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Editorial Note

The Interdisciplinary Research Review (IRR) was established with academic cooperation by the Nakhon Pathom Rajabhat University, The Royal Society of Thailand Committee of Interdisciplinary Research and Development, Rajabhat University (Western Group), and Rajamangala University of Technology Rattanakosin. This Issue, Volume 16 Number 5 (September – October 2021). This issue contains of four interesting articles in multidisciplinary fields: (1) Developing digital literacy skills for administrators under marginalized schools, (2) The intercultural adaptations of Chinese students in a Thai international university, (3) Faculty development practices in Filipino–Chinese schools, and (4) Decision–making process for purchasing organic vegetable products through electronic commerce systems and multi–channel marketing.

The Editorial Board of the IRR encourages anyone to submit articles for evaluation and review. The processes of submission, review and publication of articles are described on the journal's website, <https://www.tci-thaijo.org/index.php/jtir>. The Editorial Board and Committees of the IRR sincerely thank all peer reviewers who have sacrificed their time to help us produce a better journal, and also wish to thank all teachers, researchers and other academicians for submitting their valuable research to this journal. Finally, we thank readers of our journal who help to spread the knowledge and benefits gained to others. With your feedback and suggestions, we will strive to improve the quality and relevance of the IRR.

Yongyudh Vajaradul
Editor
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Contents

Volume 16, No. 5, September – October 2021

	Page
Developing digital literacy skills for administrators under marginalized schools Choocheep Puthaprasert, Jiraporn Supising, Thanat Boonchai, Sirimas Kosanpipat and Phubet Pongkaew	1
The intercultural adaptations of Chinese students in a Thai international university Shih Yi Huang	8
Faculty development practices in Filipino–Chinese schools Kathereen F. Fonte and Inero V. Ancho	14
Decision–making process for purchasing organic vegetable products through electronic commerce systems and multi–channel marketing Wisit Rittiboonchai	20

Developing digital literacy skills for administrators under marginalized schools

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Abstract

This research aimed to: 1) investigate the current states and problems of digital literacy skills for administrators under marginalized schools; 2) study the conditions for developing digital literacy skills for administrators under marginalized schools; and 3) propose the guidelines for developing digital literacy skills for administrators under marginalized schools. Instruments used in this research were an in-depth interview form, an open-ended questionnaire, and a record form for workshop and focus group discussion. Data were analyzed by content analysis and summarizing, and descriptive analysis. The results of the research were found as follows: 1. the current states and problems of digital literacy skills for administrators under marginalized schools consisted of basic skills, basic skills for working, and application skills for working; 2. the conditions for developing digital literacy skills for administrators under marginalized schools were budget allocation to support the education and the Ministry of Education had to stipulate the policy in developing digital literacy skills for the marginalized schools; 3. the guidelines for developing digital literacy skills for administrators under marginalized schools consisted of input, process, output, and feedback.

Keywords: Digital literacy skill, administrator, marginalized school

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1. Introduction

Educational development in remote areas is still a problem that needs to be taken care of equally. The fact that appears today is that there are still many children who cannot access to a quality education even though it is a fundamental right that should be received equally, especially for children in remote areas, or “marginalized children”. How can we build cooperation to keep children out of the education system? Not only infrastructure must come first, including roads, electricity, water supply, but also internet signals. When all utilities are ready, the next step is to manage educational institutions to have elements and environments suitable for learning and quality education. In order to improve the educational quality in “marginalized schools”, it is necessary that school administrators and teachers have to strengthen and upgrade their skills for new competencies to apply to children in remote areas, especially skills for living in new society.

According to the executive summary of The National Scheme of Education B.E. 2560–2579 (2017–

2036) [1], the cooperation among all sectors is required. Each sector must acknowledge and understand the importance of education as well as take part in the planning in order for its effectiveness. In addition to the planning, related conditions and contexts affecting the development of the national education such as rapid digital technology, economic and social advancements affecting the country, the region, and the 21st century trends affecting skill requirements among the population must all be examined as they challenge Thailand and the world economically and socially while we have been preparing for Thailand 4.0.

Moreover, the fourth strategy is to create opportunities and equality in education by providing people of all ages more opportunities in education through digital technology for education, including a modern network of digital technology for education which satisfied the needs of students and users effectively, and a high speed and quality internet access at every educational institution.

Due to the change of digital technology for living, innovation and advancement of digital technology by leaps and bounds, causing a disruptive technology, not only affects the economy but also ways of life in countries around the world which face with many digital

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technologies in daily life. Therefore, they should learn and understand about digital technology in order to be up-to-date and use them for their own benefit society and the next country. This was the role of education that must develop children and youth to have knowledge in digital literacy.

Accordingly, the Office of the Civil Service Commission [2] had defined digital literacy as a skill of understanding and using digital technology. Otherwise digital literacy referred to a skill for applying the tools, equipment and today's existing digital technologies, such as computers, mobile phones, tablets, computer program, and online media, etc. for maximum benefit in communication, operation, and team working or for development of work processes or work systems in the organizations to be modern and more efficient. Such skills covered 4 dimensions of competences consisting of efficient use, understanding, creation, and access to digital technology.

In addition, the National Scheme of Education B.E. 2560–2579 (2017–2036) [1] determined to upgrade educational quality and encourage educational accessibility for those in the Special Development Zone for multicultural or marginal groups and migrant workers in order to promote opportunities to access education and learning for people of all ages in special areas that is appropriate and in line with the social landscape, identity, and needs of communities and areas.

According to the view of Thongchai Somboon [3], the marginalized people were another group that the state had to pay special attention in the context of education management. Teachers had to understand “identities” of marginalized people well and clearly because this group wanted the unity like other people in society, only they were given less opportunity than other groups. Therefore, education must ensure teaching that could lead marginalized people to be able to read and write Thai language, the use of basic technology, and building a means of communication with understanding on the basis of the reality of society. This would greatly benefit the holistic development of the nation–state.

However, in accordance with the paper of Organization for Economic Co-operation and Development (OECD) that studied the impact of students during the COVID–19 pandemic [4], only 57% of the poorest students could access internet signal. This might be because they had no money for a subscription or they were in a too remote area to have a signal. This situation could lead to a disadvantage in accessing learning among the poorest students.

In terms of UNICEF [5], digital literacy referred to the knowledge, skills and attitudes that allowed children to be both safe and empowered in an increasingly digital world. This encompassed their play, participation, socializing, searching, and learning through digital technologies. What constitutes digital literacy would vary according to children's age, local culture

and context. Moreover, World Literacy Foundation [6] explained that digital literacy did not just mean IT proficiency. It required thinking skills, an awareness of the necessary standards of behavior expected in online environments, and an understanding of the shared social issues created by digital technologies.

