The Effect of Language Management Practices on Internationalization Outcome in Higher Education Institutes

by

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ABSTRACT

Due to the trend of internationalization, higher education institutes in Taiwan have been forced to take actions to respond. International students are considered one of the important elements in internationalization. Besides, language is the first barrier (problem) international students confront. Thus, this study sees school internationalization from a language perspective and aims to uncover the language management practices in higher education institutes of Taiwan. The relationship among strategy towards internationalization, language management practices, and internationalization outcome were investigated in this study. A qualitative study was employed to develop a list of language management practices in preparation of the quantitative study. A mail survey questionnaire was designed for the quantitative study by reviewing the literature and materials from interviews. SPSS was adopted as the tool to analyze data collected, including descriptive statistics, correlation and regression. The results support the study propositions on the significant relationship among strategies, language management practices, and internationalization outcome. The current status of language management practices in higher education institutes is also reported.

Key words: language management, higher education institute, language barrier, internationalization

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CHAPTER I   INTRODUCTION

Background of the Study

Internationalization has been a critical issue that people worldwide are conscious of. (e.g., Hirst and Thompson, 2002; Currie and Newson, 1998). Not only the corporations but also the universities/colleges are engaging in internationalization because of international competition and cooperation. The number of local students is also decreasing on account of a low birth rate. Based on these situations, international recruitment becomes an indispensable action schools need to take, especially in higher education institutes. Taiwan government has been working on that and efforts made can be seen from the increasing number of foreign students (see Table 1.1).

Table 1.1

Number of Foreign Students Studying in Taiwan by Geographic Source

YEAR	TOTAL	ASIA	AMERICA	EUROPE	AFRICA	OCEANIA
1971-72	427	225	155	39	1	7
1981-82	2,982	1,656	832	437	9	48
1991-92	5,959	3,764	1,264	796	35	100
2001-02	6,380	4,490	1,140	546	79	125
2004-05	9,616	6,358	1,892	941	225	200
2005-06	11,035	7,039	2,305	1,116	262	313
2006-07	13,070	8,119	2,819	1,544	294	294
2007-08	15,436	9,532	3,409	1,766	369	360
2008-09	16,909	10,722	3,608	1,846	366	367
2009-10	19,376	11,853	4,393	2,346	381	403
2010-11	21,356	13,332	4,524	2,509	542	449

Note. Adapted from "Education in Taiwan 2011-2012", by Ministry Of Education, 2011a, http://english.moe.gov.tw/public/Attachment/113011175371.pdf, on January 15, 2012.

Therefore, to attract the foreign students in Taiwan, the government has set up a few measures to support higher education institutes to achieve the goal of internationalization of higher education in Taiwan. In the following section, the evidences of governmental involvement are shown. In 2005, Foundation of International Cooperation in Higher Education of Taiwan (FICHET) was established and organized the first conference of international affairs development in higher education institutes of Taiwan in 2010, cooperating with Chengchi University. The conference involved all related international affairs members to discuss the situations and difficulties of internationalization development, which could be taken as one milestone. Furthermore, the Ministry of Education (MOE) has been working on many programs and projects. Here are some examples as follows. Taiwan drew up "Study-in-Taiwan Enhancement Program (MOE, 2011b)" to further expand Taiwan's higher education in 2011. This program is estimated to spend NT$57 million to achieve the goal of 90 thousand foreign students studying in Taiwan (MOE, 2011b). "The Aim for the Top University Project (MOE, 2011c)" (邁向頂尖大學計畫) expected the university to develop into international school of excellence to achieve the goal of strengthening national competitiveness. The government will support NT$50 billion for each five year. In this project, one of the criteria is the degree of internationalization. It is evaluated by the number of foreign students, exchange students, and international conferences. "Internationalization Subsidy Plan of Universities (MOE, 2011d)" (大學校院推動國際化補助計畫) encourages school to plan a more concrete plan towards internationalization. Based on the internationalization plan and situation, the government will subsidy within one million to support the fulfillment of its plan. Lastly, there are increasing number of scholarship opportunities to local and foreign students provided by government and semi-government organizations, such as the MOE and the International Cooperation

and Development Fund (ICDF). For instance, the MOE and the Ministry of Foreign Affairs set up the "Taiwan Scholarships" in November 2003. Taiwan MOE also encourages all universities and colleges of Taiwan (MOE, 2011) to build good friendship with schools of other countries and has adopted the accomplishment of international development as one criterion to distribute educational subsidy.

The active action towards internationalization is expected to bring in more talents with multilingual and transcultural ability and promote more academic interactions and cooperation through international exchanges. In this process, many foreign students are recruited to study in Taiwan. When they arrive in Taiwan, the first barrier they face is language (Selvadurai, 1998). In Taiwan, the official language is Chinese Mandarin; however, most foreign students came to Taiwan without the ability to speak Chinese. Many negative consequences resulted from the inability to speak the Chinese language. For example, they may not be able to buy food, groceries and other life necessities on their own; they may not understand important announcements from schools, or the instructions to select courses, reserve books from library, and etc. As a result, they may not know their right, and cannot easily survive in schools without arrangement of proper language interfaces.

To attract more foreign students, many higher education institutes in Taiwan strive to construct a better environment for foreign students to live and study. One of the major undertakings of schools is to minimize language barriers by different means, which is termed "language management practices" in this study.

Statement of the Problem

When the language barriers (difficulties) are taken care of through adequate language management practices, it can improve foreign students' impression of

Taiwan and also the willingness of studying in Taiwan. Consequently, the problem of language barriers forces higher education institutes to develop language management practices in order to fulfill the objectives of internationalization. Throughout the history of internationalization development by higher education institutes, many language management practices have been created and experimented. However, very few studies have focused on this aspect of school administration, nor was the effect of these language management practices on internationalization outcome studied. It is also unknown how schools develop their language management practices. Do they follow a systemic development process that is guided by the school's strategic intention? What may be the school's strategic type toward internationalization and how are these strategic types influence development and implementation of language management practices? There is a lack of extant knowledge in these issues.

Purpose of the Study

The purpose of the study reported here first was to explore the current situation of how Taiwan's universities/colleges deal with language barriers and problems (i.e., language management practices). The other specific purpose is to analyze the relationship between school strategy towards internationalization and language management practices, as well as the effects of language management practice on internationalization outcome.

Research Questions

To fulfill the purpose of this study, answers were sought to the following questions: First, what are the school strategy and language management practices of universities and colleges respectively? Secondly, what is the relationship between school strategy towards internationalization and language management practices? Third, how do school language management practices influence internationalization

outcome?

Significance of the Study

Internationalization will indeed benefit higher education of Taiwan. For local benefits, we can increase the student number to eliminate the negative effects of low birth rate, broaden the international horizon of local students, and enrich the friendship with other countries. Foreign students can bring in talent of professional, multilingual and transcultural ability. Besides, through the studying experience in Taiwan, they can promote the features of higher education in Taiwan to strengthen our international marketing.

Talents are considered as the most important asset of one country, and enterprise. Schools provide education/training to cultivate one country's talents. Therefore, to discuss the international development from the aspect of educational system is a way to see the management practice.

Internationalization forced schools to step out, and to recruit international students. However, the basic problem, language, has been a great challenge to many schools. Once the practices of language management can be collected through interviews and analyzed for their effectiveness, it will give those schools struggling in international development more direction.

As what mentioned above, language is the first problem international students encounter. Moreover, once universities/colleges could build an environment without language barriers to solve this basic problem for foreign students, the outcome of internationalization would be improved. Accordingly, this study expects to find an effective model of language management practices through exploratory investigation

and further contribute to higher education institutes in confronting language barriers.

Definition of Terms

Before the discussion on language management practices, the concept of language management needs to be defined as follows:

Language Management: A set of actions determined by the internationalization strategy set by organizations to form explicit policies and practices about the use of language to influence internationalization outcome.

Language Barrier: Feely and Harzing (2003) addressed language barrier as a problem of ''miscommunication'', which will not only occur but also arouse a series of negative effects.

Language Policy: Corson (1999) said, "School language policies are viewed by many in education as an integral and necessary part of the administration and the curriculum practice of school which identified areas in the school's scope of operations and program where language problems exist that need the commonly agreed approach offered by a policy."

Language Management Practice: Options available to organizations to manage language and to alleviate the problems it creates (Feely and Harzing, 2003).

International Outcome: The number of international students is estimated as an indicator to evaluate the internationalization outcome in this study.

CHAPTER II   LITERATURE REVIEW

Power of Language

In Chinese history, there were some examples using language as a power to control the countries. The first emperor of China- Qin Shi Huang (259-210BC) conducted the best implementation of language management. In order to govern the whole China, he unified the Chinese characters from various regions (Chang, 2007). The other evidence is the Kangxi Dictionary. This standard Chinese dictionary was ordered by Kangxi emperor during the 18th and 19th centuries. 47,000 characters (including obscure, variant, rare, and archaic characters) are contained in this dictionary. Although less than a quarter of these characters are now in common use, the influence of language use could not be ignored (Teng and Biggerstaff, 1971) .

Nowadays, the role of language has changed from nationalism to globalization (Wright, 2004) because of the interaction of knowledge, business, and education. Therefore, on the international level, historically there has been an influence of the west so that most countries use English as one of the communication tool in order to increase the interaction worldwide and gain more opportunities at the same time. Another influence is the growing power of China which encourages more people to learn Chinese. These prove that language can be the indicator to see the power of country.

English has been the dominant language to communicate in international activities. Besides, Singapore realized the power of language, so it has engaged in language policy since 1965. Due to the uniqueness of its population, English has been

adopted as the official language. Now Singapore is the example of success, using the advantage of language to connect to the international economy. From Table 1.2, it seems that percentage of foreign students is somewhat related to the ranking of global competitiveness

Table 2.1

The Percentage of Foreign Students and Ranking of Global Competitiveness

COUNTRY	PERCENTAGE OF FOREIGN STUDENTS[a]	RANKING OF GLOBAL COMPETITIVENESS[b]
JAPAN	（2009） 4.7%	9
KOREA	（2009） 3.3%	24
SINGAPORE	（2009） 45.5%	2
MALAYSIA	（2010） 7.3%	22
HONG KONG	（2010） 10 %	11
TAIWAN	（2010） 3.3%	13

[a] *Note.* Adapted from "Education in Taiwan 2011-2012", by Ministry Of Education, 2011a, http://english.moe.gov.tw/public/Attachment/1113011175371.pdf, on January 15, 2012.

[b] *Note.* Adapted from" Export of Higher Education: Study-in-Taiwan Enhancement Program", by Ministry of Education, 2011b, http://www.ey.gov.tw/public/Attachment/1671614971.doc, on January 15, 2012.

The power of language can be seen from the previous discussion. This interesting association motivates this study to look into the language management practices in schools as they are influenced by governmental policy toward internationalization, and examine the effects of these language management practices on internationalization outcome of higher education.

Language Management

Spolsky (2004) turned the term "language planning" into "language management," though he is not the first to perceive it. Spolsky (2010) defined language management as "the formulation and proclamation of an explicit plan or policy, usually but not necessarily written in a formal document, about language use." Luo and Senkar (2006) perceived language management as "a variable mechanism that needs to balance global integration with local adaptation in line with corporate strategy and an evolving global environment" (P.322), which limited language management in enterprises. The concepts of language management are mostly discussed in national and business level. However, Spolsky (2010) explained more details. He mentioned school language management is forced by the language policies adopted by educational system and identified the participants of school language management: Pupils, professors, and others (professional administrator and non-academic support staff).

Altbach and Knight (2007) mentioned, "Internationalization has included policies and practices undertaken by institutions to cope with the globalized academic environment." Management consists of strategies made to achieve the goals of organization and develop further policies and practices to influence the organization outcome. In this research, combining business management concepts, the definition of Spolsky will be mainly adopted for discussing language management of schools. Therefore, language management here is a set of actions determined by internationalization strategy in school composed by goals and characteristics of school and form explicit policies and practice about language use to influence internationalization outcome.

Language Barrier

Feely and Harzing (2003) addressed language barrier as a problem of ''miscommunication'', which will not only occur but also arouse a series of negative effects. Language enables internal communication by providing a tool within a global organization (Lehtovaara, 2009). Selvadurai (1998) mentioned the problem of language barrier, identification of classroom atmosphere and faculty-student relationship are the difficulties for international students. In the difficulties, language is the first barrier they encountered, and Olivas and Li (2006) also proved that language is one of the anxieties of international students.

