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**Utilizing social media to engage students in an ESP learning program**

利用社群媒體協助學生專業英文課程學習之研究

學生姓名： <u>邱平　　　1102402002</u>

<u>邱星豪　　1102402003</u>

<u>周香綺　　1102402006</u>

<u>李玉泰　　1102402007</u>

<u>陳育瑩　　1102402010</u>

<u>王育慈　　1102402023</u>

<u>呂之怡　　1102402044</u>

指導老師：　<u>　譚峻濱　</u>　老師

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# 利用社群媒體協助學生專業英文課程學習之研究

邱平 邱星豪 李玉泰 周香綺 陳育瑩 王育慈 呂之怡

國立澎湖科技大學

## 摘要

在這個網路發達、人手一機的時代，社群媒體的使用已完全成了現代人生活中的一部分。本研究主要在探討利用社群媒體協助學生專業英文課程之成效，藉由使用三元交互決定論為其理論基礎，觀察學生學習行為中之個人因素、行為因素以及環境因素，考量學生獨立建構與互依建構之差別。本研究提出了九項假設，並以此設計出相關之問卷，歷經兩個月的時間，共收集了 494 份有效問卷，問卷目標以學生以及社會新鮮人為主。本研究採 IMB SPSS Statistics 22 以及 AMOS 21 進行數據統計分析研究，結果顯示，使用社群媒體在專業英文課程裡可以強化學生學習動機，使學生之學習無須局限於一時一地之內；然而，由於東西方之文化差異，我們研究過程中也發現，社群媒體的功能並非完美無缺。

關鍵字：社群媒體、專業英文課程、三元交互決定論、獨立建構、互依建構

# Utilizing Social Media to Engage Students in an ESP Learning Program

**Abstract**

In the twenty-first century when everyone has their smart phone, using social media has become an indispensable part of our daily lives. This research project concentrates on the effect of utilizing social media to engage students in an ESP learning program. By using triadic reciprocal determinism (Bandura 1973) as the theoretical basis of the project, it aims to observe how personal factors, behavioral factors and environmental factors reciprocally affect one another. It also takes the differences between students' independent-construal and their interdependent-construal into consideration. This research project proposed nine hypotheses and developed its questionnaires based on the hypotheses. After two months, a total of 494 valid questionnaires had been collected. The main targets of the questionnaires are college students and the people who just entered society. This research project adopts IMB SPSS Statistics 22 and AMOS 21 to analyze statistical data. The results of the research demonstrate that utilizing social media in an ESP learning program can enhance students' motivation of learning. Students' learning doesn't need to be restricted to specific location and time. However, because of the cultural differences, let us know that the functions of social media are not always perfect.

Key Words: social media 、 ESP (English for Specific Purposes) 、 Triadic reciprocal determinism 、 independent construal 、 interdependent construal

# Acknowledgement

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# Chapter I Introduction

## 1-1    Research background

In this generation when everyone has their smart phone, using social media has completely become a part of our lives. It almost can be said to be indispensable. Currently, people use social media through computers and mobile devices. Generally speaking, people use desktops in their homes because of local restriction. That is to say, when accessing social media with a computer, you need to be inside the house. Fortunately, due to the vigorous development of science and technology, mobile devices are one of people's necessary technology products in recent years. Without local restrictions, the use of social media has become more and more free and easy.    Human beings are social animals. Even now society has developed quite well. Communication between people is still very important. Most people download social media apps directly at the moment that they get their new smart phone. That is because using social media has become their daily routine. They need to communicate with friends and family or get new information anytime, anywhere through social media. Some popular social media even don't need to be downloaded specially because they are one of the embedded applications in the smart phone from the factory. It can be seen that social media is very common and substantial to modern people.

With time passing, the number of social media users on Facebook, Youtube, Twitter, and Weibo continue to increase. In the meantime, the functions of these social media also continue to progress and become more convenient and practical. According to eMarketer's Research, there were 16.1 billion people using social media at least once a month in 2013. And eMarketer estimates that social media users will reach 23.3 billion in 2017. Nearly a third of world's population will be using social media that time. The majority of social media users are young people. It can be deduced that many social media users are school age. Thus, this paper will discuss whether utilizing social media can enhance student's learning motivation.

This study uses Triadic Reciprocal Determinism (Bandura 1986) as its theoretical basis. It is a kind of teaching theory which observes how three elements reciprocally affect with each other. The three elements are personal factors, behavioral factors, and environmental factors. Our study analyzed the personal factors of a number of ESP learners, and the behavioral factors that they manifest in regards to social media, while focusing on environmental factors that pertain to social media. Finally, we apply this theory of

behavioral sciences to analyze whether utilizing social media to engage students in an ESP learning program has positive effects on learning.

## 1-2　Purpose of study

Although some results demonstrate that digital technology such as discussion boards can enhance the participation and performance of students (Wright and Lawson 2005), research reports Facebook and other social media be used for educational purposes is still limited. Based on this background, this paper mainly discusses the feasibility of utilizing social media to engage foreign language learners in ESP program. As social media has permeated modern life and become more accessible and easy to use, more and more people can escape the bounds of classrooms and learn when and wherever they want. Generally speaking, learners' active learning is better than passive learning. Bonwell and Eison (1991:2) simply defined active learning as the actions and thoughts at a given moment. That is to say, active students not only passively receive information, but also learn from thinking and communicating specific themes (Fink 2003). Students can apply interesting themes to arrange different ways to learn, such as discussion, debate, case studies, group plans, role play and imitation (Bonwell and Eison 1991; Meyers and Jones 1993). Through using familiar social media and arranging appropriate as well as fascinating content, student's learning effect are enhanced. Student's inner tendencies and emotional connection are important to learning. When students get interesting and practical schoolwork, they always behave better and more actively (Pintrich and De Groot 1990). In short, utilizing widespread social media's outstanding functions such as groups and designing proper curriculum in teaching have many benefits.

According to study from comScore and insightxplore in 2015, Google sites and Facebook are the two biggest media giants. And Youtube is one of the largest web video platforms on GOOGLE. If instructors can combine both in teaching use, it can have a positive impact. Visual media, which has strong impact on students, can promote the future development of language by providing a meaningful and authentic language use model (Lonergan 1984). A movie not only contains valuable cross-culture values, but also provides divergence of language, especially in monolingual situations. No matter in which culture, everybody tells stories to others. As Wood (1996) says, this is a reason why feature film is so persuasive. Even if the language used in a film is very difficult for students, the desire of students to know what will happen will help them persist in watching the film. To be more precise, as Wood notes, the use of film helps learning escape from classroom restrictions. Students can develop skills and interests that they pursue for the rest of their lives, thus

achieving an inner desire to use language learning as a tool "to illustrate the world by reading, writing and explaining (Cazden, cited in Mohan, 1986, P.2)

At a time when the internet and social media are flourishing, the use of teaching methods and teaching materials should advance side by side. With regard to this, this paper makes suggestions for the integration of social media into the teaching of college instructors to improve the effectiveness of teaching and learning as well as enhance learning motivation and attitude.

Here are three research objectives the paper wants to discuss.
(1) Whether the integration of social media into teaching can improve student's learning motivation.
(2) Whether the integration of social media into teaching can promote interaction between students and teachers.
(3) Whether the integration of social media into teaching can improve learning efficiency.


## 1-3    Limitations of the study


The Range and Limit of Research

There are a great number of users using Facebook and YouTube in Taiwan. According to data made public by Facebook in 2015, users active on Facebook reached 16 million every month. Although the use of YouTube doesn't necessarily require members to login, the users of YouTube in Taiwan still surpassed prime time television viewers in 2013. Accordingly, this study focuses on these two social media sites which are the most popular in Taiwan. The content of the English courses involved the ESP topic of Maritime English in competency as it currently exists in Penghu.

The limitations of this study are as follows:
1.  Limitations of research contents

In the light of corresponding to local culture, this study chooses marine time affairs to be the proportion of ESP learning program.

2.  Limitations of research subjects

The main subjects are the students who study at National Penghu University. In addition, the questionnaire was posted in a PTT online forum to increase the number of responses. Below, we describe a number of steps we took to encourage replies while also ensuring responses were valid and reliable.

3. Time and regional limitations

For students on outlying islands, the communication with students in Taiwan is limited by resources and region. Thus, in the process of collecting data, most sources are from students in Penghu. In order to prevent collecting biased data, an online questionnaire was published for a period of two months to extend the scope of research.

4. Information reliability of online questionnaire

The forum that the questionnaire was published on was PPT Bulletin Board System, Taiwan's most well-known forum with the most users. We provided the online currency of the forum as well as draw prizes to attract respondents. Also, we established relative limitations to reduce the possibility of perfunctoriness and improve the accuracy of the responses.

## 1-4 Definition of terms

**Social media**

**Social media** are computer-mediated technologies that allow individuals, companies, NGOs, governments, and other organizations to view, create and share information, ideas, career interests, and other forms of expression via virtual communities and networks. The variety of stand-alone and built-in social media services currently available introduces challenges of definition; however, there are some common features.

**ESP**

**English for specific purposes (ESP)** is a sphere of teaching English language including English for occupational purpose, English for academic purpose, English for medical professionals, English for waiters, English for tourism, English for Art Purposes, etc. Aviation English as ESP is taught to pilots, air traffic controllers and civil aviation cadets who are going to use it in radio communications. ESP can be also considered as an avatar of language for specific purposes.
Need analysis as the key defining feature of ESP, provides information about the target situation, what learners will have to do in English and the skills and language needed. This

is generally called target situation analysis (Chambers 1980)

**Triadic reciprocal determinism**

Triadic reciprocal determinism is the theory set forth by psychologist Albert Bandura that a person's behavior both influences and is influenced by personal factors and the social environment. Bandura accepts the possibility of an individual's behavior being conditioned through the use of consequences. At the same time he asserts that a person's behavior (and personal factors, such as cognitive skills or attitudes) can impact the environment. These skill sets result in an under- or overcompensated ego that, for all creative purposes, is too strong or too weak to focus on pure outcome. This is important because Bandura was able to prove the strong correlation between this with experiments.

**Self-construal**

Self-construal refers to the grounds of self-definition, and the extent to which the self is defined independently of others or interdependently with others. Initially, the term derived from perceived cultural differences in the self.

