

## Comparing Self-Assessment of Day Students and Night Students' Perception on Intercultural Communicative Competence in the Business English Context

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### Abstract

This study aims to examine the perception levels of students in Intercultural Communicative Competence (ICC) and their proficiency level in Business English which is expected to assist in the advancement of both the teacher and the learner. The purposive sampling was selected from participants of 65 day and evening senior students, enrolled in Business English course in 1/2018. The self-assessment which was based on the five dimensions of ICC by Byram was used to conduct the study. The results indicate that students have high levels of language proficiency in listening and speaking and a high level of knowledge and attitudes of ICC skills. The results also show that the evening students have very high levels of ICC perception, and day students are at a moderate level. It is possible that evening students drew on their own work experiences. The findings from the study imply the further development and incorporation of ICC in English for Specific Purposes (ESP) courses.

**Keywords:** Business English, Intercultural Communicative Competence, Perception

### 1. Introduction

In the highly competitive business environment of our globalized world, business people cooperate with clients from different cultures to expand their markets and to exchange products. Therefore, businesspeople have to achieve proficiency in Business English to appropriately negotiate with people from different cultures. From their negotiation, they may encounter a diversity of attitudes, working styles, or the variety of written format, such as business email correspondence, teleconferencing, social networks or the Internet that allowed them to perform successfully on the level of international business, which lead them to meet the barriers of communication.

The efficiency of Business English communication is more concerned with intercultural communication when businesspeople contact other members of the global workforce. Businesspeople may encounter barriers during negotiations in a variety of languages to mix with English, cultural contrasts, different attitudes and beliefs which bring about cultural conflicts, stereotyping, prejudice, racism, and failure to appreciate cultural differences (Avruch, Black & Scimecca, 1991). For these barriers to business communication, intercultural skills are required for training programs in order to acquire proper knowledge of intercultural communication, which may enable them to achieve their business objectives.

Since intercultural communicative competence (ICC) is crucial, the Common European Framework (CEF) has set standard objectives to allow students to become aware of the importance of ICC when dealing with people from other countries (Council of the European Union 2001). Intercultural communication is also considered to be a part of foreign language education. Foreign language teachers enhance intercultural communication in English context to improve intercultural understanding and develop communicative competence among students with people from diverse cultures and effectively and appropriately in the workplace.

The level of ICC awareness can be measured by evaluation during learning a foreign language. Moreover, teacher training program can help the teacher discovers teaching methods to reinforce students' ICC skills. However, at the beginning of this research, none of the previous studies investigated ICC perception in Business English, for example, Wang, Peng & Lu (2006) investigated self-assessments among high school students and their understanding of ICC. Sun & Easton (2008) investigated the ICC of Chinese students. Therefore, this study aimed to examine the perception of Business English students towards ICC and its relationship to the proficiency level of students in Business English.

**Student readiness for online learning: Perception and Reality in Sisaket Rajabhat University**

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**Abstract**

The objectives of his study were to investigate students' readiness in terms of technological and mental aspects for online learning and to discover possible practices for effective online learning. There were three main stages in conducting the study. First, a set of questionnaires on Google Form was used as a survey tool to ask the students in one of the education majors about their readiness to learn online. One hundred and thirty students responded to the survey which presented their Internet access possibilities and their concerns about virtual learning. Second, the sample lessons on Google Classroom were made to make students explore the possibilities of learning online by having actual experiences. Lastly, they were asked to participate in Zoom meetings to voice out their experiences. Their comments via Zooms were recorded and analyzed to see their perceptions towards online learning. The results revealed that they have not had major problems with learning online; however, the normal mode of learning (face-to-face communication in classroom settings) was their preferred method to study in semester 1/2020.

**Keywords:** online learning, survey, perception

**1. Introduction**

Many scholars in the educational field have written about the importance of online learning as part of 21<sup>st</sup> Century education, particularly in the last years of the 20th century and in the first decade of the 21st century. There have been several predictions about the potential of the technology advances and how this mode of learning can greatly enhance capacity to learn without limitation of places, time and devices (Lee et al., 2009). Educators understand that online education enables teachers and students to add flexibility in the instructions so better balance of work and studies can be obtained successfully. However, online learning has been used less than traditional face-to-face communication in the classroom settings since students often see the discourse with the instructor as the better way to build up knowledge Paechter & Maier (2010). For this reason, online learning has been seen as one of the choices in learning until the global pandemic forces teaching switching to online learning in 2020.

With this sudden shift away from the classroom to online learning during a global pandemic, teachers are wondering whether the adoption of online learning will be similar to the pre-pandemic situation in term of quality of instruction, and how such a shift would impact post-pandemic education. Even though the idea of online teaching in Thailand is not new, both teachers and students still have the fear of this sudden shift from face-to-face communication in the class to virtual learning situation. While some believe that the unplanned and rapid move to online learning without proper training from both teachers and learners might result in a poor user experience that is not conducive to sustained growth. It can be argued that there is a way to make online learning meaningful by focusing on fostering learning by observing the actual situation in each class before deciding what to do to foster learning in these difficulties.

The success of e-learning involves a variety of aspects including student's readiness. Key components of e-learning readiness should somehow consider technology, human resources, and culture of learners before deciding to launch any novice innovation (Srichanyachon, 2014). For this reason, the issue of readiness should be taken into consideration before engaging in virtue learning in the near future. Educators need to bear in mind some challenges such as the numbers of computers with internet access and students access to facilities. Then, the frequency of teacher and learners' training that involves using the Internet for education should be integrated at some point before the actual launch of a new medium of instruction. The solution to enhance learning effectiveness in Thai culture might be the combination of technological preparation and mentally readiness for the change. For this reason, this study aims at investigating if students in one of the teaching majors in Rajabhat University are ready to learn online in the upcoming semester or not.

**Students' Attitude towards World Englishes in Language Teaching and Learning:  
A case study of Sakon Nakhon Rajabhat University undergraduate students**

Thidawan Wichanee

**Abstract**

The aims of this paper were 1) to study students' perception of World Englishes and 2) to study students' attitudes toward World Englishes. The research was conducted at Sakon Nakhon Rajabhat University and 50 non-English major students were selected as the sample group and ten of them were individually interviewed after taking a questionnaire, purposive sampling was employed. The results revealed that students hold different perceptions toward World Englishes due to their language experiences and they performed a positive attitude towards World Englishes, language legitimacy was not desirable as past situations in second language teaching and learning in Thailand.

**Keywords:** Student's perception, World Englishes

**1. Introduction**

The ubiquitous spread of English from past to present denotes the power of the main language of the world that people use to communicate among groups. English has also penetrated into Thailand for many reasons such as trade, law, military and education in particular. The Thai government mandates English as additional courses for students in all fields. In 2008, the ministry of Education launched the policy to push English to be a compulsory subject. Hence, Thai education had to adjust its structure to embed English in every program. Nevertheless, English seems to play a great part and Thai students have been studying English for years. Anyhow, students' ability of using English for their lives is still at a low level. Many researchers have studied about the factors that affect students' language acquisition and one of them is attitude. Attitude is viewed as the mental aspects, that affect the students' perception of learning a second language. Since, there are a variety of Englishes being used by English teachers with various nationalities namely; American, British, Australian, Dutch, Vietnamese, Filipino and Thai. Therefore, the researcher would like to investigate Sakon Nakhon Rajabhat University undergraduate students' perception and attitude towards World Englishes in Language Teaching and Learning based on students experiences and preferences.

**2. Objectives**

- 1) To study students' perception of World Englishes.
- 2) To study students' attitude towards World Englishes.

**3. Scope of research**

**3.1 Population and samples**

The population in this study were EFL students in Sakon Nakorn Rajabhat University and the samples were 50 non-English major students enrolling on English courses as a general education course. For the interview section, 10 students from those 50 participants were chosen to be interviewed.

**3.2 Instruments**

Two instruments were used to collect the data.

**3.2.1 A questionnaire**

A questionnaire was used to collect students' attitudes. The questionnaire consisted of 20 items, adapted from Yu (2010). The 3 sections of the questionnaire were, participant overview information, attitude towards World Englishes in Language Teaching and Learning and more opinions, respectively. A Likert five-point rating scale was designed to measure the items.

**3.2.2 Interview**

An interview was conducted after the participants finished with the questionnaire. This approach assists the researcher to qualitatively collect the data from the participants. The interview questions were developed from Baker (2017) to contextualize the participants' stories with the content.

The Use of Gamification to Improve English Consonant Cluster Pronunciation Ability  
of Students at Chiang Mai Rajabhat University

การใช้เกมมิฟิเคชันเพื่อพัฒนาความสามารถในการออกเสียงพยัญชนะควบกล้ำภาษาอังกฤษของนักศึกษา  
มหาวิทยาลัยราชภัฏเชียงใหม่

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### Abstract

The objectives of this study were to compare the students' English consonant cluster pronunciation ability before and after learning through the integration of gamification and to investigate students' opinions on the integration of gamification. The study was a quasi-experimental research study with a one-group pretest-posttest design. The sample group was composed of 40-Thai second-year students of the International Communication program, International College, Chiang Mai Rajabhat University in the second semester of the 2019 academic year. Three research instruments, English consonant clusters pronunciation lessons, a pronunciation pretest, and posttest, and a questionnaire were employed in this study. The data were statistically analyzed for means, standard deviations, and dependent-samples t-tests. The results revealed that the posttest mean was higher than the pretest means with the mean scores of 19.65 and 43.05, respectively. It could be concluded that integrating the gamification approach could significantly enhance the students' pronunciation ability. Furthermore, the students expressed a positive opinion with the highest level of 4.53 on the integration of gamification in their learning process.

**Keywords:** Classcraft, English Marked Consonant Clusters, Gamification

## 1. Introduction

Among the four skills in English language learning, pronunciation is a major concern in learning English (Ketkumbonk, 2015). According to Gilakjani (2016), knowing not only grammar and vocabulary will enable learners to construct the sentences but also the correct pronunciation will enhance them to become more effective communicators. Learners with good English pronunciation are likely to be understood even if they make errors in other areas, whereas learners with bad pronunciation will not be understood, even if their grammar is perfect. Moreover, Gilakjani (2016) stated that if the speakers have an unacceptable pronunciation, their utterances will not be comprehensible to listeners and, as a result, they will not be successful in their communication.

Regarding a second language (L2) pronunciation teaching, it is believed that whenever L2 sounds are similar to those in a first language, native language or mother language (L1), they could be easy to acquire. In contrast, if L2 sounds are quite different from those in L1, the speakers will probably have difficulty acquiring them (Strange & Shafter, 2008; Major, 2008; Zampini, 2008). Likewise, the structure of the English consonant clusters is more complicated than that of the Thai language. Consequently, Thai learners encounter many difficulties in producing English consonant clusters because Thai is not allowed to have complex consonants in the initial and final consonant cluster positions.

In the age of globalization and technological advancement, gamification has been implemented in an educational setting. Still, it plays a major role in the second language classrooms. The gamification concept aims to create student engagement, active learning, and motivation by learning experience in a real-world situation, e.g., language classroom. (Borges, Reis, Durelli & Isotani, 2014). Once their engagement and motivation are increased, it leads to the enhancement of knowledge and skills afterwards (Huang & Soman, 2013). Flores (2015) stated that using gamification in L2 classroom benefits both an instructor and a learner, especially in pronunciation courses. Gamification allows the instructors to persuade learners about the new teaching method. Besides, Valencia (2015) revealed that Tip Top Talk, a gamified application, helps users with a low level of competence to improve L2 in both pronunciation and phoneme discrimination. Moreover, gamification techniques are used in higher education settings to enhance not only learners' learning behaviors but also in critical thinking and teamwork skills.