Harzing and Feely (2003) categorized language barrier in business into three dimensions: the language diversity, the language penetration, and the language sophistication. The language diversity is the number of different languages the company has to manage. The language penetration means the number of functions and the number of levels within those functions that are engaged in cross-lingual communication. The language sophistication refers to the complexity and refinement of the language skills required.

In school language management, the language barrier mainly results from the language sophistication, which refers to the language acquisition. Bulavatski (1998) provides two reasons why schools do not have good language management. First, school administration does not want to exert any effort and spend resources on teaching in two languages; they consider it a complication. Secondly, most members of the school administrations do not have a positive attitude toward it.

Language Management in Schools

English has become the dominant language of the world on account of colonial

expansion, trade, science and technology, ideology and religion, and the waning of British power (Wright, 2004; Herriman and Burnaby, 1996). This trend also influences the situation of internationalization in higher education. Students are willing to study in America, or other English-dominant countries with well-prepared English ability. For those international students who study in English-dominant countries, with the advanced level of language ability, their language difficulties/barrier is their academic learning (Kim, 2009; Kuo, 2011; Maybin, 1985; Turner, Y., 2006; Yang, Noels, & Saumure, 2006). On the contrary, the non-English-dominant countries like Asian countries in order to ride the waves of internationalization; they made efforts to recruit international students whereas few students would have acquired local language when they first arrive. Hence, the schools need to make a series of policies and plan to fulfill the pursuit of internationalization strategy. The first step is to create a non-language-barrier environment to assist foreign student to learn and live in schools, so the language management would focus on the campus environment, administration, international curriculum and etc. However, there are few researches discussing the language management practices regarding the internal language setting at school.

The main purpose of this study is to discover all language management practices employed in higher education institutes of Taiwan and find out the efficient model on account of impact of internationalization. Therefore, it is clear that managing language is the focus in this study to increase internationalization outcome in school. However, most of researches studied the relationship between internationalization practices and international outcome (Altbach and Knight, 2007; Bennett and Kane, 2009; Stromquist, 2007) instead of language management practices, so the literature of language management study is limited. There is one study conducted by Harzing

11

and Feely (2003) and contributed 11 language management practices in business.

Strategy, Policy, and Practice

School Strategy

Porter (1996) asserted the nature of strategy is to choose what to do and what not to do, which means the decisions made during the process of competition. Hill and Jones (2007) defined strategy as 'a set of actions that managers take to increase their company's performance relative to rivals'. Strategy is a framework of choices that determine the nature and direction of an organization (Freedman, & Tregoe, 2003). Miles and Snow (1978) mentioned there must be a clear and direct match between the organization's mission/values. From the discussion above, strategy can be concluded as a process to make decisions based on limited resources according to the internal and external environment in a competitive market. Hax (1991) further defined strategy in schools: it is based on school objectives, environment and trend, and unique characteristics.

The strategies are categorized into different types. Porter (1980) addressed generic strategies which are overall cost leadership, differentiation, and focus strategies to assist managers realize how to use low cost, build service differentiation, and develop in a focus market in a competitive industry environment. Other researchers brought up with synergy and preemptive move strategies in the following years (Aaker, 1995; Schuler and Jackson, 1987). Miles and Snow (1978) divided business into four types based on an in-depth cross-industry study:

Prospectors: *Prospectors which almost continually search for market opportunities, and they regularly experiment with potential responses to emerging environmental*

trends. Thus, these organizations often are the creators of change and uncertainty to which their competitors must respond.

Defenders: *Defenders are organizations which have narrow product-market domains. Top managers in this type organization are highly expert in their organization's limited area of operation but do not tend to search outside their narrow domains for new opportunities.*

Analyzers: *Analyzers are organizations which operate in two types of product-market domains, one relatively stable, the other changing. In their stable areas, these organizations operate routinely and efficiently through use of formalized structures and processes. In their more turbulent areas, top managers watch their competitors closely for new ideas, and then rapidly adopt those which appear to be the most promising.*

Reactors: *Organizations in which top managers frequently perceive change and uncertainty occurring in their organizational environments but are unable to respond effectively. Because this type of organization lacks a consistent strategy-structure relationship, it seldom makes adjustments of any sort until forced to do so by environmental pressures.* (P. 29)

In Table 2.2 retrieved from Miles and Snow (1978) show the basic strategy set of these four different strategy type.

Table 2.2

Basic Strategy Set of Business Type

BASIC STRATEGY SET	
PROSPECTORS	· Broad domain, in a continuous state of development

Table 2.2 (continued)

	·	Monitors a wide range of environmental conditions, trends, and events
	·	Creators of change in their industries
	·	Growth primarily from new markets and new products
	·	Uneven, spurt-like growth
DEFENDERS	·	Aggressively maintain prominence within its chosen market segment
	·	Ignore developments outside of this domain
	·	Penetrate deeper into current markets
	·	Normally, growth occurs cautiously and incrementally
ANALYZERS	·	A mixture of products and markets, some stable, others changing
	·	Successful imitation through extensive marketing surveillance
	·	Avid follower of change
	·	Growth normally occurs through market penetration
	·	Growth may also occur through product and market development
REACTORS	·	Management fails to articulate a viable organizational strategy
	·	Management articulates an appropriate strategy, but technology, structure, and process are not linked to strategy appropriately
	·	Management adheres to a particular strategy-structure relationship that is not relevant to the environment

Note. Adapted from "Miles and Snow Organizational Types," (1978)

According to the literature discussed above, Miles and Snow's model is considered relatively appropriate to be applied to differentiate school strategy type. The concepts of this model start from this question: "What strategies do organizations employ in solving their entrepreneurial, engineering, and administrative problems?" Thus, in schools, the internationalization strategy will be adapted to how school dealing with operational, teaching, and administrative problems. To attain sustainability, more and more schools adopt strategic management. In this study,

higher education institute is considered as a business organization. May (1997) also mentioned that social institutions needed to refer to government policies and translate them into strategies. The process is to analyze the whole education environment through external and internal analysis, evaluate the resources and limitation of school to further innovate the school, and create service characteristics. However, the school characteristics are still different from business, so the adjustment while applying is necessary.

The study aims to apply the four organization types mentioned above to categorize the school strategy towards internationalization.

Language Policy in Schools

Fishman (1995) defined, "language policy is as the set of measures taken by public bodies with the intention of intervening in society's linguistic communications." Spolsky (2010) distinguishes its three components: (1) language practices, (2) language beliefs or ideology, and (3) "any specific efforts to modify or influence that practice by any kind of language intervention, planning or management". In a specific academic discipline, language policy is employed as the same concept with language planning at times (Wiley, 1996). Fishman (1973) made definition of language planning as, "the organized pursuit of solutions to language problems, typically at the national level," which is adopted by most scholars.

Corson (1999) further defined school language policy. He addressed, "school language policies are viewed by many in education as an integral and necessary part of the administration and the curriculum practice of school which identified areas in the school's scope of operations and program where language problems exist that need the commonly agreed approach offered by a policy," which is the definition this

study adopts. In school policy making, the needs of students and language problems which deeply influence the school and social content are concerned the most (Corson, 1999).

Corson (1999), in the book of "Language Policy in Schools" brought up a practical approach for school administration and professor to design a language policy and to deal with the school language issues. In the end of this book, he used what a school language policy might contain under three headings: organization and management of the school, professor approaches to language use, the curriculum to conclude. Siaya and Hayward (2003) considered study-abroad experiences, curriculum enrichment via international studies majors or area studies, strengthened foreign-language instruction, and sponsorship of foreign students to study on campus are the motivations of campus-based internationalization. This definition can help school to determine the international policy from the perspectives from international students instead of local students.

In 2011, Taiwan governmental policies towards internationalization of higher education are to expand the recruitment of international students, strengthen academic international cooperation, and cultivate language talent of excellence. In evaluation plan of learning environment for international student in Taiwanese universities/ colleges conducted by FICHET, it employed five dimensions to evaluate the achievement of internationalization: International recruitment and courses, administration resource, campus environment and equipment, life supporting system, and finally the construction of school website.

In this study, the language policy will include the range discussed above, and divided into four dimensions: teaching and curriculum, international academic

performance, administration support and campus environment, and finally the language ability.

Practices of Language Management

Spolsky (2004) mentioned, "Appropriate language practice is to form a consensual ideology, assigning values and prestige to various aspects of the language varieties used in it."

Feely and Harzing (2003) came up with options of managing language problems which are the practice of language management in business. They divided these options into 11 categories:

1. Lingua Franca: Use English as the communicative language in a company.

2. Functional Multilingualism: "Muddle through, relying on a mix of languages, pidgins and gestures to communicate by whatever means the parties have at their disposal." (P. 7)

3. External language resource: "Employ external resources such as translators and interpreters." (P. 7)

4. Training: "The immediate and understandable reaction to any skills-shortage in a business is to consider personnel development and certainly the language training industry is well developed, offering programs at almost every level and in numerous languages." (P. 8)

5. Corporate language: "Adopt a single corporate language. All recruitment and personnel development could then be focused upon achievement of required standards in that one chosen language." (P. 9)

6. Language node: "Dependent upon their scarce linguistically skilled personnel. These key personnel become informal language nodes establishing themselves

as the default communications channel between the company and the external world." (P. 10)

7. Selective recruitment: Hire people already possessing the required skills.

8. Expatriate management: "Any multinational company facing a language barrier with its subsidiaries is to assign expatriates to work within each subsidiary to act as the language node linking back to corporate headquarters." (P. 11)

9. Inpatriation: Inpatriate subsidiary personnel into the head office operation.

10. Machine translation: Use machine to translate language and help the communication efficiency.

11. Controlled language: "A controlled language imposes limits on vocabulary and syntax rules so as to make the text produced more easily comprehended by the non-native speaker/reader and equally more amenable to machine translation." (P. 13)

The above mentioned language management practices may not apply to schools, thus investigation is needed to find out how schools confront language barriers.

Internationalization Outcome in Higher Education

The Times Higher Education Supplement has set the internationalization criteria since 2004. It has evaluated the level of internationalization by peer review, recruiter review, international faculty score, international student score, faculty/student score, and citation/faculty score. Bartell (2002) addressed the international indicator should include the number of exchange and international students, the budget of internationalization, the number of international academic programs, international partnership, and curriculum content of internationalization. Besides, a Taiwanese researcher, Dai (2004), mentioned the internationalization outcome can be seen from

the internationalization level of students, professors, curriculum, and research. Internationalization outcome can be diverse.

This study also conducted telephone interview with one member of MOE to investigate the appropriate criteria to test international outcome in this study. The interviewee also revealed that the internationalization criteria can be very diverse and flexible. Moreover, each school might implement different approaches.

However, in this study, language barriers would be aroused by the enrollment of international students, so the number of international students will be utilized as the indicator to evaluate the internationalization outcome.

Relationship among Strategy Type, Language Management Practices and Internationalization Outcome

Strategy Type and Language Management Practices

Language management practices represent a major mechanism to fulfill the organization strategy towards internationalization. Higher education institutes have different internationalization strategy because of the concern of internal and external situation; thus, there must be strategy differences between schools to lead the production of various management practices. According to literature, Miles and Snow divided strategy into four types: prospector, defender, analyzer, and reactor based on the product-market domain and construct mechanisms (structures and processes). In this study, this model will be applied to distinguish the school strategy type. Product and market opportunities will also be considered as language management practices to find the relationship. Thus:

Proposition 1: Schools with different strategy types will adopt different language management practices.

Language Management Practices and Internationalization Outcome

According to Altbach and Knight (2007), "*internationalization has included policies and practices undertaken by institutions to cope with the globalized academic environment.*" (P. 290) From this perspective, the related policies and practices are brought up to confront internationalization. Besides, it is assumed that any practice will have its influence to a different degree on internationalization outcome. Thus:

Proposition 2: Language management practices have an impact on schools' internationalization outcome.

Proposition 3: The more language management practices a school adopts, the better the internationalization outcome of the school is.