**Independent –construal**

Independent Construal of Self indicates a completely "self-centered" point of view where a person's behavior and actions are organized completely around their own thoughts and feelings without taking other people's opinions or feelings into consideration. A person who lives with this point of view also doesn't understand or respect laws or social norms.

**Individual cognition**

Individual cognition is the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. It encompasses processes such as knowledge, attention, memory and working memory, judgment and evaluation, reasoning and computation, problem solving and decision making, comprehension and production of language, etc.

# Chapter II Literature review

This study adopted the theory of Triadic Reciprocal Determinism, which was

announced by Bandura in 1986, as its theoretical foundation.


## 2-1    Theoretical Foundation


Triadic reciprocal determinism is a theory which was put forward by Bandura in 1986. Its characteristic uses personal factors to explain individual cognitive learning behavior of cognition. Compared with other traditional theories of instruction, Bandura's theory emphasizes that human beings' learning behaviors are not merely restricted to stimulation of the environment. Human beings' learning behaviors are a triangular structure which is formed by three factors: subject, behavior and environment. These factors reciprocally affect each other (Bandura, 1986; Bandura and Jourden, 1991; Bandura, 2001). Bandura's learning theory emphasizes the reciprocal influence of three factors. This is because human beings' learning behavior is not only driven by inherence but also influenced by behaviors and learning environment. Human beings are affected by other people, events and substances in the environment. Simultaneously human beings are also affecting their surroundings. To research learning behavior, this study should take time to consider three directions including the foreign language learner, the learners' behavior and the environment which learners are in in the meanwhile.

Based on the following reasons, this research adopted Triadic Reciprocal determinism as its theoretical foundation.

First of all, Triadic Reciprocal Determinism can be an integrated framework to help this paper which researches the process and behavior foreign learners utilizing social media to learn in an English Specific Purpose (ESP) program.

Secondly, Triadic Reciprocal Determinism suggests that the behavior of mental cognition in triangular structure is the consequence resulting from the mutual influence of the subject, behavior and environment. Therefore, the consequences should be able to assist with understanding ESP program to create value of learning.

Thirdly, Triadic Reciprocal Determinism emphasizes the initiative and complexity of mutual influence. Its theoretical basis can give assistance to scrutinize the result of mutual influence about self-construal and social interactions.

## 2-2　Self-Construal


Generally speaking, people who live in Asia, South Europe, and South America tend to be interdependent-construal. And people live in west Europe, U.S. and Australia tend to be independent (Lebra, 1992; Markus & Kitayama, 1991; Oerter & Oreter, 1995). The individual psychological factors, including how a person builds interpersonal relationship between self and the public, may affect the interaction between the individual and society subconsciously (Cross, Hardin, & Gercek-Swing, 2010). The definition of the conception of self-construal that frequency of contact with individuals and groups would uses different forms to display a person's thoughts, feelings and behavioral responses (Markus & Kitayama, 1991; Singelis,1994). The two proper nouns, independent and interdependent, which were conceptualized by Kitayama and Markus, describe the main components of self-construal. People whose personalities are close to independent-construal consider themselves autonomous and independent. They emphasize the integrity, individualism, inherent potential and originality of thoughts (Hopp, Barker, & SchmitzWeiss, 2015; Kwon& Mattila, 2015; Lee & Workman, 2015; Singelis, 1994). At the same time, they are also devoted to expressing and pursuing the importance of individual's unique needs, rights and capacities (Wang et al., 2015). Through expressing themselves bravely, people who tend to independent-construal get the positive review and admiration back and gradually increase self-confidence (Lee & Workman, 2015). In contrast, the people whose personalities are close to interdependent-construal consider that their cognition, emotion, behavioral intention and groups are related to external society (Singelis, 1994;Wang, Yang, &Wang, 2014). Consequently, people who tend to be independent-construal considerably value the relationship with groups, surroundings, public impression and sense of belonging (Chang, 2015; Hopp et al., 2015). Therefore, they expect to integrate with and be accepted with significant others. Also, they are dedicated to using more appropriate techniques to maintain harmonious interpersonal relationships (Lee &Workman, 2015; Markus& Kitayama, 1991). In consideration of close relationships of behavioral intention, self-construal is applied to expound assistance (Yong Seo & Scammon, 2014), knowledge sharing (Liu &Rau, 2014), self-presence motivation (Long & Zhang, 2014), self-disclosure, communication intentions (Chang, 2015) and continuous intentions (Wang et al. 2015). Apart from this, Hong and Chang (2015) have offered evidence that diverse selection results between independent-construal and interdependent-construal in the process of inference. Thence, even in the same external environment, the difference of self-construal could create unique characteristics identically. Yang, Wang, and Mourali(2015) have thoroughly inspected the distinctions between independence and interdependence when they examined

peers' effects on authorized music sharing and downloading. Kwon and Mattila (2015) showed regulatory function of self-construal in associations with word- of-mouth and self-brand connection. This paper has inferred the coordinate function between behavioral intention and environmental motivation. Many scholars believe that most of time people show characteristics of interdependent-self and independent-self at the same time (Aaker & Lee, 2001; Agrawal & Maheswaran, 2005; Kwon & Mattila, 2015). In other words, no matter which construal a person tends to be, he has both . The only difference is the degree between the two (Singelis & Sharkey, 1995). And a person's overall self-construal depends on the relative degree of independence and interdependence (Singelis, 1994).

## 2-3    ESP Learners' Interactivity

Social media has been regarded as a highly interactive network platform. Through sharing and creating information, people maintain and establish interpersonal relationships with each other (Kietzmann, Hermkens, McCarthy, &Silvestre, 2011). The interactivity of social media is the most important thing when it was designed (Ariel & Avidar, 2015; Jiang, Chan, Tan, &Chua, 2010). Nowadays, people still haven't reached a unanimous viewpoint. Previous studies mainly concentrate on conceptualizing interactivity in three directions: process of information change, function of technique and the cognition of user's technical experience (Ariel & Avidar, 2015; Zhao & Lu, 2012). This paper adopted the viewpoint based on cognition because it helped take in consideration community features when studying in ESP learners' viewpoints. Combined with previous studies, this paper defines interactivity as the extent which a learner can control information changes and connect with others ((Huang, 2012; Zhao & Lu,2012)).

## 2-4    Using Social Media to help foreign language learners

The flourishing development of the internet not only shortens the time and space limitations, but also attracts more and more learners to utilize internet to learn what they want to learn. According to the study exploring Taiwanese college students' needs for English E-learning websites, which was researched by Tan in 2013, the results demonstrate that performance expectations, effort expectancy, and social influence have positive effects on behavior intentions and facilitating conditions; behavioral intentions also have positive effects on use behavior. Most English learners think that using the Internet to learn English is more

convenient than using traditional methods; and that adult English learners think that using the Internet to learn English is more helpful than using traditional methods (Tan 2015). In some classes which accommodate big numbers of students, because single instructor cannot take into account all students, students in class all feel they are not valued and they learn in a passive way. However, groups, a kind of function in Facebook, are useful to improve this situation and it has been verified as powerful tool on building relationships and learning (Kevin D. Dougherty1 and Brita Andercheck1 2014). The results which were researched by Yang and Chen in 2006 also show that the AJET (Advanced Joint English Teaching) project provided the students with an opportunity to experience new technologies; learners experienced the pleasure of learning and thus increased their learning possibilities. The students liked and approved of learning English using the Internet.

## 2-5    Advantages of utilizing technology to help learning

Over the past decade, computer-mediated communication (CMC) has been seen as a revolutionary tool for computer-assisted language learning (CALL) (Kang, 1998; Rice, 1989; Smith & Sauro, 2009). The extensive application to computers and the Internet has revolutionized almost every aspect of our life including education. In the professional field of foreign language teaching and learning, the use of computer mediated communication (CMC) has attracted considerable attention. CMC can provide distinguished online conferencing function which could enhance collaboration and interaction (De Wever, Schellens, Valcke, & Van Keer, 2006; Pena-Shaff & Nicholls, 2004). Collaborative online communication offers a lot of advantages to foreign language learners. Foreign language learners could express their thoughts and ideas clearly when they are collaborating on the internet and contribute the development of their understanding in several ways (Oliver, 2000). Through using web-based language instruction, students and teachers can truly create interactive experiences by utilizing websites as a learning foundation, a communication duct and an integrating medium (Alessi & Trollip, 2001). Researchers have found that instructors can apply technology to improve students' motivations (Chung, 1991; Guthrie & Richardson, 1995; Liou, 1997; Scardamalia & Bereiter, 1991; Van Aacken, 1999). Maslow (1970) clearly indicated that intrinsic motivation is superior to extrinsic motivation according to his hierarchy of human needs. Chang and Lehman (2002) also found that when students are learning from instructional computer-based language-learning program, they perform better academically and are more motivated intrinsically.

Recently, web-based learning continues to increase (e.g. Lin & Hsu 2001; Liou 2001; Dlaska 2002; Liou &Yang 2002; Sun 2003). Education theorist John Dewey (1938)

suggested using educative experience to foster meaningful and purposive learning and he believed that learners are inherently motivated when under effective learning conditions. Therefore, if instructors try to apply modern technology in the language classroom, the result should be over their expectations. Computer-based interactive multimedia is an instructional method that integrates computer-assisted instruction which helps students develop a variety of competencies mobilized in communication (Chanier1996). Watts and Lloyd (2001) evaluated a classroom multimedia program for teaching literacy. The results show that students become more active, exploratory and self-directive in a very short time. In a foreign language learning class, structured web –based discussion is beneficial both to students' language production and their application of cognitive skills (Chang 2013). Students learning within a web-based environment with self-regulated learning strategies became more responsible for their own learning, more intrinsically orientated and more challengeable (Chang 2005). Results show that when learning from web-based instruction, students who used reflective learning e-journals outperformed students who did not do so in terms of reading comprehension (Chang 2014).

# Chapter III Research model and Hypotheses

In the light of Triadic Reciprocal Determinism and previous literature, this paper proposes a research model integrating potential relevant factors to consider how social media can enhance the effects of ESP program learning. Nine hypotheses are proposed according to this model.