For teaching pronunciation at Chiang Mai Rajabhat University (CMRU), it is found that the students have been struggling with English pronunciation problems. According to Arunsiro (2017), the students have encountered endless

## Learning strategies in a university Statistics course: Relationship to learning outcome and student characteristics

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### Abstract

The purposes of this study were to describe the prevalence of using learning techniques in a statistics course and to compare students' levels of using learning techniques across gender and academic discipline. This study also examined the relationship between the frequency of using students' learning techniques and learning outcomes. Participants included 182 student-teachers who enrolled in the statistics course for data analysis in an education course. Analysis of variance (ANOVA) and t-tests were used to analyze the difference of using learning techniques as well as multiple regression was used to analyze the relationship of using learning strategies and learning outcomes.

It revealed that student-teacher perceiving the distributed practice strategy was the most useful to learn statistics. The self-explanation and elaborative interrogation were also frequently used for learning statistics. Female student-teachers using distributed practice and highlighting/underlining strategy were significantly higher than those of males. For learning strategies influence, students' using self-explanation and distributed practice strategy positively influenced student teacher's learning outcomes in the statistics course.

**Keywords:** Learning techniques, University Statistics course, Learning outcome

### 1. Introduction

Many learning strategies are utilized by students either in classroom or out of classroom. Students have widely array of learning strategies to learning in the university. Learning skills encompass a variety of techniques that were used flexibly and purposefully by students (Gettinger & Seibert, 2002). They are seeking a comprehensive understanding the effective approaches for their academic learning. Different learning techniques might be used in different subjects. They strive to improve their learning and academic achievement in which answering how to be an effective learner.

One particular way to mentor student becoming an effective learner that could assist them to better understand the prevalence and impact of using learning techniques. It may be necessary to focus on student goal in order to better understanding the using student learning strategies during the university period. The variety of learning technique use were various in student characteristics. Any number of student characteristics could also influence the effectiveness of a given learning technique (Rawson & Dunlosky, 2011). Even though many studies support the benefit of learning strategies reviewed in any class context (Suwanarak, K. 2019; Kafadar, T., & Tay, B. 2014; Bjork, Dunlosky, & Kornell, 2013; Sharma, M. D., Stewart, C., Wilson, R., & Gokalp, M. S., 2013). The little research has been conducted on the Mathematics or Statistics class but no study in Thailand higher education area. For example, Nenthien and Loima (2016) investigated learning of ninth grade students in mathematics classrooms. In this regard, it should be investigated to account the different form of learning techniques across student characteristics and relationship to learning outcome.

### 2. Objectives

The purposes of this study were 1) to describe the prevalence of using learning techniques in Statistics course 2) to compare students' level of using learning techniques across gender and academic discipline, and 3) to examine the relationship between the frequency of using students' learning techniques and learning outcome. This study investigated under the five research questions.

- 1) What learning techniques are students most frequently used?
- 2) What learning techniques are students perceived it most helpful?
- 3) How does the learning strategies use among gender and academic discipline?
- 4) How does the learning strategies influence learning outcome?

The development of the research-based instruction model in the curriculum development  
course for students of the teaching profession

การพัฒนาแบบแผนการเรียนการสอน โดยใช้วิจัยเป็นฐาน วิชา การพัฒนาหลักสูตร สำหรับนักศึกษาวิชาชีพครู

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### Abstract

This R&D research study aimed to develop an instructional model in a curriculum development course by using research-based learning for pre-service teachers. The four steps taken were 1) analyzing, 2) designing and developing, 3) having a trial, and 4) performing an evaluation. The samples of the study were 60 Thai-major students in the 1<sup>st</sup> year from the Faculty of Education, Chaiyaphum Rajabhat University while being enrolled in the second semester of the academic year 2020. They were selected by a multistage random sampling method. The research instruments were: 1) a curriculum development knowledge test, and 2) an ability evaluation test on the performance of curriculum development. The statistics for the data analysis were percentages, means, standard deviations, dependent-samples t-tests, and content analysis.

The results of this research study were as follows:

1. The development of the instructional model named the ALDRE Model was comprised of: 1) Analyze needs for learning, 2) Do learning planning, 3) Develop learning skills, 4) Reflect the knowledge summary, and 5) Evaluate & apply. The result of the efficient criterion was 83.56/81.86
2. The difference between the students' learning outcomes of students' knowledge before and after being taught by this model was statistically significant at the .01 level. The students' learning outcomes after the instruction was higher than that of before the instruction.
3. The students' ability in project work as a whole was at a high level.

**Keywords:** Instructional model, research-based learning, curriculum, curriculum development course

### บทคัดย่อ

การวิจัยและพัฒนา ครั้งนี้มีวัตถุประสงค์เพื่อ 1) พัฒนารูปแบบการเรียนการสอน โดยใช้วิจัยเป็นฐาน วิชา การพัฒนาหลักสูตร สำหรับนักศึกษาวิชาชีพครู 2) ศึกษาประสิทธิผลของรูปแบบการเรียนการสอน มีกระบวนการ พัฒนา 4 ขั้นตอน คือ 1) การวิเคราะห์ 2) การออกแบบและพัฒนา 3) การนำไปใช้ และ 4) การประเมินผล กลุ่มตัวอย่างเป็นนักศึกษาวิชาชีพครูปีที่ 1 สาขาภาษาไทย คณะครุศาสตร์ มหาวิทยาลัยราชภัฏชัยภูมิ ภาคเรียนที่ 2 ปีการศึกษา 2562 ได้มาโดยการสุ่มแบบหลายขั้นตอน (multistage random sampling) จำนวน 60 คน เครื่องมือที่ใช้ในการวิจัย ประกอบด้วย 1) แบบทดสอบวัดความรู้ในการพัฒนาหลักสูตร 2) แบบประเมินความสามารถในการพัฒนาหลักสูตร การวิเคราะห์ข้อมูลด้วยสถิติ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน การทดสอบค่าที (t-test) แบบ dependent และการวิเคราะห์เนื้อหา (content analysis)

ผลการวิจัย พบว่า

1. รูปแบบการเรียนการสอน ALDRE Model ประกอบด้วยกระบวนการขั้นตอนการจัดกิจกรรม 5 ขั้นตอน ดังนี้ คือ 1) วิเคราะห์ความต้องการในการการเรียนรู้ (Analyze learning needs) 2) วางแผนการเรียนรู้ (Learning planning) 3) พัฒนาศักยภาพการเรียนรู้ (Develop learning skill) 4) สะท้อนคิดและสรุปความรู้ (Reflect & knowledge summary) และ 5) ประเมินผลและนำไปประยุกต์ใช้ (Evaluation & apply) รูปแบบการเรียนการสอนที่พัฒนาขึ้นมีประสิทธิภาพ 83.56/81.86
2. ประสิทธิภาพของรูปแบบการเรียนการสอน โดยใช้วิจัยเป็นฐาน พบว่า
  - 2.1 ความรู้ของนักศึกษา ก่อนและหลังการเรียนรู้ตามรูปแบบการเรียนการสอน โดยใช้วิจัยเป็นฐาน วิชา การพัฒนาหลักสูตร สำหรับนักศึกษาวิชาชีพครู หลังเรียนนักศึกษามีผลการเรียนสูงกว่าก่อนเรียน แตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .01
  - 2.2 ความสามารถในการพัฒนาหลักสูตรของนักศึกษาโดยภาพรวมอยู่ในระดับดีมาก โดยในแต่ละขั้นตอนในการพัฒนาหลักสูตร ประกอบด้วย ภาระงาน การนำเสนอและประเมินตนเอง และการปฏิบัติงานตามกระบวนการพัฒนาหลักสูตร ได้ค่าระดับต่ำ จำนวน 7 คน ค่าระดับกลาง จำนวน 24 คน และค่าระดับสูง จำนวน 29 คน

**คำสำคัญ :** รูปแบบการเรียนการสอน การจัดการเรียนรู้โดยใช้การวิจัยเป็นฐาน หลักสูตร วิชาการพัฒนาหลักสูตร

## 6. Results and discussion

From the objective; To study the form of Youtube's music playlist for the Generation Y viewers; the survey of Generation Y samples, 400 people found that the demographic data of the samples were female. Most of the samples graduated with a bachelor degree. Most have an average income of 15,000 - 29,999, have a habit of using YouTube channel by using YouTube every day. Use the YouTube channel to listen to music and watch music programs by listening to music only Admission to music videos and watch cover music events. Creating playlists on YouTube The sample group is YouTube. Create playlists on YouTube, cover type, music / play music Take the time to create a program per 1 video within 1 day. Choose the time period 16.01 - 23.59. There are other ways to distribute your work other than YouTube via Facebook.

From the interviews with the creators of all 5 music programs, it has been shown that making music covers has the advantage of being popular. And easily showing off the potential depending on the composition, shooting, lighting, sound, editing, and the quality of the singer. These channels, which have their own complete guidelines and unique characteristics, will grow faster. Consistent with the results of the sample audience. Generation Y in the matter of the program that has to show musical talent and singing primarily. More than a variety show with talk about music content Most of which are additional searchable content if interested and quite repeatedly but talent shows like cover are always new. For problems that may occur as a result. Is a copyright issue from the original music owner, causing shared interests Another part of YouTube's system Is able to create benefits other than money YouTube has a press tracking system (Subscribe), the creator of the program. In order to make the program creator more famous can result in indirect benefits.

From the objective; To simulation broadcast the music playlist through streaming form; This research was conducted on YouTube, with the results of the study deciding to shoot the program in the form of a cover song. Causing discoveries from the said broadcasting simulate guidelines for creating awareness and creating content that is linked through song names, singers, and new covers. Based on professional filming that has a lot of interest to viewers. Because viewers will always feel the monotony of the content when the song search is repeated and the cover presentation is not new. Quality shooting and creating new singing directions that is still in the same song name, same content will help create a new dimension in presenting quality even more. In the creative process The operating methodology has applied the 5 strengths of YouTube channel to be interviewed in this interview. The proposed YouTube methodology is based on the ZaadOat Studio and Madpuppetstudio channels with effective lighting and filming. By studying various YouTube channels Shows how YouTube's algorithm and music cover approach will help draw viewership based on the name of a famous song, a hashtag and the presentation potential will help Mention of such a video is effective Due to the nature of YouTube media Allowing viewers to access content In the dimension of technology is determined (Technology determinism). YouTube plays a role in reducing the gap. In terms of space and time, that is, viewers can benefit from YouTube and can get more information Since can watch From devices, from communications Smartphones can be anywhere anytime, unlimited space, no time limit. Thanks to the innovative technology offered by YouTube, it is an advantage for the messenger. In many ways both in the matter of distributing information quickly Access to almost every area and at any time makes it a continuously growing media. It is a perfect coordination between both the messenger and the receiver. That is to say, the messenger via YouTube has sent the message as needed. And there are many types of messages and types of messenger With different content such as music, movies, advertisements, cooking, animal husbandry, house decoration, racing, etc. And at the same time Viewers are able to watch a wide variety of content or substances and can choose to watch according to their own needs. Therefore, making a cover song list can be done By relying on the human resources of the person making the transaction In finding people who have the potential to sing as a foundation and with support from the shoot These will allow the creation of song lists to grow efficiently.

