, 2000, 139)

Even more difficulties are being faced by international students. Due to the fact that they are in (to some extent) unknown environment, they may face more stress which is coming from multiple sources.

Besides the normal developmental concerns that every student may have, international students encounter additional stressors due to demands for cultural adjustment. Difficulties with the following linguistic, academic, interpersonal, financial, and intrapersonal problems constitute unique sources of stress for international students.

(Mori, 2000, p.137)

In the abovementioned quotation, financial situation is indicated as a source of stress. However, not only the money issue itself may be stressful, but also how others perceive an individual (as a wealthy one etc.) may be rather unpleasant. In Taiwan, racial issue supports negatively this fact. Generally, in the eyes of Taiwanese people, Caucasians are somehow preordained to be American nationals. Here we do not judge or analyze this phenomenon. It is only mentioned here in order to understand the fact of false perception of financial situation as stressor for international students. Why is that? It has to be said that not only are the white race members apprehended as American nationals but as wealthy American nationals. For white non-Americans in Taiwan, this may be an issue not only because of the pressure of possible financial stringency itself, but for now, only this part will be considered. Such a presumption may affect everyday live situations and may even lead to refusal of communication (for example shopping on night markets, where prices are not fixed and for white foreigners the upset price is often higher than for local people). This issue also occurs in other countries, but may be even more pressing in Taiwan, as the presumption tends to be prevalent. "Crisis situation can also arise from their financial difficulties. The general assumption that most international students are wealthy is, in fact, erroneous; the lack of sufficient funds is one of their most commonly expressed concerns." (Cadieux & Wehrly 1986; Mori, 2000, p.138)

International students have to deal with two environments at one time. Not only do they face themselves in an unknown environment; they have to deal with situations and issues that are tight back to their homes and families. If something good happens that bring happiness to their whole family and relatives, it may generate sadness because they cannot experience it with their immediate family. If anything bad happens to their family members or friends, it negatively affects their situation abroad with manifold intensity.

In addition to the complication of the student's relationships...their personal crises originating at home – such as illness or death among their families, relatives, and friends, and parental discord or divorce – are very traumatic for them, and management of these crises, especially when they are unable to go home, can produce a tremendous amount of stress.

(Burak 1987; Mori 2000, p. 138)

Loss of traditional ceremonies, religious festivities or holidays (Christmas, Ramadan, Diwali etc.) in culture totally different from the origin one also puts a lot of pressure on international students. All of the aforementioned stressors may seem unreal or at least not occurring so often, but from researcher's experience and long time observation (year 2004 and from 2006 up to now), they happen more than often.

International students deal not only with stress of what have been left behind, of time shared with their family and friends being lost. Stress from the new culture is added to that too. Newly experienced style of live, different sets of values, standard of living, hygiene standards, new customs, habits or traditions all counts into the stress factors. "...experiences of events that violate their basic sense of morals, values, logic, and beliefs about normality and civility may contribute to their cultural confusion and disorientation." (Winkelman 1994; Mori, 2000, p.139)

Differences of the new culture may keep students from coming to the counseling centers; therefore the school/language center should promote such facilities in appropriate way. "Because international students are hesitant to seek services on their own, it is crucial for counselors to take proactive approaches (Sandhu, 1995) to increase the visibility and the accessibility of the counseling facilities." (Mori, 2000, p.140)

As long as the language issue may by another reason why international students avoid utilizing counseling services and try to deal with their problems on their own, the service

should be provided in more languages. Counselors should know how the language center is operated, facilities it provides etc. in order to help even with matters of everyday concern.

For successful, comprehensive therapeutic interventions, it is desirable for counselors to integrate such multiple functions as those of an intercultural communicator, developmental facilitator, crisis manager, student advocate, and information provider and processor (Axelson, 1993). For instance, given the international students' unfamiliarity with even the most basic campus and community resources, the counselor's role in connecting the students various educational, recreational, health care, financial, employment, and legal services is often as significant as constantly providing the students with emotional support.

(Mori, 2000)

Knowledgeableness Prior Students' Arrival and Learning Environment

This paper will also examine if MTC provides enough information to international students and if there is an adequate and sufficient orientation program for new comers. Information, that students get prior arrival may help them with their own personal preparation for facing new culture, new people etc. Therefore, the researcher wants to know, if these are given to the students in a satisfactory volume and if such knowledgeableness affects their performance at MTC.

The issue brings forth the need to improve the cultural and language aspects in the orientation activities offered by the college's international student office to first year international students. Most often these orientation sessions emphasize the academic and legal aspects of the students' sojourn and tend to neglect the cultural characteristics of the new environment these students will face.

(Do, 2007)

Even though the abovementioned citation is aimed at college students, it is applicable on language centers students as well. Communication is crucial issue at language centers. In order to maintain information transfer and flow, employees should be trained and aware of possible pitfalls of cross-culture information. “At minimum, these communication issues deserve to be presented as a topic in professional development programs to help the college’s faculty and staff to become aware of the potential cultural discords.” (Do, 2007)

In order to build up organizational culture and provide satisfactory learning environment for students, more extracurricular services or facilities may be provided. Students in the study abroad program or in foreign language courses are supposed to appreciate other cultures and languages and therefore more encouragement for interaction with other international students is vital. Do (2007) explains, that such support can be provided by creating student clubs or other services. These could lessen the culture shock and can ensure the higher rate of interaction and integration of international as well as local students.

Chapter Summary

Theory on cross-cultural adjustment explains the phases of the process of adaptation for sojourners. The Maslow’s model of hierarchy of needs is used in this study to explain changes that international students face in Taiwan. The illustration of downward tendency within the hierarchy of needs is the major point of using the Maslow’s model.

Further mentioned is Herzberg’s motivator-hygiene theory which shows the impact of working environment, atmosphere, equipment, salary etc. on satisfaction and motivation. In this study, Herzberg’s theory is applied to the setting of international school. This research tries to see whether hygiene factor affects foreign students’ performance.

Last two topics included in chapter II are well-being and mental health and knowledgeableness prior students’ arrival and learning environment. The latter is associated

with the motivator-hygiene theory, as it considers services provided by schools to international students. On the other hand, well being and mental health considers first and foremost situational factors (issues connected to adaptation to everyday life, students' personal concerns, etc.).

Ample studies were conducted about adaptation of sojourners. It would be rather impossible to review all existing literature about this topic. The author chose the above reviewed materials with confidence that these are the mostly related ones to the focus of this research and serve the purpose of background for research model design as well as for design of instrument.

CHAPTER III. METHODOLOGY

Chapter Overview

Chapter three describes the research procedure and methods and shows research framework. Research techniques, data collecting strategy, and data analysis are explained in detail. Moreover, interviews and pilot test results are shown at the end of this section; they clarify how the main research instrument – the questionnaire, was developed. The outcome of pilot study explains why and how the actual research questionnaire was amended.

Research Procedure

The progress of this study is shown in figure 3.1 and researcher uses two methods for data collecting. The field of this study - mandarin training centers in Taiwan – is too broad and variant. Every school may have different approaches to international students learning and may utilize different teaching methods. This study does not aim to encompass them all; on the contrary, the researched decided to focus on one language center only in order to provide more precise and applicable results.

Even within Mandarin Training Center of National Taiwan Normal University, there are many topics to be studied. However, scale of this paper was narrowed and the focus is kept on international students' performance and satisfaction. Research questions were set and the researcher started to search literature sources for such field. As was mentioned in chapter two, not many studies about language centers in general were conducted; however, the literature review was quite extensive.

Furthermore, NTNU Student Counseling Center was found as another rich source of information and therefore, two interviews with psychology counselors were conducted in order to learn more about the topic. Another three interviews were conducted with MTC

students. When information needed was collected, the researcher started to design a questionnaire. No existing questionnaire was used for this study, so reliability and validity tests have to be included. For reliability test, researcher used Cronbach's alpha, "a coefficient of consistency that measures how well a set of variables or items measures a single, unidimensional latent construct." (Wikipedia Foundation Inc., 2008) For validity test, revision by two MTC teachers and peers was done after the pilot study analysis.

After data was collected, all information was analyzed using SPSS 16 (Statistical Package for the Social Sciences) software. Research outcomes and discussion are provided in chapter IV. (p. 41); chapter V. (p. 61) includes conclusion and recommendations.