Nevertheless, the Office of the Basic Education Commission [7] determined the third policy in fiscal year 2020 focusing on the development and enhancement of human resource potential in terms of measures and action guidelines, which were applied digital technology to support learning for learners at all levels of educational management. It was a measure for the application of digital technology to encourage and support learners to develop their own learning methods according to the needs and aptitudes of the learners. They could create their own knowledge-based society for continuous lifelong learning. Therefore, educational institutions had to apply knowledge-based information, media, videos, and various types of knowledge-based textbooks in the form of digital textbooks according to the specified course content; manage learning through a digital learning platform to respond to the development of learning of individual learners; and organize learning activities to develop learners to learn on their own through digital system.

In line with the SWOT analysis study of Chiang Mai Primary Educational Service Area Office 5 [8], it was indicated that in terms of technology, threats consisted of some areas could not be used, which were the barriers to the use of technology and the lack of knowledge in the correct use of technology. The researchers are interested in developing digital literacy skills for administrators of marginalized schools which should be initiated to make it happens. It is expected that this research results will be beneficial to the relevant agencies in marginalized school administration at all levels in the future.

2. Research Questions

2.1 What are the current states and problems of digital literacy skills for administrators under marginalized schools?

2.2 What are the conditions in developing digital literacy skills for administrators under marginalized schools?

2.3 What are the guidelines in developing digital literacy skills for administrators under marginalized schools?

3. Research Objectives

3.1 To investigate the current states and problems of digital literacy skills for administrators under marginalized schools.

3.2 To study the conditions in developing digital literacy skills for administrators under marginalized schools.

3.3 To propose the guidelines in developing digital literacy skills for administrators under marginalized schools.

4. Materials and Methods

The research process was divided into three phases as follows:

Phase 1: Investigate the current states and problems of digital literacy skills for administrators under marginalized schools. The key informants were five school administrators under Doi Koeng Patana School Network Group as follows: 1) Ban Plang 5 School, 2) Banwanglaung School, 3) Soonobphayop Plang 8 School, 4) Choomchon Soonobphayop Plang 4 School, and 5) Ban Plang 2 School; selected by purposive sampling. The instrument used was an in-depth interview form concerning the development of digital literacy skills according to the Office of the Civil Service Commission [2]. Data were analyzed by classifying into issues.

Phase 2: Study the conditions in developing digital literacy skills for administrators under marginalized schools. The key informants were fifteen relevant educational personnel/division directors/supervisors under Chiang Mai Primary Educational Service Area Office 5, a representative of community, and research team members. They participated in a work shop to analyze the factors in developing digital literacy skills for administrators under marginalized schools in terms of factors supporting achievement and recommendations for the use of digital literacy skills for administrators under marginalized schools. The instrument used was a work shop record form. Data were analyzed by content summarizing.

Phase 3: Propose guidelines for developing digital literacy skills for administrators under marginalized schools. The key informants were selected by purposive sampling. Phase 3 was divided into 3 steps as follows:

Step 3.1 Formulate guidelines for developing digital literacy skills for administrators under marginalized schools. The informants consisted of eleven relevant educational personnel/division directors/supervisors under Chiang Mai Primary Educational Service Area Office 5, and research team members, selected by purposive sampling. The instrument used was a focus group discussion. Data were analyzed by summarizing operational procedures.

Step 3.2 Inquire about the digital literacy skills for administrators under marginalized schools. The informants were five school administrators under Doi Koeng Patana School Network Group selected by purposive sampling. The instrument used was a questionnaire concerning digital literacy skills, the use of digital literacy skills as well as sharing and educating digital literacy skills of administrators under marginalized schools. Data were analyzed by summarizing.

Step 3.3 Survey the satisfaction of sharing and educating digital literacy skills of administrators under marginalized schools. The sample was 10 representatives of teachers under Doi Koeng Patana School Network Group. The instrument used was an open-ended questionnaire concerning sharing and educating digital literacy skills of school administrators for teachers under marginalized schools of Doi Koeng Patana School Network Group. Data were analyzed by descriptive analysis.

The research framework was shown in Figure 1.

5. Results and Discussion

The results of this research were as follows:

Phase 1 : Results of investigating the current states and problems of digital literacy skills for administrators under marginalized schools from the in-depth interviewing of five school administrators of Doi Koeng Patana School Network Group concerning the development of digital literacy skills of the Office of the Civil Service Commission [2]. Data were analyzed by classifying into issues. The results were shown in table 1.

It was in accordance with N. Sinlapasakkhajorn, T. Unaromlert [9] who studied the use of information technology for the education of schools under the district primary education in Nakhon Pathom. The result showed the use of computers and the Internet at a high level, the program Ms-Word documents at the highest level, followed by the use of computers to enhance their skills and knowledge for their own training. It was also found that the majority had no knowledge of the Internet and Internet applications. Regarding computer application in teaching, the collection and analysis of student results was at a moderate level, followed by the use of computer-assisted instruction (CAI), and the lesson learned by the software.

Likewise, World Literacy Foundation [7] explained that digital literacy did not just mean IT proficiency. It required thinking skills, an awareness of the necessary standards of behavior expected in online environments, and an understanding of the shared social issues created by digital technologies.

Phase 2 : Results of studying the conditions in developing digital literacy skills for administrators under marginalized schools from the workshop of fifteen key informants who were relevant educational personnel, a representative of community, and research team members. The results were divided into 2 parts as follows:

Part 2.1 : The factors supporting achievement of digital literacy skills for administrators under marginalized schools consisted of the budget allocation and support for education of Chiang Mai Primary Educational Service Area Office 5. They should recognize the necessity of marginalized schools, coordinate, and promote local administrative organizations to be able to provide education related with the educational