The result from Creativity Study and Cogitation statement that the Consumption behavior of Generation Y is the biggest buyer group in Thailand which possibility increasing in the future (SCBEIC, 2015) and The behavioral studies have shown that there is a high degree of variability and uncertainty in this group which consideration on how to create the music playlist program in appropriately. Therefore, the study is a must to delve deeper into the specific needs as it's a unique features of Generation Y which more specific needs subdivisions than the other generations. (Howe and Strauss, 2000). The result on Music Study reflection on Generation Y statement by Kruger

## Music Composition Aesthetic of Violoncello and Classical Guitar throughout Music Video via Long Take and Light Leak Techniques

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### Abstract

The research study will provide an overview of the music composition aesthetic of violoncello and classical guitar throughout music video via Long Take and Light Leak. The purpose of the study was to explain the knowledge of creative ideas in song composing and video publishing. The results of the study were as follows: 1) The 5.04 minutes duration song was composed by using western music theories. 2) The approaches and constructions of western music in the song composing were explored and analyzed, it included 7 sections. 3) The aesthetic of music composition for violoncello and the classical guitar was filmed in 1 take and edited by using the long take and Light Leak techniques to make the audiences feel more about the continuance of the song.

**Keywords:** Music Composition aesthetic, Classical Guitar and Violincello, Light Leak, Long Take

### 1. Introduction

The creative idea of composing song is presented throughout the music video that is named "Sutasinee". This is inspired from the married couple. The name of the bride is used for the title of the song. The song is given to the couple on a behalf of love, elegance, and tenderness that are the important elements that are happen with this true love. The song is divided into 7 sections. There are 4 main themes that each theme is explained about the moment of the couple through the song and music video. The performance of violoncello and classical guitar is filmed by using the long take technique and edited as a video by using Light Leak techniques.

### 2. Objectives

- 2.1 To explain the knowledge of creative ideas and approaches in song composing.
- 2.2 To describe the knowledge of long take video filming and editing by using Light Leak techniques.

### 3. Scope of research

- 3.1 The study focused on composing the 5.02 minutes new song by applying western music theories.
- 3.2 The study concentrated on filming the music video by applying long take video filming and editing by using Light Leak techniques.

### 4. Methodology

#### 4.1 Musical Structure

"Sutasinee" song was composed for the wedding ceremony. The background story of the couple inspired the authors to compose the song for them. As for expressing the respect to the couple, the authors named the song in bride's name. The song expressed and can be the representative of the love, elegance, and tenderness that are the important elements of true love. The song was divided into 4 themes for narrating the background story of the soulmate. The first theme is "Love Journey". The second theme is "Shared life". The next theme is "Fun and Relaxing". The last theme is "Forever". As mentioned above, the song was used to express the couple's love story, the authors composed the narrative song in place of narrating the various life - time in couple's life. (Narut Suttajit, 2012, pp. 104) Moreover, this song was composed by applying duo performance for violoncello and classical guitar approaches. The duo performance is the show that includes 2 musical instruments (Michael Tilmouth, 2001, online). Regarding to the song, the tempo is depended on harmony and the imagination of the composers about the married couple. The song took time in 5.04 minutes duration in filming.

Learning Management by Integration of Algorithmic Thinking and English Voice Command  
under Artificial Intelligence Yourself (AIY) Projects

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**Abstract**

This research study aimed 1) to develop learning management in Computing Science subject by using Algorithm Thinking which affected the learning outcomes in Python programming for receiving English voice command in Artificial Intelligence Yourself Projects (AIY projects), and 2) to study the results of Artificial Intelligence Yourself Projects (AIY projects). The one group pretest-posttest experimental research design was used in this study to compare the results of learning achievement and project score. The sample group was 35 Mathayomsuksa 2 students of Anuban Krokpra School (Prachanuthit) School, Krokpra District in Nakhon Sawan Province. They were selected by the purposive sampling technique. The statistics used in this study for data analysis were means, standard deviations, and dependent-samples t-tests. It was found that the effectiveness of the Learning Management in Computing Science by using Algorithm Thinking which affected the learning outcomes in Python programming for receiving English voice command in Artificial Intelligence Yourself Projects (AIY projects) of Mattayomsuksa 2 students showed that, on average, the students had a higher score on posttest ( $\bar{X} = 17.77$ , S.D. = 2.602) than that of the pretest ( $\bar{X} = 12.54$ , S.D. = 2.536) and statistically significant at 0.05. Besides, the results on the AIY Project of Mattayomsuksa 2 students of seven groups showed that there was a score over 80 points which could be concluded that, on the whole, the project score was at high criteria.

**Keywords:** Learning Management, Embedded Board, Algorithms Thinking, Artificial Intelligence Yourself Projects

**1. Introduction**

Foreign languages play an important role in today's society and future global society because it is an important method for communication, education, culture and economy. Learning a foreign language, especially English language which is considered as a widely used language and is a common language of learning for example in which students can develop Information and Communication Technology projects. In order to solve problems in real life, students can make decisions by using a variety of information and have testimonies that can be verified in the modern world as a learning society (Ministry of Education, 2017). In recent day, there are many emerging technologies such as Artificial Intelligence (AI) which is a branch of Computer Science and related to Coding in the form of problem solving process that described a clear step called "Algorithm". The pattern may appear in 3 characteristics which are commonly used Natural Language, the characteristics described by the pseudocode or the pseudocode and the flowchart (Malisuwan, 2017). The use of Algorithm in teaching and learning Computing Science in Thailand has very board across the country. An essential in preparing students in the area of computer science is the development of student's ability to think algorithmically which able to create various algorithms solving given problems starting with easy ones and consecutively increase their algorithmic knowledge and shifts during studies till the level where they deeply understand much more complex algorithms (Milkova, 2012). Algorithmic thinking is abilities that are connected to the ability to 1) analyze given problems, 2) specify a problem precisely, 3) find the basic actions in adequate to the given problem, 4) construct a correct algorithm the given problem, 5) think about all possible special and normal cases of a problem, and 6) improve the efficiency of an algorithm (Futschek, 2006). Therefore, Algorithmic thinking is that in some ways it is similar to the kind of procedural knowledge which involving a sequential nature of steps such as comprehension, flexibility, and critical judgment (Hiebert and Lefevre (1986; Star (2005)).

Education in teaching English language describes the intelligent teaching systems for students which will help students to learn Grammar such as application names Grammarly. Therefore, AI experts develop tools for learning improvement. The Intelligent Tutoring System (ITS) is a computer system that adjusts teaching and helps to

**Roles of the temples and Roles of Buddhist monks: Wat Buddharangsi of Miami FL.-USA  
as a case study**

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**Abstract**

The objectives of this academic article were to present the roles of the temple and the roles of Buddhist monks in a foreign country and to illustrate Wat Buddharangsi of Miami FL.-USA as a case study. The roles of the temple and the roles of Buddhist monks could be divided into 5 aspects: the role of cultural representative and motherland, the role in the dissemination of the teachings of the Buddha, the role of continuing the traditions and rituals of Thai Buddhists, the role of spiritual dependency among Thai people abroad, and the role in education, especially Thai language, and Thai music. In spite of the cultural diversity in the American context, it could be said that Thai temple and Buddhist monks living aboard could successfully achieve their important roles by building bridges of trust, respect, and understanding across cultures. It's a great opportunity that Thai Buddhism can take part in the world's society to live together with peace and harmony.

**Keywords:** Buddhism. Roles of the temple, Roles of Buddhist monks, Wat Buddharangsi

**1. Introduction**

The first aim of this article is to present the roles of the temples and roles of Buddhist monks in the foreign countries and secondly, to illustrate Wat Buddharangsi of Miami FL.-USA as a case study. Currently Phrarachbuddhividhet, the original abbot of the temple and 4 monks resident the temple and give sermons and services to the members and community.

In Buddhism, the primary purpose of life is to end suffering. Most Buddhist traditions share the goal of overcoming suffering and the cycle of death and rebirth, either by the attainment of Nirvana or through the path of Buddhahood. In reality, most Thai Buddhists aim for rebirth in a better existence rather than the goal of Nirvana. By feeding monks, giving donations to temples and performing regular worship at wats, acquiring enough merit to at least reduce their number of rebirths. Thai Buddhists visit the wat whenever they feel like it, most often on Buddhist Holy Day, which occur every 7th or 8th day depending on phases of the moon. On such visits typical activities include: the traditional offering of lotus buds, incense and candles at various altars and bone reliquaries around the wat compound; the offering of food to the temple sangha; meditating (individually or in groups); listening to monks chanting and attending a Desana or Dhamma talk by the abbot or some other respected Buddhist monks. Moreover, all Buddhists follow a set of guidelines for daily life called the Five Precepts. All of the good actions can be visibly seen and reflected from the Buddhist theory, especially the concept of karma that is well expressed in the Thai proverb "tham dii, dai dii, tham chua, dai chua " (good actions bring good results; bad actions bring bad results).

Among racial, cultural and religious diversity in the US context, and despite the difference in beliefs from the East world to the West world, it is interesting to study how the temples and Buddhist monks could integrate in this society, Why could Thai temples and monks join in pluricultural society?

**1. The role of cultural representative and motherland**

For centuries, temples have been a spiritual center of Thai laypeople and the heart of a community where people gather together to share their happiness and sadness, to make merits and give alms, and to find spiritual love and compassion. It is closely connected to ways of life of people from the first day to the last day of their life. For Thai people in the United States of America, Thai temples have another important role as a representative of their motherland. Moreover, Buddha statue in the temple is considered important cultural capital because Buddha statue is the representation of Lord Buddha. Thai Buddhists strongly believe that worshipping and paying respect to a statue of Buddha will bring them happiness and prosperity. In addition, they will be safe from all dangers. The temple is also like a shelter for people who are suffering in a foreign land.

## The Consideration of Changes in teaching method in Economics education

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### Abstract

In Japan, as of 1 June 2020, 600 universities (59.4%) were holding classes entirely through remote lectures, and 308 universities (30.5%) were using a combination of in-person teaching and remote lectures. The number of universities that were only teaching in person was 101 (10.0%). The University of Fukui had adopted remote lectures for the first semester (April–September). This paper contains results and discussions that verify the effect of remote lectures through the use of a multiplayer online game system.

This study aims to verify whether a remote lecture is truly ineffective by using this system which was carried out after students studied five lessons on consumer behavior concerning on-demand movies. Before students began to compete against each other, the game system to be used for the lessons was designed. This system included financing for business start-ups, the employment of a store manager and an employee, the determination of the store location, and any modifications to it. After the preparation was finished, students competed to achieve the best business performance for three in-game years, which were divided into 12 seasons. After the experiment, participants were given a questionnaire on whether their knowledge of microeconomics learned in previous lessons was utilized in this game.

High learning outcomes were achieved in the course described in this paper. Furthermore, by having turned a fixed quantity of a student's risk tolerance and business consciousness, the game also obtained data that could be used to analyze management decision-making processes. As consciousness is not being shown quantitatively, students can be more accurately aware of their action bias. According to the questionnaire involving 137 students, 128 students (93.4%) answered that the system helped study economics or management.

**Keywords:** COVID-19, Remote Lecture, Economics Education, Game

### 1. Introduction

As of July, 2020, coronaviruses are still a threat to people, not only in Japan, but across the world. COVID-19, which originated in China, spread rapidly from the beginning of 2020, and halted the global economy. The social influences of COVID-19, such as the educational impact, religious impact, political impact and psychological impact, are very large. This paper has focused on the impact on education.