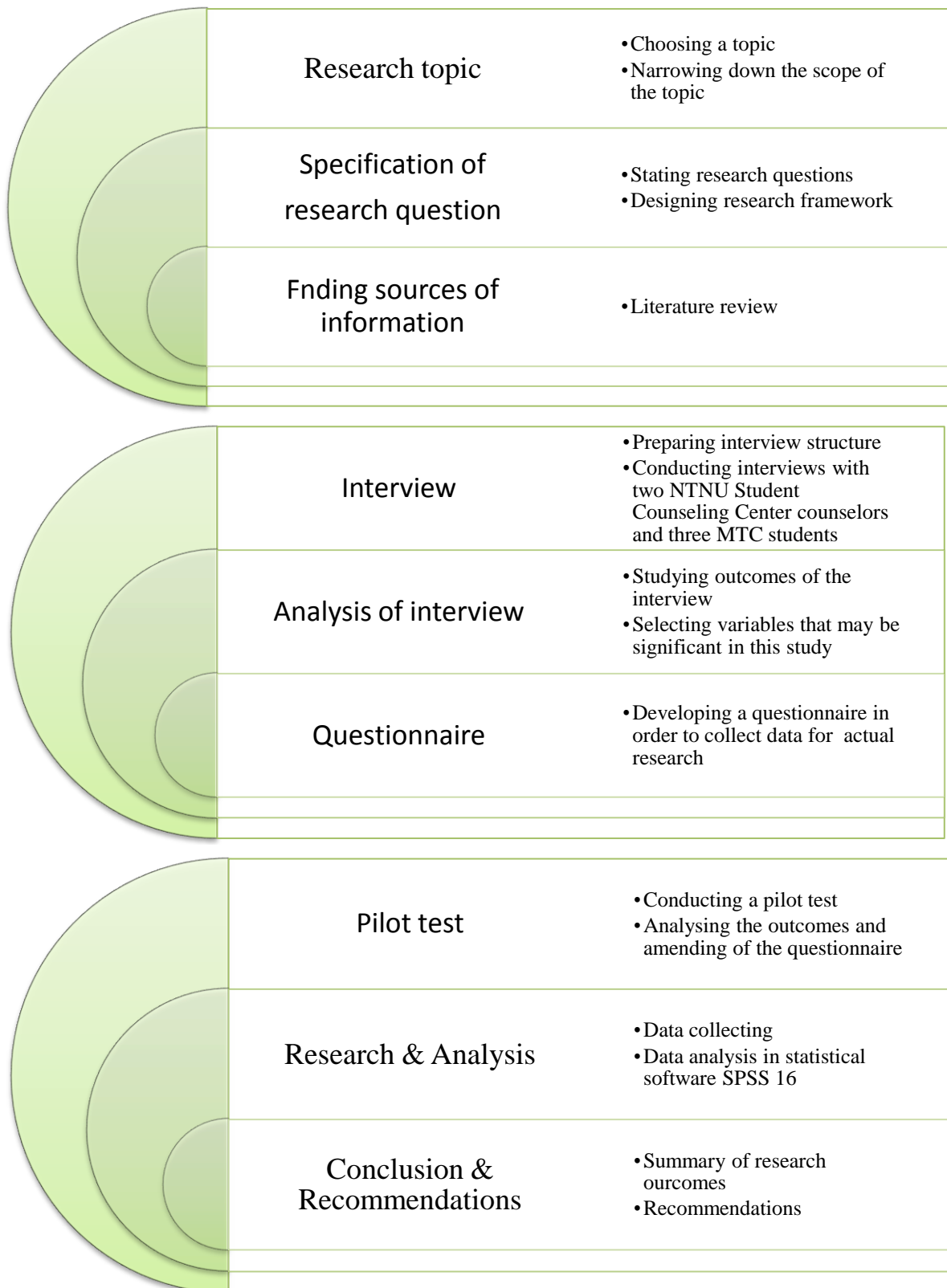


Figure 3.1. Research work flow

Source: see Research Procedure

Research Framework

Figure 3.2 shows research framework, which illustrates all hypotheses and how they will be tested. For purpose of this study, the author created four factors:

- 1) Hygiene factor
- 2) Situational factor
- 3) Adaptability factor
- 4) Region of origin

The researcher's decision to reduce variables into three factors (region of origin comprises only of one item) was initiated by the large number of items, which cannot be further scaled down. The author also hopes that such reduction will ease the data analysis.

This study examines whether or not the established factors affect international students' performance and satisfaction; also, variables are tested individually in order to see if they are significant when sample is divided according to length of stay in Taiwan and according to region of origin; further test will show if there is any correlation between international students' satisfaction and their performance.

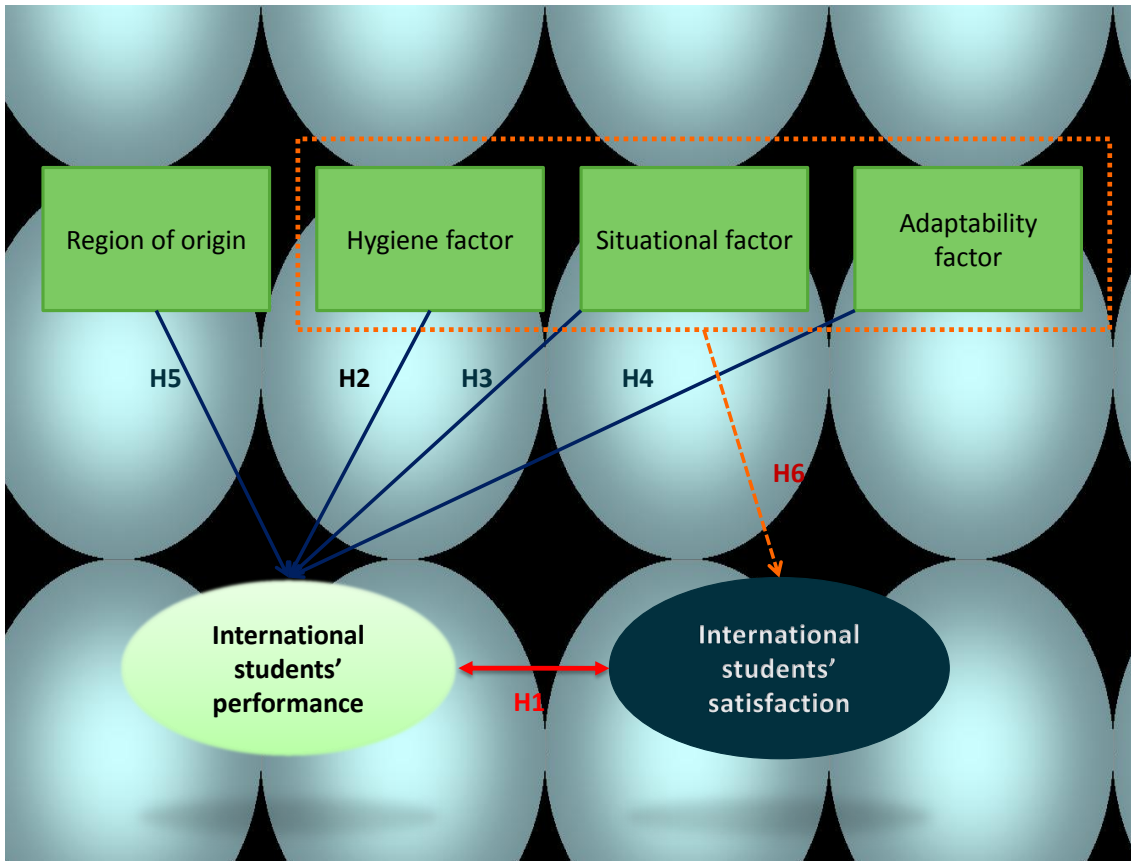


Figure 3.2. Study model

Source: see Research framework

Research Methods

The actual research used quantitative method for data gathering. A quantitative questionnaire was designed by researcher and used to collect needed information. Five-point Likert scale was utilized in the questionnaire, which is a commonly used psychometric bipolar scale method that measures positive or negative response to a statement. The format of the scale is:

1 strongly disagree

2 disagree

3 neutral

4 agree

5 strongly agree

The respondents were asked to refer to their experience of studying Chinese language at the National Taiwan Normal University, Mandarin Training Center. They were instructed to answer all parts of questionnaire about their performance, factors that may affect their learning results and level of satisfaction within and also outside the school. They were also invited and encouraged to write down their own performance motivators, if they found it uncovered by the questionnaire.

The respondents were also asked to provide a few demographic data – to indicate gender, their region/continent of origin and if they are scholarship recipients or not. In case they answer positively, they were further asked what kinds of scholarship are they awarded (Taiwan government scholarship, their country government scholarship or some other kind).

A pilot test was conducted with 21 MTC students. Pilot study analysis allowed the researcher to amend the questionnaire so that it can search its purpose as well as possible.

Population and Sampling

Population of this study is restricted to NTNU Mandarin Training Center international students. The average size of population is 2000 students for each semester. This number is volatile; therefore only approximate figure is given. There are no limitations about country/region of origin. The only condition that must be accomplished is the time of being involved in mandarin studies, which is at least one semester (MTC has four semesters per year; each of them lasts for three months.), so that the information about students' performance is averaged from longer time.

This research is using snowball sampling method, which is recognized by the researcher as the most satisfying mean of data collection. By utilizing snowball method, the researcher expects enough variety of received data and thus rule out the possibility that majority of respondents will be from one region/continent only. Questionnaire was originally only in English; further, Chinese translation was added. The printed questionnaires were first given to selected teachers of MTC, who spread them to their students as well as their colleagues. The researcher herself also addressed MTC students directly in order to ask them to fill in the questionnaire. Students had three to five days to fill in the questionnaire, which were be collected by the researcher from MTC teachers.

Instrumentation

This research used two tools for data collection. In addition to the referred interviews, a questionnaire was designed by the researcher in order to get information that will answer the research question. It is comprised of 26 questions that are to be evaluated with five points Likert scale; further, two questions are open questions and last two items are closed questions.

The reliability was be measured by Cronbach's alpha (coefficient of internal consistency) and the validity was enhanced by two MTC teachers' review, peer review and

the pilot test. SPSS 16 software was used for computing Cronbach's alpha, which is defined as

$$\alpha = \frac{N}{N - 1} \left(1 - \frac{\sum_{i=1}^N \sigma_{Y_i}^2}{\sigma_X^2} \right)$$

“-where where N is the number of components (items or testlets), σ_X^2 is the variance of the observed total test scores, and $\sigma_{Y_i}^2$ is the variance of component i .”(Wikipedia Foundation Inc., 2008

Interview

Five interviews were conducted in order to obtain an in-look into problems that international students might face. The collected information was later used during the designing of this research main instrument – the questionnaire. To ensure the objectivity of the obtained data, the researcher interviewed two psychology counselors and three students of the Mandarin Training Center. First counselor was an American lady, who is a former employee of NTNU Student Counseling Center. Thanks to the advantage of English language fluency, she promoted the NTNU Student Counseling Center to the MTC international students. Her work was exclusively focused on foreign students and therefore, the information she provided to the researcher are of high value.

The second counselor is a Taiwanese lady, a current counselor of the NTNU Student Counseling Center, who also works with international students. Thanks to the ability to deliver counseling in two languages, she was able to compare difficulties that international and local students face.

Three students, who were interviewed, are all European females. Two of them are recent MTC students; one of them is currently enrolled in the MTC. Interviewees were

chosen according to their experience if foreign country. Therefore, first lady has experience with living in foreign, Chinese speaking country and the second one has no experience with living in foreign country, however, is used to travel. The last student interviewee has no experience neither with living in a foreign country or with traveling.

Questionnaire

Questionnaire was designed exclusively for this research by its author, without using any existing sample. Questionnaire is divided into five small sections for the sake of researcher's overview during the data analysis. The set of variables is a result of careful literature review, researcher's observation (during the years 2004 and from 2006 up to now) as well as outcomes of the abovementioned interview.

Some minor changes may be done in the questionnaire after the data from pilot test will be analyzed. As was mentioned before, snowball sampling method will be used for this research; therefore a printed version of questionnaire will be spread among potential respondents. This sampling also ensures respondents anonymity and any extra data (for example respondents 'email addresses) will be required.