**3-1 Research Model**
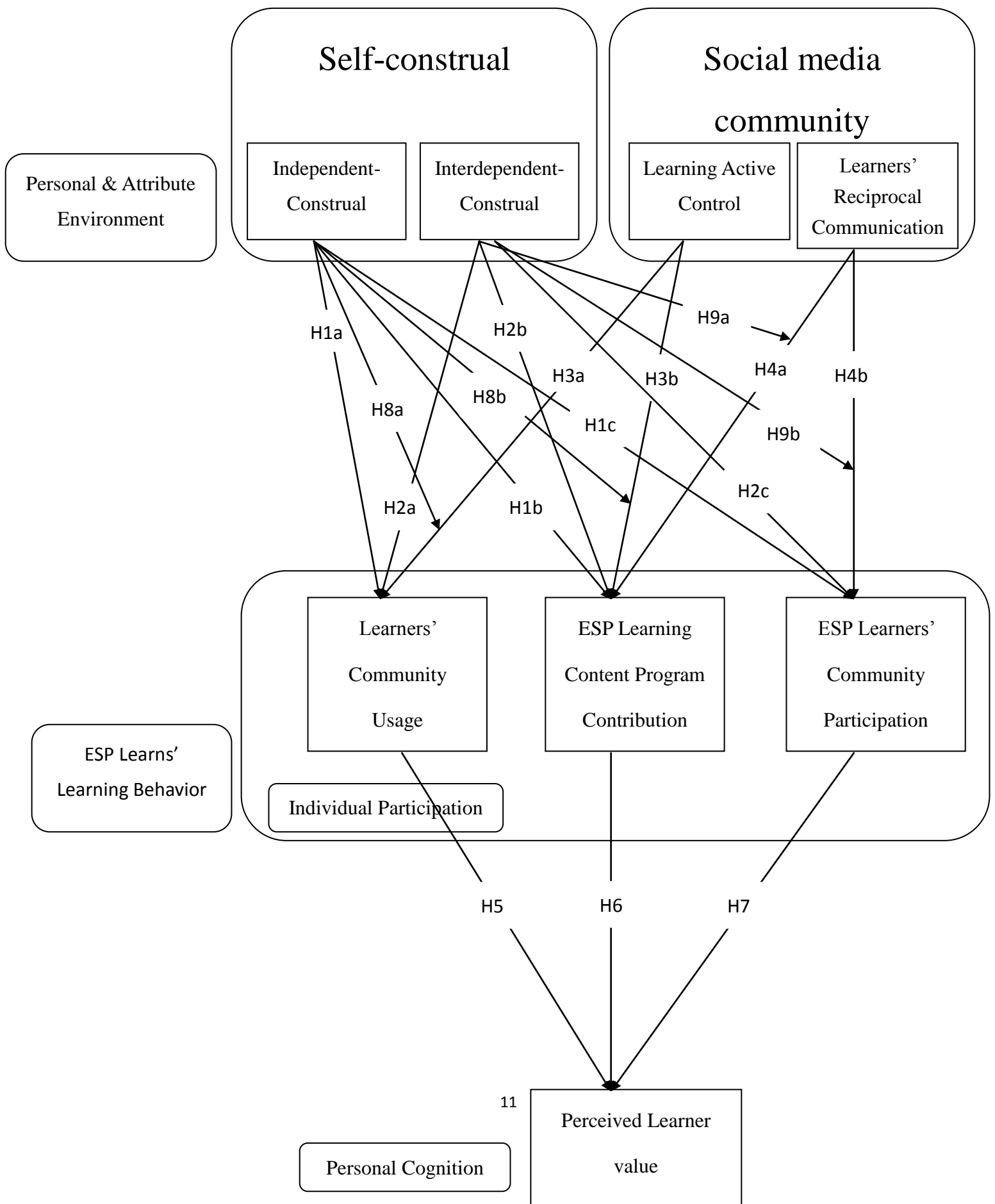
## 3-2    ESP learners' participation and self-construal


As mentioned previously, self-construal presents individual's cognition of self and surroundings. This distinct self-awareness influences individual behavioral intentions. That is to say, individuals' distinct self-construal produces a variety of motivations for actual behavior. (Hong& Chang 2015; Youg Seo & Scanmon 2014) People who are high independent-construal attach importance to needs and interests. That's why they may choose to use social media because they can select what they want in a convenient and free environment. Also, people who are highly independent focus on the opportunities to express self-opinions and features (Chang, 2015; Hopp, et al, 2015). Therefore, they usually tend to express themselves actively. For example, they enthusiastically share their opinions or experiences in groups. They want to promote their capabilities, intrinsic abilities and self-images too (Lee& Workman, 2015). In this aspect, using social media to conduct ESP program learning provides them opportunities to convey their personality. Based on the discussion, this paper hypothesizes:


H1: Independent-construal is positively related to (A) Learners' community usage (B) ESP Learning content program contribution (C) ESP Learners' community participation.


Interdependent-construal is a significant factor to explain an individual's collective involvement intention (Markus and Kitayama, 1991). Since social media offers interdependent-construal users an ideal place to know and comprehend each other, Learners' community use can satisfy their desires to about join groups with identical interests and ideals. In order to integrate into groups, people who are interdependent-construal are inclined to perform altruistic behavior to keep a good public image and gain the recognition of society (Chang, 2015; Hopp et al., 2015). As a result, they are willing to do things which are helpful to groups such as respond, translate, upload and share because it can enhance their public cognition. At last, having harmonious interpersonal relationship is the core value of the interdependent-self (Lee&Workman, 2015). They consider that the community of social media is a medium that help people exchange thoughts and reach consensuses. They may like to participate in some online activities such as online gaming, using communications software or social media. Based on this discussion, this paper hypothesizes:


Hypothesis 2: Interdependent-construal is positively related to (A) Learners' community usage (B) ESP learning content program contribution (C) ESP learners' community participation.

## 3-3    ESP Learners' participation and interactivity of community


Interactivity of an ESP learners' community plays an important role in users' cognition (Jiang et al., 2010; Huang, 2012). Therefore, according to the degree of interactive cognition of social media, each person would participate in different kinds of online activities on their own. In the light of Yang and Coffey (2014), the degree of interpersonal interaction on social media would reflect on the internet and a learners' online community usage includes reading, watching and short communication between peers. By comparison, ESP learners' community participation means proactive participation and communication with each other. In order to further analyze the relationships of social interactivity and users' participation degree, this paper refers to Hoffman and Novak's argument. There are two interactive forms in their argument: (1) User to User: Emphasizes the communication between the user. (2) User to system: Focuses on the communication between user and system. (Hoffman and Novak, 1996; Wu and Chang, 2005) Learning active control and communication perfectly answer the measurements between user-to-user and user-to-system. Combining with   Yang and Coffey (2014)'s viewpoint and theory, we infer that learning active control is more associated to middle and low level interactivity, and mutual communication involves high level interpersonal participation.

Social media can help ESP learners have good experiences with online learning. For instance, there are many essays, pictures, videos, web pages and lot of information on Facebook. ESP program learners can easily find what they are interested in. And using Youtube to watch videos can satisfy their interests and demands (Ariely, 2000; Huang, 2012). In addition, social media can encourage learners to share their videos, comments, thoughts and other information to integrate with the learners' community.   With the increasing of a learners' self-awareness, more and more ESP learners' expect to have more opportunities to express themselves (Ouschan et al., 2006). Based on this discussion, the paper hypothesizes:

Hypothesis 3: Learning active control is positively related to (A) Learners' community usage (B) ESP learning content program contribution

Social media not only can provide learning information but also act as interactive platforms to connect relationships (Kietzmann et al., 2011). Reciprocal communication sets an operation mechanism to let users share what they want and enhance the relationships among them (Duncan and Moriarty, 1998). In terms of social exchange theory, ESP learners

may play an active role to share information about videos, articles and websites. In the meantime, reciprocal features connect learners and social media users. The increasing two-way communication among learners enhances identification and internalization bonds communities (Shih and Huang, 2014). Based on this discussion, this paper hypothesizes:

Hypothesis 4: Reciprocal communication is positively related to (A) ESP learning content program contribution (B) ESP learners' community participation

## 3-4 Individual Participation and Perceived learners' value

Scholars have reached a relative accordance that ESP learning content program contribution and ESP learners' community participation are the major factors in constructing the value of a virtual community (Nambisan and Baron, 2009; Nambisan and Baron, 2010; Wang et al. 2013). ESP learning content program contribution about social media includes uploading photos and videos, writing comments, sharing posts and exchanging information. Additionally, some learners will volunteer to answer academic problems and share learning experience for self-actualization and reputation. Because the profile of social media learners is easy to acquire, people who contribute to online communities are receive given affirmation and establish good relationships (Kim et al., 2014). Based on people who are keen on the activities listed above and building and strengthening their social media communities and using social media to engage with others can enhance their sense of belonging to online communities (Chang, 2015; Wang et al., 2013). Learner community usage of this paper refers to passive and implicit participation. Some inward learners seldom communicate with others in real life. However, through using social media, their communication opportunities will increase and they may want to try conducting some simple interactions with others. Learners' passive characteristics influence the value of online community participation. Social media can help learners expand their relationships. In addition, by reading comments, posts and shared information, even unilateral participation of passive learners can also provide learners with social support and social presence. Based on this discussion, the paper hypothesizes:

H5: Learners' community usage is positively related to perceived learners' value.

H6: ESP learning content program contribution is positively related to perceived learners' value
.

H7: ESP learners' community participation is positively related to perceived learners' value.

## 3-5    The moderating role of self-construal

According to Bandura (1978), individual participation is not just the result of simple effect between external incentives and internal motivation. It is a complex result of reciprocal effects of individuals and environment. (Singelis, 1994; Markus and Kitayama, 1991).Self-construal and personal cognition combine with community interaction interact with each other when using social media. Highly independent-construal person prefer to focus on pleasant experience during information exchange (Singelis, 1994).That is to say, they may value on user-system interactivity more (Lee and Workman, 2015). On social media, effective learning active control allows members to customize their homepage and personal profiles. Social media also provide modifying functions such as content filters, hash tags, comment management and other selections. All these features can enhance social media learners' motivation and performance in learning community usage and ESP learning content program contribution. Based on this discussion, this paper hypothesizes:

H8: Independent-construal positively moderates the relationships between learning active controls and (A) Learning community usage (B) ESP learning content program contribution. When independent-construal is higher, learning active control will demonstrate a stronger influence on learning community usage and ESP learning content program contribution.