According to UNESCO (2018), most governments around the world have temporarily closed educational institutions in an attempt to contain the spread of the COVID-19 pandemic, and these closures are impacting over 60% of the world's student population.<sup>1</sup> From March 2020, 90% of primary, junior and senior high schools in Japan were closed. The Ministry of Education, Culture, Sports, Science and Technology (MEXT) announced a plan that would catch up with the lost study time in two or more years. For this purpose, remote lectures are needed in Japan. However, Kitagawa (2020) mentions the infrequent use of ICT apparatus in Japanese schools, and teachers' low ICT literacy rate (as seen by the OECD investigation) and has concerns regarding the difficulty of distance learning in Japan.<sup>2</sup>

This concern also applies to Japanese universities. The implementation status of universities' lessons as of June 1 is shown in Table 1 and Table 2.

### The arbutin extraction from Maoluang leaves by reflux method

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#### Abstract

This research aims to determine the arbutin contents in Maoluang (*Antidesma thwaitesianum* Müll. Arg.) leaves by reflux method. Maoluang leaves were collected in two different age, young and mature leaves, and dried at 40 °C for 72 hours before extraction. The extraction method between maceration and reflux system were compared. 95 % ethanol was used as a solvent. The qualitative and quantitative analysis of arbutin in Maoluang leaves were processed in reversed phased of High-performance liquid chromatography. The results showed the highest amount of arbutin in mature Maoluang leaves with reflux extraction at 46.10 ± 0.49 mg/kg dry weight.

**Keywords:** *Antidesma thwaitesianum* Müll. Arg., Arbutin, Maoluang, Reflux extraction

#### 1. Introduction

*Antidesma thwaitesianum* Müll. Arg. is the local plant in North-eastern Thailand which its local name is Maoluang. its fruits are rich of nutrients that are normally prepared for drink called Mak- Mao which the meaning of Mak is fruit. Phytochemicals in the fruits are reported as anthocyanin, phenolic acids and flavonoid (Jorjong, Butkhup, & Samappito, 2015). Moreover, other parts of Maoluang also were reported about having anti – apoptotic and anti-inflammatory effects (Puangpronpitag et al., 2011). Arbutin is a kind of skin whitening agent that showed the chemical structure in figure 1, hydroquinone-b-D-glucopyranoside, which is a hydroquinone derivative, a glucose attaching. It is used in skin depigmentation which was discovered in Maoluang leaves (Suwanprasert, 2018). Arbutin also has an efficiency in anti – bacterial in urogenital tract infection treatment (Rychlinska & Nowak, 2012). The extraction method is the step to isolate the desired component from the natural raw materials. The method of arbutin extraction in Maoluang leaves was reported in maceration system with ethanol solvent (Suwanprasert, 2018). The reflux is an alternative method with higher temperature. Ethanol was selected for solvent according to human safety. The different between maceration and reflux methods was the temperature and time. Maceration method is the selected solvent extraction procedure at room temperature that the desired components in raw materials dissolved in the solvent which would take about 3 days of extraction. Reflux system is the selected solvent extraction method under higher temperature than room status and take shorter time than maceration, about 3 hours. There is a study of comparative assessment of extraction, maceration, reflux, soxhlet and ultrasound assisted extraction techniques luteolin from the leaves *Vitex negundo* Linn. and the results showed reflux method showed the highest amount of luteolin (Abidin et al., 2014). According to this study, this research was to investigate the optimum extraction method for arbutin in Maoluang leaves. The comparative methods of maceration and reflux extraction were assessed.

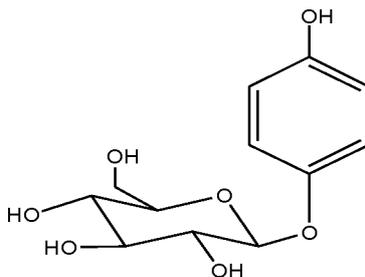


Figure 1 A chemical structure of arbutin

会話における割り込み発話と日本語教育  
-異文化コミュニケーションの観点から-  
Interruption in Conversations and Japanese Language Education  
-From an Intercultural Communication Perspective-

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Abstract

While vocabulary and grammar are essential to communicating well in Japanese, conversational processing also plays a critical role. The objective of this study is to examine the functions of gazing and interruption in opinion-exchanging conversations. The participants in this research were either Thai or Japanese native speakers. They were divided into three experimental groups: (a) conversations among Japanese speakers (six pairs), (b) conversations between Thai speakers (six pairs), and (c) conversations between Japanese and Thai speakers (three pairs). Each pair was given two identical topics.

The study revealed two interesting findings. First, the additional explanation function(補足機能) of interruption was not found in conversations between native Japanese speakers. However, native Japanese speakers used this function in their conversations with Thai speakers, to assist the Thai speakers who were less skilled in Japanese. Conversely, Thai speakers gazed at Japanese speakers as a sign to seek help. Second, the changing topic function(新情報提示機能) of interruption was found to disturb the conversation by the transcribed paper-based data analysis. However, according to the gazing analysis of recorded-video, this function was found to support conversation: The interrupting speaker always looked at their partner from the beginning to the end of their turn speaking, in contrast to normal conversations where the interrupting speaker would usually avoid eye contact. The findings from this study carry implications for teaching Japanese conversational skills when communicating interculturally. While it may not be necessary to teach conversation management in class immediately, it seems important to monitor one's conversation and support conversational methodological awareness.

Keywords: 割り込み発話, 視線行動, 異文化コミュニケーション,

1. はじめに

日本語教育において「会話」の教育は最も重視されている技能の1つである。学習者の会話技能の習得のためには、基本文型や表現の知識だけではなく、普段はあまり意識することのない会話の構成や会話の特徴を知ることが必要である。会話分析の理論を打ち立てたサックスら(1974, 2010)によると、1つのターンでは基本的に一人ずつ話すのが原則であると述べている。しかし、実際の自然会話では、このルールに違反し、聞き手が発話権を持っている話し手の会話の途中で、自分の発話を意図的に開始するという「割り込み」も見られる。他人の話に割り込むことを嫌い、発話の妨害だと思われる言語もある一方で、他人の話にかぶせて発話することを嫌わない日本語のような言語もあり、大きい文化差が会話には存在している。これまでの割り込みに関する先行研究により、日本語母語話者同士の会話と日本語母語話者と学習者の接触場面の会話では、割り込みは相手の発話を妨害することだけでなく、互いの会話を促進し、スムーズに進められるように協力している現われでもあることが明らかになっている(藤井・大塚 1994)(深澤 1997)。しかし、タイ語母語話者同士の会話における割り込みがどのように現れているか、そして日本語との異なりがどのようなものであるかをまだ明らかになっていない。

The Development of Blended Instructional Model Based on Self-Directed Learning Method  
in Research for Educational Development Course for Student Teachers

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**Abstract**

The purposes of this research study were to 1) develop a blended instructional model based on a self-directed learning method in Research for Educational Development course for student-teachers, and 2) to investigate the effects after the implementation of the developed blended instructional model. The research methodology consisted of three steps: 1) Developing the blended instructional model based on self-directed learning method, 2) Creating tools for data collection, and 3) Implementing the developed instructional model. The subjects were 50 students enrolled in the Research for Educational Development course in the second semester of the academic year 2019 with 26 students in the treatment group and 24 students in the control group. These subjects were obtained through cluster random sampling. The research instruments consisted of 1) an achievement test, 2) a form to measure the students' self-directed learning ability, and 3) a set of questionnaires to explore the students' satisfaction. The data gained were quantitatively and qualitatively analyzed. The statistical methods included percentages, means, standard deviations, One-Sample, Dependent-samples, and Independent-samples t-tests. Content analysis was also conducted with qualitative data.

The findings were as follows:

1. The blended instructional model based on self-directed learning method in Research for Educational Development course for student teachers had 7 components: 1) origin and importance, 2) concepts and theories, 3) principles, 4) objectives, 5) contents, 6) learning process which was divided into 2 forms. i.e. face-to-face, and online teaching and 7) measurement and evaluation.

2. The results from installing the blended instructional model based on self-directed learning method in Research for Educational Development course for student-teachers were shown below:

2.1 The efficiency of the blended instructional model based on the self-directed learning method in Research for Educational Development course for student teachers was 78.85/77.23.

2.2 After the students had been taught through the blended instructional model based on the self-directed learning method, their learning achievement was significantly higher than that of before. The increment of their achievement was more significantly higher than 75 percent.

2.3 An achievement of the experimented students was significantly higher than that of the control group and significantly higher than the control group students learning through a traditional method.

2.4 The self-directed learning of the experimented students was significantly higher than that of the control group and significantly higher than the control group students learning through a traditional method.

2.5 The satisfaction of the experimented students who had been taught through the developed instructional model was at a high level.

**Keywords:** Instructional Model, Blended instruction, Research for Educational Development, Self-Directed Learning Method

## 1. Introduction

The human learning process under the trend of modern society with a variety of science and technology has developed rapidly. Resulting in education and learning developed under the trend of technology, technology and scientific knowledge have been applied to manage education widely (Surasak Pahe, 2020). Matches the English word that Self-directed Learning (SDL) is a process in which the student initiates their own learning. By diagnosing their learning needs, setting goals and teaching media, contacting with others, finding resources, choosing to use learning methods, supplementing their learning plans and assess their learning results with or without help from others. People who learn by themselves can learn better than those who are just recipients or wait for the instructors to transfer the knowledge to learn by intention. Aim highly motivated have more individuality able to lead a self-directed life (Knowles, 1975), self-directed learning by studying the characteristics of self-directed learning

Needs Assessment in Academic Administration of the Faculty  
of Nursing Rajabhat University Network

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Abstract

The purpose of this research was to study current operating conditions and needs assessment in the academic administration of the Faculty of Nursing Rajabhat University Network (FONRUN). The participants were curricular committees from eight faculties of Nursing Rajabhat University (FONRU) in Thailand. Each FONRU consisted of 13 participants who have supervised curricular as 1) a dean of faculty of nursing, 2) a chairperson of Nursing Science Program, 3) five curriculum administrators, and 4) six lecturers. A convenience sampling was used to recruit a total of 104 participants. Data collection was conducted between September and November 2019. The Actual State and Academic Administration Need Assessment with input, process, and output questionnaires was used to collect the Needs Identification (NI). Data analysis was done using descriptive statistics and modified Priority Needs Index ( $PNI_{modified}$ ).

The findings indicated that: The current condition of academic administration for FONRUN was at a moderate level ( $\bar{X} = 3.21$ ,  $S.D. = 0.96$ ). It was found that the Input component was at a high level ( $\bar{X} = 3.84$ ,  $S.D. = 0.70$ ). Processes and Output were moderate, and they showed a mean score of 3.21, ( $S.D. = 0.96$ ), and 36.0 ( $S.D. = 0.68$ ), respectively. The needs assessment in academic administration from high to low were ranked: 1) Measurement and Evaluation of education ( $PNI_{modified} = 0.51$ ), 2) learning management system ( $PNI_{modified} = 0.50$ ), and 3) curriculum administration ( $PNI_{modified} = 0.46$ ), respectively. These findings can decide to improve their academic administration with effective ways and actions to achieve a goal and excellent quality.