Data Analysis

The collected data was analyzed by SPSS software version 16. In order to see if there is significant relationship between international students' performance and their satisfaction, correlation, which indicates the strength and direction of a *linear* relationship between two variables, is used. In order to get result needed to answer hypotheses H2-H6, linear regression was used. To see what the strength of prediction of the outcomes was r^2 (or coefficient of determination) was used as a statistic tool. The r^2 showed how well the outcomes are predicted by the research framework.

For the purpose of this study, 300 questionnaires were spread among the MTC international students. The researcher collected 135 filled questionnaires. After careful examination, only 85 questionnaires were found applicable to this study. Collected data did not provide any response from students from Africa. The SPSS 16 statistical software does not consider samples less than 2 ($n < 2$). As the number of students from Australia and South America was less than two, therefore these samples had to be removed and the final sample number stabilized on 83.

Interviews results

For purpose of this study, the researcher decided to conduct semi-structured interviews with few topics to explore. Questions that the psychology counselors' interviewees were asked follows:

- 1) Did you work with MTC international students during your activity at NTNU Student Counseling Center?
- 2) How many foreigners seek for counseling services during the time you worked there?
- 3) Could you tell me, what were the major topics of your sessions with international students?
- 4) Were these problems related to school or were they behavioral problems or mental disorders?

For interviewees recruited from MTC international students, questions mostly identical to the questionnaire were used. Interviewer provided the students with enough space to share any opinion they had.

The results of all interviews are shown below as well as data obtained from the NTNU Student Counseling Center. It is a very limiting fact that only data from the fall semester of 2006 are available for the researcher. By that time, individual counseling as well as group counseling was accessible. Data available for group counseling are as follows:

Table 3.1.

Division of group sessions topics

GROUP TOPIC	SESSION HOURS
MTC Support Group	68
Dream work Group	16
Total	84

Source: L.Cornberg, personal communication, October 25, 2008.

The following table summarizes the primary individual counseling topics among international student clients.

Table 3.2.

Divisions of international students' problems

TYPE OF PROBLEM	HOURS
Family relationship	19
Interpersonal relationship	8
Intimate relationship	11
Self-exploration	47
Career plan	30
Crisis	3
Mental disorder	5
Total	123

Source: L.Cornberg, personal communication, October 25, 2008.

According to the former psychology counselor of the NTNU Student Counseling Center, the most frequent problems that international students face include: basic health concerns, transitional issues, behaviors related to stress, interpersonal and intimate relationships, identity issues and career concern. (Figure 4.1)

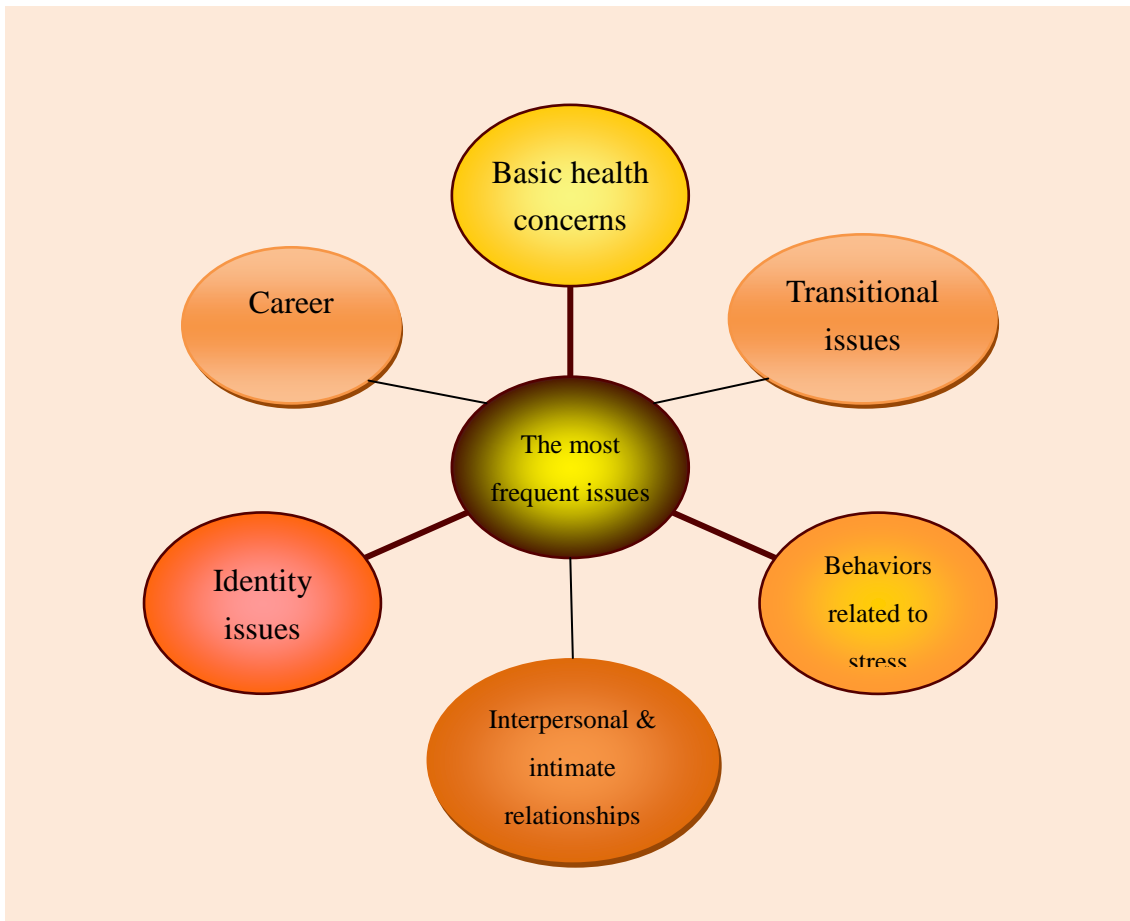


Figure 3.3. Major concerns of MTC international students
Source: Lynn Cornberg, personal communication, October 25, 2008.

Basic health concerns involve

- Sleep (too little or too much)
- Diet
- Eating disorder behaviors
- Body image

- Finding satisfying and healthy foods

Behaviors related to stress involve

- Behaviors related to alcohol and/or substance abuse
- Management of previously diagnosed mental disorders
- Homesickness

According to the American counselor, the age group from 24 -35 years, faces major transitional issues of living in a foreign country (alone or with problematic roommates) than the groups of other ages. They become stressed about long term relationships pressures, career and educational decisions, living in foreign society while at the same time becoming more confused and mixed up about their 'own'. Along with transitional issues, how to eat well and sleep well in modern life, tended to be a goal aimed in most therapy sessions. The counselor also stressed that "Many clients came and kept coming in order to focused non-judgmental and non-comparative conversations – they enjoyed having someone listen with real interests to their experiences as a foreigner and as a student. " (Lynn Cornberg, personal communication, October 25, 2008)

The other interviewee, who is currently employed by the NTNU Student Counseling Center and counsels both MTC and NTNU students, provided the following information:

- especially for students from developing countries, education systems differences, the loading and number of requirements on students becomes a significant stressor
- specifically for western students (European and North American students) restrictions within the educational system in Taiwan seems stressing and they demand students' rights comparable to their countries (e.g., students opinions are not being considered

by faculty or school authorities, complains and demands for improvement are being swept from the table without further discussion, etc.)

- language barrier problems
- issues with family relationships (parents versus offspring perceptions and points of view) and relationships in general
- unclearness or confusion about future career

The data obtained from all interviews helped the researcher to develop questionnaire for the actual study. Many issues were mentioned by interviewees. Therefore, the author summarized the problems, which were brought out by majority of interviewees, in the below figure. In total, there were five interviewees; two psychology counselors and three students. The MTC students were individuals and they provided only their personal opinion. The two NTNU counselors, on the other hand, furnished the researcher with summaries of their work with international students. Therefore, first counselor represents approximately 100 cases, the other one around 80 cases.

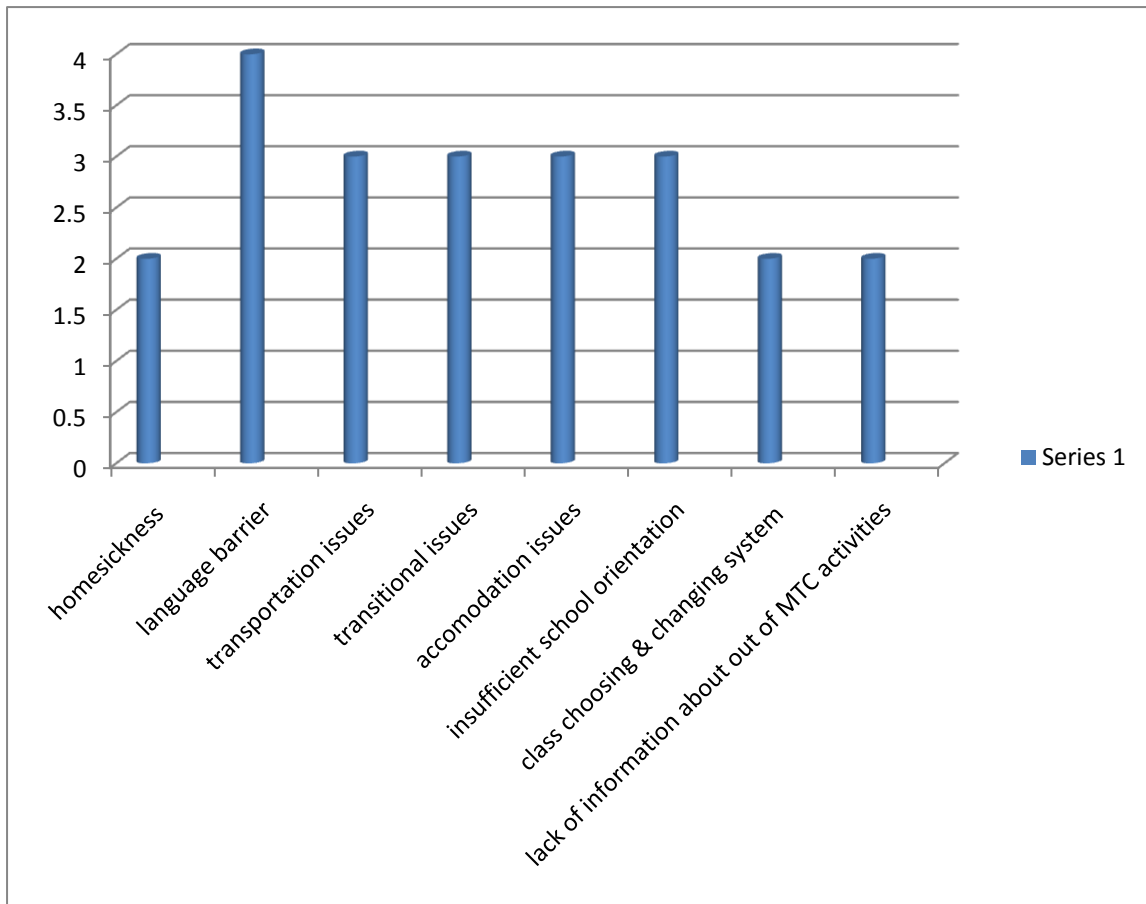


Figure 3.4. Interviews summary – items with multiple occurrence

Source: personal conversation with NTNU Student Counseling Center psychology counselors, February-April, 2009)