CHAPTER III. METHODOLOGY

This chapter describes the framework, methods, steps, samples, and data collection employed in this research. It includes the qualitative research used to investigate the language management practices commonly adopted by higher education institutes in Taiwan, and explains the quantitative research process employed to explore the relationship among school strategy towards internationalization, language management practices, and internationalization outcome.

Research Framework

Language management issues are recently brought up owing to the effect of internationalization, not only in business but also in schools. According to the business concepts discussed in literature review, strategies of organization guide the formulation of policies and practices. Literature also showed that language is the first barrier international students confront; hence, this situation leads the researcher to study the relationship between language management and internationalization outcome. Figure 3.1 depicts the framework of this study as follows:

School Strategy towards Internationalization	Language Management Practices	Internationalization Outcome

Figure 3.1 *Conceptual Framework of this Study*

Based on the previous introduction, the propositions are as follows:

Proposition 1: Schools with different strategy type will adopt different language

management practices.

Proposition 2: Language management practices have an impact on schools'

internationalization outcome.

Proposition 3: The more language management practices a school adopts, the better

the internationalization outcome of the school is.

Research Method

As shown in the literature review section, few studies discussed language management, especially in school perspectives. This study is exploratory in nature and used both a qualitative and a quantitative approach to explore language management issues in higher education institutes. First, qualitative method was adopted to investigate the language management practices in universities/colleges under the influence of school internationalization using an in-depth interview with semi-structured questions. Second, using a quantitative approach, a survey questionnaire was employed as the tool to collect data on school strategy towards internationalization, language management practices, as well as internationalization outcome of schools, with the purpose of investigating the relationship among these variables.

Research Procedure

The procedure was separated into four main steps (See Table 3.1). The first step was preparation, including the direction of the topic, and literature review. The second and third steps were implementation of qualitative and quantitative studies. In qualitative study, it started from sample selection and interview question design through expert review. Then, interview was conducted to collect the language management practices.

Quantitative study also began from design phase. After expert review, one pilot study of 15 universities/colleges was conducted to make adjustment. Finally, the questionnaire was administered to collect data. In the result section, the data was analyzed and the discussion and conclusions were offered.

Table 3.1

Research Procedure

Preparation	Identification of the Topic and Direction
	↓
	Literature Review and Research Method
	↓

Qualitative Study (Stage 1)	Interview Participant Selection
	↓
	Interview Question Design
	↓
	Expert Review
	↓
	Implementation of Interviews
	↓
	Qualitative Data Analysis
	↓

Quantitative Study (Stage 2)	Questionnaire Design
	↓
	Expert Review and Pilot Test
	↓
	Distribution of Survey Questionnaire
	↓
	Data Collection
	↓
	Data Analysis
	↓

| Result | Finding Writing of the Thesis |

Research Sample

Qualitative Study

Nine universities/colleges from the 163 in Taiwan with great performance in recruiting international students were focused in the study. There is an assumption that

more international students will force the school to make more efforts on international affairs. Hence, the interviewees are the people working in international affairs related divisions in universities/colleges of great international outcome. The number of international students was employed as the selection criterion. E-mail and telephone were used to invite the members of top 30 universities/colleges with high number of international students. This study eventually included 9 interviewees of international affair division from different universities/colleges with at least one year international affair experience. Table 3.2 shows the profile information of interviewees in this study. Nicknames were used to assure anonymity of the participants.

Table 3.2

Interviewee Information in Qualitative Study

Interviewee	Title	International Affair Experience	Ranking / Number of international students in University
Mary	Dean of International Affairs	1	1 / 4005
Mark	Dean of International Affairs	3	5 / 1887
Linda	Deputy Dean of International Affairs	4	6 / 1875
John	Dean of International Affairs	6	7 / 1746
Cathy	Director of International Student Center	2	8 / 1371
Alan	Dean of International Affairs	5	13 / 764
Vincent	Dean of International Affairs	2	15 / 680
Kate	Deputy Dean of International Affairs	2	16 / 531
William	Dean of International Affairs	7	22 / 497

Quantitative Study

The quantitative study was intended to include all 163 higher education institutes in Taiwan, consisting of 116 universities, 32 institutes, and 15 colleges. There are 52 national schools, 2 municipal schools, and 109 private schools in the list (Ministry of

Education, 2012). However, only 146 universities/colleges have international students and not all schools have the international affairs division. For those who do not have international affair division, the questionnaire was delivered to the academic affairs division or the research and development division.

Table 3.3

Demographic Information of Schools in Quantitative Study

	Sample Characteristics	Frequency	Percentage
Type	National	36	28.3
	Private	83	65.4
	Municipal	2	1.6
	Missing Value	6	4.7
Region	North	48	37.8
	Central	26	20.5
	South	37	29.1
	East and others	10	7.9
	Missing Value	6	4.7
Location	City	64	50.4
	Suburb	1	0.8
	Rural and Mountain	55	43.3
	Missing Value	7	5.5
Motivation of Internationalization	Elevate international vision of local students	35	27.6
	Increase the number of students	45	35.4
	Build international Reputation	31	24.4
	Others	6	4.7
	Missing Value	10	7.9
Enrollment of International Students	With International Students	103	81.1
	Without International Students	18	14.2
	Missing Value	6	4.7

Though this study tried to utilize a census approach to collect data from all universities/colleges of Taiwan, the response rate was unpredictable. This study used several approaches to increase the response rate, including an official cover letter on department letterhead explaining the importance of this study, a gift certificate in the

value of NT$100 as an incentive, and follow-up phone calls. A total of 121 questionnaires were collected. The total response rate is 74.2 percent.

To detect non-response error, this study adopted the procedure suggested by Armstrong and Overton (1977) and compared the responses between early and late respondents based on the assumption that non-respondents are similar to late respondents. Late respondents were defined as those last 41 who returned the survey. The t-test result showed that the two groups were only significantly different on one response item, c13. Thus, it can be assumed that the responses collected in this research are representative of the target population.

Data Collection

Qualitative Study

In qualitative study, an in-depth interview was conducted mainly to investigate the language management practices in schools. The interview was semi-structural utilizing eleven questions to invite them to speak of language management practices. As discussed in the introduction, language management is a relatively new concept, thus, the general public is not familiar with the term "language management". Hence, in the interview, the issues of internationalization were utilized to start our conversation. The questions (see Appendix A) were explained respectively in the following paragraphs.

At the beginning, the internationalization strategy and policies are focused by asking these two questions: "*What is the degree of internationalization your school involved?*" and "*Would you please share the internationalization policies that your school has now?*" In this part, the language related internationalization practices are

what the researcher need to explore more on.

After the interviewees openly finish their sharing about internationalization practices, the researcher encouraged them to speak in details on language management practices. First, "*What are the language assistances and requirements does your school have from the registration of international/local students to graduation?*" and "*What are the language assistances and requirements does your school have for other school members except students, such as administrative personnel, professor, and personnel of guidance system?*" are the questions utilized to generally talk about LM practices for different school members in sequence. Furthermore, teaching and curriculum, international academic performance, administrative environment, and language ability requirement, these four dimensions are employed to structurally acquire the completeness of LM management according to the literature by asking the following questions in Table 3.4.

Table 3.4

Interview Questions Categorized by Dimensions

DIMENSION	QUESTION
Teaching and Curriculum	– What are the changes of teaching and curriculum because of school internationalization?
International Academic Performance	– What are the plans to develop international academic performance?

(continued)

Table3.4 (continued)

Administrative Support	–	What administrative assistance do school offer to support international students? How's the language and accessibility of school website? Do you receive any feedback of administrative assistance and website use? What are they?
	–	How international is the campus environment of your school?
Language Ability	–	Under the impact of internationalization, what are the adjustments of language requirement for local students, professors, and faculties? And what are they?
	–	Do schools have plans to cultivate language ability of foreign students? Please explain the difference your school provides for English-dominant and non-English-dominant students.

Finally, the question "*Would you please share some internationalization practices successfully implemented at school based on your own experience?*" was employed to find out whether language management was recognized as best practices.

Quantitative Study

The two main objectives of quantitative study were to find out the relationship among school strategy towards internationalization and language management practices, and the influence of language management practices on internationalization outcome. The internationalization outcome was measured by the number of international students enrolled in a school, with data retrieved from the MOE, Taiwan. Data on school strategy and language management practices were collected through a survey questionnaire.

This questionnaire was designed into three parts to fulfill the objectives of the study: strategy identification, implementation of language management practices, and finally the demographic information. In strategy identification, this study utilized the description of the four general strategies in the Miles and Snow typology to help

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research participants identify their school strategy towards internationalization. McDaniel and Kolari (1987) also employed this method to find out the strategy type of banks. To uncover the current situation on the implementation of language management practices, all language management practices identified from the qualitative study was organized into a list as part of the survey questionnaire (See Appendix C). Participants selected the practices their school has implemented from this list.

However, Miles and Snow's strategy typology was developed for private organizations and may not be appropriate for educational institutes. This study thus modified McDaniel and Kolari's (1987) descriptive approach to identify strategy types in educational institutes and further broke Miles and Snow's strategy typology into 20 Likert-type questions to prevent the difficulty for schools to subjectively select its strategy. Since these strategy questions were developed by this study, factor analysis was conducted to explore the factor structure of these questions. This study used principle component analysis with varimax rotation in factor analysis. Factors with eigenvalue larger than 1 were extracted.

The 20 descriptive questions of strategy were grouped into four categories after factor analysis procedure (See Table 3.5). The total variance explained by the four factors was 67.86%. Questions were deleted when their factor loading fell below 0.5 or when cross loaded on other factors. Therefore, questions s2, s12, and s15 were deleted.

Table 3.5

Factor Analysis of Internationalization Strategy Questions

Question	S1	S2	S3	S4
Strategy				
	Factor Loading			
S1-Reactor				
s19: My school is not willing to spend extra cost to undertake the uncertain risk.	**.796**	-.061	.156	-.137
s20: Only when the overall environment is over pressured, my school will adopt fundamental internationalization practices.	**.792**	.049	-.019	.058
s17: The school does not have consistent internationalization policy and target market.	**.702**	-.231	.306	-.183
s18: My school is relatively not proactive in coping with internationalization.	**.692**	-.381	.185	-.254
s12: My school usually ignores indirectly related overall internationalization environment.	.412	-.233	.389	-.009
S2-Prospector				
s3: My school emphasizes on the market signs and checks the opportunities in the environment regularly.	-.162	**.803**	-.027	.070
s1: My school focuses on the extensive market and target on the way to progress internationalization process.	.142	**.765**	.045	.206
s4: My school would evaluate regularly the appropriateness of internationalization services and strategy, and make the following action plan by the opportunities.	-.333	**.751**	-.131	.108
s5: My school usually adopted more innovative internationalization practices than other schools.	-.530	**.565**	-.239	-.033
s13: On one hand, my school implements the existed effective internationalization policy and services; on the other hand, my school observes closely the competitors in the market, and adopts those policies that are possibly with good potential.	-.290	**.541**	-.171	.324
s6: My school aims to become the leader of every internationalization practices.	-.443	**.508**	-.323	.117

(continued)

Table 3.5 (continued)

S3-Analyzer (Stable Approach)				
s7: My school does not seek to become extensive leader in the process of internationalization.	.153	-.194	**.737**	.074
s9: My school focuses on mature and stable internationalization policy, and rarely adjusts with the environment changes.	.170	-.078	**.713**	-.181
s14: The internationalization strategy in my school emphasizes efficiency and effectiveness, and inclined to take the uncertainty.	.109	.356	**.558**	.164
S4-Defender (Target Market)				
s8: My school focuses on specific region, market and target on the way to internationalization.	.014	.030	.040	**.783**
s11: My school is adept in maintaining certain target market.	-.360	.217	.027	**.706**
s10: My school is very familiar with the internationalization operation in certain market, and provides good quality services to target market.	-.492	.298	-.053	**.530**
s16: My school is good at setting up formal structure and process, such as policies and standard operation procedures, to perform efficient routine services.	.117	.274	-.470	**.503**

The language management practices were collected from in-depth interview in this study. Since there were many items of language management practices, factor analysis was applied to reduce the number of dimensions for further inferential statistical analysis. As seen in Table 3.6, the first group of language management practices is language ability of school members. This group is categorized into six dimensions. The total variance explained by the six factors was 69.08%. Questions e9 and e20 with loading lower than 0.5 were deleted. The other group of language management practices is language environment building. It is divided into four dimensions after deleting seven questions (c8, c12, c13, c17, c21, c22, c23) using the criteria consistent with the previous procedure. The total variance explained by the

four factors was 71.27%

Table 3.6

Factor Analysis of Language Management Practices (Language Ability)