**Keywords:** Academic Administration, Faculty of Nursing, Rajabhat University Network

## 1. Introduction

Rajabhat University (RU) is a local higher education institution where mainly aims to develop academic services and improve technology to local society (Office of the Council of State, 2004). Thailand, the healthcare service system has a crucial problem regards health manpower, especially the number of nurses in healthcare services are limited. The nurse shortage has an effect on the low quality of health systems (Khunthar, 2014). Faculty of Nursing of Rajabhat University (FONRU) therefore responds to the Nursing Council Policy. It has a responsibility to increase the number of nurses in the local community as well. There are eight faculties of the FONRU (Thailand Nursing and Midwifery Council, 2018). They aggregate to be Faculty of Nursing Rajabhat University Network (FONRUN). FONRUN aims to develop the quality of the nursing academic administration, and improve together with academic administration strategy (Chaiwong, Maneepun, Bonkhonthod and Wisoram, 2020). Academic administration is a significant process or action for developing quality of the academic nursing curriculum (Peatchthaipong, 2012). The academic activities regarding teaching and learning within academic institutions are considered. Academic administration comprises 4 processes of learning and teaching including policy formulation, planning, improvement, and evaluation. These processes aim to develop the effectiveness of the curriculum for enhancing skills and the academic benefit for the students (Wong-anutaraj, 2010).

Several previous studies revealed that the Academic Administration Framework (AAF) consists of three components comprising a curriculum administration, teaching and learning management, and measurement and evaluation (Chaiwong et al., 2020). However, those findings of previous studies conclude that there are four factors that have effect on academic administration in area of both public and private nursing institutions (Peatchthaipong, 2012). The first factors seemed intense effects is an administrator. Previous study revealed that some executives lack the plan and strategies for improving the quality of the curriculum. This limitation results in the effective teaching process that leads to poorer development of instructors. Likewise, the instructor is the second factor. Many studies have shown that the ratio between teachers and students is poorer. As the number of instructors is limited, this results in overwhelming daily tasks and overload in their work. The instructors do not have time to plan their

## The Evaluative Language in a Group Discussion of EFL Undergraduate Students in a Context of Deep South Thailand: An Appraisal Perspective

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### Abstract

A key element of group discussion concerns expressions of ideas and opinion voices, which is viewed as either a positive or negative assessment of people, places, things, phenomena, and circumstances. Student speakers must face challenges of using attitudinal resources to assess participants and processes by reference either to emotional responses or to systems of culturally-determined value systems. APPRAISAL framework, specifically the Attitude system, offers a useful framework for construing feelings and emotional reactions as well as judgments of behavior and evaluation of things. This study aims to explore appraisal resources used by a group discussion of undergraduate students in the context of Deep South Thailand. The paper explains the linguistic phenomenon case study that happens simultaneously in a group discussion. The participants were two male students and one female student who discussed the topic of 'should we have a university uniform or not?' The data were taken from an audio recording of the discourse, and transcription of the same discourse. The analytical tool used the Attitude system of APPRAISAL framework that administers three sub-types of Attitude that are affected by judgment and appreciation. Besides, explicit and implicit attitudes including positive and negative expressions were investigated. Results reveal that the students deployed their attitudinal positioning by all sub-types of Attitude, especially the appreciation and justice system. Interesting findings involve the experience and culture values deployed in the group discussion. The study provides and suggests some insights into how the Appraisal plays out in the sample of a group discussion and its implications in the EFL classroom.

**Keywords:** Appraisal, Deep south Thailand, evaluative language, group discussion

### 1. Introduction

Communication is a tool for exchanging or sharing information between two or more individuals or within a group to reach a common understanding as well as the process of conveying messages (facts, ideas, attitudes and opinions) from one person to another, so that they are understood. Communication skills are needed to inform, influence and express feeling. These mean the ability of senders to communicate clearly and share thoughts, feelings and ideas will help them in all their relationships. For example, they can inform about something or they can also influence others through communication.

In the context of EFL teaching and learning, communication is played a crucial role in order to achieve learning outcome. It could be said that a successful of teaching and learning comes from the effectiveness of communication between a teacher and students. Likewise, the management of activity in classroom through communication among students can show their abilities in terms of exchanging facts, information, opinions, including negotiating others, and expressing emotions and feelings. Group discussion is one of good activities to promote students' autonomy, and it develops students' capacity for the clear communication of ideas and meaning, including helps students explore a diversity of perspectives. However, Thai EFL students still lack the skills of critical thinking and thoughtful argumentation when they exchange their points of view. To understand increasingly how students are working together in a group discussion, the evaluative language needs to be clarified by using APPRAISAL framework. This framework is an analytical tool for the evaluation of language meaning making. A number of linguists (Derewianka, 2007; Songsukrujiroad, Chaiyasuk & Praphan, 2015; Chu, 2014; Hong, 2012; Souza, 2006; Arunsirot, 2012; Srinon, 2017; Badklang, 2018) have studied the evaluative language by using Appraisal framework related to academic writing, news, learners' compositions, national anthems, the leader's speech and classroom talk. Although, a few studies on the spoken text has been rarely examined. Hence, the current study will

### Cancer Chemopreventive Activity of Himalayan Plants

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#### Abstract

The present work aimed to explore *in vitro* cytotoxic activity of four Indian plants namely *Anogeissus latifolia*, *Terminalia bellerica*, *Acacia catechu*, and *Moringa oleifera* on nine human cancer cells from different origins. Firstly, these extracts were screened for cytotoxicity after 48hr of treatment the cell lines using the following assays: (1) SRB assay for seven adherent human cancer cell lines from lung (A549), prostate (PC3), breast (T47D & MCF-7), colon (HCT-16 & Colo-205), and leukemia (THP-1); (2) MTT assay for two suspension leukemia (HL-60 & K562). Secondly, these extracts were examined for induction apoptosis in two suspension leukemia cell lines using cell cycle analysis. The results showed that all crude extracts inhibited differential cell proliferation on cancer cells in a concentration-dependent manner. The cytotoxic activity of plant extracts was arranged in descending order as follows: *A. latifolia* > *T. bellerica* > *A. catechu* > *M. oleifera*. Furthermore, all extracts inhibited the cell proliferation of HL-60 and K562 cells by blocking the G0/G1 phase of the cell cycle. Extracts from *T. bellerica* and *A. latifolia* at the concentration (100 µg/mL) induced apoptotic peak (subG0-G1) to its maximum values 37.21% in HL-60 and 17.49% in K562 cells, respectively, compared to their control values (2.08% and 2.97% respectively). Extract from *A. catechu* at high concentration (100 µg/mL) induced G2/M phase blocking in leukemia K562 cells. In conclusion, all extracts mainly inhibited the cell proliferation of leukemia cell lines (HL-60 and K562) in a cytostatic manner by blocking the cell cycle at the G0/G1 phase.

**Keywords:** *Anogeissus latifolia* ; *Terminalia bellerica* ; *Acacia catechu*; *Moringa oleifera* ; Cytotoxicity; Cell Cycle Analysis

#### 1. Introduction

Cancer is the third leading cause of death worldwide, preceded by cardiovascular and infectious diseases. Although the chemotherapy strategies have been used to treat cancer, high systemic toxicity and drug resistance have limited the successful outcomes in most cases (Vineis and Wild, 2014). Therefore, searching for drugs extracted from the plants as potential cytotoxic agents is an important line of research in the discovery of novel anticancer candidates. India has two of 18 hotspots of plant biodiversity in the world namely Eastern Himalaya and Western Ghats which offer a unique opportunity for the drugs discovery researchers. The selection of suitable plants for pharmacological studies is a decisive step and is depended on traditional uses, chemical constituents, toxicity, randomized selection or a combination of several criteria. In Ayurveda, the stem bark of *Anogeissus latifolia* has been used in the treatment of skin diseases, diabetes, stomach diseases, colic, cough and diarrhea (Singh *et al.*, 2016). The fruit of *Terminalia bellerica* has been used for the treatment of anaemia, asthma, cancer, colic, constipation, diarrhoea, dysuria, headache, hypertension, inflammation and rheumatism (Cock, 2015). The bark and heartwood of *Acacia catechu* have been used for the treatment thinning of blood, tooth related troubles, skin disorders, chronic fever, ulcer, cough, worm infestation, snakebite, throat problems, obesity, hepatomegaly, spleenomegaly, tastelessness, hemorrhages, blood disorder, and urine related disorders (Stohs and Bagchi, 2015). The leaves of *Moringa oleifera* have been used as cardiac and circulatory stimulant, antipyretic, antispasmodic, anti-inflammatory, antibacterial, antifungal, antidiabetic, and antihypertensive agent (Abdull Raziz *et al.*, 2014). These plants are a source for antioxidant compounds which have great potential in alleviation carcinogenic processes through scavenging the formation of free radicals.

Considering this, the present work was explored the anticancer activity of *A. latifolia* , *T. bellerica* , *A. catechu* and *M. oleifera* on nine cancer cells from different origin. To understand the efficacy the plant extracts to arrest cell cycle and induce apoptosis in leukemia cancer cells, the most active concentrations of plant extracts were analyzed using cell cycle analysis with flow cytometry.

## Technological Leadership Development Model for the School Administrators in the Digital Age

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### Abstract

This research study aims 1) to study the technological leadership elements of school administrators in the digital age 2) to create and develop technological leadership models of school administrators in the digital age, and 3) to investigate the effectiveness of the technology leadership development model of school administrators in the digital age. This study was research and development in 3 phases of proceeds. Phase 1 includes 1) Study the elements of the technology leadership of the school administrators in the digital age, and 2) Confirm the accuracy and assessment of the appropriateness of the technological leadership elements of the school administrators in the digital age. Data were collected from in-depth interviews and analyzed by confirmatory factor analysis (CFA). 3) A survey using a set of five-point scale questionnaires was also conducted asking executives' needs for developing technological leadership. The samples were 615 school directors in Sakon Nakhon Province from 615 schools. They were selected by the purposive sampling method from school directors who voluntarily participated in the study. A set of questionnaires in 5 rating-scale levels was used for data collection. Phase 2, creation and develop technological leadership development models of digital school administrators, consisted of 1) creating and developing models, 2) monitor and evaluate the appropriateness of the model from 10 samples. Phase 3, the implementation of the developed model with 30 samples. Descriptive statistics were used to analyze data such as means and standard deviations.

The findings were as follows:

1. Technological leadership elements of the school administrators in the digital age which were extracted from the related document could conclude 5 indicator elements, namely: 1) School of innovation, 2) Innovation creation, 3) Investigating technology and innovation learning management in the digital age, 4) Ethics of digital technology, and 5) Integrating technology for measurement and evaluation. Therefore, these five indicators could be employed in the process of technology leadership development model of school administrators in the digital age.

2. According to the previous studies related to this topic, the model of development which is falsified by 10 experts, the development models can be divided into 5 elements. The technological leadership development model of the school administrators in the digital age consisted of 1) the principle of model, 2) the purpose of the model, 3) content of the model included School of innovation, Digital technology innovation, Integration of technology, and Innovation in learning management in the digital age. Ethical use of digital technology to integrate technology for measurement and evaluation. 4) process of development which included self-practice, shared knowledge, development manual, following up the result, evaluating the development result both before-during- after of the participants. 5) measurement and evaluation based on the testing result of the participants. This could be used as a guide in the experiment in the study.

3. I was found that the results of the effectiveness of the development of technology leadership of school administrators in the digital age were that participants developed for technology leadership level of the academy administrators in the digital age were at a moderate level and after the test of the overall development model was at a high level. The percentage of progress was equal to 25.8.