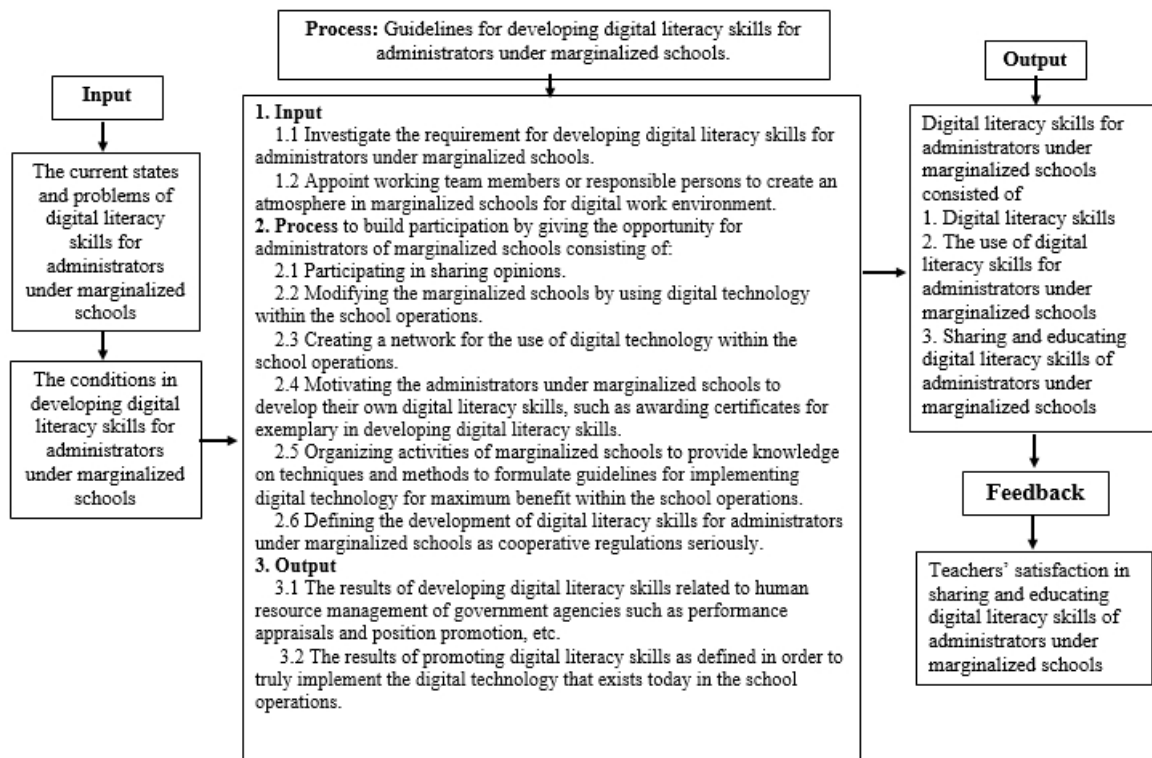


Figure 1: Research framework.

standards and educational management of marginalized schools.

Part 2.2 : For the recommendations of the use of digital literacy skills for administrators under marginalized schools, The Ministry of Education had to stipulate the policy in developing digital literacy skills for the marginalized schools; build leadership for administrators; and provide equal education with quality, standards and all over without charge; provide education for the use of digital literacy skills of marginalized schools with disadvantages; and gave special rights and opportunities to receive digital technology. The schools had to create brand and outstanding for community values to reduce students decrease. Moreover, Chiang Mai Primary Educational Service Area Office 5 should motivate communities to participate in educational management and development of learning processes of marginalized schools continuously.

It was in compliance with T. Artmak, N. Pimsan, N. Punchakhetthikul [10] who studied the marginal schools in terms of the development of educational institutions focusing on participation in subject analysis or items that would be taken as an educational institution course; goals of the school curriculum, implementation of the school curriculum for actual teaching and learning; monitoring, evaluation, revision of content, and practice methods of the school curriculum.

Regarding the finding of Z. Ozturk [11], one should highlight the complexity of participation to under-

stand digital literacy practices, a central tenet of these practices. The understanding of the participation was worth noting the difference between interaction and participation. Many literacy practices might be interactive but not necessarily participatory. Interaction occurred when objects and events mutually influenced one another. In contrast, participation encompassed not only receiving information but also creating and synthesizing information.

Phase 3 : Results of proposing guidelines for developing digital literacy skills for administrators under marginalized schools which were divided into 3 steps as follows:

Step 3.1 : Results of formulating guidelines for developing digital literacy skills for administrators under marginalized schools from a focus group discussion of eleven relevant educational personnel/division directors/supervisors under Chiang Mai Primary Educational Service Area Office 5, and research team members, selected by purposive sampling. Data were analyzed by summarizing the operational processes as shown in figure 2.

Step 3.2 : Results of inquiring the digital literacy skills for administrators under marginalized schools of five school administrators under Doi Koeng Patana School Network Group, selected by purposive sampling. In term of digital literacy skills, the variety of relevant skills related to media literacy, technology literacy, information literacy, visual literacy, communication literacy, and social literacy were not often in-

Table 1. Results of investigating the current states and problems of digital literacy skills for administrators under marginalized schools.

Items	Current states	Current problems
1. Basic skills		
1.1 Computer usage	There is the number of processing devices in daily life.	Administrators still lack of new knowledge of technology literacy that has more complexity and techniques. The technical fluency requires computer operating.
1.2 Internet usage	There are several internet providers but none of them coordinates the cooperation and assists to fix the network problems.	Administrators still lack of access to search engine to assist teachers to prepare students for a knowledge-based economy where they develop information management skills to find, evaluate, and use information effectively.
1.3 The use of a security program	There is not a security program with license such as Nod32.	Administrators still lack of knowledge to use a security program to protect the database on cloud computing or Google Drive.
2. Basic skills for working		
2.1 The use of a word processing program	Administrators use a word processing program only to make official documents.	Administrators still lack of revised skills and knowledge in functions of a word processor and web browser.
2.2 The use of a spreadsheet program	Administrators assign responsible teachers to use a spreadsheet program for article accounting, monetary, budget, and examination scores.	Administrators still lack of ability to assess information literacy—what information that teachers need such as an online, knowledge of assessment, and the use of searchable information.
2.3 The use of a presentation program	Administrators use a presentation program only to show school profile when they have school visitors.	Administrators still lack of communication literacy of art, meaning, and sending messages in different ways, the impact and influence of mass media and popular culture—how can the media be used to communicate ideas effectively.
3. Application skills for working		
3.1 The use of a digital media creation program	Several devices are designed to help administrators to operate a computer.	Administrators still lack of media literacy in effectively searching for the information that teachers want from the Internet. It is also necessary to understand the different types of digital media and any applications.
3.2 The use of an online collaborative program	Administrators use only Line program to communicate.	Administrators still lack of social literacy in developing the management through cooperation and networking skills for working within social networks in order for gathering knowledge across different school cultures.
3.3 The use of digital for stability and security programs	Administrators do not use these programs.	Administrators do not involve with these programs.

involved with school administrations, so they did not have the literacy skills of digital technology. In term of the use of digital literacy skills for administrators under marginalized schools, they rarely used the skills because the lack of stable internet system. And in terms of sharing and educating digital literacy skills of administrators under marginalized schools, some teachers who were excellent in digital literacy skills assisted sharing and educating among teachers.

According to the findings of S. Chanunan and M. Brückner [12], the present study, the instructors showed a moderate level of digital literacy and more than half of the participating instructors exhibited some key fundamental digital skills and literacy. The findings suggested that there was still a need for specific training for enhancing their digital literacy in order for them to suitably leverage technology or digital tools for their teaching practice and research in an effective way.

Step 3.3 : Results of surveying the teachers' satisfaction in terms of sharing digital literacy skills of school administrators for teachers under marginalized schools of Doi Koeng Patana School Network Group were as follows: school administrators attempted to procure computers enough for working and provide computers with fast speed internet from community leaders. School administrators chose the internet provider to support the internet system that could be used to connect to various network systems both upload and download. School administrators had studied to create a database system that was sufficient for the school operations with easy to access and fast speed.