Language Management Practices (Language Ability)						
Question	Factor Loading					
	E1	E2	E3	E4	E5	E6
E1- Language Training Center						
e1: Establish language training center (e.g. Mandarin Chinese center)	**.817**	.182	.066	.131	.007	.268
e2: Design Mandarin Chinese training courses for international students.	**.798**	.300	.124	.220	.070	.123
e3: Design English training courses.	**.619**	.285	.137	.094	.352	.153
e10: Establish language training unit (e.g. learning center for language or language assessment center)	**.601**	.009	.445	.203	.117	.060
E2- Language Ability Policy for Foreign Students						
e4: Set English as the criteria for application of international students.	.315	**.769**	.140	-.005	.159	.146
e5: Set Mandarin Chinese as the criteria for application of international students.	.305	**.720**	.029	.142	.029	.275
e13: Set English as the criteria for application of local students.	-.105	**.707**	.182	.423	.009	.127
e7: Set Mandarin Chinese as graduation criteria of international students.	.210	**.561**	-.047	.148	.231	.394
E3- Language Ability Policy for Local Students						
e16: Design English make-up teaching courses for local students.	-.056	.169	**.819**	.235	.076	.000
e15: Classes divided by different language proficiency for local students.	.133	.100	**.778**	.086	.108	.136
e14: List English as common required course for local students.	.195	-.107	**.710**	.098	.007	.188
e17: Set English as graduation criteria for local students.	.244	.318	**.615**	.203	.280	-.030
E4- Language Ability Service for Local Students						
e19: Design and implement after-class language learning activity for local students (e.g. English day).	.111	.027	.178	**.783**	.036	.218
e11: Design other language training course besides English training courses.	.350	.264	.170	**.632**	.022	-.085

(continued)

Language Management Practices (Language Ability)						
Table 3.6 (continued)						
e12: Design English training courses for local students. (e.g. English program or English on-line learning)	.064	.293	.203	**.626**	.137	.045
E5- Language Incentives						
e8: Establish language incentive practices for international students.(e.g. reimbursement for language test and incentive programs for language certification)	.096	.064	.038	.012	**.885**	.135
e6: Set English as graduation criteria for international students.	.264	.380	.202	.091	**.712**	-.108
e18: Establish language incentive practices for local students. (e.g. reimbursement for language test and incentive programs for language certification)	-.371	-.054	.381	.268	**.576**	.157
E6- Language Learning for Faculty Members						
e23: Establish language incentive practices for faculty members (e.g. reimbursement for language test and incentive programs for language certification)	.087	.146	.146	.008	.128	**.829**
e22: Design English training course to increase the language ability of local professors and other faculty members.	.199	.356	.194	.208	-.032	**.731**
e21: Design Mandarin Chinese training courses to elevate Chinese ability of professors from other countries.	.281	.481	.041	.186	.155	**.558**

Table 3.7

Factor Analysis of Language Management Practices (Language Environment)

Language Management Practices (Language Environment)				
Question	C1	C2	C3	C4
C1-Indirect Language Environment				
c10: Set administrative personnel basic language requirement.	**.793**	.076	.408	.079
c6: Adopt bilingual content in Academic Affair (registration and course selection) system.	**.779**	.330	.030	.227
c11: Set basic language requirement for school guidance system. (e.g. military instructor, guidance Officer, nurse)	**.770**	.086	.354	.014
c7: Adopt bilingual content in on-line learning system	**.743**	.412	-.003	.233
c2: Adopt bilingual content in regulations	**.666**	.217	.327	.307
c9: Provide professors from other countries guideline and manual.	**.569**	.165	.035	.451
C2- Courses Conducted in English				
c20: Set up courses taught in English.	.131	**.865**	.249	.165
c19: Set up English programs.	.377	**.795**	.118	.142
c18: Recruit local professors that can teach in English.	.205	**.768**	.382	.167
C3- Faculty Language Ability				
c14: Recruit administrative staff with relatively good language ability.	.263	.155	**.844**	.147
c15: Recruit part-time workers with excellent language ability	.125	.315	**.794**	.176
c16: Recruit foreign professors with Chinese Mandarin ability	.196	.334	**.617**	.298
C4- Direct Language Environment				
c3: Adopt bilingual/ multi-lingual content in school website	.094	.152	.143	**.798**
c4: Adopt bilingual content in campus signs.	.096	.141	.102	**.777**
c5: Adopt bilingual content in campus information (e.g. poster, electronic newspaper in campus, internal activities information and traffic information)	.339	.167	.260	**.663**
c1: Adopt bilingual content in forms and document.	.437	-.034	.436	**.537**

In conclusion, school strategy towards internationalization is divided into four types as shown in the literature (prospector, reactor, analyzer and defender). A five-point Likert type scale (1 represents strongly disagree and 5 represents strongly agree) was used for respondents to rate how their school do on these strategy items.

Ratings were aggregated for each strategy type. For each school, the highest-scored strategy type was identified as the school's strategy. For example, if a school scored the highest on the prospector strategy items, this school will be identified as a prospector. Except the correlation analysis, which used the mean of original rating of each strategy type, school strategy was treated as a categorical variable. When a school has more than one highest-scored strategy type, this school was identified as having multiple strategies, a fifth category in data coding. LM practices of language ability among school members are categorized into six dimensions, which are defined as E1 to E6. The detail information of each dimension is shown in Table 3.6. LM practices of language environment in campus are divided into four dimensions (C1 to C4). Table 3.7 reports category information in details. Respondents were asked to rate their schools on these items using a five-point Likert type scale representing the level of implementation of each practice in their schools.

Data Analysis Procedures

Qualitative

The procedure for the qualitative study was first the preparation of raw data files, which included the researcher's record and verbatim text. After careful reading, the researcher coded the text content into different categories and further reviewed the overlapping coding and uncoded text. The coding process went through continuous revision and refinement until a valid category system is achieved. (Thomas, 2006). The ultimate outcome of this stage was a list of language management practices currently in use by higher education institutes.

Quantitative

SPSS version 19 was employed to conduct statistical analysis in quantitative study. Descriptive statistics was used to show the general distribution of the school

demographics and major research variables. Cross tabulation was used to show inter-relations between school internationalization strategy and language management practices. Regression analysis was conducted to test the propositions regarding relationships between language management practices and internationalization outcome.

CHAPTER IV   FINDINGS AND DISCUSSIONS

Language Management Practices

Language Ability for School Members

This section would only emphasize the LM practices which are implemented the most and the least. Table 4.1 reveals the implementation level of LM practices in universities/colleges from the percentage shown. Besides, the mean tells the general implementation situation in universities/colleges.

Table 4.1

Descriptive Statistics of Language Management Practices in Language Ability for

School Members

Question	Implementation Level of LM Practices (low) ⟶ (high)					Mean	SD
	1	2	3	4	5		
e1	37.8 %	21.3 %	7.9 %	12.6 %	15.7 %	2.45	1.52
e2	30.7 %	18.9 %	9.4 %	17.3 %	18.9 %	2.74	1.55
e3	26.8 %	11.0 %	22.0 %	21.3 %	14.2 %	2.84	1.43
e4	39.4 %	18.1 %	11.8 %	18.1 %	7.9 %	2.34	1.39
e5	42.1 %	22.8 %	13.4 %	15.0 %	4.7 %	2.18	1.27
e6	29.8 %	9.9 %	14.0 %	29.8 %	16.5 %	2.93	1.50
e7	33.9 %	7.4 %	8.3 %	28.1 %	22.3 %	1.82	1.20
e8	33.9 %	7.4 %	8.3 %	28.1 %	22.3 %	2.98	1.62
e9	32.2 %	20.7 %	14.9 %	17.4 %	14.9 %	2.62	1.46
e10	17.4 %	11.6 %	14.9 %	26.4 %	29.8 %	3.40	1.46
e11	19.0 %	13.2 %	26.4 %	23.1 %	18.2 %	3.08	1.36
e12	8.3 %	16.5 %	25.6 %	24.8 %	24.8 %	3.41	1.26
e13	48.8 %	13.2 %	14.0 %	11.6 %	12.4 %	2.26	1.47
e14	2.5 %	.8 %	10.7 %	33.9 %	52.1 %	4.32	.89
e15	15.7 %	9.1 %	10.7 %	23.1 %	41.3 %	3.65	1.48
e16	6.6 %	7.4 %	17.4 %	35.5 %	33.1 %	3.81	1.17
e17	10.7 %	9.1 %	11.6 %	27.3 %	41.3 %	3.79	1.35
e18	6.6 %	5.0 %	17.4 %	32.2 %	38.8 %	3.92	1.17

(continued)

Table 4.1 (continued)

e19	18.2 %	12.4 %	20.7 %	23.1 %	25.6 %	3.26	1.44
e20	3.3 %	5.0 %	14.9 %	28.1 %	48.8 %	4.14	1.06
e21	59.5%	19.8%	9.9 %	5.8 %	5.0 %	1.77	1.15
e22	38.0 %	20.7 %	22.3 %	11.6 %	6.6 %	2.27	1.27
e23	34.7 %	16.5 %	22.3 %	17.4 %	8.3 %	2.47	1.35

The lowest (level 1) and highest (level 5) implementation levels of question items are the focus to see the LM practices which are the most applied and the least applied. The top five and bottom five LM practices with the highest in these two extreme levels are chosen to be discussed in this section. This research thus used this criterion to arrange list of LM practices most and least applied for language ability dimension (See Table 4.2). LM practices least applied are e4, e5, e13, e21, e22; LM practices most applied are e14, e16, e17, e18, e20.

For the LM practices least applied in these dimension (e4, e5, e13, e21, e22), we could conclude that setting any criteria for both local and international students might decrease the willingness for application, so few schools adopt the practices. Besides, from Table 4.1, it is proven that most LM practices commonly used for language ability are designed for students, including international and local students because the difficulty of elevating language ability of faculty members is the highest, so few school adopt e22. It is obvious that the LM practices most applied shown in Table 4.2 are all established for local students, so it can be interpreted the language ability of local students is first emphasized in all school members and the need of elevating their language ability is the highest. The mean shown in Table 4.2 is used to see its average implementation level.

Table 4.2

Top Five and Bottom Five LM Practices for Language Ability

Bottom Five LM Practices for Language Ability	Percentage of Lowest Implementation Level of LM Practices	Mean
e4: Set English as the criteria for application of international students.	39.4 %	2.34
e5: Set Mandarin Chinese as the criteria for application of international students.	42.1 %	2.18
e13: Set English as the criteria for application of local students.	48.8%	2.26
e21: Design Mandarin Chinese training courses to elevate Chinese ability of foreign professors.	59.5%	1.77
e22: Design English training course to increase the English ability of local professors and other faculty members.	38.0 %	2.27
Top Five LM Practices for Language Ability	Percentage of Highest Implementation Level of LM Practices	Mean
e14: List English as common obligatory course for local students.	52.1 %	4.32
e16: Design English make-up courses for local students.	33.1 %	3.81
e17: Set English as the graduation criteria for local students.	41.3 %	3.92
e18: Establish language incentive practices for local students.	38.8 %	3.79
e20: Provide study abroad and exchange opportunities for local students.	48.8 %	4.14

To conclude, Table 4.2 clearly shows the current implementing situation of LM

practices. The current LM practices applied to elevate language ability are mostly

designed for local students. The practices of setting any language requirement are not

commonly applied. The target participants of language training are students instead of

the other school members, such as professor and faculty members.

Language Environment in Campus

Concerning the LM practices for the language environment built in campus; this

study employed the same approach as the previous section: select the highest

percentage in the highest and lowest implementation level to contribute top 5 and

bottom 5 LM practices in language environment dimension. However, there are two

practices (c6, c16) with the same percentage, so there are 6 LM practices in LM

practices least applied. The distribution of LM practices for language environment,

mean, and standard deviation are organized in Table 4.3.