**Keyword:** Technological leadership development model, School administrator, Digital Technology

### 1. Introduction

The world is changing rapidly due to the technological advancement, increase access to information and transportation which result in changes in human behavior from the slow pace analog era to the fast moving digital age; information regarding the societies, economies, politic and cultures are being exchange constantly at a rapid rate. The world in the 21st century is therefore the age for globalize society and globalize economy where every country must adapt in order to survive and create stability in this fast moving world. As part of the effort to move forward, Thailand's government has set the policy "Thailand 4.0" with the aim to raise Thailand from a middle-income country to high-income

Treatment of COPD Based on the theory of "PEITUSHENGJIN"  
基于“培土生金”理论的治疗慢性阻塞性肺疾病稳定期临床疗效观察

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### Abstract

Based on the theory of "PEITUSHENGJIN", this study aims to analyze the curative effect of self-made prescription of "baofeishengjinyin" combined with western medicine in treating COPD (deficiency of both spleen and lung). Next, 69 patients were randomly divided into two groups, one in the treatment group failed in follow-up and the other group in the control group failed in a follow-up. There were 33 patients in the treatment group and 33 in the control group. The control group was treated with long-acting beta-2 receptor agonists (Salbutamol sulfate sustained-release capsules) and aminophylline tablets. The control group was treated with self-made baofeishengjinyin 100ml, Diurnal oral administration based on Western medicine. The treatment lasted for 3 months. The scores of the 6MWD/SGRQ 6MWD questionnaire, pulmonary function test, and a lung function test were observed before and after the treatment for 6 months in both groups. EOS was counted and the curative effect was judged. It was found that after the treatment, the scores of the 6MWD/SGRQ 6MWD questionnaire, FVC, FEV1, PEF, and therapeutic effect of the two groups showed that the treatment group was better than those of the control group. (P<0.05). **CONCLUSION:** The effects of self-made PEITUSHENGJIN Prescription(baofeishengjinyin) combined with western medicine in treating COPD patients with spleen and lung deficiency in stationary phase was better than that of the simple western medicine. The symptoms of patients were alleviated, and the indexes were improved. The effect was better than that of pure western medicine.

**Key:** COPD; plateau; peitushengjin; baofeishengjinyin

### 摘要

**目的:** 基于“培土生金”的中医理论, 自拟保肺生津饮联合西药治疗COPD (脾肺两虚) 患者的临床疗效分析。**方法:** 将69例患者采用抽签法随机分为两组, 其中治疗组随访失败1人, 对照组随访失败2人, 治疗组和对照组各33例完成实验。对照组行长效 $\beta_2$ 受体激动剂(硫酸沙丁胺醇缓释胶囊)及氨茶碱片治疗; 对照组除上述治疗, 予保肺生津方, 100ml, 日二次口服, 治疗3个月。观察治疗前后6MWD、SGRQ 6MWD问卷评分、肺功能(FVC、FEV1、PEF)检测、EOS计数并进行疗效判定。**结果:** 两组治疗后6MWD、SGRQ 6MWD问卷评分、FVC、FEV1、PEF及疗效判定显示, 治疗组优于对照组(P<0.05)。**结论:** 自拟培土生金方(保肺生津饮)联合西药治疗脾肺两虚的COPD稳定期患者能改善肺功能, 提高患者的生活质量, 效果优于单纯西药。

**关键词:** COPD; 稳定期; 培土生金; 保肺生津饮

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慢性阻塞性肺疾病(COPD)是一种气流受限特征性疾病, 临床以呼吸气流进出障碍为特点, 表现为咳嗽(可有痰)、气短憋闷、喘促等, 也可导致全身的功能性病变<sup>[1]</sup>。COPD是一种慢性进行性疾病, 目前没有特效的治疗方法, 严重危害了人们的健康及生活, 已成为世界上病死率最高的疾病之一<sup>[2]</sup>。COPD在病情进展中

## A Study on the Compensation of Language Environment in Chinese Teaching Thailand

Xie Na Fei Chen Mei Jie

泰国汉语教学语境补偿调查研究

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### 摘要

目的语环境在语言学习中非常重要，作为第二语言的汉语教学，过去多是在目的语环境下针对成人进行的。随着中国的发展，海外开展的汉语教育越来越多，低龄化现象比较突出，需要对非目的语环境中的汉语教学进行研究。本文结合泰国实地教学调查后认为，非目的语环境中的汉语教学，关键是进行语言环境补偿及创设，因此对泰国调查学校的语言环境补偿及创设提出了若干建议，重点补偿及创设对象是课堂学习和课外活动两者。

**关键词：**汉语学习；语言环境；非目的语环境；语言环境补偿

### Abstract

The target language environment is very important in language learning, For the Chinese teaching of the second language, it used to be targeted at adults in the context of the target language. With the development of China, more and more Chinese language education has been carried out overseas, and the juvenile phenomenon in Chinese learning is prominent. Therefore, Chinese teaching in the non-target language environment needs to be studied. Combined with Chinese teaching practice, this paper argues that the key to Chinese teaching in the context of non-target language is to compensate for the language environment. Therefore, this paper puts forward some suggestions on the compensation and creation of the language environment in Thailand's practice school, and the main objects of compensation and creation are classroom learning and extracurricular activities.

Keywords: Chinese study; Language environment; Non-target language; Language environment compensation

随着中国的发展，海外开展的汉语教育越来越多，语言环境是影响学习效果的重要因素。借着教学调查的机会，展开关于泰国...府...县Wat Tup Lung学校和刚鹏盛中学语言环境的调查。汉语对这两所学校的汉语学习者来说是第二语言，他们缺乏自然的语言环境，亟需对这两所学校的汉语教学进行研究，比如学生们二语学习现状及课堂课后特点如何？在非目的语环境下其课堂语言环境及课外语言文化环境如何？如何进行语言环境补偿？

本研究旨在使读者了解调查学校汉语学习者所处的语言学习环境，以及研究如何在非目的语环境下，进行语言环境补偿来激发和保持汉语学习者学习汉语的兴趣，提高汉语水平及交际能力，同时也为当地汉语教学方法提供新的思考角度与方向。

陈三东（2005）中从母语习得环境过渡到语言环境对二语习得的影响，引出“语言环境对二语习得的成败起着关键作用”这一观点，对比自然语言环境和课堂语言环境对二语习得的影响不同，进而提出针对课堂及课外的教学策略。在语言环境补偿方面认为创设接近自然的尽可能真实的语言环境有助于二语习得，具体措施为学校外语环境化和外语环境社会化。邓曼英（2013）分析了两类语言环境对于二语习得的影响，以及在此环境下的对策，也就是仿真环境的兴建、模拟环境的创建和虚拟环境的搭建。

此外，朱勇（2015）对课外汉语学习环境的作用，以及如何建设课外汉语学习环境进行了探讨，并对海外的汉语环境建设提出了若干建议。杨莉（2016）提出创

## 针灸治疗糖尿病周围神经病变的用穴规律研究

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### 摘要

**目的：**通过整理针灸治疗糖尿病周围神经病变的文献，总结和分析临床用穴规律，为临床提供依据和指导。**材料与方法：**检索 2010 年 1 月~2020 年 3 月期间在国内公开发表的针刺治疗糖尿病周围神经病变的临床研究中文文献，提取符合纳入标准的文献中所应用的腧穴，进行数据整理和分析。**结果：**共纳入 57 篇文献，用穴共 76 个，腧穴使用总频次为 520 次。其中腧穴所属经络使用频数居前四位是足太阳膀胱经（82 次）、足阳明胃经（75 次）、手阳明大肠经（75 次）、足太阴脾经（68 次）；穴位所属特定穴使用频数居前三位是合穴（141 次）、原穴（89 次）、下合穴（87 次）；穴位所属部位使用频数居前三位是下肢部（271 次）、上肢部（130 次）、背部（80 次）。**结论：**针灸治疗糖尿病周围神经病变取穴归经以足太阳膀胱经、足阳明胃经、手阳明大肠经、足太阴脾经为主；按照特定穴分类则以合穴、原穴、下合穴为主；穴位主要分布在四肢及背部。

**关键词：**糖尿病周围神经病变；选穴规律；针灸

糖尿病周围神经病变（Diabetic Peripheral Neuropathy, DPN）是糖尿病最常见的并发症之一，临床表现以麻木、疼痛及感觉减退为主。中医将糖尿病周围神经病变归入“消渴病痹症”、“筋痹”及“痿证”等病范畴。西医尚未完全阐明糖尿病周围神经病变的病因及发病机制，目前主流认知为炎症反应、氧化应激和代谢紊乱等诸多因素共同作用，导致神经细胞受损，从而引发糖尿病周围神经病变<sup>[1]</sup>。

针灸是中医治疗糖尿病周围神经病变的常用方法，多项临床试验研究结果显示针灸可以改善患者的运动和感觉功能，但选穴繁杂多样，不利于临床推广。本研究欲通过整理针灸治疗糖尿病周围神经病变的文献，总结和分析临床用穴规律，为临床提供依据和指导。

### 1. 文献检索

以国内医学期刊为来源，采用计算机检索为主，手工检索为辅，检索以知网、万方、维普等数据库中的中文文献为主，时间为 2010 年 1 月 1 日至 2020 年 3 月 27 日，将“糖尿病周围神经病变、神经病变、糖尿病、消渴”等为关键词、自由词以 OR 相连进行检索；与“针刺、针灸、艾灸、电针、经络、穴”等为关键词、自由词，以 OR 相连进行检索。

## USING A COMBINATION OF SMALL MOLECULE MIXTURES CAN INCREASE SKELETAL MUSCLE TISSUE-DERIVED STEM CELL YIELD FROM HUMAN PLURIPOTENT STEM CELLS

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### Abstract

The limited amount of available human muscle cells, especially patient-specific muscle cells, causes slow progress towards finding a new treatment for neuromuscular diseases. Here we propose an easy culture system using small molecule mixtures to generate myogenic progenitors derived from human pluripotent stem cells (hPSCs). Without genetic modification or cell sorting, the lifted hPSCs formed cell aggregates (EZ spheres) and were maintained as a suspension in media with a high concentration of FGF2 and EGF for 38 days. The first 10 days also had the addition of TGF- $\beta$ 1 inhibitor, Wnt activator, and adenyl cyclase activator. EZ spheres exponentially expanded and were passaged weekly using a non-enzymatic chopping method. Upon EZ sphere dissociation and differentiation, a higher percentage (approximately 30%) of Myosin heavy chain (MHC)+ myotubes was identified than in the original protocol. With these small molecule mixtures, such myotubes presented a morphological and functional appearance resembling myotubes found in adult skeletal muscles. This updated protocol would provide an increased amount of mature muscle cells derived from hPSCs in a shorter time, which would be valuable for further research into disease mechanisms and pharmacological studies.

**Keywords:** Human pluripotent stem cells, Induced pluripotent stem cells, Muscle differentiation, Neuromuscular diseases, Skeletal muscle.