Pilot Study Results

The questionnaire used in this research was developed by the author and therefore needed to be proved as valid and reliable. For this reason, a pilot study was conducted. 21 questionnaires were collected and obtained data were analyzed in the SPSS 16 statistical software. Cronbach's alpha (coefficient of internal consistency) was used in order to run a reliability test. The validity of questionnaire was procured by additional interviews with NTNU Counseling Center psychology counselors and two teachers of the Mandarin Training Center.

Cronbach's alpha was run separately for each set of variables – hygiene factor, situational factor and adaptability factor. For hygiene factor, 18 items were processed. The Cronbach's alpha was 0.796. Generally, Cronbach's Alpha of 0.7 is considered to be a good reliability value. The researcher also used the item-total correlation, which tests each item's correlation with the test total in order to ensure that each item is correlated to the total and therefore is contributing to the test. 'A high total correlation indicated that the item is closely related to the content that the scale represents. A low correlation between an item and the scale suggest that the item measures something conceptually different from the scale.' (Miles & Gilbert, 197-198) When the item shows correlation coefficient that is lower than 0.3, it should be removed from the scale. Therefore, the researcher extracted two items from the hygiene factor. In consequence, Cronbach's Alpha also rose to 0.812.

Situational factor data, obtained in the pilot test, was run in the same way. However, the reliability of the original 19 questions was very low with Cronbach's Alpha only 0.433. Therefore, the researcher ran the item-total correlation test to see, which items are not conceptually related to situational factor. According to the results, 13 questions were deleted. With the six questions left, the reliability strengthen to $\alpha=0.731$.

Last group of variables – adaptability factor, only comprised of three questions. The reliability test showed $\alpha=0.874$ and item correlation coefficient indicated that all items are

contributive to the adaptability factor. Therefore, this section remained unchanged.

One question was added in demographic data in order to specify the length of respondent's stay in Taiwan. Other change, that emerged as necessary after the pilot test, was adding of Chinese translation. Due to the fact that many NTNU Mandarin Training Center students do not speak English, the researcher decided to provide Chinese mutation in order to augment the number of population who was able to answer the questionnaire. Also, recommendation for translation was given by a MTC teacher who reviewed the pilot test questionnaire.

The accuracy of translation of the questionnaire was checked by two peers' review and by professor of International Human Development department of NTNU. The translation intended to use rather simple language so that even students who did not reach higher level of Chinese could answer the questionnaire.

Chapter Summary

Chapter three provided a detailed in-look into the research methodology. The logic of research procedures was explained and illustrated. Interviews results justify the development of major research instrument – the questionnaire; pilot test proves its reliability and validity.

CHAPTER IV. FINDINGS AND DISCUSSION

Chapter Overview

This chapter presents at first the descriptive statistics in order to illustrate the sample population profile. The empirical results of this research, which follows, are divided into major groups according to the methods used. Therefore, factor analysis is discussed at first, followed by correlation, linear regression and one way ANOVA tests outcomes.

Respondents' Profile

The demographic data collected in the research showed valuable information about the sample population. 51 respondents (61%) were female students; 32 respondents (39%) were male students. Four continents are represented by the sample population – Asia (44 respondents), Central America (5 respondents), Europe (23 respondents) and North America (11 respondents). The pie chart illustrates the division of number of respondents according to the region of their origin.

Regional Division

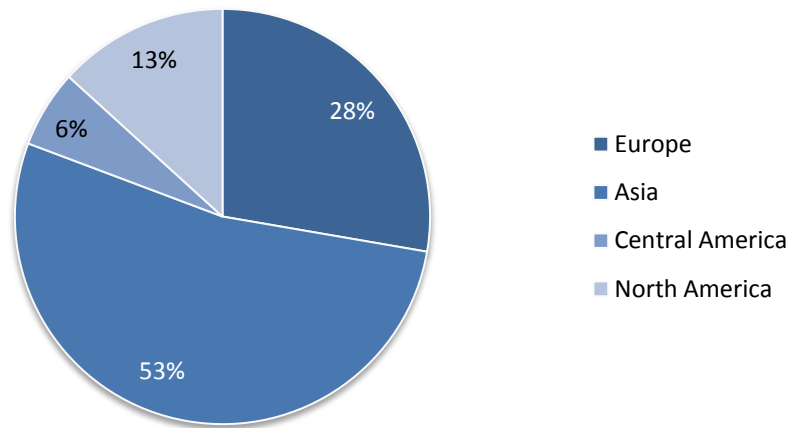


Figure 4.1. Regional division of research sample population

The age of sample population was available only with 75 samples. Ten Japanese female respondents did not fill in their age. Despite this fact, they were included in the final data analysis, and an average age of 26.4 years was assigned to those samples. The researcher presumes that the reluctance to reveal respondents' age is caused by cultural issue. The age distribution is illustrated by the doughnut graph below.

Age

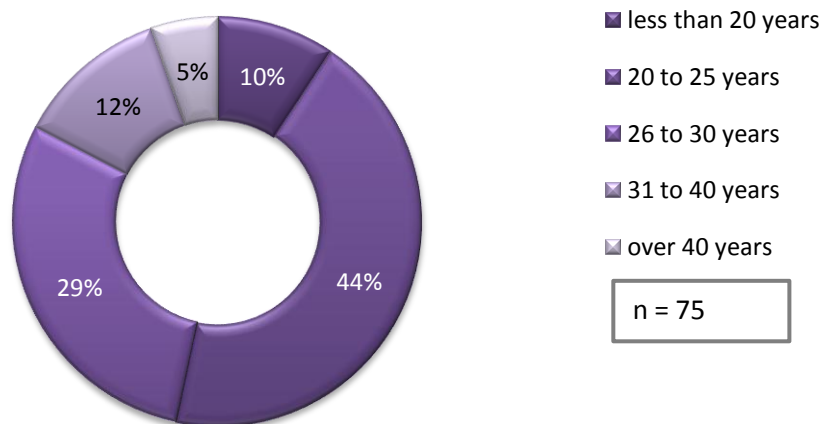


Figure 4.2. Age division of research sample population

Respondents were further asked whether or not they are scholarship recipients. 59 respondents (71%) do not receive scholarship. Only 24 students do have scholarship. 23 students receive Taiwan government scholarship. Only one recipient receives different kind of scholarship.

Outcome of Factor Analysis

Due to the large number of variables, the researcher decided to divide them into factors. Therefore, the factor analysis was run at first, to see the cohesiveness of variables within one factor. The Kaiser-Meyer-Olkin and Bartlett's tests were run. The KMO measure of sampling adequacy tests whether the partial correlations among variables are small. Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate. (Statistical Methods, 2008) The KMO measures the sampling adequacy and should be greater than 0.5 for a satisfactory factor analysis to proceed. The Bartlett's tests show that the associated probability is significant, being less than 0.05. In other words, this means that the correlation matrix is not an identity matrix.

Table 4.1.

KMO and Bartlett's test for hygiene and situational factors

test	value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.708
Bartlett's Test of Sphericity Approx. Chi-Square	2766.947
Sig.	.000*

* $p < .05$

For hygiene and situational factors, KMO test of sampling is high with the value of 0.708. Significance is also high with the value of 0.000. From the component matrix table below, a clear division between the two factors can be seen. Therefore variables x1-x16 come under hygiene factor; variables x17-x23 come under situational factor.

Table 4.2.

Component Matrix for hygiene and situational factors

	Component		
	1	2	
x1	.566	.195	
x2	.624	.138	
x3	.665	.163	
x4	.554	.114	
x5	.455	.334	
x6	.575	-.165	
x7	.506	-.199	
x8	.583	-.216	
x9	.546	-.306	
x10	.564	-.225	Hygiene factor (1) Variables x1-x16
x11	.672	.112	
x12	.786	-.224	
x13	.461	.073	
x14	.697	-.095	
x15	.294	.084	
x16	.431	-.044	
x17	.013	.387	
x18	.233	.639	
x19	.190	.736	Situational factor (2) Variables x17-x23 KMO and Bartlett's test results acceptable even if items x20 and x22 are kept within situational factor
x20	-.403	.025	
x21	.150	.582	
x22	-.157	-.124	
x23	-.300	.559	

Extraction Method: Principal Component Analysis.
a. 2 components extracted.

The two tables below show results of KMO and Bartlett's tests for adaptability factor. KMO value of 0.690 is high as well as significance with value 0.000. The component matrix table clearly illustrates that all three variables x24-x26 can be viewed as a factor.

Table 4.3.

KMO and Bartlett's test for adaptability factor

Test		value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.690
Bartlett's Test of Sphericity	Approx. Chi-Square	202.243
		Sig. .000*

* $p < .05$

Table 4.4.

Component Matrix for hygiene and adaptability factor

Component	1
x24	.803
x25	.815
x26	.835

Extraction Method: Principal Component analysis.

a. 1 component extracted.

Results of Correlation & Linear Regression Tests

Hypothesis H1

Research hypothesis one studies if there is any correlation between international students' performance and satisfaction with life in Taiwan. The correlation statistics was run in SPSS 16 and the results show that there is no correlation between performance and satisfaction of international students. Therefore the null hypothesis cannot be rejected.

Table 4.5.