On the other hand, interdependent-self individuals are embedded in the social network of surroundings (Singelis, 1994). The notion of being accepted and fitting in with identified groups may motivate consistent communication among intergroup members (Chang, 2015). Among these, we infer that Video sharing communities can satisfy the special needs of interdependently oriented people with numerous functions that facilitate two-way communication. In-time comment systems, built-in instant messages, social networking functions, and live telecast sections are offered. Elevated smooth interpersonal communication may in turn create a huge impetus for users with higher interdependent-construal to engage in diverse activities. On the other side, the conception of being accepted in identified groups may motivate consistent communication among intergroup members (Chang, 2015). Among these, we infer that interdependent-construal people benefit more from learner-learner interactivity rather than learner-system interactivity. Social media communities can satisfy the demands of interdependent-construal people with a variety of functions to promote two-way communication. Comments

management, instant message and live telecast sections are provided. Good interpersonal communication can not only a help for learners but also helps interdependent people gain a sense of belonging and promotes motivation. Based on this discussion, this paper hypothesizes:

H9: Interdependent-construal positively moderates the relationships between learners' reciprocal communication and (A) ESP learning content program contribution, (B) ESP learners' community participation. When interdependent-construal is higher, learners' reciprocal communication will demonstrate a stronger influence on ESP learning content program contribution and ESP learners' community participation.


# Chapter IV Methodology of Research and Results

In order to support the thesis of this paper, a questionnaire survey was done to verify the hypotheses. First, referring to previous studies as this paper's research background, this paper designed a questionnaire about utilizing social media to engage in ESP programs. Second, this paper used Google forms, online and paper questionnaires to conduct the survey in the meantime so as to increase the validity. Finally, after collecting these data, the paper applies IMB SPSS Statistics 22 and AMOS 21 to do data analysis.


## 4-1    Measures

The conception of independent-construal and interdependent-construal refer to Wang et al. (2015). The data of learning active control and learners' reciprocal communication are surveyed in view of Huang (2012). The scale of learners' community usage was reorganized from Jahn and Kunz (2012) and the scale of ESP learning content contribution and ESP learners' community participation was reorganized from Xu and Li (2015). Perceived learners' value was adapted from Kim et al. The questions in the questionnaire provide five options to express the level of consent (from 1 for Strongly Disagree to 5 for Strongly Agree).


## 4-2    Data Collection

In the section of data collection, this paper distributed the questionnaire in three different ways. Firstly, three hundred paper questionnaires were distributed to students who study in Maritime-related schools. Secondly, a Google form was created and shared on social media to attract people who live in Taiwan to offer their opinions. Thirdly, the online questionnaires were posted on Taiwan's largest bulletin board system, PPT, and bonus rules were set up as well as identity restrictions to extend the scope of data collection. Although the timeframe for posting online questionnaires was only two months during August to October, we still collected a certain amount of data due to the extensive use of the internet currently. A total of 250 online questionnaires and 300 paper questionnaires were collected. Among them, 494 questionnaires including 200 online questionnaires and 294 paper questionnaires were valid.

Table 1 shows the descriptive statistics, from which we can gain the basic information about the people who filled out this questionnaire. This data lets us understand the bias of this paper and also can be used as variables to increase reliability. In this questionnaire, we use gender, age educational level, occupation and location to distinguish our subjects. For instance, we can see that 73.5% of those who filled out the questionnaire were between 21 and 30 years old and they may be college students and new members of the labor force.

**Table 1**

Demographic information (N= 494)

| Variable | Category | Numbers | Percentage |
|---|---|---|---|
| Gender | Male | 236 | 47.8% |
| | Female | 258 | 52.2% |
| Age | <20 | 121 | 24.5% |
| | 21~30 | 363 | 73.5% |
| | 31~40 | 7 | 1.4% |
| | 41~50 | 3 | 0.6% |
| | >51 | 0 | 0% |
| Education | Elementary school or to learn to read | 0 | 0% |
| | Junior high school | 5 | 1% |
| | Senior high school or vocational high school | 67 | 13.6% |
| | College or university of science and technology | 399 | 80.8% |
| | Graduate school or above | 23 | 4.7% |
| Occupation | Student | 453 | 91.7% |
| | Service industry | 17 | 3.4% |
| | Shipping or air transport industry | 3 | 0.6% |
| | Civil service | 6 | 1.2% |
| | Retire | 1 | 0.2% |
| | Others | 14 | 2.8% |

| Location | | | |
|---|---|---|---|
| | Northern part | 120 | 24.3% |
| | Middle part | 63 | 12.8% |
| | Southern part | 94 | 19% |
| | Eastern part | 30 | 6.1% |
| | Outlying islands | 184 | 37.2% |
| | Others | 3 | 0.6% |

## 4-3    Reliability and Validity

This paper use IMB SPSS Statistics 22 and AMOS as statistical software to analyze the data including factor analysis and descriptive statistics. We chose SPSS because it's the most widely used statistical software and the operations are simple and convenient. On the other hand, AMOS can use path analysis so that we could quickly understand the trends of the hypotheses. The contents of this paper have been seen and recognized by three experts and it has content validity. In Table 2, factor analysis shows that the data is significant and the results are useful. Since basic factors influence learners' perceived value in using social media. In the result of this factor analysis, the factor loadings of the questions are between 0.52 and 0.88. (Factors loadings should be at least 0.5 or more to avoid problems in deriving a valid analysis.) Figure1 shows that KMO value (Kaiser-Meyer-Olkin) of this project was 0.93. (A KMO value of greater than 0.6 is adequate. 0.7 to 0.89 is moderate. 0.8 to 1.0 is excellent.) From these results, we know that this paper is suitable for statistical analysis. The figure of the Rotated Component Matrix(a) is divided into eight dimensions by research model. When Cronbach's Alpha value is more than 0.6, it represents that the reliability of the questionnaires are quite stable. In Table 2, we can see Cronbach's Alpha value for the eight dimensions ranged from 0.61 to 0.93. That is, the questionnaire for this paper is quite reliable and highly correlated.

| Constructs and items | Factor loadings |
|---|---|
| **Independent-Construal (Cronbach's Alpha =0.88)** | |
| INDC1: I take the initiative to voice my opinions when the group is discussing. | 0.73 |
| INDC2: Self- identity with others, who approve me, is very important to me. | 0.62 |
| INDC3: I have own ideas and suggestions about ESP learning: I know what I like and I know what I don't like in the learning activities. | 0.81 |
| INDC4: I enjoy for my learning unique qualities. | 0.81 |
| INDC5: I can use my advantages to help my ESP learning group. | 0.79 |
| **Interdependent-Construal   (Cronbach's Alpha =0.88)** | |
| INTC1: My happiness comes from the happiness of those in my group. | 0.71 |
| INTC2: In my group, I watch my words so I won't offend anyone. | 0.62 |
| INTC3: I would sacrifice my leisure time for the benefit of my group. | 0.82 |
| INTC4: I would like to enrich myself for our group. | 0.72 |
| INTC5: I would like to listen to other's suggestions during the discussion. | 0.60 |
| **Learning Active control (Cronbach's Alpha =0.88)** | |
| LAC1: Using social media to learn ESP makes me be aware of where I am while I can learn it. | 0.77 |
| LAC2: Using social media to learn ESP offers me to control over what I want to learn. | 0.74 |
| LAC3: Using social media to learn ESP allows me to choose freely what I want to learn and whom I want to talk to. | 0.67 |
| LAC4: Using social media to learn ESP give me greater control over learning activities. | 0.52 |
| **Learns' Reciprocal communication(Cronbach's Alpha =0.90)** | |
| LRC1: Using social media to learn ESP facilitates two-way communication. | 0.73 |
| LRC2: Using social media to learn ESP makes me feel like I want to listen to our learning members. | 0.79 |
| LRC3: Using social media to learn enables us to conversation among our members effectively. | 0.80 |
| LRC4: I will encourage my friends to use social media to learn ESP English. | 0.70 |
| **Learner Community Usage (Cronbach's Alpha =0.61)** | |
| LCU1: I frequently use social media to learn ESP programs. | 0.78 |
| LCU2: I often use social media to learn ESP. | 0.74 |
| LCU3: I regularly use social media to practice ESP. | 0.70 |
| LCU4: I rarely use social media to learn ESP. | 0.86 |
| **ESP Learning Content Program Contribution (Cronbach's Alpha =0.88)** | |
| LCPC1: I often add something about ESP videos and comments content on social media. | 0.88 |
| LCPC2: I often edit something about ESP videos and comments content on social media. | 0.85 |
| LCPC3: I often write something about ESP articles and edit comments on social media. | 0.83 |
| LCPC4: I often search the information about ESP on social medis. | 0.69 |
| **ESP Learners' Community Participation(Cronbach's Alpha=0.89)** | |
| LCP1: I help to answer other ESP learners with their questions. | 0.57 |
| LCP2: I participate in discussions about community issues in using social media to learn ESP. | 0.58 |

| | |
|---|---|
| LCP3: I actively participate in activities organized by how to use social media to learn ESP. | 0.64 |
| LCP4: I would like to attend relevant of using social media to learn ESP. | 0.56 |
| Perceived ESP Learner Value (Cronbach's Alpha =0.93) | |
| PLV1: Using social media to learn ESP is a joyful experience. | 0.76 |
| PLV2: The value of learning experience using social media to learn ESP is great. | 0.81 |
| PLV3: Using social media to learn ESP can help me use my professional ability wisely, it save my money and time. | 0.80 |
| PLV4: Using social media increases my learning performance in my ESP learning. | 0.74 |

**Table2**

**KMO and Bartlett Test**

| KMO and Bartlett Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Test for Sampling Adequacy | | .936 |
| Bartltett's Sphericity Test | $X^2$ | 13504.111 |
| | df | 561 |
| | significance | .000 |