In terms of educating digital literacy skills of school administrators for teachers under marginalized schools of Doi Koeng Patana School Network Group were as follows: school administrators explained the learning and working process and built the motivation to use digital technology in the integration of teach-

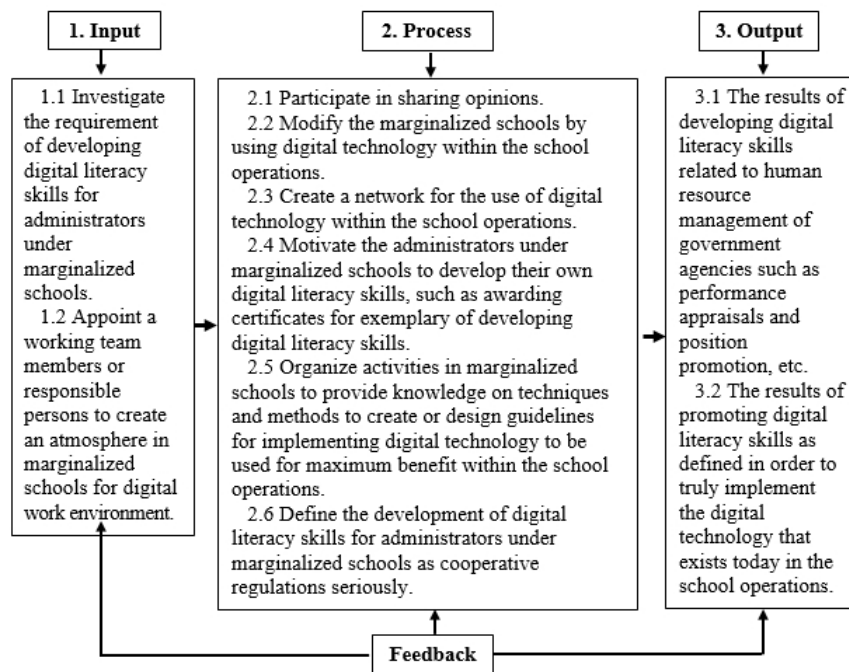


Figure 2: Operational processes.

ing and learning. School administrators had sufficient skills in transferring knowledge. School administrators were examples of using digital technology linking to the school operations and provided assistance, advice, and promotion of learning and problem solving.

According to R. L. Tyger [13], the results of studying teacher candidates' digital literacy and their technology integration efficacy will be important to both College of Education faculty and P-12 public school systems. It is because digital literacy and technology integration efficacy within both content and pedagogical knowledge are important requirements necessary for our pre-service teaching (PST) candidates to successfully take the helm of their 21st Century classrooms.

Similarly, G. Tongpasuk [14] studied the priority need index for ICT literacy knowledge of new graduates. The results of the research showed that the needs for development in the first three areas were 1) ICT literacy processes, 2) ICT in education, and 3) database usage.

Through these study results, it can be seen that it is possible to promote the digital literacy skills of school administrator and teachers with the implementation of practices involving digital technologies. The technological plan for marginalized schools should be implemented and equipped with appropriate technological resources to develop digital literacy skills. Skilled administrators in digital literacy can be encouraged attitudes of their teachers and students.

6. Conclusion

It could be said that the development of digital literacy skills for administrators under marginalized schools has been an essential part of school administration. Basic education management must focus on instilling to preserve and promote the marginalized rights as equality and human dignity with pride in being Thai people. Thus, the results of developing digital literacy skills for administrators under marginalized schools could be the initiation for caring and supporting marginalized schools all over regions of Thailand.

7. Recommendations

From this research, the recommendations are as follows:

7.1 The results of the current states and problems of digital literacy skills for administrators under marginalized schools will reflect the policy of the Office of the Basic Education Commission or other relevant educational agencies over Thailand.

7.2 There should be the building of digital literacy skills for administrators under marginalized schools that encouraged students of marginalized schools to benefit from Thai educational agencies actively.

8. Recommendation for Further Research

8.1 There should be the studying of digital literacy skills for administrators under marginalized schools all regions.

8.2 There should be the studying of digital literacy skills for teachers, educational personnel, and students of marginalized schools.

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The intercultural adaptations of Chinese students in a Thai international university

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Abstract

This study aims to investigate the difficulties Chinese students encounter in various dimensions of intercultural adaptation. With a qualitative and quantitative study, six participants of freshman to master's students have been interviewed with semi-structured guides, and 56 Chinese students have been asked to complete a questionnaire. Observation of participants had been carried out from 4 months to 2 years. The results demonstrate the seven facets of culture in the university field: Thai university studying culture; Thai administrative culture; Thai interpersonal culture; Thai social culture; Thai eating habits; Thai daily habits; and nonverbal communication. The results and conclusions will be used to compile an intercultural manual for Chinese students who want to study in Thailand, which will also be of help for Thai universities to enhance their studying prerequisites for Chinese students.

Keywords: Intercultural adaptation, Chinese students, Thai culture, nonverbal communication

Article history: Received 28 July 2021, Revised 19 October 2021, Accepted 20 October 2021

1. Introduction

The process of intercultural adaptation is the main focus of scholars in the anthropology, psychology, communication and sociology disciplines. Studies of foreign students involved in the adaptation process mainly within a host culture are documented [1]. The intercultural adaptation of students studying in a foreign country seems to be an unavoidable process. ASEAN students studying in China have difficulties in adapting to Chinese culture due to narrow interpersonal circle, channels, and the influence of new media [2].

Studying at a university overseas is becoming popular for Chinese high school graduates and where Thailand, with its significance in ASEAN and the Belt and Road, is an advantageous option for their future career. It should be noted that Thai university enrolment has declined since 2011 due to the low birth rate and such a growing Chinese student market has filled a hole in Thai tertiary enrolment. This study, therefore, focuses on Chinese students in a Thai international university, and the difficulties they encountered during intercultural adaptation which also includes nonverbal aspects of communication.

Byram [3] explained culture as rules of behaviors, values, and beliefs. He says the "culture shock" we have in a different country is out of deeper social and

unconscious rules, but which are considered important in a social group context. The so-called "culture shock" is a medical metaphor suggested first by Oberg [4]. However, this dramatic change falling from high excitement to gross anxiety and with recovery and growth is not experienced by everyone.

As far as previous Thai studies are concerned, the findings seem to be positive from the psychological viewpoint [5–7]. Stated that the factors to influence mental health and cross-cultural adaptation of Chinese students are levels of educational degrees and length of stay in Thailand. Sun, Yossuck, Panyadee, and Eklem [8] found Chinese students of the northern Thai universities less adapted to the environment.

Schumann's [9] acculturation model claims that social and psychological distance has a greater contribution to second language acquisition. As far as intercultural adaptation in Thai culture is concerned, language is the key factor [10],[11]. Nomnian [12] discovered that Thai teachers' accent of English and Thai language also interferes with the learning progress.

The difficulties faced by Chinese students with intercultural adaptation seem varied in the available literature (academically, socially, and environmentally). Most related studies about Chinese university students in Thailand are quantitative. Thus the objectives of this research are to explore and analyze the dynamic insights in the international universities. The conceptual framework derives from intercultural adaptation, cultural dimensions, and nonverbal communication.

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2. Methodology

2.1 Participants

The Chinese students participating in this study were from freshman to master level studying at an international university in Thailand. All the undergraduate participants were chosen from Chinese elective classes. Six took the qualitative semi-structured interviews, 56 (including two interviewed) took the quantitative questionnaire.