### 1. Introduction

A breakthrough of human stem cell technology gives new hope to suffering patients who are ill with incurable neuromuscular diseases. However, opposite to the significant progress in differentiated cardiomyocyte and neuronal cells derived from Human pluripotent stem cells (hPSCs), only a small percentage (about 20%) of skeletal muscles were produced. It wasn't until recent years that significant progress has been made on the generation of skeletal muscles derived from hPSCs (Barberi et al. 2007; Borchin et al. 2013; Hwang et al. 2013; Xu et al. 2013; Hosoyama et al. 2014; Shelton et al. 2014; Chal et al. 2015; Caron et al. 2016a; Chal et al. 2016; Choi et al. 2016). Accumulated knowledge of skeletal muscle development (or myogenesis) provides insight on key components needed for successful muscle generation. Embryonic myogenesis involves complex processes controlled by extrinsic small molecule signaling and intrinsic gene expression. Moreover, following developmental signaling pathways, recent protocols (including our own) allow us to directly (i.e. without genetic modification) derive myogenic progenitors and myotubes from human pluripotent stem cells (PSCs). Newly published protocols have tested the small molecule effect on muscle differentiation and such chemical additions increase the differentiation efficiency (Xu et al. 2013; Abujarour et al. 2014; Chal et al. 2015; Caron et al. 2016b; Chal et al. 2016; Choi et al. 2016). Likewise, our group previously published a unique and easy EZ sphere culture system using a chopping method- non-enzymatic passaging to expand myogenic progenitors in high concentrations of fibroblast growth factor 2 (FGF2) and epidermal growth factor (EGF) (Hosoyama et al. 2014). With this original protocol, we can generate approximately 24% of our cells as MHC+ myotubes.

### 2. Objectives

In this study, we examined other small molecules and tested how these small molecule mixtures would affect muscle differentiation.

COMMON FIXED POINT THEOREMS VIA CLR<sub>g</sub> PROPERTY  
IN COMPLETE FUZZY METRIC-LIKE SPACES

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### Abstract

This paper aims to introduce the CLR<sub>g</sub> property for common fixed point mapping and a common fixed point in fuzzy metric-like space. Our results generalize the recent results and many other known results.

**Keywords:** common fixed point, complete fuzzy metric-like spaces, the CLR<sub>g</sub> property

### 1. Introduction

In 1965 Zadeh [1] introduced the notion of fuzzy sets. Since that time a substantial literature has developed on this subject, Fixed point theory is one of the most famous mathematical theories with application in several branches of science, especially in chaos theory, game theory, nonlinear programming, economics, theory of differential equations, and so forth.

In 1981 Heilpern [2] introduced fixed point theory in fuzzy metric spaces has been developed starting with the work. He introduced the concept of fuzzy mappings and proved some fixed point theorems for fuzzy contraction mappings in metric linear space, which is a fuzzy extension of the Banachs contraction principle. Subsequently several authors [3, 4, 5, 6, 7] have studied existence of fixed points of fuzzy mappings. Butnariu [8] also proved some useful fixed point results for fuzzy mappings. Badshah and Joshi [10] studied and proved a common fixed point theorem for six mappings on fuzzy metric spaces by using notion of semicompatibility and reciprocal continuity of mappings satisfying an implicit relation.

In this paper, we improve the definitions of Cauchy sequences and completeness of fuzzy metric-like spaces introduced by Shukla and Abbas [18] and prove common fixed point results. Our results generalize and extend several existing results of literature of fuzzy metric-like spaces. Some examples are presented which illustrate and show the significance of our results.

### 2. Preliminaries

First, we recall some definitions about fuzzy metric and fuzzy metric-like spaces.

**Definition 2.1.** [1] A fuzzy set  $A$  in a nonempty set  $X$  is a function with domain  $X$  and values in  $[0,1]$ .

**Definition 2.2.** [9] A continuous t-norm is a binary operation  $*$  on  $[0,1]$  satisfying the following conditions:

- (i)  $*$  is commutative and associative;
- (ii)  $a * 1 = a$  for all  $a \in [0,1]$ ;
- (iii)  $a * b \leq c * d$  whenever  $a \leq c$  and  $b \leq d$  for all  $a, b, c, d \in [0,1]$ ;
- (iv) the mapping  $*$  :  $[0,1] \times [0,1] \rightarrow [0,1]$  is continuous.

In 1975, Kramosil and Michalek [11] gave a notion of fuzzy metric space which could be considered as a

Pathogenicity and antimicrobial resistance of *Enterobacter* spp. Isolated from Siamese  
Fighting fish (*Betta splendens* Regans)

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### Abstract

The present study is aimed to study the pathogenicity of *Enterobacter aerogenes* and *Enterobacter cloacae* which isolated from diseased Siamese fighting fish *Betta splendens* and to study an antibacterial resistance of antibiotics and medicinal plants extracts against *E. aerogenes* and *E. cloacae*. The results showed that the mortality of *E. aerogenes* and *E. cloacae* were 80 and 75 percent, respectively in high dose of bacterial concentration. *Enterobacter* spp. were sensitive to ciprofloxacin, whereas showed multi-resistant to various antibiotics such as, ampicillin, erythromycin, tetracycline. *Enterobacter* spp. was a high pathogenicity in *Betta splendens*. Antibacterial resistance of antibiotics and medicinal plants extracts could be suggested that ciprofloxacin and *Terminalia catappa* and *Melissa officinalis* extracts were the best antibacterial resistance for inhibiting the bacterial pathogens causing by *Enterobacter* spp.

**Keywords:** Bacterial disease, pathogenicity, antibiotics, medicinal plants, Siamese fighting fish

### 1. Introduction

*Betta splendens* Regans is a commonly known as Siamese fighting fish which is a popular fish nowadays. Bacterial diseases are the most common infectious problem of ornamental fish (Kanchan et al., 2019; Walczak et al., 2017). *Enterobacter* spp. are a member of the Enterobacteriaceae family which gram negative and frequently isolated from cultured fish (Almeida et al. 2018). In this study, *Enterobacter* spp. namely *E. aerogenes* and *E. cloacae* in the diseased Siamese fighting fish were isolated. There was a documentation of these bacteria in various fish species such as *E. aerogenes* in *Oreochromis niloticus* (Abdel-Latif & Sedeek, 2017) and *E. clocae* in *Oreochromis niloticus* (Almeida et al. 2018; Abdel-Latif & Sedeek, 2017); *Prochilodus lineatus* (Peixoto et al. 2013); *Mugil cephalus* (Sekar et al. 2008). The misuse of antibiotics is an important aspect to increase the occurrence of resistance in bacterial pathogen. The global concerns about bacterial antibiotic resistance and antibiotic residues have increased. Hence, there is an essential for development of alternative therapy against bacterial pathogens in aquaculture production (Turker & Yildirim, 2015). Treatments with herbal plants having an antimicrobial activity are safely use in aquaculture (Madhuri et al., 2012). Thus, the alternative way to find a potential antibiotic replacement by using herbal plant extracts against the bacterial pathogens can reduce the use of antibiotics.

### 2. Objectives

This study is aimed to determine the pathogenicity of *E. aerogenes* and *E. cloacae* isolated from diseased Siamese fighting fish and to study an antibacterial resistance of antibiotics and medicinal plants extracts against *E. aerogenes* and *E. cloacae*.

### 3. Scope of research

Nowadays, the occupation of ornamental fish farming is becoming popularity. It is suitable for farmers or people interested in cultivating ornamental fish. But the major problems are bacterial infections, which are the main reasons to cause fish die. Finding a treatment for bacterial diseases is an important solution to reduce the losses in cultured fish. Antibiotics should be accurately used for curing a bacterial disease, but the misuse of antibiotics is inducing a drug-resistant. Effective antibiotics were determined against the bacteria. Alternative way to find a

Development of a Model of Learning Management Based on Effective STEM Education  
of Secondary Schools in the Northeastern Region

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**Abstract**

The purposes of this research were to 1) examine the components of learning management based on effective STEM education of secondary schools in the northeastern region, 2) construct and develop a learning management model based on effective STEM education of secondary schools in the northeastern region, and 3) validate and confirm the developed model. This Research and Development approach (R&D) was performed in three phases: Phase I- Investigation of Model and Indicators. This phase was carried out using document inquiry, expert in-depth interviews, assessment of components and indicators of learning management based on effective STEM education with seven experts, including academic consultants on STEM education, STEM Ambassadors, administrators, and teachers of STEM education in secondary schools in the northeastern region. Phase II- Model Construction and Development. This phase examined current and desirable conditions of learning management for STEM education effectiveness in secondary schools in the northeastern region, and a survey research. The samples included 320 administrators and teachers from 40 secondary schools in the northeastern region in 2019 academic year. Phase III- Model Validation and Confirmation were done through a focus group discussion with nine experts. The research instruments included an unstructured interview form, a set of rating scale questionnaires, and a model assessment form. Data were analyzed through frequency, percentage, mean, and standard deviation.

The findings were as follows:

1. Major and sub-components of learning management based on STEM education in secondary schools consisting of six major components, 23 sub-components, and 77 indicators as follows: 1) Administrative plans comprising four sub-components with 15 indicators, 2) Personnel development comprising three sub-components with 11 indicators, 3) Curriculum development comprising four sub-components with 13 indicators. 4) Learning management based on STEM education comprising five sub-components with 17 indicators, 5) Supervision on learning management based on STEM education comprising four sub-components with 12 indicators, 6) Building learning network based on STEM education comprising three sub-components with nine indicators.

2. The model of learning management for effective STEM Education of secondary schools in the northeast Thailand consisted of: 1) principles, 2) objectives, 3) contents, 4) process implementation, and 5) monitoring and evaluation.

3. The effects after the model validation and confirmation revealed that the developed model was appropriate at the highest level in overall ( $\bar{x} = 4.78$ ) with the overall feasibility at the highest level ( $\bar{x} = 4.72$ ).

**Keywords** : Model Development, Learning Management, STEM Education

### Nature of Contract Farming

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### Abstract

Objective of paper are to review contract farming in term of various types of agricultural contract, benefits for farmers and smallholders, reasons for success in contract farming and governments role on contract farming in Thailand.

There were four types of agricultural contract including physical spot markets or cash markets, marketing contract, production contract and vertical integration. Farmers and smallholders earn some benefit from contract farming including; adoption of new enterprises, access to markets, access to credit, managing risk, access to information and access to insurance.

However, there were some reasons for success in contract farming such as profitable market and a strong market and farm groups. In the long run, farmers and smallholders would be able to collect skill in production and management, consequently improving their bargaining power. When increasing demand makes the market more competitive, contract farming may no longer be farmers' best choice.

**Keywords:** Contract Farming, Benefit of Contracts, Access to Market, Thailand

## A Comparative Study of ICT Adoption Influence on Performance of 3-5 Star Hotels

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### Abstract

The purpose of this study is to compare the influence of ICT adoption on the performance of three star and four & five star hotels in Phuket, Thailand. The three elements considered for measuring ICT adoption are: (i) availability of ICT components, (ii) integration of ICT components, and (iii) intensity of ICT usage. Operational productivity and customer satisfaction were utilized in order to measure hotel performance. To control for any effect of locational factors on hotel performance, the hotels were selected from the same geographical area, Phuket, Thailand. Operational productivity was gauged via Data Envelopment Analysis (DEA). A five-point likert-type scale was employed for assessing customer satisfaction. Multiple regression analysis was applied to evaluate the relationship between ICT adoption and hotel performance. ICT adoption has influenced operational productivity considerably in both three star and four & five star hotels. However, its' significant influence on customer satisfaction is confined to four & five star hotels only. The findings of this study have the potential to be of considerable assistance to the hotel industry through availing critical information to management in deciding which operational areas should adopt ICT as well as identifying the specific technologies that would improve hotel performance.