**Figure1**

Rotated Component Matrix(a)

| | component | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | .124 | .735 | .097 | .103 | .228 | .040 | .014 | .049 |
| 2 | -.072 | .621 | .232 | .188 | .426 | .137 | -.028 | .108 |
| 3 | -.041 | .813 | .150 | .094 | .199 | .184 | .081 | .015 |
| 4 | .018 | .812 | .016 | .101 | .178 | .193 | -.044 | .007 |
| 5 | .005 | .796 | .077 | .161 | .229 | .196 | -.022 | .026 |
| 6 | .058 | .196 | .003 | .208 | .712 | .164 | .095 | .032 |
| 7 | -.172 | .337 | .245 | .142 | .620 | .181 | .091 | .076 |
| 8 | .018 | .239 | .112 | .129 | .820 | .065 | -.096 | .022 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 9 | .002 | .399 | .124 | .156 | .721 | .223 | .000 | .038 |
| 10 | -.201 | .446 | .190 | .179 | .601 | .255 | -.015 | .134 |
| 11 | .074 | .266 | .092 | .211 | .200 | .779 | .052 | -.009 |
| 12 | .063 | .277 | .192 | .259 | .249 | .746 | .029 | .032 |
| 13 | -.105 | .326 | .297 | .222 | .259 | .678 | -.015 | .085 |
| 14 | .117 | .156 | .371 | .486 | .182 | .523 | -.025 | -.024 |
| 15 | .134 | .216 | .272 | .730 | .183 | .234 | .048 | -.032 |
| 16 | .171 | .118 | .194 | .795 | .229 | .163 | .104 | .041 |
| 17 | .172 | .198 | .257 | .807 | .152 | .132 | .105 | .033 |
| 18 | .210 | .147 | .246 | .703 | .186 | .204 | .023 | -.059 |
| 19 | .784 | -.032 | .137 | .224 | -.010 | .063 | .047 | -.297 |
| 20 | .748 | -.036 | .198 | .238 | -.039 | .070 | .049 | -.348 |
| 21 | .706 | -.005 | .156 | .267 | -.065 | .025 | .155 | -.289 |
| 22 | -.103 | .115 | -.055 | .023 | .132 | .055 | -.035 | .861 |
| 23 | .885 | .047 | .109 | .020 | .037 | -.030 | .057 | .080 |
| 24 | .851 | .018 | .103 | .062 | -.031 | -.034 | .158 | .128 |
| 25 | .832 | -.041 | .057 | .096 | -.050 | -.068 | .074 | .181 |
| 26 | .695 | .086 | .328 | -.067 | -.002 | .173 | -.055 | -.055 |
| 27 | .577 | -.030 | .241 | .144 | .011 | .008 | .670 | .003 |
| 28 | .582 | .033 | .263 | .153 | .033 | .012 | .647 | -.057 |
| 29 | .643 | -.013 | .302 | .119 | -.011 | .069 | .551 | -.086 |
| 30 | .384 | .039 | .562 | .096 | .111 | .167 | .303 | -.148 |
| 31 | .288 | .136 | .766 | .239 | .117 | .140 | .144 | -.050 |
| 32 | .223 | .119 | .816 | .250 | .128 | .129 | .122 | -.057 |
| 33 | .229 | .166 | .804 | .225 | .130 | .123 | .060 | -.001 |
| 34 | .246 | .141 | .749 | .316 | .121 | .143 | .026 | .049 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table 3 shows the Pearson correlation coefficients of each dimension. (Pearson's correlation coefficient represents the correlation between each dimension. Its value is always between -1 ~ +1. Close to 1 or equal to 1 shows a positive the higher correlation, -1 shows a negative and 0 shows no correlation.) Basically, the coefficients shows that almost all dimensions correlated with each other, except the dimension of independent-construal and dimension of interdependent-construal have low correlations to the dimension of ESP learning content program contribution.

**Table3**

| | | INDC | INTC | LAC | LRC | LCU | LCPC | LCP | PLV |
|---|---|---|---|---|---|---|---|---|---|
| INDC | Pearson significant | 1 | | | | | | | |
| INTC | Pearson Significant | 1.000 ** | 1 | | | | | | |
| LAC | Pearson Significant | .591 ** | .591 ** | 1 | | | | | |
| LRC | Pearson Significant | .444 ** | .444 ** | .649 ** | 1 | | | | |
| LCU | Pearson Significant | .137 ** | .137 ** | .247 ** | .391 ** | 1 | | | |
| LCPC | Pearson Significant | .060 .186 | .060 .186 | .115 * | .292 ** | .622 ** | 1 | | |
| LCP | Pearson Significant | .111 * | .111 * | .259 ** | .438 ** | .578 ** | .702 ** | 1 | |
| PLV | Pearson Significant | .372 ** | .372 ** | .551 ** | .620 ** | .414 ** | .416 ** | .611 ** | 1 |

## 4-4    Hypothesis testing

We use symbol the "*" to represent the degree of significance of the hypothesis. (The number of symbols "*" represent the degree of significance. Three "*" on behalf of the hypothesis is very significant and tenable.) The figure of the results of the research model shows that H1a, H1c, H3b, H5, H6 do not hold water because theirs values are not significant, indicating that the results is not tenable. To summarize the above date, the questionnaire we proposed has high reliability and validity.

22

Self-construal

Social media community

Personal & Attribute

Independent- Construal

Interdependen t- Construal

Learning Active

Learners' Reciprocal Communicati

0.02

***

***

0.85

***

***

***

0.021

***

***

***

***

ESP Learns' Learning

Learner Community Usage

ESP Learning Content Program

ESP Learners' Community Participation

Individual

0.007

0.045

***

Personal Cognition

Perceived Learner value
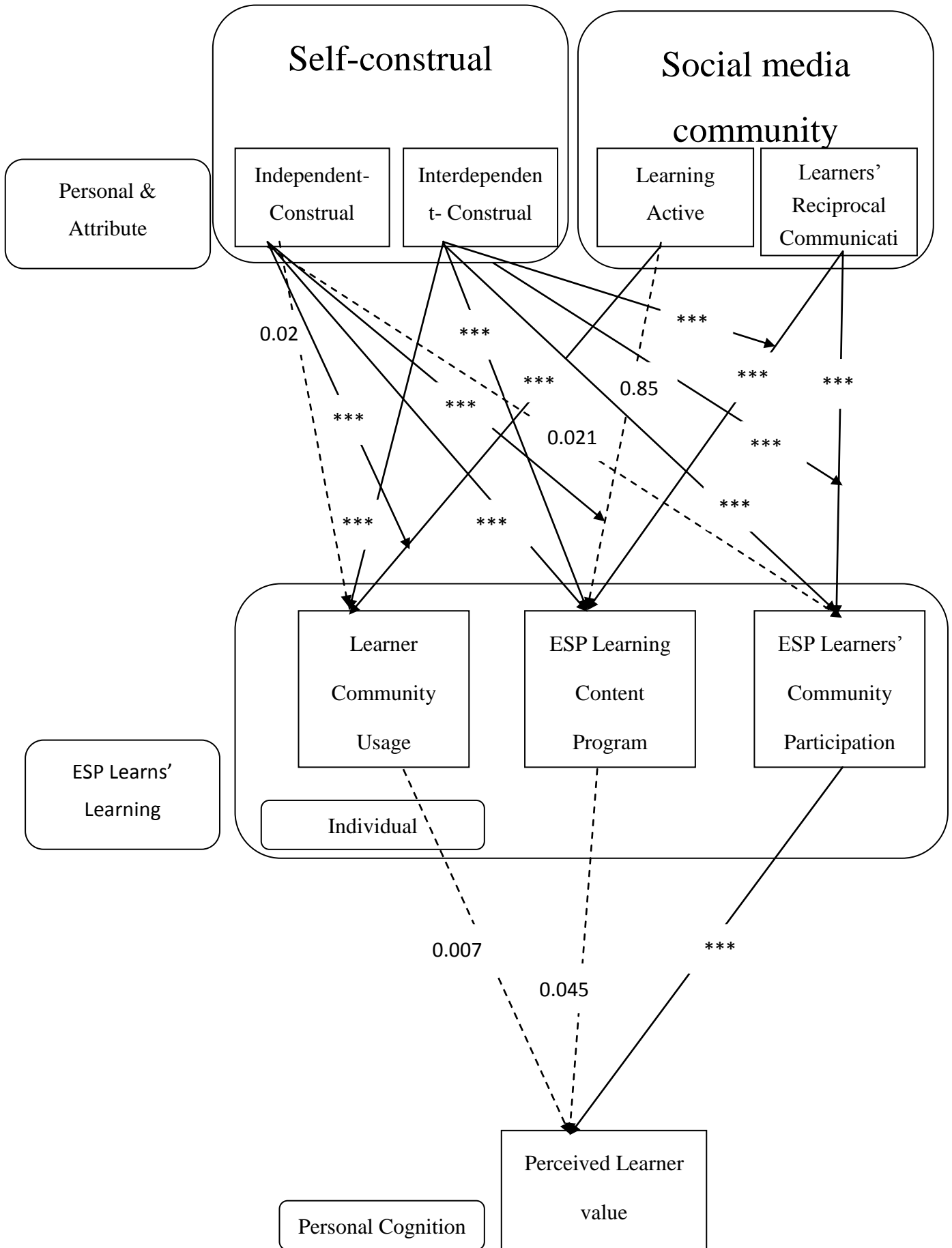
23

Results of Research Model

Table 4 is the figure of path analysis. From Table 4, we can see that the results of H8a, H8b, H9a, and H9b are significant. Their P-values (The significance should be less than 0.01, 0.05, or 0.001: the closer the value is to 0, the more significant the result is.) shows that these hypotheses are correct. The two dimensions of Independent-construal and Learning Active Control are both related to Learner Community Usage and ESP Learning content program contribution. And the two dimensions of Interdependent-construal and Learners' Reciprocal Communication are both related to ESP content program contribution and Learner Community usage. Thus, these two hypotheses are all tenable.