In addition, there were 56 effective questionnaires (from free elective Chinese basic courses), excluding those from Taiwan and Malaysia. 52% were males, and 48% were females. Students' national origins covered almost all of China except the Northwest region. From freshman to junior, about 64% were business majors. Nearly half of all students applied through study agents. Their result can be complementary to the interview.

2.2 Measures and procedures

Qualitative semi-structured interviews were used to explore varied aspects and nonverbal communication of intercultural adaptation of Chinese students. The interview guide referred to the researcher's study of Chinese teachers [13]. The interview consisted of two parts. The first part was related to the six different aspects of Thai culture, including Thai university learning culture, Thai university administrative culture, Thai interpersonal culture, Thai social culture, Thai daily habits, and Thai eating habits. Within each aspect, there were four questions. The second part of the interview had 11 aspects that dealt with nonverbal communication.

For the quantitative questionnaire, the interview guide was used as a reference to design an open-ended questionnaire. The questionnaire consisted of personal information and 10 questions which included the method for applying to the university; their reason for choosing to study in Thailand and at which particular international university; the most adapted/unadapted culture in Thailand and in the international university, etc.

Observation of student adaptation was carried inside the classroom and on campus. The problems of Chinese students encountered in the university dormitory were also investigated.

2.3 Data analysis

The transcripts of the qualitative interviews were classified. The reading of key responses was carefully underlined. Then themes were located and compared with the reviewed literature. The results of the questionnaire were presented as complement data.

3. Results and Discussion

3.1 Difficulties found in Thai university culture

The difficulties were shown in Table 1.

3.2 Unfamiliar Thai nonverbal communication

Nonverbal facets are investigated, such as chronemics, haptics, kinesics, proxemics, and vocalics. Chinese students found it difficult to adapt to Thai students taking off their shoes and sitting cross-legged even while eating. The least adapted is to take off one's shoes and sit on the floor. Older teachers are more concerned about etiquette, like using both hands for receiving anything from the teacher. As an example, students hugging teachers would never happen in China, or when Chinese speak loudly compared to the Thai students who in general speak with a quiet voice. Only 33% of participants who could tell the difference tried to lower their voice in public. Punctuality is also a problem, not only for Thai students but also for Thai teachers. They are often 10 to 20 minutes late. Low work efficiency was taken as a sign of low progress in Thai society. Male students are more similar to being female in characters with some actions.

3.3 Summary of questionnaire

According to the result, the top three reasons for choosing to study in Thai universities were: 21% favor of Thailand; 14% close to hometown; and another 14% with family working in Thailand. The most un-adapted metrics to Thailand were weather at 34%, food at 32%, and language at 16%.

The most un-adapted with Thai people were language at 46%, no un-adapted at 18%, and low efficiency at 7%. The most un-adapted to the international university where this study was made were: no un-adapted at 25%; language at 18%; and course at 11%.

Thai food and weather are complicated for adaptation since they are the most adapted with 30% of Thai food and 27% of Thai weather. Language was the third factor with adaption problems giving a 16% measure. However, language was the second factor in the Thai international university adaptation (18%), while 46% of those questioned getting along well with Thai people.

3.4 Through observation

Chinese students in Thailand tend to study business for their future careers, so English is quite important when studying at an international university. However, lacking a good learning foundation or attitude, some need to reenter, and overall the student dropout rate is high. As a result, more students now enter or have changed to Communication Arts majors. Those who cannot pass business or English classes transfer to other universities, and even to certain universities that take only Chinese students and teach in Chinese.

Chinese students majoring in Chinese or studying elective Chinese basic courses are required to do the same homework as Thai students. Their Thai or Chinese teachers only passively ask them not to disturb the class. Some Chinese students who take Chinese

Table 1. Summary of difficulties in Thai university culture.

Six Facets	Extract (S refers to the interviewee)
1. Learning culture:	
Expectation to university teachers	S5: There is a tutor in China who is with you all the time, very close to you, inform you and guide you.
Accent of Thai teachers	S1: Teacher's pronunciation has a strong accent, so I can't understand quite so often.
Group work	S5: Here emphasize group study, doing many reports. There will be Thai people, many Thai people actually do not like to be (working) with foreigners.
English proficiency	S4: Not good at English and couldn't work together for reports, so Thai classmates discussed by themselves, which was embarrassing.
Obtain information	S5: We have a kind of feeling that we never know where to get information. Later, I paid attention to FB, IG and Line, but the new students won't pay attention.
Western business text books	S5: I learned cultural differences to a large extent. Doing business in China will not pay special attention to cultural differences. China just uses dumping. Regardless of your culture, cheap price is the last word.
2. Administrative culture:	
Communication with dorm and registration staff	S6: The dormitory staff cannot communicate in English. S5: Registration staff's attitude has always been criticized. They may not like Chinese students. Generally, Chinese freshmen have poor English. They find it difficult to communicate in simple English, so they feel a little irritable.
Efficiency	S4: They think it may be polite to be slow. This makes me unadapted
Admission procedure	S2: There are no admissions notices. No one explains and shows you how to do it.
3. Interpersonal culture:	
Distant with Thai students	S3: Thai seem friendly, but deeply exclusive. Never invite us to go out on weekends, which is understandable. It is difficult to communicate deeply since the culture and language are not the same.
Complicated with Chinese fellows	S1: Southerners don't get along quite well with northerners, and their personalities are quite different.
4. Social culture:	
Royal taboo	S1: I think it should be more democratic. Having free speech is better. I prefer places where there is freedom of speech.
Alcohol sale	S4: I can only buy wine after 5 o'clock? I think this is not convenient. Is it because of Buddhism?
Cards playing	S4: For playing cards, they don't like gambling. After all, playing cards in China is very common.
Gender	S1: I don't discriminate against them, but I don't like them personally. I have seen and met, but personally don't like transgender people very much, LADY BOY, etc.
Unreasonable charge	S1: When traveling, we, Chinese, would be charged more, like taking a taxi, and be asked for a lot of money. Since I don't speak Thai, I am treated here as a tourist.
5. Daily habits:	
Heat	S6: It was too hot at first.
Shoes removing	S1: I don't know the taboos for head and feet, but they love to take off their shoes. When they go to eat, they take off their shoes and put them up. I don't quite understand it. I think it is Thai culture.
Toilet hose	S5: Mentioning the hose next to the toilet, my mother told me that it was not clean, and it was not clean to hold with hands.
6. Eating habits:	
Flavor, herbs	S4: I'm not used to Thai food until now. The spices are a bit strange. Not very comfortable with spicy and sour.
Breakfast, rice amount	S6: I can't eat rice in the morning. The rice was relatively small for me at first.
Cold drinks	S5: When I went back after half a year as a freshman, I accidentally said that I didn't drink hot water. My family thought it was so miserable.