Correlation between performance and satisfaction

		satisfaction	performance
satisfaction	Pearson Correlation	1.000	-.062
	Sig. (2-tailed)		.294
	N	85.000	85
performance	Pearson Correlation	-.062	1.000
	Sig. (2-tailed)	.294	
	N	85	85.000

Hypothesis H2 – H4

According to the model of this research, regression was run between hygiene, situational and adaptability factors and international students’ performance. As the following tables show, there is no significance in the relation of those three factors on international students’ performance, because all the results are higher than 0.05. Therefore, for hypothesis H2 –H4 the null hypothesis cannot be rejected.

Table 4.6.

Linear regression results –coefficients

Model	Unstandardized		Standardized	t	Significance
	Coefficients		Coefficients		
	B	Std. Error	Beta		
Hygiene factor	-.008	.007	-.136	-1.160	.250
Situational factor	-.007	.016	-.052	-.448	.656
Adaptability factor	.005	.031	.018	.148	.883

Dependent Variable: performance

Hypothesis H5

International students from all over the world study Chinese at MTC. Hence, the researcher wanted to see if region of students’ origin affects their achievements in Taiwan. The results of linear regression of hypotheses 5 shows that region of origin and international students’ performance are not related. Therefore, the null hypotheses cannot be rejected.

Table 4.7.

Linear regression for region of origin

Model 1	Sum of Squares	df	Mean Square	F	Significance
Regression	.055	1	.055	.193	.661 ^a
Residual	81.578	287	.284		
Total	81.633	288			

a. Predictor : (Constant), region of origin

b. Dependent Variable: performance

Hypothesis H6

Hypotheses H6 tests if hygiene, situational and adaptability factors have significant relation with international students' satisfaction with life in Taiwan. As can be seen in the following tables, hygiene and situational factors show high significance. Therefore, null hypothesis can be rejected.

Table 4.8.
Linear regression for satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.436 ^a	.190	.182	.869

a. Predictors: (Constant), adaptability factor, situational factor, hygiene factor

Table 4.9.
Continued results from linear regression for satisfaction

Model 1	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Significance
(Constant)	2.868	.482		5.951	.000
hygieneFactor	.029	.006	.277	5.055	.000*
situationalFactor	-.063	.014	-.248	-4.546	.000*
adaptabilityFactor	.047	.024	.109	1.958	.051

Dependent Variable: Y2

* $p < .05$

The adjusted r^2 shows that 18% of international students' satisfaction with life in Taiwan is explained by hygiene and situational factor. Even though these are not significant for performance and are not motivators for international students' studies, they still play important roles in students' everyday life in Taiwan.

Results of One Way ANOVA Analyses

Due to the fact that regression of factors did not show any relation to international students performance, the researcher decided to run one way ANOVA tests to compare the means of variables within hygiene, situational and adaptability factors and thus to learn if any variables will show significance once they are considered individually. Further, post-hoc tests were run in order to find if variables behave differently among different sample groups. Two one way ANOVA tests were conducted; one with length of international students in Taiwan as

dependent factor; the second one uses region of students' origin as dependent factor.

One Way ANOVA (1)

Hygiene factor

For One way ANOVA test where dependent factor is length of international student's stay in Taiwan, one sample has to be extracted. As SPSS statistical software does not consider samples less than two, the only sample with duration of stay over 39 months has to be deleted. Therefore, sample comprises of 82 respondents (n = 82). The results for hygiene factor are illustrated in the following table.

Table 4.10.

One way ANOVA test for hygiene factor – ANOVA analysis

		Sum of Squares	df	Mean Square	F	Significance
x13	Between Groups	8.239	3	2.746	3.047	.034*
	Within Groups	70.309	78	.901		
	Total	78.549	81			

* $p < .05$

As can be understood from table 4.10, there is a significant difference between the groups (the significance is less than 0.05). The descriptive statistics shows the means of answers from respondent.

Table 4.11.

One way ANOVA for hygiene factor - descriptive statistics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
x13								
less than 6 months	5	3.00	1.581	.707	1.04	4.96	1	5
6 to 12 months	47	2.89	.938	.137	2.62	3.17	1	5
13 to 24 months	21	2.62	.865	.189	2.23	3.01	1	4
25 to 36 months	9	1.89	.782	.261	1.29	2.49	1	3
Total	82	2.72	.985	.109	2.50	2.94	1	5

Variable x13, which stands for provided information about medical care, is negatively

significant. Proportionally with longer time spent at the MTC, the dissatisfaction with information about medical care is growing.

The post-hoc test was run to see which groups exactly have significant difference. Tukey HSD test was used as the instrument for measuring differences between groups' means. From the following table we can see which groups have significant means difference at 0.05.

Table 4.12.

One way ANOVA for hygiene factor – post-hoc test

Dependent Variable	(I) duration of stay in Taiwan	(J) duration of stay in Taiwan	Mean Difference (I-J)	Std. Error	Significance
x13	less than 6 months	6 to 12 months	.106	.447	.995
		13 to 24 months	.381	.472	.851
		25 to 36 months	1.111	.530	.163
	6 to 12 months	less than 6 months	-.106	.447	.995
		13 to 24 months	.275	.249	.690
		25 to 36 months	1.005*	.345	.024
	13 to 24 months	less than 6 months	-.381	.472	.851
		6 to 12 months	-.275	.249	.690
		25 to 36 months	.730	.378	.224
	25 to 36 months	less than 6 months	-1.111	.530	.163
		6 to 12 months	-1.005*	.345	.024
		13 to 24 months	-.730	.378	.224

* $p < .05$

There is a significant mean difference between groups of students who have stayed in Taiwan for half-one year (6-12 months) and for 2-3 years (25-36 months).

Situational Factor

From the following ANOVA analysis for variables x17-x23, only two are significant. The means further explain that on question x20 (feeling confused about ones career) most respondents replied neutrally; responses on x21 (difficulties with adapting to Taiwanese cuisine) were negatively significant.

Table 4.13.

One way ANOVA for situational factor- ANOVA analysis

		Sum of	df	Mean Square	F	Significance
		Squares				
x20	Between Groups	12.277	3	4.092	2.886	.041*
	Within Groups	110.613	78	1.418		
	Total	82	81			
x21	Between Groups	11.779	3	3.926	2.880	.041*
	Within Groups	106.331	78	1.363		
	Total	82	81			

* $p < .05$

Table 4.14.

One way ANOVA for situational factor – descriptive statistics

		N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
x20	less than 6 months	5	2.00	1.225	.548	1	4
	6 to 12 months	47	3.04	1.233	.180	1	5
	13 to 24 months	21	2.90	1.179	.257	1	5
	25 to 36 months	9	3.89	.928	.309	2	5
	Total	82	3.04	1.232	.136	1	5
x21	less than 6 months	5	3.80	1.304	.583	2	5
	6 to 12 months	47	2.28	1.136	.166	1	5
	13 to 24 months	21	2.19	1.167	.255	1	5
	25 to 36 months	9	2.11	1.269	.423	1	5
	Total	82	2.33	1.208	.133	1	5

The means for variable x20 (confusion about one's career) have no descending or rising tendency. This can be explained by the fact that individual career planning is probably affected by other variables and is not only related to international students' stay in a foreign country. Variable x21 (troubles with getting used to Taiwanese cuisine) has a declining tendency over the time of stay in Taiwan. Using the U curve of adjustment, we can explain this tendency. At the beginning, international students are excited about new food and flavors, however after some time they start to miss their homeland cuisine.

The post-hoc test shows that there are significant differences between means of groups of students staying in Taiwan for half-one year (6-12 months) and two-three years

(25-36 months) for variable x20; variable x21 demonstrates significance between groups of half-one year (6-12 months) and one-two years (13-24months).

Table 4.15.

One way ANOVA for situational factor – post-hoc test

Dependent Variable	(I) duration of stay in Taiwan	(J) duration of stay in Taiwan	Mean Difference (I-J)	Std. Error	Significance
x20	less than 6 months	6 to 12 months	-1.043	.560	.253
		13 to 24 months	-.905	.593	.427
		25 to 36 months	-1.889*	.664	.029
	6 to 12 months	less than 6 months	1.043	.560	.253
		13 to 24 months	.138	.313	.971
		25 to 36 months	-.846	.433	.215
	13 to 24 months	less than 6 months	.905	.593	.427
		6 to 12 months	-.138	.313	.971
		25 to 36 months	-.984	.474	.171
	25 to 36 months	less than 6 months	1.889*	.664	.029
		6 to 12 months	.846	.433	.215
		13 to 24 months	.984	.474	.171
x21	less than 6 months	6 to 12 months	1.523*	.549	.034
		13 to 24 months	1.610*	.581	.035
		25 to 36 months	1.689	.651	.054
	6 to 12 months	less than 6 months	-1.523*	.549	.034
		13 to 24 months	.086	.306	.992
		25 to 36 months	.165	.425	.980
	13 to 24 months	less than 6 months	-1.610*	.581	.035
		6 to 12 months	-.086	.306	.992
		25 to 36 months	.079	.465	.998
	25 to 36 months	less than 6 months	-1.689	.651	.054
		6 to 12 months	-.165	.425	.980
		13 to 24 months	-.079	.465	.998

* $p < .05$

Adaptability Factor

For adaptability factor, all three variables x24-x26 appeared significant. Variable x24 stands for openness; variable x25 describes adaptability to new life situations, new culture and environment; variable x26 explains ability of self-motivation.

Table 4.16.

One way ANOVA for adaptability factor – ANOVA analysis

		Sum of Squares	df	Mean Square	F	Significance
x24	Between Groups	12.578	3	4.193	5.656	.001*
	Within Groups	57.824	78	.741		
	Total	70.402	81			
x25	Between Groups	7.176	3	2.392	3.349	.023*
	Within Groups	55.715	78	.714		
	Total	62.890	81			
x26	Between Groups	7.011	3	2.337	2.905	.040*
	Within Groups	62.745	78	.804		
	Total	69.756	81			

* $p < .05$

After the researcher ran the descriptive statistics, the means of answers did not show any declining or raising tendency and values were 3.91; 3.96; 3.68. Openness, self-motivation and ability to adapt do not change dependently on length of stay in Taiwan. The following table shows which mean differences between groups are significant.

Table 4.17.