**Table 4**

Results of H8 and H9.

| Path | Coefficient | p-value | Hypothesis | Support |
|---|---|---|---|---|
| Independent-construal" Learning Active Control→Learner Community Usage | 0.24 | 0.000 | H8a | yes |
| Independent-construal" Learning Active Control→ESP Learning content Program Contribution | 0.13 | 0.003 | H8b | yes |
| Interdependent-construal" Learners' Reciprocal Communication→ESP Learning content Program Contribution | 0.24 | 0.000 | H9a | yes |
| Interdependent-construal" Learners' Reciprocal Communication→ESP Learners' Community Participation | 0.36 | 0.000 | H9b | yes |
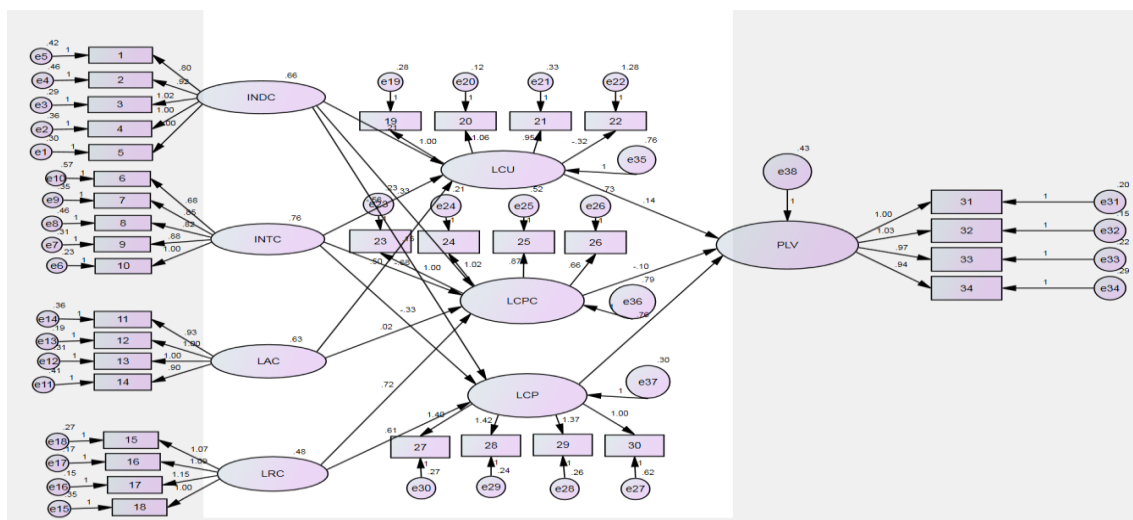


# Chapter V Conclusion and Suggestion

## 5-1    Discussion

We refer to all three ESP learning dimensions as individual participation. The results of these statistics demonstrate that most of our hypotheses are correct. First, the extension (B) of Hypothesis 1: Independent-construal learning has a positive correlation with ESP learning content program contribution. People who are independent-construal may look for opportunities to express their personality and thoughts. Therefore they actively contribute to social media to gain self-affirmation and increase their personal influence.

Second, the results of Hypothesis 2 demonstrate that independent-construal has positive correlation with three extensions of individual participation. That is in accordance with the result of previous studies that show independent-construal and interdependent-construal can generate different motivations for a person to produce similar behavior (Seo and Scammon, 2014; Hong and Chang, 2015; Wang et al., 2015). Learners believe that using social media as a platform allows them to meet others. Students who are interdependent-construal will use responding, uploading videos and sharing information to gain social recognition (Chang, 2015; Hopp et al., 2015). Hence we can see that interdependent-construal is positively correlated with learners' community usage, ESP learning content program contribution and ESP learners' community participation.

Third, the extension (A) of Hypothesis 3 and Hypothesis 4: Learners' reciprocal communication is positively associated with individual participation and learners' reciprocal communication is positively related to ESP learning content program contribution and ESP learners' community participation. Because younger generations are usually seeking a sense of belonging and finding their real self on the internet, the convenience and optionality of social media can provide students a superior platform to learn what they want (Dholakia et al., 2004).

Fourth, Hypothesis 7: ESP learners' community participation has a positive correlation with perceived learner value. From the statistical results, perceived learner value is only positively correlated with ESP learners' community participation positively. The rest are not relevant. The reason may be that when teachers require students to use social media to learn, the degree of participation increases. Nevertheless, due to the unfamiliarity of maritime English and inappropriateness of using social media for maritime English learning, the results of the questionnaire produced divergent results.

Finally, from the results of table 4 for Hypothesis 8 and 9, we found that self-construal has moderate effects between social media community interactivity and individual participation. Specifically, learning active control was discovered to exert a stronger influence on ESP learning content program contribution when independent-construal is higher. Learners' reciprocal communication was found to have a stronger effect on

community participation when interdependent-construal is higher. The discovery proves the premise of Triadic reciprocal determinism, and explains the interaction effect of subject and environment on behavior (Bandura, 1986; Bandura and Jourden, 1991)

However, not all hypotheses are tenable. There are two hypotheses and three extensions of hypotheses do not hold. First are extensions (A) and (C) of Hypothesis 1, independent-construal learners having positive correlation with community usage and independent-construal ESP learners' having positive correlation with community participation. The reason why these two are not tenable can be discussed from a psychological point of view. Unlike Western countries, people in Asian countries are more conservative and introverted (Lebra, 1992; Markus & Kitayama, 1991; Oerter & Oreter, 1995). People in Western countries are more open-minded and they will actively express themselves and communicate with others. In Taiwan, students seldom answer questions actively when teachers are asking them. Interaction in class with teachers is also less. The reason why (A) of Hypothesis 1 isn't tenable may be that students are afraid of asking unreasonable questions or giving wrong answers. These concerns often lead to students not speaking in groups. The reason why (C) of Hypothesis 1 isn't tenable may be that Taiwanese students are still unfamiliar about learning by using social media, because social media is generally regarded as a platform for social interaction and scarcely for learning purposes.

Second is the extension (B) of Hypothesis 3, learning active control having a positive correlation with ESP learning content program contribution. From this, learners can choose what they want to learn in social media communities. However, from the result of statistics, learners do not contribute much in social media communities in ESP programs for maritime English. This also reflected from extension C of Hypothesis 1. Taiwanese learners don't take initiative participating and seldom speak in groups because of being afraid of answering wrong answers or conflicting with others' viewpoints. They always take into account others' thoughts but ignore their own (Lu, 2009).

Final are Hypothesis 5 and 6, learner community usage having a positive correlation with perceived learner value and ESP learning content program contribution having positive correlation with perceived learner value. This paper uses maritime English as its ESP content. However, according to Cole, Pritchard and Trenkner, many students think that using CLT method for the ESP of maritime English will have a better impact. Because of the occasion of maritime English, students need to discuss issues with teachers face to face. Hence, students may think that using social media to learn maritime English is inappropriate. Questions 19-22 of our questionnaire reflect the results of Hypothesis 5 that students rarely use social media to learn maritime English. And Questions 23-26 reflect the results that more than half of the students don't normally write articles or search information about maritime English of ESP. Although these two hypotheses don't hold, questions 27-30 reflect

the results of Hypothesis 7 that students are mostly willing to use social media for academic discussion.

## 5-2    Recommendation

Because this paper is focused on maritime English as its ESP content, some results may be different from other related literature. ESP is not only limited to the category of maritime English. There are still other kinds of ESP such as business English, technical English, scientific English, English for medical professionals, English for waiters and aviation English waiting for discussion. Moreover, the scope of our study is limited to students in Taiwan. Hence the cultural differences between East and West may influence the results of our study. We hope future study can integrate students of Western countries into subjects to increase the diversity of the data. This will make it easier to understand whether utilizing social media to engage students in an ESP learning program is beneficial or not. Nowadays, with the rapid development of science and technology, social media is becoming more and more popular and shortens the distance between people. People can use it anytime, anywhere to contact others and gain new information. The trend towards the use of social media in teaching has been unavoidable. However, will using social media for teaching improve the quality of learning? This issue should be consistently observed and discussed in the future.

# References

Aaker, J. L., & Lee, A. Y. (2001). "I" seek pleasures and "we" avoid pains: the role of self-regulatory goals in information processing and persuasion. *Journal of consumer Research*, 28(1), 33e49.

Agrawal, N., & Maheswaran, D. (2005). The effects of self-construal and commitmenton persuasion. *Journal of Consumer Research*, 31(4), 841e849.

Agrawal, Nidhi and Durairaj Maheswaran (2005a), "The Effects of Self-Construal and Commitment on Persuasion," *Journal of Consumer Research,* 31 (March), 841–49

Alessi, S. M., & Trollip, S. R. (2001). Multimedia for Learning: Methods and Development (3rd ed.). *Massachusetts: Allyn & Bacon.*

Ariel, Y., & Avidar, R. (2015). Information, interactivity, and social media. *Atlantic Journal of Communication*, 23(1), 19e30.

Ariely, D. (2000), "Controlling the information flow: Effects on consumers' decision making and preferences", *Journal of Consumer Research*, Vol. 27, No. 2, pp. 233-248.

Bandura, A. (1978). The self system in reciprocal determinism. *American Psychologist*,33(4), 344e358.

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. Journal of *Social and Clinical Psychology*, 4(3), 359e373.

Bandura, A. (2001). Social cognitive theory: an agentic perspective. *Annual Review of Psychology*, 52(1), 1e26.

Bandura, A., & Jourden, F. J. (1991). Self-regulatory mechanisms governing the impact of social comparison on complex decision making. *Journal of Personality and Social Psychology*, 60(6), 941e951.

Bonwell, Charles C. and James A. Eison. 1991. Active Learning: Creating Excitement in the Classroom. ASHE-ERIC Higher Education Report No. 1. *Washington, DC: George Washington University*.

Carla Meskill., Natasha Anthony.(2014).    Managing synchronous polyfocality in new media/new learning: Online language educators' instructional strategies.    System Volume 42, February 2014, Pages 177-188.

Chang, C. (2015). Self-construal and Facebook activities: exploring differences in social interaction orientation. *Computers in Human Behavior*, 53, 91e101.

Chang, M. M., & Lehman, J. D. (2002). Learning foreign language through an interactive multimedia program: An experimental study on the effects of the relevance component of the ARCS model. *CALICO Journal*, 20(1), 81 – 98.

Chanier,T.(1996)Learning a second language for specific purpose within a hypermedia framework. *Computer Assisted Language Learning*, 9(1), 3-43.

Chung, J. (1991). Collaborative learning strategies: The design of instructional environments for the emerging new school. *Educational Technology*, 31(12), 15 – 22.

Clive Cole*, Boris Pritchard**&Peter Trenkner***. (2007).    Maritime English instruction-ensuring instructors' competence. *Ibérica, núm*. 14, 2007, pp. 123-147. community participation in Wikipedia", I*nformation & Management*, Vol. 52, No. 3, pp. 275-286.