Table 4.3

Descriptive Statistics of Language Management Practices in Language Environment

Built in Campus

Question	Implementation Level of LM Practices (low) ——————————— (high)					Mean	SD
	1	2	3	4	5		
c1	26.4 %	24.0 %	24.0 %	19.0 %	6.6 %	2.55	1.25
c2	40.5 %	23.1 %	19.8 %	12.4 %	4.1 %	2.17	1.21
c3	1.7 %	7.4 %	38.0 %	21.3 %	22.3 %	3.64	.97
c4	5.0 %	9.9 %	24.0 %	38.0 %	23.1 %	3.64	1.10
c5	14.9 %	22.3 %	32.2 %	22.3 %	8.3 %	2.87	1.17
c6	30.6 %	31.4 %	17.4 %	14.9 %	5.8 %	2.34	1.22
c7	33.9 %	28.1 %	18.2 %	14.9 %	4.1 %	2.27	1.20
c8	21.5 %	15.7 %	14.9 %	21.5 %	26.4 %	3.16	1.51
c9	39.7 %	23.1 %	22.3 %	7.4 %	7.4 %	2.20	1.25
c10	36.4 %	35.5 %	15.7 %	10.7 %	1.7 %	2.06	1.05
c11	41.3 %	33.9 %	15.7 %	7.4 %	1.7 %	1.94	1.01
c12	27.3 %	15.7 %	16.5 %	24.8 %	15.7 %	2.86	1.46
c13	17.4 %	26.4 %	28.9 %	18.2 %	9.1 %	2.75	1.21
c14	13.2 %	19.0 %	32.2 %	24.0 %	11.6 %	3.02	1.20
c15	21.5 %	14.9 %	30.6 %	22.3 %	10.7 %	2.86	1.29
c16	30.6 %	16.5 %	23.1 %	19.8 %	9.9 %	2.62	1.36
c17	13.2 %	16.5 %	24.0 %	26.4 %	19.8 %	3.23	1.31
c18	14.9 %	22.3 %	25.6 %	23.1 %	14.0 %	2.99	1.28
c19	24.8 %	15.7 %	25.6 %	22.3 %	11.6 %	2.80	1.35
c20	13.2 %	15.7 %	29.8 %	25.6 %	15.7 %	3.15	1.25
c21	5.0 %	10.7 %	21.5 %	35.5 %	27.3 %	3.69	1.13
c22	5.0 %	9.9 %	18.2 %	43.0 %	24.0 %	3.71	1.09
c23	8.3 %	5.8 %	15.7 %	25.6 %	44.6 %	3.93	1.26

The bottom six LM practices (c6, c7, c9, c10, c11, c16) consist of two

characteristics: one is that the LM practices are more difficult to apply and the other is the LM practices are not for urgent need. For instance, to recruit all school members with high language ability is one of the practices which is not easy to reach. There are still many school members recruited before the trend of internationalization and it is not easy to set a language criterion. Moreover, there are some LM practices which are not urgent. For example, the number of foreign professors is fewer than students, so fewer schools do guidance manual for foreign professors.

As for the LM practice best applied (c23) in this dimension-setting up an international affair unit, it is common that most schools would first build a unit of internationalization to thoroughly implement internationalization. Also, the professor exchange/visit programs for both foreign and local (c21, c22) are practices adopted often. For international students, the school set up campus sign (c4) and manual of guidance (c8) to make them reduce the language barriers.

Top five and bottom six LM practices in language environment are organized in Table 4.4 to show the current LM practices situation in campus environment.

Table 4.4

Top Five and Bottom Six LM Practices for Language Environment

Bottom Six LM Practices for Language Environment Built in Campus	Percentage of Lowest Implementation Level of LM Practices	Mean
c6: Adopt bilingual content in Academic Affair (registration and course selection) system.	30.6 %	2.34
c7: Adopt bilingual content in on-line learning system.	33.9 %	2.27
c9: Provide manual of guidance for foreign professors.	39.7 %	2.20
c10: Set up basic language requirement for administrative personnel.	36.4 %	2.06

(continued)

Table 4.4 (continued)

	Percentage	Mean
c11: Set basic language requirement for school guidance system.	41.3 %	1.94
c16: Recruit foreign professors with Chinese ability.	30.6 %	2.62
Top 5 LM Practices for Language Environment Built in Campus	Percentage of Highest Implementation Level of LM Practices	Mean
c4: Adopt bilingual content in campus signs.	23.1%	3.64
c8: Provide manual of guidance for international students.	26.4 %	3.16
c21: Encourage foreign professors to come to exchange and visit.	27.3 %	3.69
c22: Encourage local professors to go to exchange and visit other schools.	24.0 %	3.71
c23: Establish international affair unit.	44.6 %	3.93

Comparing Language Management Practices by Internationalization Strategy

This section employed descriptive statistics to show the association between LM practices and strategies. The strategy identification of each school is determined by feedback given in designed questionnaire. The research calculated the mean of each school in four different types and further distributed them into one type according to its highest mean in a school. The results (see Table 4.5) shows there are 29 prospectors, 9 reactors, 26 defenders, and 37 analyzers distributed in sample universities/colleges. As to discuss the relationship between practices and strategy, Table 4.5 and Table 4.7 shows the mean of each LM practice in four different strategies to generally see the distribution of each strategy type. The higher the mean, the better a university/college implements the practice. In Table 4.6 and 4.8, this research reported top three and bottom three LM practices in each strategy type.

Table 4.5

Mean of each LM Practice (Language Ability) in Four Strategy Types

LM Practices	Prospector	Reactor	Defender	Analyzer
e1	3.38	1.00	2.30	2.19
e2	3.76	1.00	2.70	2.31
e3	3.48	2.25	2.46	2.92
e4	2.86	1.88	2.24	2.00
e5	2.72	1.38	2.24	1.81
e6	3.28	2.38	2.84	2.85
e7	2.03	1.13	1.89	1.46
e8	3.14	2.50	2.92	2.81
e9	3.10	1.75	2.51	2.50
e10	3.90	2.25	3.57	3.08
e11	3.79	1.75	3.08	2.81
e12	4.17	2.75	3.30	3.12
e13	3.00	2.13	2.11	1.92
e14	4.59	3.63	4.43	4.19
e15	3.97	2.38	3.78	3.69
e16	3.93	3.00	3.89	4.00
e17	4.45	2.75	3.89	3.54
e18	3.90	3.50	4.11	4.00
e19	3.83	3.50	3.41	2.73
e20	4.55	3.25	4.32	3.77
e21	2.38	1.00	1.68	1.46
e22	2.79	1.88	2.35	1.92
e23	2.93	2.38	2.54	2.12
Maximum	4.59	3.63	4.43	4.19
Minimum	2.03	1.00	1.68	1.46
Mean	3.48	2.23	2.98	2.75
The number of schools	29	9	26	37

From the total mean of each strategy type (see Table 4.5), it shows that prospector is the most active whereas reactor applies language management practices the least. The value of defender and analyzer are between them. This result fits the literature discussed in chapter two.

In Table 4.6, the different strategy types have their unique characteristic of LM practices. It is also very interesting to find that all of these strategy types apply e14

(List English as common required course for local students) the most according to their highest mean in each strategy type , which means that the basic language training for local students is widely employed in language management field. Providing study abroad and exchange opportunities for local students (e20) is another common practice applied by all types except reactor because this practice requires financial budget which needs to be highly supported by school. There is one more finding is that most prospectors would set language requirement for graduation for local students which the other three types do not apply. This practice requires many efforts: the estimation of language criteria, the make-up plan, sufficient language training, and the communication with related people; thus, prospector applied this practice did represent its activeness towards internationalization.

Table 4.6

Top Three and Bottom Three LM Practices (Language Ability) in Four Strategy Types

Typology	Top three practices	Mean	Bottom three practices	Mean
Prospector	e14: List English as common obligatory course for local students.	4.59	e7: Set Mandarin Chinese as graduation criteria of international students.	2.03
	e17: Set English as the graduation criteria for local students.	4.45	e21: Design Mandarin Chinese training courses to elevate Chinese ability of foreign professors.	2.38
	e20: Provide study abroad and exchange opportunities for local students.	4.55	e5: Set Mandarin Chinese as the criteria for application for international students.	2.72
Reactor	e14: List English as common obligatory course for local students.	3.63	e1: Establish language training center for international students.	1
	e18: Establish language incentive practices for local students.	3.5	e2: Design Mandarin Chinese training courses for international students.	1

Table 4.6 (continued)

	e19: Design after-class language learning activities (e.g. English day).	3.5	e21: Design Mandarin Chinese training courses to elevate Chinese ability of foreign professors.	1
Defender	e14: List English as common obligatory course for local students.	4.43	e21: Design Mandarin Chinese training courses to elevate Chinese ability of foreign professors.	1.68
	e20: Provide study abroad and exchange opportunities for local students.	4.33	e13: Set English as the criteria for application for local students.	2.11
	e18: Establish language incentive practices for local students.	4.11	e7: Set Mandarin Chinese as graduation criteria of international students.	1.89
Analyzer	e14: List English as common obligatory course for local students.	4.19	e21: Design Mandarin Chinese training courses to elevate Chinese ability of foreign professors.	1.46
	e20: Provide study abroad and exchange opportunities for local students.	3.76	e7: Set Mandarin Chinese as graduation criteria of international students.	1.46
	e15: English proficiency test is implemented and the results would distribute students into different classes (local students).	3.69	e5: Set Mandarin Chinese as the criteria for application for international students.	1.81

In Table 4.7, the distribution of the mean shows again that prospector is still the most active whereas reactor applies language management practices the least. The value of defender and analyzer are between them. From this table, we can further see the situation of language environment built in campus in four strategy types separately. Table 4.8 retrieves the top three and bottom three LM practices in language environment in four strategy types to depict the feature of language management in each strategy type.

Table 4.7

Mean of each LM Practice (Language Environment) in Four Strategy Types

LM Practices	Prospector	Reactor	Defender	Analyzer
c1	2.97	1.88	2.54	2.35
c2	2.69	1.25	2.16	1.96
c3	3.86	2.88	3.70	3.65
c4	3.86	2.75	3.73	3.73
c5	3.28	2.13	2.86	2.65
c6	2.76	1.25	2.54	2.04
c7	2.66	1.38	2.39	2.04
c8	3.93	1.25	3.41	2.77
c9	2.86	1.00	2.24	1.73
c10	2.69	1.50	1.92	1.73
c11	2.59	1.63	1.76	1.65
c12	3.83	2.00	3.11	2.04
c13	3.21	2.50	2.73	2.58
c14	3.72	2.38	3.05	2.73
c15	3.66	2.25	2.92	2.50
c16	3.28	1.63	2.68	2.35
c17	4.00	1.88	3.30	3.00
c18	3.83	1.88	3.05	2.69
c19	3.55	1.88	2.68	2.77
c20	3.83	2.38	3.11	3.12
c21	4.21	2.88	4.05	3.19
c22	4.17	3.00	4.00	3.38
c23	4.66	2.88	4.19	3.38
Maximum	4.66	3.00	4.19	3.73
Minimum	2.59	1.00	1.76	1.65
Mean	3.4813	2.0163	2.9617	2.6104
The number of schools	29	9	26	37

In Table 4.8, prospector and defender share the same characteristic of LM practices in language environment dimension. These two types are considered active in internationalization. Hence, the necessity of international affair unit is emphasized and exchange programs for professors when developing internationalization develop actively. However, language requirement of each school member (c_{10} and c_{11}) could not easily apply even when conducting an active approach towards

internationalization. The evidence shows in three types out of four: prospector, defender, and analyzer.

The main target participants of language management for reactor are professors. It could be explained that reactor shares very different characteristics with the other three types whereas the quality of professors in higher education institutes still exist. Therefore, to manage the language ability for professors is easier than the other practices. Bilingual website is another LM practice reactor adopts often. For analyzer, the bilingual campus notification is a basic approach which can represent the stable characteristic very well.

However, though these four types sometimes utilize the same practice, the level of implementation is still different according to their mean difference, which means the LM involvement of each type exists its own characteristics.