One way ANOVA for adaptability factor –post-hoc test

Dependent Variable	(I) duration of stay in Taiwan	(J) duration of stay in Taiwan	Mean Difference (I-J)	Std. Error	Significance
x24	less than 6 months	6 to 12 months	-1.549*	.405	.001
		13 to 24 months	-1.067	.428	.069
		25 to 36 months	-1.400*	.480	.024
	6 to 12 months	less than 6 months	1.549*	.405	.001
		13 to 24 months	.482	.226	.151
		25 to 36 months	.149	.313	.964
	13 to 24 months	less than 6 months	1.067	.428	.069
		6 to 12 months	-.482	.226	.151
		25 to 36 months	-.333	.343	.766

(Continued)

Table 4.17. (Continued)

Dependent Variable	(I) duration of stay in Taiwan	(J) duration of stay in Taiwan	Mean Difference (I-J)	Std. Error	Significance	
x 25	25 to 36 months	less than 6 months	1.400*	.480	.024	
		6 to 12 months	-.149	.313	.964	
		13 to 24 months	.333	.343	.766	
	13 to 24 months	less than 6 months	-.076	.421	.998	
		6 to 12 months	-.668*	.222	.018	
		25 to 36 months	-.476	.337	.494	
	25 to 36 months	less than 6 months	6 to 12 months	.400	.471	.831
			13 to 24 months	-.191	.308	.925
			25 to 36 months	.476	.337	.494
		6 to 12 months	less than 6 months	-.715	.422	.334
			13 to 24 months	-.086	.446	.997
			25 to 36 months	-.467	.500	.787
x26	less than 6 months	6 to 12 months	.715	.422	.334	
		13 to 24 months	.629*	.235	.044	
		25 to 36 months	.248	.326	.872	
	6 to 12 months	less than 6 months	.086	.446	.997	
		13 to 24 months	-.629*	.235	.044	
		25 to 36 months	-.381	.357	.711	
	13 to 24 months	less than 6 months	6 to 12 months	.467	.500	.787
			13 to 24 months	-.248	.326	.872
			25 to 36 months	.381	.357	.711
		6 to 12 months	less than 6 months	-.248	.326	.872
			13 to 24 months	.381	.357	.711
			25 to 36 months	-.248	.326	.872

* $p < .05$

One Way ANOVA (2)

The second one way ANOVA test is looking at individual variables and their significance based on division into groups according to region of origin. The researcher wants to know if any variables are significant for students from different regions around the world. The SPSS software does not consider samples less than two, therefore two samples had to be extracted with the total number of 83 respondents ($n = 83$).

Hygiene factor

Table 4.18 shows only the significant variables from hygiene factors followed by the table with post-hoc test. Variable x7 stands for satisfaction with MTC teachers' attitude; variable x10 represents satisfaction with MTC staff language skills.

Table 4.18.

ANOVA table for hygiene factor

		Sum of Squares	df	Mean Square	F	Significance
x7	Between Groups	5.006	3	1.669	2.960	.037*
	Within Groups	44.536	79	.564		
	Total	49.542	82			
x10	Between Groups	9.078	3	3.026	2.888	.041*
	Within Groups	82.777	79	1.048		
	Total	91.855	82			

* $p < .05$

Table 4.19

Post-hoc for hygiene factor

Dependent Variable	(I) region of origin	(J) region of origin	Mean Difference (I-J)	Std. Error	Significance	
x7 Tukey HSD	2 Asia	4 Central America	-.641	.354	.277	
		5 Europe	.333	.193	.318	
		6 North America	-.205	.253	.850	
	4	2	5	.641	.354	.277
			6	.974*	.370	.049
			4	.436	.405	.704
	5	2	4	-.333	.193	.318
			6	-.974*	.370	.049
			4	-.538	.275	.215
	6	2	4	.205	.253	.850
			5	-.436	.405	.704
			6	.538	.275	.215

* $p < .05$

The post-hoc test only shows significance in mean differences for variable x7 between groups 4 and 5, in other words between students from Central America and Europe.

Situational factor

Within situational factor, four out of six variables appears highly significant. Variable x18 stands for hardships with life style changes in new country; variable x19 represents difficulties with living in a new culture and environment; x20 shows confusion about future career plans and x22 stands for difficulties with shopping.

Table 4.20.

ANOVA for situational factor

		Sum of Squares	df	Mean Square	F	Significance
x18	Between Groups	11.850	3	3.950	4.618	.005*
	Within Groups	67.572	79	.855		
	Total	79.422	82			
x19	Between Groups	18.994	3	6.331	8.337	.000*
	Within Groups	59.994	79	.759		
	Total	78.988	82			
x20	Between Groups	14.787	3	4.929	3.602	.017*
	Within Groups	108.104	79	1.368		
	Total	122.892	82			
x22	Between Groups	21.733	3	7.244	6.276	.001*
	Within Groups	91.183	79	1.154		
	Total	112.916	82			

* $p < .05$

Table 4.21.

Post-hoc test for situational factor

Dependent Variable		(I) region of origin	(J) region of origin	Mean Difference (I-J)	Std. Error	Significance
x18	Tukey HSD	2 Asia	4 Central America	-.855	.436	.213
			5 Europe	.632*	.238	.046
			6 North America	.364	.312	.650
		4	2	.855	.436	.213
			5	1.487*	.456	.009
			6	1.218	.499	.077

(Continued)

Table 4.21. (Continued)

Dependent Variable	(I) region of origin	(J) region of origin	Mean Difference (I-J)	Std. Error	Significance			
x19	Tukey	5	2	-.632*	.238	.046		
		HSD	4	4	-1.487*	.456	.009	
			5	5	.751*	.224	.007	
		HSD	6	6	.818*	.294	.033	
			4	2	.927	.411	.118	
		HSD	5	5	1.678*	.430	.001	
	6		6	1.745*	.470	.002		
	Tukey	5	2	-.751*	.224	.007		
			4	4	-1.678*	.430	.001	
			6	6	.067	.319	.997	
		HSD	2	2	-.818*	.294	.033	
			4	4	-1.745*	.470	.002	
5			5	-.067	.319	.997		
x20	Tukey	2	4	.800	.552	.473		
			HSD	5	.174	.301	.938	
				6	-1.000	.394	.062	
		HSD	4	2	-.800	.552	.473	
			5	5	-.626	.577	.700	
			6	6	-1.800*	.631	.028	
	Tukey	5	2	-.174	.301	.938		
			4	4	.626	.577	.700	
			6	6	-1.174*	.429	.038	
		HSD	2	2	1.000	.394	.062	
			4	4	1.800*	.631	.028	
			5	5	1.174*	.429	.038	
x22	Tukey	2	4	-.432	.507	.829		
			HSD	5	5	-.041	.276	.999
				6	6	-1.523*	.362	.000
		HSD	4	2	.432	.507	.829	
			5	5	.391	.530	.881	
			6	6	-1.091	.579	.244	
	Tukey	5	2	.041	.276	.999		
			4	4	-.391	.530	.881	
			6	6	-1.482*	.394	.002	
		HSD	2	2	1.523*	.362	.000	
			4	4	1.091	.579	.244	
			5	5	1.482*	.394	.002	

* $p < .05$

The mean differences show significance among all the groups. Then, these variables are significant for members of all regions.

Adaptability factor

The last factor comprises of three variables. Only x25, which stands for the ability to adapt easily to new culture and environment, is highly significant. Other two variables did not show any significance, therefore are not included in the following table.

Table 4.22.
ANOVA table

		Sum of Squares	df	Mean Square	F	Significance
x25	Between Groups	9.663	3	3.221	4.700	.005*
	Within Groups	54.144	79	.685		
	Total	63.807	82			

*p < .05

Table 4.23.
Post-hoc test table

Dependent Variable	(I) region of origin	(J) region of origin	Mean Difference (I-J)	Std. Error	Significance	
x25	Tukey HSD	2 Asia	4 Central America	-.564	.391	.477
			5 Europe	-.625*	.213	.022
			6 North America	-.818*	.279	.022
		4	2	.564	.391	.477
			5	-.061	.408	.999
			6	-.255	.447	.941
		5	2	.625*	.213	.022
			4	.061	.408	.999
			6	-.194	.303	.919
		6	2	.818*	.279	.022
			4	.255	.447	.941
			5	.194	.303	.919

*p < .05

The means differences are significant between groups of respondents from Asia, Europe and North America.

Review of Respondents' Comments

The questionnaire design allowed respondents to write down notes and comments on their stay in Taiwan and studies at the MTC. 33 respondents from Asia, Europe and North America took the opportunity and shared with the author their major concerns and facts that displease them. The table below summarizes all the comments. The highlighted numbers shows the highest occurrence of comments on one particular issue. Five commenting respondents think that the MTC does not provide clean environment. MTC administrative personnel were strongly criticized by five respondents. The same number of comments conveys dissatisfaction with information on school canteen, free on-campus medical care, insurance etc., provided by MTC. Four questionnaire respondents were displeased with the MTC library situation. Finally, five respondents complained about size and equipment of MTC classrooms.

Table 4.24.