Cross, S. E., Hardin, E. E., & Gercek-Swing, B. (2010). The what, how, why, and whereof self-construal. *Personality and Social Psychology Review*, 15(No 2), 142e179

Cui, N., Wang, T., & Xu, S. (2010). The influence of social presence on consumers' perceptions of the interactivity of websites. *Journal of Interactive Advertising*,11(1), 36e49.

De Wever, B., Schellens, T., Valcke, M., & Van Keer, H. (2006). Content analysis schemes to analyze transcripts of online asynchronous discussion groups: A review. *Computers and Education*, 46(1), 6–28.

Dewey, J. (1938). Experience and education. *New York: Collier Books*.
Dholakia, U. M., Bagozzi, R. P., and Pearo, L. K. (2004), "A social influence model of consumer customer environments to promote two types of customer contributions", *Organization Science*,Vol. 21, No. 2, pp. 554-572.

Dlaska A. (2002) Sites of construction: language learning, multimedia, and the international

engineer. *Computer and Education* **39**, 129–143.

Duncan, T. and Moriarty, S. E. (1998), "A communication-based marketing model for managing relationships", *Journal of marketing*, Vol. 62, No. 2, pp. 1-13.

Fink, L. Dee. 2003. Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses. *San Francisco: Jossey-Bass.*

Guthrie L. F., & Richardson, S. (1995). Turned on to language arts: Computer literacy in primary grades. *Educational Leadership*, 53(2), 14 – 17.

Hoffman, D. L., & Novak, T. P. (1996). Marketing in hypermedia computer-mediated environments: conceptual foundations. *Journal of Marketing*, 60(3), 50e68.

Hong, J., & Chang, H. H. (2015). "I" follow My Heart and "We" rely on reasons: the impact of self-construal on reliance on feelings versus reasons in decision making. *Journal of Consumer Research*, 41(6), 1392e1411.

Hopp, T., Barker, V., & Schmitz Weiss, A. (2015). Interdependent self-construal, selfefficacy,and community involvement as Predictors of perceived knowledge gain among

MMORPG players. *Cyberpsychology, Behavior, and Social Networking*,18(8), 468e473.

Hopp, T., Barker, V., & Schmitz Weiss, A. (2015). Interdependent self-construal, selfefficacy,and community involvement as Predictors of perceived knowledge gain among MMORPG players. *Cyberpsychology, Behavior, and Social Networking*,18(8), 468e473.

Huang, E. (2012). Online experiences and virtual goods purchase intention. *Internet Research*, 22(3), 252e274.

Jahn, B. and Kunz, W. (2012), "How to transform consumers into fans of your brand", *Journal of Service Management*, Vol. 23, No. 3, pp. 344-361.

Jensen, M. L., Dunbar, N. E., Connelly, M. S., Taylor, W. D., Hughes, M., Adame, B.,et al. (2014). Organizational balancing of website interactivity and control: an examination of ideological groups and the duality of goals. *Computers in Human Behavior*, 38, 43e54. Jiang, Z., Chan, J., Tan, B. C., & Chua, W. S. (2010). Effects of interactivity on website involvement and purchase intention. *Journal of the Association for Information Systems*,

11(1), 34e59.

Kang, I. (1998). The use of computer-mediated communication: Electronic collaboration and interactivity. In C. J. Bonk, & K. S. King (Eds.), Electronic collaborators: Learner centered technologies for literacy, apprenticeship, and discourse (pp. 315–337). *Mahwah, NJ: Erlbaum.*

Kevin D. Dougherty1 and Brita Andercheck1. (2014). Using Facebook to Engage Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. Business Horizons, 54(3), 241e251.

Kwon, E., & Mattila, A. S. (2015). The effect of self-brand connection and selfconstrualon brand lovers' word of mouth (WOM). *Cornell Hospitality Quarterly*,56(4), 427e435.

Kwon, E., & Mattila, A. S. (2015). The effect of self-brand connection and selfconstrualon brand lovers' word of mouth (WOM). *Cornell Hospitality Quarterly*,56(4), 427e435.

Lebra, T.S. (1992). *Culture, self, and communication.* Ann Arbor: University on Michigan Press.
Lee, S. H., & Workman, J. E. (2015). Determinants of brand loyalty: self-construal, self-expressive brands, and brand attachment. *International Journal of Fashion. Design, Technology and Education*, 8(1), 12e20.

Lin C.C. & Hsu H.C. (2001) EFL students' perceptions of web-based reading-writing activities. *Proceedings of the 10th International Symposium on English Teaching*, 525–533. The Crane, Taipei.

Liou H.C. & Yang C.Y. (2002) Building a virtual community MOO for pre-service English teachers. *Proceedings of the 19th International Conference on English Teaching and Learning in the Republic of China*, 337–349. The Crane, Taipei.

Liou H.C. (2001) Computers, classroom culture, and the social contexts: A study of integrating CALL into college EFL curriculum. Paper presented at CALICO 2001, *University of Central Florida*, Orlando, FL, 13–17 March. Available at: http://www.calico.org (accessed 20 May 2001).

Liou, H. C. (1997). The impact of WWW texts on EFL learning. *Computer Assisted*

*Language Learning*, 10(5), 455 – 478.

Liu, J., & Rau, P. L. P. (2014). Impact of self-construal on choice of enterprise social media for knowledge sharing. *Social Behavior and Personality: An International Journal*, 42(7), 1077e1089.

Lonergan,J.,1984.Videoinlanguageteaching.CambridgeUniversityPress,Cambridge,UK. Long, K., & Zhang, X. (2014). The role of self-construal in predicting selfpresentationalmotives for online social network use in the UK and Japan. *Cyberpsychology, Behavior, and Social Networking*, 17(7), 454e459.

Lu. (2009). A Study of extroversion and Facebook use motives and behaviors. Retrieved form National Chengchi University.　Web site: https://nccur.lib.nccu.edu.tw/bitstream/140.119/60157/1/200901.pdf

Markus, H. R., & Kitayama, S. (1991). Culture and the self: implications for cognition,emotion, and motivation. *Psychological Review*, 98(2), 224e253.

Maslow, A. H. (1970). *The whole world guide to language learning . Yarmouth, ME:Intercultural Press.*

Mei-Mei Chang. (2002).　Learning Foreign Language through an Interactive Multimedia Program: An Experimental Study on the Effects of the ARCS Model.　*CALICO journal.* 20(1), p-p 81-98.

Mei-Mei Chang. (2005).　Applying Self-Regulated Learning Strategies in a Web-Based Instruction-An Investigation of Motivation Perception.　Article in Computer Assisted Language Learning. DOI:10.1080/09588220500178939.　*Computer Assisted Language Learning* Vo1. 18, No 3, July 2005, pp. 217-230.

Mei-Mei Chang. (2005). Applying Self-Regulated Learning Strategies in a Web-Based Instruction—An Investigation of motivation Perception. *Article in Computer Assisted Language Learning*. Computer Assisted Language Learning vol. 18, No. 3, July 2005, pp. 217 – 230.

Mei-Mei Chang. (2007).　Enhancing Web-based language learning through self-monitoring.　A*rticle in Journal of Computer Assisted Learning*. DOI:10.111/j.1365-2729.2006.00203.x

Mei-Mei Chang. (2013).　A study of enhanced structured web-based discussion in a

foreign language learning class.   *Article in Computers & Education*.
DOI:10.1016/j.compedu.2012.09.12.   *Computers & Education* 61(2013)232-241.

Mei-Mei Chang. (2013). A study of enhanced structured web-based discussion in a foreign
language learning class. *Article Computers & Education.* Computers & Education 61 (2013)
232–241

Mei-Mei Chang. (2014).   The effect of reflective learning e-journals on reading
comprehension and communication in language learning.   *Article in Computers &
Education.*   DOI:10.1016/j.compedu.2013.09.023.   *Computers & Education*
71(2014)124-132.

Mei-Mei Chang. (2014). The effect of reflective learning-journals on reading
comprehension and communication in language learning. *Article in Computers & Education*.
Computers & Education 71 (2014) 124–132

Meskill, C., Anthony, N.,(2005). Foreign language learning with CMC: Forms of online
instructional discourse in a hybrid Russian class. System 33 (1), 89-105.

Meskill, C., Anthony, N.,(2007).Form-focused communicative practice via computer
mediated communication: What language learners say. *Computer Assisted Language
Instruction Consortium Journal* 25 (1), 69-90.

Meskill, C., Anthony, N.,(2010). Teaching languages online. *Multilingual Matters, Bristol*.
1068-1086.

Meskill, C.,(2010). Moment by moment formative assessment of English language learner
development. In: Adrande, H., Civek, G. (Eds.), *Handbook of formative assessment.
Routeledge*, New York. 198-211.

Meyers, Chet and Thomas B. Jones. 1993. Promoting Active Learning: Strategies for the
College Classroom. *San Francisco: Jossey-Bass.*

Mohan,B.,1986.LanguageandContent.AddisonWesley,Reading,MA. Learners in a Large
Introductory Course. *American Sociological Association*. Teaching Sociology 2014, Vol.
42(2) 95-104.

Nambisan, S. and Baron, R. A. (2009), "Virtual customer environments: testing a model of

Nambisan, S., and Baron, R. A. (2010), "Different roles, different strokes: Organizing virtual

Oerter, R., & Oerter, R. (1995). Zur Konzeption der autonomen identitaet in oetlichen und westlichen Kulturen: Ergebnisse von kulturvergleichenden Untersuchungen zum Menschenbild junger Erwachsener [The concept of autonomous identity in eastern and western culture: Results of cross-cultural researches about the differences in the image of man of young adults]. In Trommsdorff, G. (Hrsg.), Kindheit und Jugend in verschiedenen Kulturen (S.153-173). Weinheim & Muechen: Juventa.

Oliver, R. (2000). When Teaching meets Learning: Design Principles and Strategies for Web-based Learning Environments that Support Knowledge Construction. *In Proceedings of ASCILITE 2000 conference, Coff's Harbour, Australia*, 17–28.

Ouschan, R., Sweeney, J., and Johnson, L. (2006), "Customer empowerment and relationship outcomes in healthcare consultations", *European Journal of Marketing*, Vol. 40, No. 9/10, pp. participation in network-and small-group-based virtual communities", *International journal of research in marketing*, Vol. 21, No. 3, pp.241-263.