Table 4.8

Top Three and Bottom Three LM Practices (Language Environment) in Four Strategy Types

Typology	Top three practices	Mean	Bottom three practices	Mean
Prospector	c23: Establish international affair unit.	4.66	c11: Set basic language requirement for school guidance system.	2.59
	c21: Encourage foreign professors to come to exchange and visit.	4.21	c7: Adopt bilingual content in on-line learning system	2.66
	c22: Encourage local professors to go to exchange and visit other schools	4.17	c10: Set up basic language requirement for administrative personnel.	2.69
Reactor	c22: Encourage local professors to go to exchange and visit other schools	3	c9: Provide manual of guidance for foreign professors.	1
	c21: Encourage foreign professors to come to exchange and visit.	2.88	c6: Adopt bilingual content in Academic Affair system.	1.25

(continued)

Table 4.8 (continued)

	c3: Adopt bilingual/ multilingual content in school website.	2.88	c8: Provide manual of guidance for international students.	1.25
Defender	c23: Establish international affair unit.	4.19	c11: Set basic language requirement for school guidance system.	1.76
	c22: Encourage local professors to go to exchange and visit other schools	4.05	c10: Set up basic language requirement for administrative personnel.	1.91
	c4: Adopt bilingual content in campus signs.	3.73	c2: Adopt bilingual content in regulations.	2.16
Analyzer	c4: Adopt bilingual content in campus signs.	3.73	c11: Set basic language requirement for school guidance system.	1.65
	c3: Adopt bilingual/ multilingual content in school website.	3.65	c9: Provide manual of guidance for foreign professors.	1.73
	c23: Establish international affair unit.	3.38	c10: Set up basic language requirement for administrative personnel.	1.73

Relationship among Internationalization Strategy, Language Management Practices and Internationalization Outcome

Correlation and hierarchical regression analysis were used to analyze the relationship among internationalization strategy, language management practices and internationalization outcome of the higher education institutes in Taiwan.

The results of correlational analysis of all variables are reported in Table 4.9. There are several variables that display significant correlations. In this study, factor analysis was conducted to categorize LM practices into several dimensions. LM practices are grouped into two. The first one is LM practices of language ability among school members and the other is LM practices of language environment in campus. There are a total of 10 LM practice dimensions. Table 4.9 shows the relations among strategies, LM practices, and internationalization outcome.

The results show there is a strong relationship between the score on each strategy type and LM practices. Schools who rated themselves high on prospector and defender strategy adopt an active approach towards internationalization, but those high on defender strategy tend to focus on target market. According to the results of Table 4.9, they are both associated with language learning center (E1), language ability policy for foreign students (E2), language ability service for local students (E4), and language learning for faculty members (E6) whereas defenders tend to implement language ability policy for local students (E3). Furthermore, both of them are inclined to building language environment in campus (C1 and C4), even indirect language environment, and also organize courses conducted in English (C2), which reflects their active involvement in internationalization, while defenders also involve in the development of faculty language ability .

For reactor, there is a strong but negative relationship between strategy and LM practices. All of the LM practices have negative correlation with reactor, except language incentives (E5), which can predict that once school adopt passive attitude towards internationalization, the LM practices would not be emphasized. Analyzer is considered more stable and cautious; hence, they do not show particular trend toward LM practices. Language ability policy for foreign students (E2) and indirect language environment (C1) are the only two LM practices which negatively correlated with analyzer.

Table 4.9 also reveals significant correlation coefficients between most of the LM practices (except E3, E5, and C3) and internationalization outcome, which can be interpreted as evidence of strong association between LM practices and internationalization outcome, though a cause and effect relation cannot be assured.

Table 4.9

Results of Correlation Analysis

	Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Prospector	3.57	.66	(.84)													
2	Reactor	2.75	.90	-.56**	(.51)												
3	Analyzer	3.46	.67	-.27*	.35**	(.55)											
4	Defender	3.73	.60	.54**	-.45**	-.17	(.69)										
5	E1:	2.86	1.23	.41**	-.42**	-.13	.29**	(.85)									
6	E2	2.15	1.07	.34**	-.23*	-.19*	.29**	.55**	(.80)								
7	E3	3.89	.97	.12	-.35**	-.03	.18*	.48**	.39**	(.79)							
8	E4	3.25	1.07	.36**	-.32**	-.14	.21*	.53**	.52**	.49**	(.70)						
9	E5	3.28	1.15	.08	-.09	.06	.16	.32**	.35**	.43**	.31**	(.71)					
10	E6	2.17	1.07	.24**	-.26**	-.10	.23*	.51**	.64**	.36**	.41**	.30**	(.81)				
11	C1	2.16	.93	.43**	-.45**	-.20*	.33**	.51**	.64**	.39**	.46**	.32**	.68**	(.89)			
12	C2	2.98	1.17	.36**	-.35**	-.14	.24**	.55**	.55**	.47**	.62**	.28**	.44**	.58**	(.89)		
13	C3	3.93	.99	.02	-.30**	.04	.13	.39**	.30	.96**	.43**	.34**	.32**	.32**	.38**	(.83)	
14	C4	3.18	.89	.39**	-.45**	-.08	.31**	.56**	.41**	.43**	.43**	.19*	.42**	.62**	.46**	.39**	(.80)
15	Number of International Students	223.96	547.35	.31**	-.19*	-.13	.16	.44**	.21*	.16	.27**	.00	.29**	.25**	.28**	.12	.28**

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed). ( ) is the value of Cronbach's alpha.

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Table 4.10

Results of Hierarchical Regression for Internationalization Outcome

Predictor Variables		Internationalization Outcome			
		Standardized coefficients (Beta)			
		Model 1	*Model 2*	*Model 3*	*Model 4*
Control Variables					
Type	National	.477	.329	.428	.429
	Private	.215	.113	.263	.268
Region	North	.124	.100	.201*	.208*
	Central	-.118	-.113	-.164	-.164
	South	-.092	-.071	-.014	-.013
Location	City	.118	.109	.033	.025
Strategy Typology (dummy)					
Prospector			.223	-.078	-.082
Analyzer			.082	-.073	-.075
Defender			.033	-.157	-.156
Multiple Strategy			-.008	-.133	-.127
LM Practices (Language Ability)					
E1: Language Training Center				.437***	.433**
E2: Language Ability Policy for Foreign Students				-.199	-.206
E3: Language Ability Policy for Local Students				-.058	.010
E4: Language Ability Service for Local Students				.109	.097
E5: Language Incentives				-.137	-.142
E6: Language Learning for Faculty Members				.191	.209
LM Practice (Language Environment)					
C1: Indirect Language Environment					-.208
C2: Courses Conducted in English					.046
C3: Faculty Language Ability					-.070
C4: Direct Language Environment					-.009
R^2		.127	.165	.331	.332
Adjusted R^2		.081	.088	.227	.197
ΔR^2			.038*	.166***	.001
F-value		2.33*	1.94*	2.97***	2.33**

*P<0.05, **P<0.01, ***P<0.001

The results of hierarchical regression deliver the fact that one of the tested demographic variables (schools located in north region) appears to have positive influence on school international outcome. Besides, not all the strategies and LM practices have significant influence with school international outcome. As shown in Model 4 of Table 4.10, language training center (E1) has significant positive relationship with school internationalization outcome (β=.433, p<.01).

Altogether the independent variables of this study explain 33% (Model 4 R^2=.332) of the outcome of internationalization. Furthermore, in model 3, after adding the LM practices, R^2 increases 17% (ΔR^2 =.166) whereas the R^2 between model 3 and model 4 remain almost the same, which shows the importance of LM practices in achieving internationalization outcome.

As described in chapter three, there are three propositions this study intends to investigate:

Proposition 1: Different strategy type will adopt different language management practices.

Proposition 2: Language management practices have an impact on schools' internationalization outcome.

Proposition 3: The more language management practices a school adopts, the better the internationalization outcome of the school is.

This study employed descriptive statistics and correlation analysis to test the first proposition. The results shows different strategy type with its unique feature indeed exist the language management differences. For proposition 2, regression is adopted to see the effects of language management practices on school international outcome. After language management practices were added, the regression model significantly increases its power to predict internationalization of schools. Both propositions have been discussed in detail in the previous section.

As for the third proposition, this study calculated the sum of LM practices in each school to investigate the overall effect. Regression was utilized to see the relationship between the level of LM practices and internationalization outcome. In Table 4.11, it shows that overall level of LM practices does have a significant influence on school internationalization outcome (β=.265, p<.05).

Table 4.11

Result of Regression Analysis in Total Involvement in Each Practice

		Internationalization Outcome		
		Standardized coefficients (Beta)		
Predictor Variables		*Model 1*	*Model 2*	*Model 3*
<u>Control Variables</u>				
Type	National	.477	.329	.308
	Private	.215	.113	.131
Region	North	.124	.100	.115
	Central	-.118	-.113	-.142
	South	-.092	-.071	-.050
Location	City	.118	.109	.062
<u>Strategy Typology (Dummy)</u>				
Prospector			.223	.029
Analyzer			.082	-.006
Defender			.033	-.117
Multiple Strategy			-.008	-.091
<u>Total involvement in each LM Practice</u>				
Sum of LM practices				.265*
R^2		.127	.165	.214
Adjusted R^2		.081	.088	.134
ΔR^2			.048*	.049*
F-value		2.737*	2.147*	2.670**

*P<0.05, **P<0.01, ***P<0.001

The test result of the study propositions is summarized in the following chart:

Table 4.12

Summary of Propositions

Proposition Test	Result
Proposition 1: Different strategy type will adopt different language management practices.	Supported
Proposition 2: Language management practices have an impact on schools' internationalization outcome.	Supported
Proposition 3: The more language management practices a school adopts, the better the internationalization outcome of the school is.	Supported

CHAPTER V CONCLUSION

Conclusion

Since internationalization has been emphasized for years, language is considered an indispensable element in it. With the emphasis of language, these years, more and more organization and institutes are adopting language management. In this study, educational institutes are the main focus to investigate the current language management situation to conduct exploratory study in higher educational institutes. The relationship among school strategy, LM practices, and international outcome are emphasized the most in this study. In order to figure out the relationship, qualitative study was employed to collect the language management practices to develop the questionnaire materials for preparation of quantitative study. Second, the questionnaire was designed basing on previous research from literature review and materials from interviews. SPSS was adopted as the tool to analyze data collected including descriptive statistics, correlation and regression.

Current Language Management Practices Applied in Higher Educational Institutes

From interviews conducted, this study found that schools manage language in two ways. First is through the practices of elevating school members' language ability. Second is by adopting the practices to create a better language environment in campus.
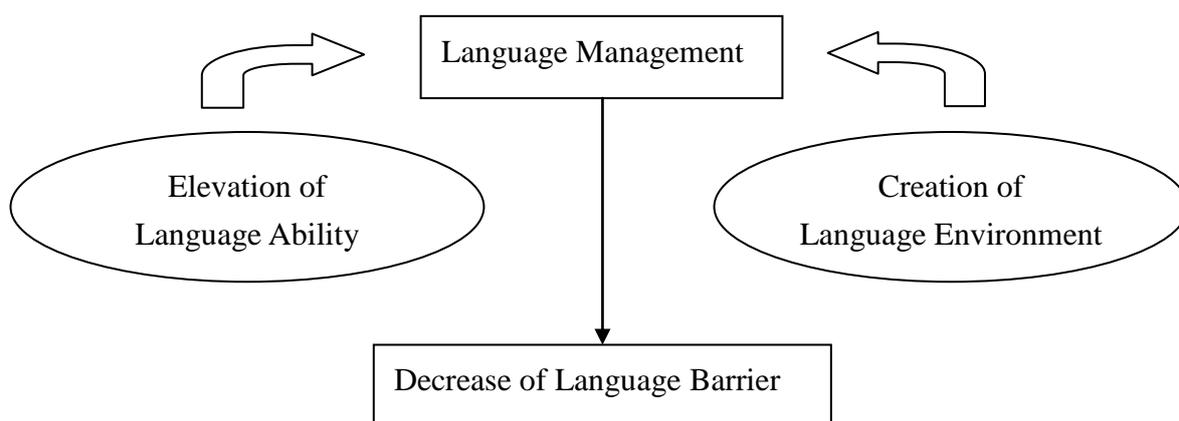
Figure 5.1 *Model of Language Management in Higher Education Institutes*

Both purposes are to decrease the language barriers. There are totally 46 LM practices which can be classified into two major groups. This research employed descriptive analysis to discover the top and bottom five LM practices in both language ability and language environment dimensions. The most common LM practices applied to elevate language ability (e14, e16, e17, e18, e20) are mostly designed for local students. On the other hand, there are five least applied LM practices (e4, e5, e13, e21, e22) and three out of five are the practices of setting language requirement (e4, e5, e13). The subject of the other two least applied LM practices (e21 and e22) are professors and faculty members, which indicates that   the target of language training are students instead of the other school members. For the LM practices for language environment, the least applied LM practices (c6, c7, c9, c10, c11, c16) consist of two characteristics: one is that the LM practices are more difficult to apply and the other is that the LM practices are not for urgent need. However, there are still practices applied commonly to create better language environment, for instance, adopting bilingual content in campus signs (c4), providing manual of guidance for international students (c8), encouraging foreign professors to come to exchange and visit (c21), encouraging local professors to go to exchange and visit other schools (c22), and establishing

international affair unit (c23). Most of the practices are relatively urgent and easy than the practices least applied. In conclusion, the LM practices could be divided into basic and advanced level in terms of its degree of necessity. This study also found that the LM practices most applied are mainly for students instead of the other school members.