Table 2. Summary of observation

Positive	Negative
+ Help from the Chinese student community	- Poor learning foundation or attitude
+ Clear dorm rules and regulations	- High loss rate
	- Mismatched nonverbal performance, habits

elective courses to boost their GPA do not take the class seriously. About 25% get below A-, while some have attendance problems. They do not take attendance seriously, and they might use leave to go to immigration or pretend to be sick as an excuse. Some leave the class early without telling the teacher. A few students doubt their Thai teacher's Chinese proficiency and argue to annoy the teacher.

At this international university, the numbers of Chinese students were, at one time, the most in Thailand and used study agents in China to help enlist students who wish to come to study in Thailand. The university is famous for its Business School. Chinese students need to make an effort to pass business and English courses. All participants said many of their friends simply disappeared during their studies. Many went back to China or transferred to universities that are easier to graduate from.

For nonverbal communication, Chinese students tend to lack gentle eye contact, compared to Thai students, which seems to instill a lack of trust or doubt. In addition, they lack gentle action, such as closing the door, so the van driver needs to remind them to close the door gently. While waiting for the tram or van in the university, they might rush to the fore, speak loudly in the van or talk loudly on their cell phone without an awareness of disturbing others. Although all participants like the uniform of Thai universities, they do not have the habit of ironing their shirts, so often it is wrinkled and unkempt. They seem unaware of the smell of their clothes and personal hygiene. In the early morning, some male students have messy or greasy hair as they do not shower as often as Thai students, so ingrained because of the weather. In the sports field, male Chinese students might take off their shirts and play as "skins" with the upper torso naked which is unusual in Thailand but common in China.

3.5 Discussion

3.5.1 Relationship with teachers under power distance

From the power distance detailed by Hofstede, the higher score represents a higher power distance environment. For example, China has a score of 80 compared to 64 for Thailand. Although Thailand has a lower score, the power distance seems greater than China in many ways.

In class, Thai students will seldom disagree with teachers regardless of what is said or taught and regardless of agreeing or not with what is taught. Teachers' authority is above students, so whenever their au-

thority is questioned, teachers will not tolerate such students. As an example in a Chinese class with a Thai teacher and native Chinese students, the Thai teacher would transfer out a Chinese student for arguing possible correct answers with an impolite attitude, and in so doing, challenged her Chinese proficiency.

Nevertheless, physically the distance is relatively smaller. They can hug each other like children with parents for gratitude. Thai students that hug teachers are a shock for Chinese students where physical touch might be a cause of problems in China. Chinese always have a tradition of respecting teacher, and will never have physical contact with their teachers.

3.5.2 Sex and gender mixture

Thailand represents femininity with a score of 34 while China with 66 represents masculinity. It is quite obvious that in Thailand both social genders overlap, and they behave gently and pay attention to life qualities. The gender differences have clear characteristics. Amongst the Chinese interviewees, 75% of males respect and understand the phenomenon of LGBT, except the master's student who studied in a Korean university. He is from the northeast province of China which is close to Korea. He identifies only with typical gender roles in China and Korea, so he has difficulties in understanding non-binary individuals. The two female participants who are all from the south of China accept it totally. One thinks that Thailand is more civilized about this development trend, and the other has a good friend as a "transgendered woman" who takes care of her like a mother. Students from the south of China tend to accept new ideas and phenomena easier. The new generation in China is also less masculine.

3.5.3 Confusing politeness

Thai embodies politeness in many ways, such as wearing the right outfit for the right occasion, avoiding pointing to people with their feet, and speaking softly in public, etc. But on certain occasions, they might take off their slippers or shoes and sit cross-legged, such as eating. They can sit on the ground easily without considering if it is dirty according to a Chinese view.

The participants feel positive towards a received smile from "Land of Smiles", which is consistent with Samovar et al. (2017). It is said that outsiders cannot read the smile of a Thai person as there are so many variations depending on the purpose and meaning. Chinese participants do not build a deep relationship with Thai, so they cannot tell the difference. They

all take their Thai smile as a way to express friendliness.

3.5.4 Value barriers

Cultural values are hidden at the core of social culture. They are revealed from time to time and become barriers to intercultural adaptation.

As far as language is concerned, contradicting Schumann's acquisition theory, although Thailand and China seem to have smaller social distance and Chinese are welcomed by the Thai tourism, they do not contribute to learning Thai language. In line with Songsirisak, English and Thai languages are the crucial factors for Chinese student adjustment in Thai universities. Thai teachers' English accent can be problematic for comprehension is in line with Nomnian.

Learning English seems more important. As two female interviewees had planned, studying in Thailand at an international university is a bridge to English-speaking countries for further study. They have also spent a lot of time and effort in improving their English to meet university requirements, so leaving little or no time to study Thai. All participants stay in their Chinese circle: having Chinese roommates; attending class with Chinese friends; having a social life with Chinese, etc. There are even Chinese restaurants inside or near the campus, and not knowing Thai does not seem to be a problem when it comes to the goals of the student.

In addition, Thai Tourism has a deep reliance on Chinese tourism and students. Learning Chinese for Thais seems to be more motivating and advantageous than the other way round. Therefore, learning Thai is not a must in the international university lives for most Chinese students, as there is no real incentive. Further, lacking deep contact with their Thai classmates means they do not have much curiosity in Thai language and culture as they are not fully immersed. According to the survey, language factor in the Thai international university adaptation is only 18%, but 46% is of getting along with Thai people. The reason for the lower percentage may be that students can communicate at least in English inside international campuses. Most, however, will stay within their clique Chinese groups and will not integrate with Thai students. Lacking motivation for learning the local language seems to be a forever barrier of intercultural adaption for Chinese students.

As for Thai food, the interview corresponds with Nomnian which has a major impact on adaptation. Six interviewees all dislike Thai food no matter how long they have stayed in Thailand. Once the first impression fossilizes, it is hard to learn to adapt to Thai food. Food seems to be the most difficult thing to adapt to in intercultural adaptation. In this aspect, they use a separation strategy to avoid eating Thai food. It confirms what Li [2] asserts, Chinese students use differ-

ent strategies towards Thai host culture. However, the survey also demonstrates Thai food wins 30% hearts of participants, being the most adapted.

As Kim asserts that adaptation is a growth experience under stress, from the participants themselves, it is obvious to recognize if they have grown through the process of adaptation. S1 has a lot of traveling experience and had a Korean bachelor's degree. Although self-assertive and with many intercultural experiences, he seems hard to accept what he has not seen before, such as LBGT and alcohol ban on campus. S3 and S6 both are good observers. They noticed the speaking volume of Thais, then adapted to lower their voices in public. S1 is an example of using his own experience or mentality to see Thai culture, lacking the opportunity to learn how they react or think, and this seems to stop him from growing and seeing life from a different perspective.

Chinese freshmen who are used to the crowded environment in China seem unaware of their loud volume, body movement, self-centeredness (not quite thoughtful for others), and ignoring the rules to some degree. When taking the tram or van, being afraid of missing and rushing to get in without considering the others lining up before them is the norm. The habit of staying with Chinese friends all the time and letting them live the same lifestyles as they had in China is discouraged. It becomes more difficult for them to observe how Thai behave, to know how Thais think or act.