Respondents' comments

No.	RESPONDENTS' COMMENTS <i>(data collected from questionnaires – respondents' notes section)</i>	Occurrence of comment
1	MTC is not clean (classrooms, restrooms).	5
2	Teachers are very good.	1
3	MTC administrative personnel are not helpful.	5
4	Some teachers are weak in <i>pinyin</i> phonetic transcription.	1
5	Audio-visual test books are not good, do not support independent study and are too pro-American.	2
6	MTC only has announcements in English and Japanese, which is not fair to other south-east Asians.	1
7	Applying for ARC is stressful – it is too complicated.	1
8	Some MTC teachers are too conservative → this discourage students →any discussion or attempt to talk to the teacher about this is waste of time →training should be provided to MTC teachers to better understand international students	3

(Continued)

Table 4.24. (Continued)

No.	RESPONDENTS' COMMENTS	Occurrence of comment
<i>(data collected from questionnaires – respondents' notes section)</i>		
9	Only teachers as native speakers are not enough for the best learning environment.	1
10	Troubles with finding clothes/shoes in bigger sizes – annoying.	2
11	MTC did not provide information about school canteen, NTNU counseling center, insurance and on campus free medical care.	5
12	Scholarship is deferred in September and January – causes financial problems, especially because the school tuition has to be paid by that time.	3
13	The factors affecting my performance and motivation the most are teachers and classmates.	1
14	The MTC library is too crowded, especially after increase of the study hours for the visa purpose).	4
15	Summer heat and humidity are biggest adaptation issues.	2
16	Class changing procedure is confusing and stressful.	1
17	Inconvenient schedule of cultural classes.	2
18	Because of the bad service at MTC, respondent is changing to another university's language center next semester.	1
19	Classrooms are too small, furniture too bulky and inconvenient.	5
20	Schedules of summer trips disregard students who leave earlier in the summer.	1
21	MTC does not meet the needs of students in the higher level classes (beginners oriented).	2
22	Teachers are not willing to explain the subject matter in English even when students do not understand (especially for beginners).	1
23	The extra five hours at school are ridiculous.	1
24	MTC students cannot enter NTNU library – annoying.	2
25	No or little chance for international students and NTNU students for exchange and communication.	1
26	MTC students have only few holidays – de-motivating after few months; no time to even get know other parts of the country and culture.	1

Summary of Research Results

From the statistical results we can see that the null hypothesis H1-H5 have to be retained because the results of linear regressions and correlation showed no significant relation between satisfaction and hygiene, situational, adaptability factors to international students' performance. For hypothesis H6 the null hypothesis can be rejected, as hygiene and situational factors both shows high significance and therefore they are related to international students' satisfaction with life in Taiwan.

The one way ANOVA tests were run twice. Firstly, length of students' stay in Taiwan was the dependent variable. In the second test, region of origin of international students was considered as the dependent variable. As is illustrated by the abovementioned tables, when individually tested, some variables showed significance.

The empirical results and the data collected from questionnaire respondents' comments enable the researcher to provide conclusion and suggestions to MTC staff as well as international students in the following chapter V.

Discussion

From the research results, some variables appeared to be significant when sample was divided according to length of stay in Taiwan. Moreover, some of them show declining tendency in respondents answers' means concurrently with the longer duration of stay in Taiwan. Accordingly it can be concluded that these results support Lysgaard's (1955) adaptation theory of sojourners adaptation process – the cultural shock; the U-curve of adjustment can be supported with this research results as well. Answers on lack of information about medical care provided by MTC, has declining tendency over length of students' stay in Taiwan. The same tendency is visible with difficulties with adaptation to

Taiwanese cuisine. It can be deducted, that at the beginning of stay in Taiwan, students feel excited about new cuisine and want to try all local delicacies. Nevertheless, after some time they feel fed up with unaccustomed flavors and start yearn for food of their homeland. As for the awareness about medical care, the researcher assumes that the U- curve is also applicable. This is probably caused by the fact that students start to seek medical care (either for preventive health check or for actual treatment) after they spend some time in new country. By that time they may feel the pressing urge for more information about hospitals, medicaments etc. It may be concluded that the Lysgaard's (1955) theory of cultural shock and the U-curve of adjustment proved its applicability on international students in Taiwan and should be considered by organizations which receive international students.

Respondents' comments and student interviewees are evidence to the Maslow's Theory of human needs (1943). Participants of this research validate the idea that when they move backwards from self-actualization or esteem levels of their needs and suddenly have to deal with needs coming under physiological or safety level, they feel annoyance or stress.

The researcher assumed that Herzberg's Motivator-hygiene Theory (1966) can be applied in school environment as well. However, according to the test results, it can be said that even though hygiene factor is important for international student's satisfaction, it does not act as motivator or de-motivator for their studies. Nevertheless, the fact that satisfaction is closely related to hygiene factor shows that researcher's assumption about necessity of well being was correct. Mandarin Training Center may uplift the learning environment in order to sustain students' well being and mental health and thus to make them more satisfied.

This study also shows that international students at MTC call for more information about school and out-of-campus life and activities. Also, more chances to meet and spend time with NTNU students were mentioned. Therefore, the author supports Do's (2007) research results about the importance of orientation sessions and interaction between international and local students. In agreement with Mori (200), the author believes that MTC

should also provide more information prior students' arrival in order to anticipate stressful situation at the beginning of their stay in Taiwan.

CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS

Chapter Overview

This chapter comprises of two sections. Section one provides detailed summary of research results with further description of empirical results. Section two offers specific recommendation to the Mandarin Training Center (MTC) of National Taiwan Normal University as well as to the international students, who pursue their language study in Taiwan. Recommendations for further research are also included.

Conclusions

This study tried to assess which variables affect international students' performance and their satisfaction with life in Taiwan. Variables for questionnaire were gained through extensive literature review and through five interviews that were conducted with two psychology counselors of NTNU Student Counseling Center and three MTC students. The pilot test was run to test the reliability of main research instrument – a questionnaire which was developed by researcher. The actual field study was executed at the MTC at National Taiwan National University by the researcher and with significant help of MTC teachers, who helped to spread the questionnaire among students. Research hypotheses that were developed in order to test the findings and the results of statistical analysis are provided below.

Summary of hygiene factor

Sixteen items, that form hygiene factor, pointed out the environment MTC provides to its students. Hygiene factor has no significant relation to international students' performance. Schools environment, equipment, learning materials, staff and teachers' attitude are not motivating neither de-motivating factors for foreign students and therefore do not affect their

performance in any way.

Statistics results showed that when the sixteen items (from hygiene factor) are treated individually, variables which stands for information about medical care, is significant. This result is also supported by respondents' comments (see chapter IV, table 4.24). Five respondents adverted to the fact that MTC does not provide enough information (not only about medical care).

Summary of situational factor

Six items come under situational factor that embodies issues of everyday life which, in another country, may bring unknown, even stressful, situations. These items were established after vast review of former studies and after interviews with psychology counselors from NTNU, who work with international students and hence have information about their life in Taiwan (and possible troubles and problems). However, according to research a result, situational factor is not related to international students' performance and thus does not affect students' accomplishments.

Two variables from situational factor appeared to be significant when they were tested independently. Being confused about one's career was one issue that was significant with students who have stayed in Taiwan for less than six months and for students who have been in Taiwan for two to three years. Having difficulties with adapting to local cuisine was the other issue and its significance was obvious for group of students who have been to Taiwan for less than six months and for students staying for almost two years.

Summary of adaptability factor

Three variables form the adaptability factor, which did not show any significant relation to international student's performance. However, when variables were studied independently with students divided according to the length of their stay in Taiwan, all

variables showed high significance. Therefore, it can be said that openness, self-motivation and the ability to adapt easily to new life situations, new culture and environment does affect international students' adaptation process.

Summary of factor of region of origin

One of research hypotheses covered the idea that students from different regions (continents) may have different perception about factors which affect their performance. However, the research results did not prove this hypothesis and therefore it can be stated that region of students' origin is not significantly related to their performance.

Outcomes on satisfaction

The researcher intended to see if there is any relation between international students' performance and their satisfaction with life in Taiwan. Therefore, a correlation test was run. However, the result shows that there is no correlation between them.

Hypothesis six looked at hygiene, situational and adaptability factors and their possible relation with satisfaction. Result of this test revealed high significance of relation between hygiene factor and satisfaction and situational factor and satisfaction. Accordingly, it can be said that hygiene factors and situational factors do strongly affect international students' satisfaction with life in Taiwan. As is further illustrated in table 4.24 (chapter 4, page 57), respondents' comments also stated issues that affect their everyday life. These are not necessarily connected to school (as these factors do not affect performance), however school may probably help students to deal with those problems.

Recommendations

Based on the conclusion of research results, the author provided recommendations to the authorities of Mandarin Training Center (MTC) at the National Taiwan University, and to international students enrolled at MTC Chinese language courses. The researcher sincerely hopes that the below recommendation will be considered by the abovementioned institution for further development of services towards international students. However, even students should be informed about the results of this study in order to know how to prevent problems with living in foreign country.

Recommendation for Mandarin Training Center (MTC)

Clean and affable environment

According to respondents' comments, hygiene should be improved at the premises of MTC. The empirical research results also showed that hygiene is a factor with high significance and affects international student's satisfaction with life in Taiwan. The MTC should provide cleaner and more sanitary ambience and so reach the international standard, as that is what most of its students expects.

More possibilities of exchange between MTC & NTNU students

Another recommendation that comes from respondents' comments and indirectly from interviews results is the call for more chances to meet with NTNU students in order to find new friends, to mutually benefit from language exchange as well as to get more involved in NTNU on-campus students activities. Therefore, the researcher proposes that MTC will provide information about all students' activities that take place at NTNU or even organize and promote activities that will bring MTC and NTNU students together. By getting more

involved in the on-campus life, international students can find new friends and also get help with their adaptation issues.

Teachers' and administration personnel training

Student interviewees and questionnaire respondents pointed out that some MTC teachers have very conservative attitude and this makes the multicultural communication rather hard. Also, interviewees and respondents complaint that administration personnel are not helpful and do not show concern for students' situations. Hence, the researcher recommends training in international communication for both teachers and administration personnel. For the later, problem solving workshops may also be helpful. Teachers may also study, what are the suitable teaching techniques for adult learners at international school.

The administration personnel should further improve the ways information is transmitted to students, even prior students' arrival. Also, training or workshops, that will help the MTC staff to prepare effective and efficient orientation for new enrolled students, should be included. MTC employees should learn how to think ahead of their customers – students. Only like this then can preserve good services and their students' satisfaction.

Switching classes' procedure

As a stressful matter, students' interviewees and questionnaire respondents depicted the rules and procedure for switching classes.¹ The researcher thus recommends that this particular matter should be improved in such a way so that every student has a chance to get

¹ During the first week on each semester, students can change their class in order to get to another level or to change their teacher. However, the student can easily end up without having any class, which is frustrating and, as was said before, administrative personnel is not very helpful with such issues. Students are at first asked to leave their current class without the option of going back. Only after that they are allowed to go and look for suitable class. However, if the class has too many students or the teacher rejects the student from any reason, it is hard to sort out this situation without stress.

to their desired level and study under a teacher they find suitable. The author finds effective changing classes' possibility as one of the core services that should be provided to the students without any reluctance.

MTC and NTNU library

Last but not least, students commented on MTC and NTNU libraries. MTC library was criticized for its size and that it is persistently overcrowded.² Also, the library only offers dictionaries and selected periodicals, but very little books. Therefore, the name *library* is misleading.