School Strategy Types Influence the Implementation of Language Management Practices

In each type, the extent of involvement in LM practices is different. Prospector is the most active whereas reactor applies language management practices the least. Defender and analyzer are between them. According to the discussion in chapter four, listing English as a required course (e14) is the practice that each strategy type would apply the most, which is defined as a very basic practice in language management. Furthermore, different school strategy types would adopt different practices by their strategy characteristics.

In the following section, the different practices in each strategy type will be further described. Both prospector and defender adopt an active approach towards internationalization, but defender tends to have its target market. Thus, prospector and defender are both good at setting up language learning center, language ability policy for foreign students, and language ability service for local students. They are also good at building language environment in campus, even indirect language environment, which again reflects their activeness towards internationalization. The difference is that defender dedicates more in implementing language learning for faculty members and prospector is involved in organizing courses conducted in English.

For reactor, the results shows the significant negative correlation with LM

practices, which reflects a passive attitude towards internationalization. Language incentives policy is the only basic practice it can easily conduct. Reactor did not really manage language in campus. Analyzer is considered stable; hence, there is no significant correlation with most LM practice. Indirect language environment is the only LM practice which negatively correlated with analyzer, which shows a reluctance to set up any practice with little influence.

The Influence of Language Management Practices on International Outcome

First, in the hierarchical regression the variables (including demographics) explained around 33 percent of international outcome and the influence of LM practices is significant because after adding LM practices, the change of R^2 is 17 percent ($\Delta R^2 = .166$), which greatly increased the power of the model. Besides, language training center is the best practice category which can predict the internationalization outcome, and the schools located in north also predict internationalization better than those in the other regions.

Research Implication

First, this exploratory study of language management designed a questionnaire for research participants to report the implementation level of LM practices. This method may incur many subjective view points and each participant may have different standards, even though the researcher had clearly defined the standard in the beginning of the questionnaire. Thus, to overcome the subjectivity is one way to increase the validity in the future study. Opinions from other members of the school may be one way to provide more facts.

Second, for interview part, the explanation of LM concept is necessary because

of unfamiliarity of the term. What's more, in the research design, interviews were only intended to discover the current situation of LM and LM practices in universities/colleges, but it is more time-consuming to contact interviewees and organize data. Accordingly, the research method could be adjusted little. The search for LM practices on website should be emphasized more. As for the interview, it can be used to obtain some other perspectives of importance from Dean of international affairs, which will be more effective in collecting data.

At last, the interviewees and questionnaire participants are all in high position of school, so they are relatively busier. The difficulties of research participation can be easily imagined, so the patience and passion of research need to be shown in front of them. Moreover, in this study, an incentive in the value of NT$ 100 gift certificate from convenient store was offered to encourage questionnaire participants to answer, which is an effective way to show appreciation of the researcher and may have contributed a lot to the 74% response rate in a month.

Practical Implication

For schools interested in internationalization, they first should be aware of the necessity of the international affair unit, which is the LM practice most applied in the dimension of language environment. Second, each school has its advantage in internationalization because different school situation will result in different need for LM practices. In other words, when schools devote more care in the alignment between strategy and LM practices, the more beneficial is the effects.

Though students are the important focus in internationalization for most schools according to the survey result, schools should put more emphasis on the language ability of other school members as well to elevate the language ability of all school members. The result shows that language learning center can bring in positive effect in internationalization. Language learning center is not only set up for students but

can also be beneficial for other school members.

Limitation

First, during qualitative stage, although universities of high international outcome were chosen, it may not cover LM practices applied in all schools. Second, the effectiveness of LM practices should be evaluated by all school members to ensure the neutrality and objectivity. However, the school members include international and local professors, international and local students, faculty and staff members. With 163 universities and colleges in Taiwan, it is not easy to conduct such research in a census survey.

Secondly, the unfamiliarity of the term "language management" confuses the study participants. Hence, the term "internationalization" is used to lead them to talk about language management practices. Furthermore, to test the effects of language management practice towards internationalization outcome, the international student number is the only index adopted in this study to measure the internationalization, while the degree of internationalization cannot only be seen from it. Hence, it would be considered as one limitation as well.

This study intends to uncover the language management practices in schools whereas it is delimited to higher education institutes in Taiwan on account of the study focus. Besides, in the qualitative stage, only top nine universities/colleges of 163 in Taiwan with great performance in recruiting foreign students are chosen. The result from this preliminary study may be limited to the experiences of these interviewed schools.

Suggestions for Future Research

LM is a research subject surfaced in recent years, therefore, the literature is lacking. References in this research come from other fields, such as

internationalization and communication. How to construct organized LM literature and build some models and dimensions would be a great contribution to help the research community get the key points more easily. For instance, Feely and Harzing (2003) organized 11 options to overcome language barriers in organizations, which is really helpful for understanding the subject and for future research.

Besides, in LM field, few empirical studies are found. Future researchers are encouraged to conduct more empirical research with different research samples, including private organizations in different industry sectors, and with diverse research methods to increase the reliability.

Finally, for those who are interested in LM of educational institutes, it is suggested to involve the school members' feedback to see if there is a gap between decision maker and school members.

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APPENDIX A: Interview Question

1. What is the degree of internationalization your school involved?

2. Would you please share the internationalization policies that your school has now?

3. What are the language assistances and requirements does your school have from the registration of international/local students to graduation?

4. What are the language assistances and requirements does your school have for other school members except students, such as administrative personnel, professor, and personnel of guidance system?

5. By the impact of internationalization, what are the adjustments of language requirement for local students, professors, and faculties? And what are they?

6. What are the changes of teaching and curriculum because of school internationalization?

7. What are the plans to develop international academic performance?

8. What administrative assistance do school offer to support international students? How's the language and accessibility of school website? Do you receive any feedback of administrative assistance and website use? What are they?

9. How international is the campus environment of your school?

10. Do schools have plans to cultivate language ability of foreign students? Please explain the difference your school provides for English-dominant and non-English-dominant students.

11. Would you please share some internationalization practices successfully implemented at school based on your own experience?

APPENDIX B: Interview Question [Text in Chinese]

1. 您認為學校對國際化關注的程度為何？

2. 是否可以請您分享學校目前國際化的政策有哪些？

3. 想請問學校對於國際學生和本地學生從入學到畢業所提供的語言協助和語言要求有哪些？

4. 想請問學校在校內員工((如：行政人員、教授、輔導人員）的語言協助和語言要求有哪些？

5. 學校國際化後，對於本地學生、教師及員工的語言要求是否有改變？其語言要求為何？

6. 因應國際化，學校在教學和課程上的調整為何？

7. 學校是否有擬訂國際學術發展相關計畫？

8. 目前學校給予外國學生的行政協助有哪些？其中網頁建置的設計為何？學生是否有反應學校在行政協助和網站使用上的問題？大部分為何？

9. 目前校園環境內雙語化的情形為何？

10. 學校是如何提供外國學生語言能力培養的協助？針對英語系和非英語系國家的學生是否有不同的措施？其措施為何？

11. 最後是否可以請您依照個人經驗，分享您認為校內國際化目前最成功的幾個實務做法？

APPENDIX C: Questionnaire

Dear Sir/Madam,

First of all, thank you for your time to complete the questionnaire.

Internationalization is the goal that every school has been working on. As a result of internationalization, schools in Taiwan has increased their diversity in student nationality, and hence brought about the language barrier and language management issue. The research hopes to understand the internationalization strategy and language management practices by means of a survey. Your participation in the research is greatly anticipated. The research result will only be used in the research and all responses will be kept confidential. Your efforts and response will make the research result more valuable and representative. Should you have any question, please contact Grace. Thank you.

Best regards,

National Taiwan Normal University
Project owner: Dr. Rosa Yeh
Research assistant: Grace Ou
E-mail:opc2614@gmail.com
Mobile:0912709133

【第一部分】高等教育國際化策略

[Part 1] Internationalization Strategy

In the section, the questions aim to understand the internationalization strategy that adopted by colleges. The question items represent the internationalization strategy. Please select the response that you believe would most represent your school. Internationalization in the research includes student recruiting, interaction, academic cooperation and school promotion; market represents the target and environment.

問卷題項	非常不同意	不同意	尚可	同意	非常同意

1.	本校在拓展國際化的過程中，會關注較廣泛的國際化市場與對象。 My school focuses on the extensive market and target participants ins internationalization process.	□	□	□	□	□
2.	即便某些國際化相關政策並<u>不</u>總是符合經濟效益，本校仍勇於嘗試。 Even some internationalization relevant policies are not always cost-effective; my school is willing to try.	□	□	□	□	□
3.	本校很重視市場訊號，並會定期檢視觀察環境中的機會。 My school emphasizes on the market signs and observes the opportunities in the environment regularly.	□	□	□	□	□
4.	本校會定期檢視其提供之國際化相關服務和策略的適配性，並依照市場機會訂定後續計畫。 My school would evaluate regularly the appropriateness of internationalization services and strategy, and make the following action plans by market opportunities.	□	□	□	□	□
5.	本校通常領先他校採行較創新之國際化措施。 My school usually adopts more innovative internationalization practices than other schools.	□	□	□	□	□
6.	本校致力於成為各種國際化措施的領導者。 My school aims to become the leader of every internationalization practice.	□	□	□	□	□
7.	本校在國際化的歷程中<u>不</u>尋求成為全面性的領導者。 My school <u>does not</u> seek to become extensive leader in the process of internationalization.	□	□	□	□	□
	問卷題項	非常不同意	不同意	尚可	同意	非常同意
8.	本校在尋求國際化的過程中，會針對特定的地區、市場和對象。 My school focuses on specific region, market and target on the way to internationalization.	□	□	□	□	□

9.	本校偏重較穩健成熟的國際化政策，較少因應國際化環境變化調整。 My school focuses on mature and stable internationalization policy, and rarely adjust with the environment changes.	☐	☐	☐	☐	☐
10.	學校對特定市場的國際化操作非常嫻熟，能針對目標市場對象提供較高品質的服務。 My school is very familiar with the internationalization operation in certain market, and provides services of quality to target market.	☐	☐	☐	☐	☐
11.	本校較擅長深耕於特定之目標市場。 My school is adept in maintaining certain target market.	☐	☐	☐	☐	☐
12.	本校常忽略與目標市場無直接相關的整體國際化情勢的改變。 My school usually ignores indirectly related environmental changes in the whole process of internationalization	☐	☐	☐	☐	☐
13.	本校一方面執行既有已具效能的國際化政策與服務，另一方面密切觀察市場競爭者，並迅速採行市場中具發展潛力的政策。 On one hand, my school implements the existed effective internationalization policies and services; on the other hand, my school observes closely the competitors in the market, and adopts those policies that are possibly with high potential.	☐	☐	☐	☐	☐
14.	本校的國際化策略注重效率及效能，較不傾向承擔過於不確定之風險。 The internationalization strategy in my school emphasizes efficiency and effectiveness, and not inclined to take the uncertainty	☐	☐	☐	☐	☐
15.	經常選擇他校現有策略中較有發展性之措施，加以調整後以更有效率方式來執行。 My school usually adopts the existed and developed practice from other schools, and further adjusts to implement it in an efficient way.	☐	☐	☐	☐	☐
16.	本校擅於使用正式化的結構與流程（如：辦法和作業細則），在既有市場中作有效率的常態性服務。 My school is good at setting up formal structure and process, such as policies and standard operation procedures, to perform efficient routine services.	☐	☐	☐	☐	☐

17.	本校無一致性的國際化政策及目標市場。 The school <u>does not</u> have consistent internationalization policy and target market.	☐	☐	☐	☐	☐
18.	本校在因應國際化方面較<u>不</u>積極。 My school is relatively not proactive in coping with internationalization.	☐	☐	☐	☐	☐
19.	本校較<u>不</u>願花費多餘的成本承擔國際化的不確定風險。 My school is <u>not</u> willing to spend extra cost to undertake the uncertain risk	☐	☐	☐	☐	☐
20.	本校僅在整體環境壓力大時，會採取基本的國際化相關措施以因應。 Only when the overall environment is over pressured, my school will adopt fundamental internationalization practices.	☐	☐	☐	☐	☐

（續下頁）

【第二部分】語言管理－語言能力的提升

[Part 2] Language Management – Enhancing Language Capability

國際化過程中，相關人員語言能力的提升為語言管理的首要課題，請問貴校在下列各項語言能力提升措施的實施情況為何？請您客觀地依目前貴校實施程度以 **1~5** 分於下列右方空白勾選填答。

1:學校尚未有相關措施規劃。

2:有計畫規劃，但尚未正式於校內實施。

3:已於校內正式實施，但效果並不顯著。

4:校內正式實施，且實施情況佳，僅小部分尚待加強。

5:實施情況十分良好，已具效能。

In the process of internationalization, the language capability of relevant staffs is the first-priority in language management. The research is designed to examine how schools enhance the language capability. Please rate the current language management practice from 1 to 5 for each item.