4. Conclusion and Implications

Under a mainly qualitative study, dynamic and complicated intercultural adaptation aspects were explored and analyzed. In the international university field, Chinese students need to adapt to a Thai university studying culture, such as independent learning; administrative culture, and common English communication skills; interpersonal culture, such as building a friendship with Thais; social culture, such as alcohol bans; eating habits, such as cold drinks, daily habits, such as removing one's shoes; along with nonverbal communication, such as avoiding to use one's feet to point to with. With this survey result, language is the key factor to getting along with Thais and studying at an international university in Thailand. Thai food is tricky since it can be the most adapted and the most unadapted culture. For the unadapted students, time will not help them to adapt.

Facing the prospect of local student numbers reducing, there is a push to attract more Chinese students as a way to keep a school running. From the findings presented herein, Thai universities could take the content of interviews and observation as intercultural training examples for Chinese student orientation in order to help them adapt to Thai culture sooner and more successfully. With the limited time and effort, the results

could be a reference for quantitative research in measuring cultural factors in the future.

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Faculty development practices in Filipino–Chinese schools

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Abstract

This study aims to identify, describe, and compare faculty development practices in Filipino–Chinese schools and examines social contexts in which they are situated. Data were gathered from school heads, current teachers, and those who transferred schools through online interview to share their experiences, perspectives, and practices. Using case study design in multiple case study approach, three (3) school heads, six (6) current teachers, and three (3) teachers who transferred to other schools participated in the study. The interviews were done online through Google Meet or Zoom and the interview guide was validated by seven experts. Data analysis, research consultations, and selection of participants were conducted in Metro Manila, Philippines. The findings from this study revealed that faculty development practices in the three Filipino–Chinese schools are: (1) gears toward institutional excellence, (2) synergizes the development of leaders, (3) advances community endeavor, and (4) bears the responsibility of individual teachers and school. This study concluded that institutional support could nourish or hinder the implementation of faculty development, school culture is an important factor in designing faculty development programs, and migration to online teaching now dictates the future direction of faculty development program.

Keywords: Faculty development practices, faculty development, Filipino–Chinese schools

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1. Introduction

Chinese education system generates attention and interest for its successive performance in the Program for International Student Assessment (PISA) and emergence as a global hub for higher education by establishing world-class universities [1]. However, Chinese education system has changed over the years and reshaped through experimentation and reform, focusing on high and universal expectations for all students, great teaching, provisions of resources for struggling students and schools, provision of the mandatory national curriculum framework for primary education, and employing textbooks as the principal means to implement curricular aspirations [2]. On top of these, teachers' professional development (PD) becomes a top priority tied to the education system's career advancement framework. A "teaching research system" has been set up to allocate training and extend support to teachers in the profession [3].

In the Philippines, the first Chinese school, named Anglo-Chinese School, was opened in 1898 and founded by Tan Chue–Lion, the first Chinese Consul in the Philippines. With the increasing Chinese population, Chinese schools totaled 58 by 1935 and 159 in 1964, with 52,000 students. Today, "there are 207 elementary and secondary schools for overseas Chi-

nese, three state-run Confucius institutes, and 27 colleges with Chinese course in the Philippines" [4]. Students in these schools are mostly of Chinese descent and only a few non-Chinese students.

The Philippines boasts of Filipino students who bagged and won awards from various international Math competitions [5]. However, these students mostly come from the best Filipino–Chinese schools in the country. Likewise, a number of Filipino–Chinese students have topped local and international competitions, such as the Math Challenge sponsored by the Metrobank Foundation, the Department of Education (DepEd), the Math Teachers Association of the Philippines (MTAP), and the International Math Olympiad (IMO). Such performance can attribute to certain best practices in terms of faculty development of teachers in Filipino–Chinese schools.

This research study aims to fill the research gap concerning the best practices in faculty development of teachers and the factors that impact it in Filipino–Chinese schools. What are the current faculty development practices in Filipino–Chinese schools as perceived by teachers and school heads?

Several researchers offered various conceptualizations of faculty development based on goal, scope, and emphasis [6]. It has evolved from the traditional model which is linked to the acquisition of knowledge and skills that is passed down from educational experts to teachers who then apply this knowledge in

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their classrooms [7] to a continuing learning process where teachers participate to learn and reflect on how to adapt their teaching practices to the learning needs of the students [8]. As such, it is regarded as a long-term process of growth, facilitated through regular opportunities to promote learning.

Furthermore, extensive research has defined the characteristics of effective faculty development to be successful as follows: content focus, active learning, coherence, sustained duration, and collective participation [9],[10]. In addition, its relationship to student achievement and transfer of learning was also examined by various researchers [11-13]. However, learning opportunities that are available to teachers today have been found ineffective in improving instruction or focused on individual teachers and individual programs or activities without inclusion of influences from the school system context [14]. More studies have emphasized the factors that impede the implementation of faculty development, such as the heavy workload of teachers, lack of time, attitude of teachers, lack of support from the school and leaders, and lack of teacher centeredness in terms of topic or content [15].

Emergent directions of faculty development are due to advances in technology as characterized by mobile-centric society [16], heutagogy, connectivism and connected learning theories [17]. It is imperative to learn how this can provide alternative approaches to faculty development. Consequently, numerous studies highlighted the positive impact of technology and innovation, such as the use of online social networking services, like Twitter, to build professional learning community through sharing practices online [18]. Several studies that have theoretical underpinnings in connectivism and connected learning were consolidated and reviewed by Watulak [19]. Connected learning is an evolving model that “uses media technologies and human networks” to support interest-driven, in-and-out-of-school, online, intergenerational, and interdisciplinary learning that transcends global boundaries.

2. Methodology

The case study approach allowed the researcher to examine the faculty development practices in Filipino–Chinese schools, to identify the common elements in these activities, and to explore what variables were linked. It also enables the researcher to uncover the meaning that teachers and school heads ascribe to their FD experiences in their own context [20]. The interviews were done online through Google Meet or Zoom and the interview guide was validated by seven experts. Data analysis, research consultations, and selection of participants were conducted in Metro Manila, Philippines.

The first step conducted in analyzing the data was to transcribe the interviews. The verbatim transcriptions

of audio or video recordings captured the whole statement of both the interviewers and interviewees. Next is coding the text. This process also involves organizing the data by bracketing, segmenting, and writing words representing a category in the margins. After the initial coding, the researcher scrutinized the data with a closer eye, one document (one interview transcript) at a time, and studied the meanings. The most descriptive wording(s) for the codes were turned into categories. By creating these code categories, the data became more organized, and the researcher was able to see new connections between different groups of codes and reduce the list of categories. Moreover, the researcher identified redundant codes or codes that do not support the analysis to be eliminated. To implement this action, literal meanings of the codes were analyzed, the number of meaning occurrences was counted, and some non-verbal clues connected with the codes were recapped. From this categorization of codes, the researchers advanced to identify the consistent and overarching themes in the data. This is the part where the researchers analyzed and drew meaning from the data, generated themes for analysis, proceeded as to how the description and themes will be represented in the qualitative narrative, and finally interpreted the themes.