Pena-Shaff, J. B., & Nicholls, C. (2004). Analyzing student interactions and meaning construction in computer bulletin board discussions. *Computers & Education*, 42(3), 243–265.

Pintrich, Paul R. and Elisabeth V. De Groot. 1990. "Motivational and Self-Regulated Learning Components of Classroom Academic Performance." *Journal of Educational Psychology* 82(1):33–40.

Rice, R. E. (1989). Issues and concepts in research on computer-mediated communication systems. In J. Anderson (Ed.), Communication Yearbook, 12 (pp. 436–476). *Beverly Hills, CA: Sage Publications*.

Scardamalia, M., & Bereiter, C. (1991). Higher levels of agency for children in knowledge-building:A challenge for the design of new knowledge media. *The Journal of Learning Science*, 1(1), 37 –68.

Shih, H. P., & Huang, E. (2014). Influences of Web interactivity and social identity and bonds on the quality of online discussion in a virtual community. *Information Systems Frontiers*, 16(4), 627e641.

Singelis, T. M. (1994). The measurement of independent and interdependent selfconstruals.*Personality and Social Psychology Bulletin*, 20(5), 580e591.

Singelis, T. M. (1994). The measurement of independent and interdependent selfconstruals. *Personality and Social Psychology Bulletin*, 20(5), 580e591

Singelis, T. M., & Sharkey, W. F. (1995). Culture, self-construal, and embarrassability.Journal of Cross-Cultural Psychology, 26(6), 622e644.

Smith, B., & Sauro, S. (2009). *Interruptions in chat. Computer Assisted Language Learning*, 22(3), 229–246.

Smith, B., & Sauro, S. (2009). Interruptions in chat. *Computer Assisted Language Learning, 22*(3), 229-247.

Sun Y.C. (2003) Extensive reading online: an overview and evaluation. *Journal of Computer Assisted Learning* **19**,438–446.

Tan. (2015). English e-learning in the virtual classroom and the factors that influence ESL (English as a Second Language): Taiwanese citizens' acceptance and use of the Modular Object- Oriented Dynamic Learning Environment. *Social Science Information.* 0.1177/0539018414566670

Van Aacken, S. (1999). What motivates L2 learners in acquisition of Kanji using CALL: A case study. *Computer Assisted Language Learning*, 12(2), 113 – 136.

Wang, C. C., Yang, Y. Y. H., & Wang, P. (2014). Sharing word-of-mouths or not: the difference between independent and interdependent self-construal. In PACIS 2014 proceedings (pp. 56e67). *AIS Electronic Library*.

Wang, Qiyun, Huay Lit Woo, Choon Lang Quek, Yuqin Yang, and Mei Liu. 2012. "Using the Facebook Group as a Learning Management System: An Exploratory Study." *British Journal of Educational Technology* 43(3):428–38.

Wang, Y., Ma, S. S., & Li, D. (2015). Customer participation in virtual brand communities: the self-construal perspective. *Information & Management*, 52(5),577e587.

Watts M. & Lloyd C. (2001) Evaluating a classroom multimedia programme in the teaching of literacy. *Educational Research and Evaluation* 7, 35–52.

Watts, M., & Lloyd, C. (2001). Evaluating a classroom multimedia programme in the teaching of, literacy. *Educational Research and Evaluation*, 7(1), 35 – 52.

Wright, Eric R. and Anthony H. Lawson. 2005. "Computer Mediated Communication and Student Learning in Large Introductory Sociology Classes." *Teaching Sociology* 33(2):122–35.

Wu, J. J. and Chang, Y. S. (2005), "Towards understanding members' interactivity, trust, and flow in online travel community", *Industrial Management & Data Systems*, Vol., 105, No. 7, pp.937-954.

Xu, B. and Li, D. (2015), "An empirical study of the motivations for content contribution and Yang, Y. & Coffey, A. J. (2014), "Audience Valuation in the New Media Era: Interactivity, voluntary participation in value co-creation activities", *Journal of product innovation management*,Vol. 26, No. 4, pp. 388-406.

OnlineEngagement, and Electronic Word-of-Mouth Value", *International Journal on Media Management*, Vol. 16, No. 2, pp. 77-103.

Yang, Z., Wang, J., & Mourali, M. (2015). Effect of peer influence on unauthorized music downloading and sharing: the moderating role of self-construal. *Journal of Business Research*, 68(3), 516e525.

Yang., & Chen. (2006). Technology-enhanced language learning: A case study. *Computers in Human Behavior*. 23 (2007) 860–879.

Yong Seo, J., & Scammon, D. L. (2014). Does feeling holier than others predict good deeds? Self-construal, self-enhancement and helping behavior. *Journal of Consumer Marketing,* 31(6/7), 441e451.

Yong Seo, J., and L. Scammon, D. (2014), "Does feeling holier than others predict good deeds? Self-construal, self-enhancement and helping behavior", *Journal of Consumer Marketing*, Vol. 31,No. 6/7, pp. 441-451.

Zhao, L., & Lu, Y. (2012). Enhancing perceived interactivity through network externalities:an empirical study on micro-blogging service satisfaction and continuance intention. *Decision Support Systems*, 53(4), 825e834.

# Questionnaire(Appendix I)

Independent-Construal

INDC1: I take the initiative to voice my opinions when the group is discussing.

INDC2: Self- identity with others, who approve me, is very important to me.

INDC3: I have own ideas and suggestions about ESP learning: I know what I like and I know what I don't like in the learning activities.

INDC4: I enjoy for my learning unique qualities.

INDC5: I can use my advantages to help my ESP learning group.

Interdependent-Construal

INTC1: My happiness comes from the happiness of those in my group.

INTC2: In my group, I watch my words so I won't offend anyone.

INTC3: I would sacrifice my leisure time for the benefit of my group.

INTC4: I would like to enrich myself for our group.

INTC5: I would like to listen to other's suggestions during the discussion.


      Learning Active control

LAC1: Using social media to learn ESP makes me be aware of where I am while I can learn it.

LAC2: Using social media to learn ESP offers me to control over what I want to learn.

LAC3: Using social media to learn ESP allows me to choose freely what I want to learn and whom I want to talk to.

LAC4: Using social media to learn ESP give me greater control over learning activities.


      Learners' Reciprocal communication

LRC1: Using social media to learn ESP facilitates two-way communication.

LRC2: Using social media to learn ESP makes me feel like I want to listen to our learning members.

LRC3: Using social media to learn ESP enables us to conversation among our members effectively.

LRC4: I will encourage my friends to use social media to learn ESP English.


      Learner Community Usage

LCU1: I frequently use social media to learn ESP programs.

LCU2: I often use social media to learn ESP.

LCU3: I regularly use social media to practice ESP.

LCU4: I rarely use social media to learn ESP.


      ESP Learning Content Program Contribution

LCPC1: I often add something about ESP new videos and comments content on social media.

LCPC2: I often edit something about ESP videos and comments content on social media.

LCPC3: I often write something about ESP articles and edit comments on social media.

LCPC4: I often search the information about ESP on social media.


      ESP Learners' Community Participation

LCP1: I help to answer other ESP learners with their questions.

LCP2: I participate in discussions about community issues in using social media to learn ESP.

LCP3: I actively participate in activities organized by how to use social media to learn ESP.

LCP4: I would like to attend relevant of using social media to learn ESP.

Perceived ESP Learner Value

PLV1: Using social media to learn ESP is a joyful experience.

PLV2: The value of learning experience using social media to learn ESP is great.

PLV3: Using social media to learn ESP can help me use my professional ability wisely, it saves my money and time.

PLV4: Using social media increases my learning performance in my ESP learning.

獨立構念

1. 我會在團體討論的過程中主動發表自己的意見。
2. 自我和他人對我的認可對我而言都非常重要。
3. 我對大部分的事情都有一些想法和建議，而我也知道我喜歡甚麼和不喜歡什麼。
4. 我欣賞我自己獨有的特質。
5. 我可以用我自己的優點來幫助自己的組別。

互依構念

6. 我的快樂來自於其他組員的快樂。
7. 在我的組別裡，我會注意我的用詞，不冒犯到任何人。
8. 我願意為了團體的利益，犧牲自己空閒的時間。
9. 我願意為了團體充實自己。
10. 我願意在討論當中傾聽別人的意見。

學習主動控制

11. 當我在使用社群網站學習專業英文課程時我會察覺到不論我在哪都可以學習。
12. 使用社群網站學習專業課程提供我掌控我想學專業課程的知識。
13. 社群網站學習專業課程允許我自由地選擇我想學的東西。
14. 使用社群網站來學習專業英文課程，讓我更容易掌握學習的活動。

## 學習者的相互溝通

15. 使用社群網站學習專業英文課程促進雙向溝通。
16. 使用社群網站學習專業英文課程使我想去傾聽組員們的聲音。
17. 使用社群網站學習專業英文課程使我能夠和我的組員溝通。
18. 我會鼓勵我的朋友們使用社群網站來學習專業英文課程。

## 學習者社群使用

19. 我頻繁使用社群網站來學習專業英文課程。
20. 我經常使用社群網站來學習專業英文課程。
21. 我定期使用社群網站來學習專業英文課程。
22. 我很少使用是群網站來學習專業英文課程。

## 專業英文課程學習內容貢獻

23. 我經常在社群網站上添加有關專業課程的新視頻和評論。
24. 我經常在社群網站上編輯有關專業課程的新視頻和評論。
25. 我經常在社群網站上撰寫文章及編輯評論。
26. 我經常在社群網站搜尋有關專業英文課程的資訊。.

## 專業英文課程學習者社群參與

27. 我協助解答專業英文課程學習者所提出的問題。
28. 我參與討論關於使用社群網站學習專業英文課程的相關共同議題。
29. 我積極參與有關如何使用社群網站來學習專業英文課程所組成的活動。
30. 我會想要參與社群網站來學習專業英文課程的相關的網站。

## 感知學習者價值

31. 使用社群網站來學習專業英文課程是很快樂的經驗。
32. 使用社群網站來學習專業英文課程是很棒的學習經驗價值。
33. 使用社群網站來學習專業英文課程可以善用我的專業能力。
34. 利用社群網站提升我在專業英文課程中的學習表現。