1. School does not have relevant practice.

2. School plans to implement it, but has not officially done that.

3. School is implementing the practice, but has not seen significant result.

4. The practice is well-established in school; only small adjustments may be needed.

5. The practice is well-established and effective.

針對外籍生 **For international students**	1	2	3	4	5
1. 成立語言訓練單位(如:華語中心)。 Establish language training center (e.g. Mandarin Chinese center).	☐	☐	☐	☐	☐
2. 設計華語文訓練課程。 Design Mandarin Chinese training courses.	☐	☐	☐	☐	☐
3. 設計英語文訓練課程。 Design English training courses.	☐	☐	☐	☐	☐
4. 設定英語入學門檻。 Set English as the criteria for application.	☐	☐	☐	☐	☐

		1	2	3	4	5
5.	設定華語入學門檻。 Set Mandarin Chinese as the criteria for application.	☐	☐	☐	☐	☐
6.	設定英語畢業門檻。 Set English as the graduation criteria.	☐	☐	☐	☐	☐
7.	設定華語畢業門檻。 Set Mandarin Chinese as the graduation criteria.	☐	☐	☐	☐	☐
8.	設立語文獎勵措施（如：語文考試補助或語文證照獎勵金）。 Establish language incentive practices (e.g. reimbursement for language test and incentive programs for language certification).	☐	☐	☐	☐	☐
9.	擬定校園課後語言學習活動 (如:華語日)。 Design after-class language learning activities (e.g. Mandarin Chinese day).	☐	☐	☐	☐	☐
	針對本籍生 **For local student**	**1**	**2**	**3**	**4**	**5**
10.	成立語言訓練單位(如:外語中心或外語診斷中心)。 Establish language training units (e.g. Language learning center or language assessment center).	☐	☐	☐	☐	☐
11.	設計英文以外之外語文訓練課程。 Design language training courses other than English training courses	☐	☐	☐	☐	☐
12.	設計英語文訓練課程(如:全英語學程、線上英文)。 Design English training courses (e.g. English program or English on-line learning).	☐	☐	☐	☐	☐
13.	設定英語入學門檻。 Set English as the criteria for application.	☐	☐	☐	☐	☐
14.	英文列為共同必修。 List English as common obligatory course	☐	☐	☐	☐	☐
15.	入學時舉辦英文分級考試，按級上課。 English proficiency test is implemented and the results would distribute students into different classes.	☐	☐	☐	☐	☐
16.	設計英文補救教學課程。 Design English make-up courses.	☐	☐	☐	☐	☐
17.	設定英文畢業門檻。 Set English as the graduation criteria.	☐	☐	☐	☐	☐

		1	2	3	4	5
18.	設立語文獎勵措施。（如：語文考試補助或語文證照獎勵金）。 Establish language incentive practices (e.g. Reimbursement for language test and incentive programs for language certification).	☐	☐	☐	☐	☐
19.	擬定校園課後語言學習活動 (如:英語日)。 Design after-class language learning activities (e.g. English day).	☐	☐	☐	☐	☐
20.	提供海外遊學與交換機會。 Provide study abroad and exchange opportunities.	☐	☐	☐	☐	☐
	針對現任教職員工 **For current faculty members**	1	2	3	4	5
21.	設計華語文訓練課程提升外籍教師華語能力。 Design Mandarin Chinese training courses to elevate Chinese ability of foreign professors.	☐	☐	☐	☐	☐
22.	設計英語文訓練課程提升本籍教師及校內員工英語能力。 Design English training course to increase the English ability of local professors and other faculty members.	☐	☐	☐	☐	☐
23.	設立語文獎勵措施。（如：語文考試補助或語文證照獎勵金）。 Establish language incentive practices (e.g. reimbursement for language test and incentive programs for language certification).	☐	☐	☐	☐	☐

【第三部分】語言管理 - 國際化環境的建構

[Part 3] Language Management – Establishing Internationalization Environment

校園國際化環境的建構須透過校內各項行政流程與介面的語言管理，請問貴校在下列各項國際化環境建構措施的實施情況為何？

請您依目前貴校實施程度以 **1~5** 分於下列右方空白勾選填答。

1:學校尚未有相關措施規劃。

2:有計畫規劃，但尚未正式於校內實施。

3:已於校內正式實施，但效果並不顯著。

4:校內正式實施，且實施情況佳，僅小部分尚待加強。

5:實施情況十分良好，已具效能。

In the process of internationalization, the language management should be done through administrative process and interface of language management. The research is designed to investigate how schools manage the language environment. Please rate the current language management practice from 1 to 5 for each item.

1.   School does not have relevant practice.

2.   School plans to implement it, but has not officially done that.

3.   School is implementing the practice, but has not seen significant result.

4.   The practice is well-established in school; only small adjustments may be needed.

5.   The practice is well-established and effective.

		1	2	3	4	5
1.	表單與文件雙語化。 Adopt bilingual content in forms and documents.	☐	☐	☐	☐	☐
2.	法規雙語化。 Adopt bilingual content in regulations.	☐	☐	☐	☐	☐
3.	學校網頁雙/多語化。 Adopt bilingual/ multilingual content in school website.	☐	☐	☐	☐	☐
4.	校園標示雙語化。 Adopt bilingual content in campus signs.	☐	☐	☐	☐	☐

5.	校園資訊雙語化（如:海報、校園電子報、校內活動資訊、交通）。 Adopt bilingual content for campus information (e.g. poster, electronic newspaper in campus, internal activities information and traffic information)	☐	☐	☐	☐	☐
6.	教務(註冊、選課)系統雙語化。 Adopt bilingual content in Academic Affair (registration and course selection) system.	☐	☐	☐	☐	☐
7.	線上學習系統雙語化。 Adopt bilingual content in on-line learning system	☐	☐	☐	☐	☐
8.	提供國際生手冊。 Provide　manual of guidance for international students.	☐	☐	☐	☐	☐
9.	提供外籍老師手冊。 Provide manual of guidance for foreign professors.	☐	☐	☐	☐	☐
10.	訂定行政人員基本語言要求。 Set up basic language requirement for administrative personnel.	☐	☐	☐	☐	☐
11.	訂定校內輔導人員（如：教官、輔導老師、保健室人員）基本語言要求。 Set basic language requirement for school guidance system. (e.g. military instructor, guidance officer, nurse)	☐	☐	☐	☐	☐
12.	提供學生志工（學伴）給外籍師生作為生活輔導協助。 Provide volunteer or buddy for foreign professors and students in life consulting and assistance.	☐	☐	☐	☐	☐
13.	鼓勵學生社團國際化。 Encourage internationalization of student clubs in campus.	☐	☐	☐	☐	☐
14.	招募語言能力較優之行政人員。 Recruit administrative staffs with relatively high language ability.	☐	☐	☐	☐	☐
15.	招募具優秀語言能力工讀生。 Recruit part-time workers with excellent language ability	☐	☐	☐	☐	☐
16.	招募已具備華語能力之外籍教師。 Recruit foreign professors with Chinese ability.	☐	☐	☐	☐	☐
17.	招募已具備英語能力之外籍教師。 Recruit foreign professors with English ability	☐	☐	☐	☐	☐
18.	招募可全英語授課之本籍教師。 Recruit local professors that can teach in English.	☐	☐	☐	☐	☐
19.	開設全英語學程。 Set up English programs	☐	☐	☐	☐	☐

20.	開設全英語授課科目。 Set up courses taught in English.	☐	☐	☐	☐	☐
21.	鼓勵外國教師來校國際交換及參訪。 Encourage foreign professors to come to exchange and visit.	☐	☐	☐	☐	☐
22.	鼓勵國內教師到海外進行國際交換及參訪。 Encourage local professors to go to exchange and visit other schools	☐	☐	☐	☐	☐
23.	成立國際性事務單位。 Establish international affair unit.	☐	☐	☐	☐	☐

【第四部份】基本資料

1. 請問您目前服務於哪間學校？＿＿＿＿＿＿＿＿＿＿＿＿
   What school do you currently serve in?
   本研究需另外蒐集各校次級資料（如：網頁或教育部統計資料）以完成最後資料分析，故請
   務必配合填寫，以利資料配對。註：本資料絕對保密，將不會洩漏學校個別資料。
   This research needs to collect information on schools from other sources to
   perform final data analysis. Please be sure to fill in all the blanks so the researcher
   can match the data with information from other sources.

2. 請問您目前的職稱為？（如：國際處處長）＿＿＿＿＿＿＿＿＿＿＿
   What is your current position? (e.g. vice director in international affairs.)

3. 請問您個人擔任國際事務主管的年資大約幾年？
   ＿＿＿＿＿＿＿＿＿＿＿年（若無，請填寫無即可）
   How long (in years) have you served in the international affair managerial
   position?＿＿＿＿＿＿＿＿＿＿＿(Please fill in no if there is no experience)

4. 貴校大約從何時開始致力於國際化？西元＿＿＿＿＿年
   What year did your school initiate internationalization? Year ＿＿＿＿＿

5. 若貴校有國際事務相關單位，關於外籍師生事務是如何處置？
   ☐外籍師生事務統一交辦國際事務處
   ☐國際事務處僅統合外籍師生事務，各單位系所皆有相關人員協助處理
   How have the foreign professors and students been taken care of if there is an
   international affair unit in your school?
   ☐International affairs office is in charge of all matters related to foreign
   professors and students.
   ☐International affairs office only serves as the coordinator; matters related to
   foreign professors and students are taken care of by respective department
   representatives.

6.
   a. 請問您目前服務的學校為?What best characterize your school?
      ☐國立 National　☐私立 private　☐市立 municipal　☐其他 others
   b. 學校總校區位於臺灣 The main campus of the school is located in Taiwan
      ☐北區 North　☐中區 Central　☐南區 South
      ☐東區 East　☐外島 island outside Taiwan
   c. 學校總校區周邊屬於 How would you characterize the areas where the
      main campus of your school is located?
      ☐都市(近市中心) City☐山區 Mountain side ☐郊區(非市中心) Rural

7. 請問貴校從事國際化的「最重要」動機為何？（請擇一）
　　□提升本地生就業競爭優勢　　　□拓展國外招生市場，提高招生率
　　□提高學校國際名聲　　　　　　□其他＿＿＿＿＿＿＿＿＿＿＿＿＿＿
　　What is the most important motivation which drives the school to
　　internationalization?
　　□Increase career competitiveness for local student　□Expand foreign market
　　to increase enrollment　□Enhance international reputation of the school
　　□Others

若您對本問卷有任何回饋，請不吝指教。

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If you have any suggestions, please feel free to contact me.

It is the end of the questionnaire. Thank you for your patience.