**Keywords:** Information and communication technology (ICT) adoption, hotel performance, operational productivity, customer satisfaction, user rating

### 1. Introduction

Hotels are increasingly adopting ICT in the face of an increasingly competitive environment (Šeric, M., Gil-Saura, I. and Mollá-Descals, A. 2016). Online reservation systems, procurement and inventory systems, wireless internet, electronic transactions and video conference systems are some ICT applications that have been broadly implemented throughout the hotel industry (Ahmad, R. and Scott, N. 2019). Hotel managers believe ICT adoption can provide many benefits including improved hotel performance (Al-Adamat, A. 2015). In service organizations, such as hotels, customer relationships are critical because the nature of the hospitality business focuses more on human skill and intangible assets (Chevers, D. and Spencer, A. 2017). These lead to the increasing importance and value of people (employees and customers) within the hotel industry. Therefore, hotel performance evaluation should be viewed from both operational and customer perspectives (Johnston and Jones 2004). With regard to the operational perspective, performance is mostly measured using operational productivity as a benchmark, reflecting the efficiency level of the business operations. From the customer perspective, hotel performance is usually evaluated by assessing customer satisfaction. This indicates the process of building both long term customer relationships and the credibility of the hotel. However, some researchers indicated contradictory opinions on the relationship between ICT adoption and hotel performance. Some indicated that ICT adoption could improve hotel performance (Sigala., 2003), while others indicated that ICT adoption may not improve hotel performance (David, Grabski and Kasavana, 1996). These contradictions could be because of differences in the types of hotels under consideration, their locations and customer characteristics, such as employee & management training, organizational culture and management style. Thus, a comparative study of different categories of hotels could provide invaluable insight and would be useful from both academic and practitioner perspectives since most of the previous studies were conducted on only one category of hotel. Moreover, studies in a developing country context are limited in number, and research from this perspective would be useful to hotel management as the tourism and hospitality industry in these countries, especially in Asia, is growing rapidly.

### 2. Objectives

The purpose of this study is to compare the influences of ICT adoption on the performance of three star and four & five star hotels in Phuket, Thailand.

### The Management for Ethnic Diversity Private Welfare Education Schools for National Security

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#### Abstract

The research was aimed to 1) Conceptualize the framework of academic management of The Ethnic Diversity Private Welfare Education Schools for National Security. 2) Study the current and the desirable states of academic management of The Ethnic Diversity Private Welfare Schools for National Security. Methodologically, mixed methods including documentary reviewing, personal interview, using questionnaires and focus group discussion were conducted. The informants are as follows: administrators, deputy director of school, teachers, parents, students and the officers who work with the ethnic groups. The research results are summarized as follows: 1) The conceptual framework of the management for Ethnic Diversity Private Welfare Schools for National Security consists of 4 categories, which are 1.1) National Security 1.2) The development of ethnic groups in Thailand 1.3) Educational management by ethnic groups 1.4) The management for Ethnic Diversity Private Welfare Schools 2) Overall, the current situation of the management for Ethnic Diversity Private Welfare Schools for National Security is at high level with the average in descending order from budget management, school religious management and academic management. Regarding the desirable condition in general, it was in the highest level with the average order in ascending order from resource management for education, student affairs management and academic management.

**Keywords:** Private School Management, Ethnic groups, Human Security, National Security

#### 1. Introduction

National security is a very important matter that all sectors must pay attention to not only responsible for militaries. The national security is not only about warfare or using army force to create keep nation safe, it also includes security in the political, economy, and social psychology. Therefore, the majority of people believe that the national security problem usually occurs near the country's border that being territorial intrusion by the neighbor's nation and sovereignty requires the army and combat force to deal with the problem. The national security problem in both urban and border area are various (Sinlarat P. et al., 2012: 2). With these stability issues, the education institutions able to play a role in preventing and solving problems by strengthening national stability along the border of Thailand by the educational management that is not only focusing on the reading, writing, happiness, or well academic of the students. The educational management must promote the students to be qualified as a citizen of the nation that help maintain national stability. There are 2 dimensions of national security according to the royal speech and the royal speech of His Majesty King Rama IX about the national stability and according to the economy, political, social psychology, military, science, technology, energy and environment, and human security elements (Oumsumrit C., 2007: 4).

National Educational Direction Framework 2017-2031 sets the goal of educational management to be a tool for human resource development to be citizenship, that is, good person, well-disciplined, good citizenship and quality people toward the social, country and world, as well as, having skills knowledge and abilities which can operate work that responds to the need of labor and national development. Building quality and effective education system is, therefore, the main mechanism for developing the potential and capacity of human resources which enhance the quality of learners to have various abilities and desirable characteristics that adaptable to the change of the world in 21st century (Office of Basic Education Commission, 2016: 1). This is associate with the royal speech of His Majesty King Rama IX on 27 July 1981 that "If society and any country can provide good education that suitable in every area to every youth. The society and country will have quality citizens which able to maintain the security of the nation and continue to advance. Every person in charge of education must consider being fully responsible for their country which are able to work accurately, correctly and completely without being negligent or neglected" and also associate to the Constitution of the Kingdom of Thailand 2017 has given importance to education, religion and culture since it is an important foundation in development of people, nation and equality in

## The Marketing Mix Factors Affecting Consumer Behavior for The Herbal Product

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### Abstract

This research aims to study the factors of the marketing mix which affect the consumer behavior in purchasing and consuming cosmetics and dietary supplement from *Clitoria Ternatea* Linn (butterfly pea) extract in Muang District, Chiang Mai. The sample group comes from 400 people who have purchased the cosmetics and dietary supplements with butterfly pea extract. The tool used in this research is questionnaires, and the statistics used in this research are frequency, percentages, means, standard deviation, Pearson Product Moment Correlation, statistics of T-test and ONE WAY ANOVA with p-value at 0.05.

The research finds that the most influential marketing mix is the products. It is important to the consumers that the products are certified by trustworthy organizations, such as Food and Drug Administration, or Good Manufacturing Practice (GMP). For the prices, the consumers suggest that the prices of the products should be appropriate to the quality of the products. The consumers also prefer to buy their products from shops that sell healthy goods or drugstores. Aside from that, individual factors, such as gender, occupations and incomes, do not contribute to any difference on the consumer behavior in buying cosmetics and dietary supplement from butterfly pea extract. Lastly, the salesperson should be knowledgeable in their products. Promotions, such as discount and distribution of testers, also have a strong effect on the decision to buy the products. However, factors, such as age, status, and education have major contribution to the consumer behavior on purchasing butterfly pea extract cosmetics and dietary supplement. The four factors marketing mix have close correlation to the consumer behavior, the reasons of purchase, and the influencers in purchasing the cosmetics and dietary supplement from butterfly pea extract. The study also discovers that the type of cosmetics with butterfly pea extract that the consumers decide on purchasing is skincare. The reason of it is that the product is safe from any chemicals and the person who influence their choice is the consumers themselves.

The entrepreneurs should prioritize to the marketing mix to the utmost; the products should be certified by standard organizations. In addition, the entrepreneurs should manufacture and sell cosmetics and dietary supplement from butterfly pea extract with the utmost benefits of the consumers in mind. Lastly, the variety of cosmetics and dietary supplement from butterfly pea extract may be improved by including the ingredients that are popular among the consumers.

**Keywords:** Marketing mix, consumer behavior, herbal product

### 1. Introduction

The cosmetics and body care market has continuously grown despite the flagging economy. In 2019, Thai herbs had the export value of 146,605,230 million Thai Baht. It is expected that in each year, trade value of herbs and spices in the global market will reach 10 billion US dollars in total, and herbal medicine and cosmetics will have the highest value. (Department of International Trade Promotion, Ministry of Commerce, 2019) According to the National Economic and Social Development Plan, the government formulates ongoing development of Thai herbs, starting from the primary health care. This results in the wake of herbal knowledge development. In the Twelfth National Economic and Social Development Plan (2017-2021) which has the philosophy of sufficient economy, sustainable development, and the development centering around human as its core, Thai herbs and traditional medicine still have the importance for the nation's current economic development. (Office of the National Economic and Social Development Board, 2017)

The history of Thai herbs is as long as Thai history itself, from Sukhothai era to present time. Thai herbs are used as ingredients in both main dishes and desserts, medicine, and health care and beauty products. Products from Thai herbs are the best of Thai wisdom. They are the country's important export, having the growth rate of 3% or 250-300 billion Thai Baht. (Thai Herb Association, 2013) The consumers of Thai herb can be divided into 3 groups: people who are concern of their health; people who want to have good shapes; and elders. Each group of

INFLUENCE OF SPORT PRODUCT PACKAGING ON CONSUMER DECISION MAKING AT MTG  
FIGTGEAR IN BANGKOK, THAILAND

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### Abstract

The business in the modern era faces many challenges to sustain sales and the growing number of competitors in the markets result in the business to imply different strategies to remain competitive in the market. Therefore, the traditional purpose of packaging has modified from just to protect and transport product to the tool of the promotion, to enhance the revenue capacity of the business. The package has become the tool of promotion which influences the consumer decision making process. This study is conducted with the aim to evaluate the packaging influence to the consumer decision making process and by dividing the packaging into three categories which influences the consumer decision making process. To explore the packaging influence on the consumer decision making, the packaging is divided into three factors, which are, attribute, design, and material of the packaging. Each identified factor is further divided into sub-factor, such as, the font style, colour, written information, makes the package attribute and the modernization of design, illustrations, uniqueness of design makes the package design and lastly the quality of material and eco-friendly material are sub factors of Package material. The objective of the research is to find out impact of packaging and its influence on consumer decision making.

To understand the packaging influence of the identified factors on consumer decision making process, the researcher select the quantitative approach to conduct the research. The measuring tool, questionnaire, is created and distributed to the consumer of the current members of MTG fightgear to complete questionnaires. The target population of the research is 1870 and the sample taken for pilot study is 40 and the main sample is calculated using Yamane (1973) equation as 328. A statistical software was used to analyze the data and it includes descriptive and regression analysis. As per the result from the collected data and using the mixed regression analysis to conclude that all the factors have positive influence on packaging and it has an influence on the consumer decision making process. Lastly, there are some recommendation for business, such to continuous invest on packaging attribute, create unique and different packaging, and use the green packaging to target the green consumer.

**Keywords:** Packaging, packaging Attributes, package design, Package material, Consumer decision making

## 1. Introduction

In the 21<sup>st</sup> century, the healthy competition in the market has pushed the businesses to their edge, and the function of packaging has modernized. The healthy competition in the global stage has added the promotional element to packaging function (Hamilton, Garretson, & Kerne, 2014). Pilditch (1973) and Borishade & Ogunnaiké (2015) further suggests that the packaging is a silent salesman, as it is the only communication between a consumer and the product at the final stage of the purchase. The researchers agree that packaging work as a communication tool for a product and creates the Unique Selling Point for a product and support the concept of point-of-purchase (Clement, 2007; Silayoi & Speece, 2004). The packaging of a product is the first thing seen before making purchase choices, and it is recognised that over 50% of purchasing decision is formed at the shelf, or point-of-purchase (Frontiers, 1996; Ferrell, 1987). The packaging has two core functions; first function is to protect the product and second function, to promote product to consumers. As per Ksenia (2013), the packaging is important marketing tools which promotes the product and aids the consumer to differentiate the products from its competitors. Packaging became a useful tool for marketing of comfort for capture interest customers and gained a competitive advantage. The attributes of packaging such as font style, colour and written information, the quality and eco-friendly material and modernization of design, illustrations and uniqueness of design influences consumer decision making.