MTC students cannot enter main NTNU library.³ As MTC library does not offer many items and also does not allow loan, it is understandable that international students are not satisfied with this situation. Possibly, some solution could be offered by MTC authorities so that students have access to library and therefore can practice their Chinese ability by reading books written in Mandarin or further study their areas of interest.

Recommendations for International Students

Seek information prior departure to Taiwan

The researcher supposes that if students have general information before their arrival to Taiwan, it would help them to overcome many unexpected troubles they may face during

² This is especially due to the fact that international students have to spend 15 hours per week at school for the visa purpose (in contrast with previous regulations which only required students to fulfill 10 hours of classes per week). However, ordinary courses only cover 10 hours. Therefore, students have to sit in the library or audio-visual rooms or attend cultural classes. However, to many of them, sitting in an overcrowded, noisy library is not contributing to language improvement.

³ In the past, it was possible for MTC students to enter the NTNU library with their student cards; however they were not entitled to borrow any items unless they had special permission that required a security.

first days of their stay.

In order to be informed, international students may seek the internet to learn more about everyday life, part-time job opportunities, accommodation possibility etc. For students whose country has diplomatic relations with Taiwan, they may contact their embassy or Cultural and Economical Office⁴ in order to get information about legal matters. Ideally, those representations should also organize an informational meeting for students who arrive to Taiwan. If this is not the case, they can at least provide some useful information about everyday life. The researcher believes, that such information can be very contributive, because it comes from a same national who perceive Taiwan in possibly a similar way as the arriving students (from cultural perspective, life-style differences, etc.).

Multicultural perception

Some interviewees and questionnaire respondents made the researcher believe that also students, who arrive to Taiwan, should try to adjust their attitude and should try to understand the new culture and life-style. The researcher beliefs, that it is international students' ethnocentrism that aggravates their adaptation process. Everyone is using his/her cultural background as a benchmark to the new culture. According to Martin and Chaney (2007), ethnocentrism is 'the belief that your own cultural background, including ways of analyzing problems, values, beliefs, language, and verbal and nonverbal communication, is correct.' Therefore, everyone evaluates other cultures and people through his criterion, which is his culture, that he/she perceive as central (hence other cultures are incorrect, defective, or quaint). International students should try to overcome the illiberalness of ethnocentrism and should embrace all new without preconceptions.

⁴Countries that have official political relationship with People's Republic of China cannot have regular embassy in Taiwan. Accordingly, representation called Cultural and Economic Office protects all official activities between Taiwan and the other country.

Recommendation for Further Research

As was stated in the introduction chapter, this research focuses exclusively on international students studying at Mandarin Training Center (MTC) at National Taiwan Normal University. To the author's knowledge, there is no other research that tries to study which factors affect international students' performance and satisfaction in the language center in Taiwan.

The researcher is aware of the fact that this is a pioneering study and is not flawless. Further research should be conducted in order to fully understand the situation of international students. Future studies should consider more students' background (education, country of origin, etc.) in order to get clearer picture about students from certain regions. Also, students' background in Taiwan should be considered. Presence of family, spouse, children or other acquaintances as well as occupation (if students work here) may be quite influential for the issue of overall satisfaction with life in Taiwan.

Future researchers should also try to get official data from MTC authorities as well as support for doing research on their premises. More should be known about MTC's organizational structure and teachers' education and teaching techniques.

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APPENDIX: QUESTIONNAIRE

Vladimíra Bilijenková
Graduate Student
National Taiwan Normal University
Taipei, Taiwan ROC

Dear International Student,

I am a Master's degree student in International Workforce Education and Development at National Taiwan Normal University. I am writing my thesis on the major factors that affect international students' performance at Mandarin Training Center (MTC). I would like to ask you for help by filling in this questionnaire.

Only your participation can make this research significant. Your anonymity is guaranteed. The results of this research will be forwarded the MTC managers for the future improvement, so more foreign students can receive the benefits of your help from this study.

Thank you in advance for your participation in my research. If you have any questions about the study or you would like to know the research results, you may contact me via email at yewan_z_cech@yahoo.com.

Sincerely,

Vladimíra Bilijenková
M.Ed. Student, NTNU

QUESTIONNAIRE

Please, provide the following demographic data: 基本資料

Region/continent of origin / 州別 / 國家: _____

Gender / 性別: _____

Age / 年齡: _____

Please, indicate your level of agreement with the following statements using the scale:

請於每一項敘述中，選出最適當的選項：

1	2	3	4	5
Strongly disagree 非常不同意	Disagree 不同意	Neutral 無意見	Agree 同意	Strongly agree 非常同意

Please, answer all items: 請回答以下所有問題：

A:

		strongly disagree 非常不同意	Disagree 不同意	Neutral 無意見	Agree 同意	Strongly agree 非常同意
Y1	At MTC, I have a satisfactory performance. 在師大國語中心，我對我的成績表現很滿意。	1	2	3	4	5
Y2	I am in every respect satisfied with my life in Taiwan. 在臺灣，我對我生活各方面都很滿意。	1	2	3	4	5
	Section one:					
1	I am satisfied with Mandarin Training Center (MTC) facilities. 我對於師大國語中心的設備很滿意。	1	2	3	4	5
2	I am satisfied with MTC classrooms equipment. 我對於師大國語中心的教室設備很滿意。	1	2	3	4	5
3	I am satisfied with MTC library and its services. 我對於師大國語中心圖書館及其服務很滿意。	1	2	3	4	5
4	After my arrival I was well informed about accommodation possibilities by MTC. 師大國語中心提供充足的租屋資訊。	1	2	3	4	5
5	After starting my studies at MTC, I was well informed about school canteen and its location. 師大國語中心提供學校餐廳資訊及地點。	1	2	3	4	5
6	After starting my studies at MTC, I was well informed about NTNU Student Counseling Center. 師大國語中心提供學生輔導中心的資訊。	1	2	3	4	5
7	I am satisfied with MTC teachers' attitude.	1	2	3	4	5

	我對於師大國語中心老師的態度很滿意。					
8	I am satisfied with MTC staff' attitude. 我對於師大國語中心行政人員的態度很滿意。	1	2	3	4	5
9	MTC staff is always willing to help me solve my problems. 師大國語中心的行政人員總是很樂意幫忙我解決問題。	1	2	3	4	5
10	The language skills of MTC staff are satisfactory. 師大國語中心行政人員的語言能力是令人滿意的。	1	2	3	4	5
11	MTC provided satisfactory information about school and life in Taiwan before I arrived/started studying here. 對師大國語中心提供學校生活與在地資訊感到滿意。	1	2	3	4	5
12	In general, MTC provides friendly and efficient learning environment. 整體而言，師大國語中心提供友善及有效率的學習環境。	1	2	3	4	5
13	MTC provided satisfactory information about medical care. 對師大國語中心提供的醫療保健資訊感到滿意。	1	2	3	4	5
14	I am satisfied with NTNU library and its services. 我對於師大圖書館以及其服務很滿意。	1	2	3	4	5
15	I am satisfied with hygiene level of MTC (cleanness of classrooms, restrooms, etc.) 我很滿意師大國語中心的衛生水準（例如教室或化妝室等環境的清潔度）。	1	2	3	4	5
16	MTC provides enough information about cultural/sport events organized by NTNU or out of school. 師大國語中心對於師大或校外舉辦的藝文與體育活動，都能提供充足的資訊。	1	2	3	4	5

If you have any additional comments to section one, please write them below:

如果對於第一部分有任何意見或想法，請於下列空白處說明：

B:

		strongly disagree 非常不同意	Disagree 不同意	Neutral 無意見	Agree 同意	Strongly agree 非常同意
	Section two:					
17	I am often concerned about my financial situation. 我會經常關注我的財務狀況。	1	2	3	4	5
18	The change of my life-style here is hard to deal with. 我不太適應在這裡生活型態的改變。	1	2	3	4	5
19	It is hard for me to live in a different culture and environment. 對我而言，生活在不同的文化及環境中是困難的。	1	2	3	4	5
20	I feel confused about my career and future life plans. 對於我的職涯及未來計畫感到困惑。	1	2	3	4	5
21	It is hard to get used to Taiwanese cuisine. 我需要花時間來習慣台灣料理。	1	2	3	4	5
22	I experienced difficulties with shopping clothes (size issue, style disparity,...) 在採購衣服時我遭遇困難（尺寸、樣式）	1	2	3	4	5
23	I face digestion problems (caused by consuming local food, dieting, eating disorder, etc.). 我曾經有消化不良的問題（導因於適應台灣食物、節食或飲食失調等）。	1	2	3	4	5

If you have any additional comments to section two, please write them below:

如果對於第二部分有任何意見或想法，請於下列空白處說明：

C:

		strongly disagree 非常不同意	Disagree 不同意	Neutral 無意見	Agree 同意	Strongly agree 非常同意
	Section three:					
24	I am a very open person, I deal easily with novelties. 我是個思想開放的人，能接受各種新奇的事物。	1	2	3	4	5
25	I adapt easily to new life situations, new culture and environment. 我對於新生活、新文化和新環境的適應力很強。	1	2	3	4	5
26	I have strong ability of self-motivating. 我很能夠自我激勵。	1	2	3	4	5

If you have any additional comments to section three, please write them below:

如果對於第三部分有任何意見或想法，請於下列空白處說明：

D:

Please write your average score (including all kind of tests, quizzes and oral performance) for the last semester: _____

請寫下您最近這學期所有筆試或口試的平均分數：_____

E:

Please indicate if you are a scholarship recipient: 請問您是否領取獎學金：

Yes, I am a scholarship recipient 是的

No, I am not receiving any scholarship (please, skip F) 否 (請跳答至 F)

F:

If you have answered positively on the preceding question, please indicate what kind of scholarship you are receiving.

接上題，您是領取哪種獎學金：

- I receive Taiwan Government Scholarship 我領取台灣政府獎學金
- I receive scholarship provided by my country's government 我領取自己國家政府獎學金
- I receive other kind of scholarship 我領取其他的獎學金

H:

How long have you been in Taiwan? 你在臺灣多久了? _____

If you have any additional comments to the factors (situations, issues) that affect your performance at MTC, please write them below:

如果還有其他因素影響您在 MTC 的表現，請提出您的意見或想法，並於下列空白處說明：