The participants in this study were three (3) school heads, six (6) current teachers, and three (3) teachers who transferred to other schools. Hence, purposive sampling was employed. The school head participants are limited to principals, directors/directresses, officers-in-charge, or the highest-ranking professionals responsible for faculty development in Filipino–Chinese schools. The teachers with a minimum of ten (10) years of working experience in these schools were considered participants. Those who transferred to other schools but possess a minimum of five (5) years of teaching experience in Filipino–Chinese schools also included in the case study.

2.1 Results and Discussion

2.1.1 Faculty development gearing toward institutional excellence

The end goal of any faculty development program is student learning. Teachers engage in FD to become excellent by broadening their vision, perfecting their competencies, and sharpening their skills. When students learn, the school stands out because it provides quality education. In this respect, it leads to institutional excellence. Indeed, the school gives intentional and continuous training so that teachers will be excellent in their field to accomplish the goal of the school which is to provide quality education and be competitive with other schools.

“How can we provide quality education if we cannot share that with our students. So we need to have our quality education first before we can share that

with our students. That's the purpose of our institution." (T2–TH1)

Every institution conducts an assessment in some form as part of continuous improvement initiative. However, performance review or evaluation of teachers and staff should not stop from collecting documentation and assessing the results. It must be combined with planning and used as a basis for preparing or implementing faculty development program. Likewise, performance appraisal must have coherent performance indicators and marking schemes, and be tied to the salary increase. Therefore, its orientation is to give and get a reward from participation in these activities.

"There is a pointing system for promotion. How many seminars have you attended? Okay so, the pointing system that we need to count, not only to get renewal of license." (SH3–TH1d)

2.2 Faculty development synergizing the development of leaders

The word “synergy” means working together to create something better than doing it alone or being partners to achieve excellence. In this regard, faculty development can be an avenue to develop leaders whether at present or in the future. Each school must have succession planning for sustainability. In addition, it will reduce the expense in recruitment and high turnover costs.

Implementing a leadership strategy is akin to career mapping. It directs the initiatives in leadership development with strategy, vision and mission, goals, and aspirations of the school. The first step in any leadership strategy is to identify potential leaders and help them identify their God-given talents and calling. Next is mentoring that involves instruction to facilitate the transfer of vital knowledge, skills, and information to the potential leader; giving the leader the right tools; and shaping and strengthening the character through mentor-mentee relationship. The last one is an empowering culture that gives opportunities to potential leaders to watch, learn, and lead along with his/her mentor or other leaders with more experience. When teachers are empowered, it also makes the team or the community better. It creates synergy. To quote:

"We complement each other, some teachers may be good at this, some teachers maybe not, but they have other strengths. We can complement each other, empowering each other." (L3–TH2b)

No leader can lead alone; leaders seek support from other administrators or teachers by delegating or distributing responsibilities to focus on more crucial tasks. This can provide opportunities for teachers and other leaders to grow and realize their potential. It involves matching and assigning the task to the right people [21]. The participants shared the following practices in terms of creating new leadership lanes: training students for outside competitions,

heading a program committee for a school program, being assigned as a class or club adviser, or tapping teachers with certain skills or specialization to conduct the training whether school-wide, departmental or in smaller groups. In some cases, the leadership role is established due to change or external factors.

2.3 Faculty development advancing community endeavor

Faculty development mainly takes place in the community, the school. Similarly, if we want to achieve institutional excellence for the sake of student learning, our mindset regarding faculty development should change. We need to realize that faculty development is not about “me” but is a community endeavor. Roels [22] described it as mirrored development between the individual professional and the school community. She further explained that “the development of every single teacher and administrator in the school setting has profound implications for every other person associated with the school”. [23]

The first sub-theme shows that faculty development is culture-focused. It mirrors the culture of the school. Each school has its own unique culture, more in Filipino–Chinese schools where learners are more diverse in terms of ethnicity, language, religion, and family background. Sullivan [24] further stated that teachers’ attitude on professional development planning is influenced by school culture. The school needs to utilize a matching strategy between tools (individual strengths of teachers) and plan (FD opportunities) and align it to the intended future of the school. Likewise, it should include everyone even the janitors, janitresses, security guards, and other maintenance personnel.

Next is collaborative planning for faculty development which is characterized as organized, collegial, and cooperative. Planning is admittedly the most difficult aspect in the implementation of faculty development. Obviously, developing a collaborative plan intensifies the difficulty of the process. It seems repetitive. But to make the planning effective, the people involved in planning must have an in-depth understanding of the institutional goals and focus all the initiatives or efforts toward them. One commonality among the participant schools is that no single or specific office can oversee and manage the faculty development alone, but with collaboration. The practices involve: (1) regularly meetings with team members, (2) soliciting feedback from teachers, and (3) aligning institutional and departmental FD goals to complement the overall vision and mission of the school. To quote:

"Ahh. It's a collaboration of the academic heads, vice-principal for academic, vice-principal for admin, and then the supervisors. The HR also gives input." (SHB–TH3b)

One practice that was found common to all participants is in the aspect of collegial learning. Teachers

are learning together, especially in terms of technology use and integration of technology into teaching in an informal and personal way. In this format, teachers learned how to use Zoom, Google Meet, Google Classroom, and other apps that help in delivering instruction to students online. Also, teachers who have the necessary skills are given a chance to train other teachers and share what they know. However, FD promotes collegial sharing and learning even before the pandemic. Teachers are bringing in and recommending new ideas to schools. To quote:

“So, there are many new ideas that we implement, like... ‘you know we can do this, I learn this from my MA’. ‘I learn this from my Ph.D.’ ‘I learned this from webinars.’ So, we have an exchange of ideas. We can do this.” (SHC–TH3c)

The participants shared that the most tangible support they received in terms of FD from the school is financial support. It comes in different forms: (1) scholarship grant, (2) study loan, (3) registration fee for seminars and workshops, (4) food and transportation allowance when attending in-house and outside training, and (5) subscription to different apps like Kahoot! and Pear Deck. Also, the teachers can use school materials and school resources like printing and researching for their papers or assignments. They are also allowed to use their vacant periods to work on their assignments or study as long as supervisors are informed. Some commonality from the responses is the perceived support from leaders and colleagues through the following: (1) encouraging them to pursue graduate studies, (2) substitution system, (3) psychological support, like counseling, and (4) instructional coaching. With the onset of migration to online teaching, some commonalities from the responses concerning institutional support are the following: (1) online trainings and virtual workshops, (2) provision of laptop, (3) financial loan to purchase laptop or other peripheral devices, and (4) internet subsidy.

2.4 Faculty development bearing the responsibility of individual teacher and the school

There is a multitude of educational seminars, conferences, workshops, professional development blogs, and online resources for faculty development. The process must start from individual teachers at the bottom with overall leader and institution support echoed by some participants:

“I think to generalize mine; my perception of faculty development is a responsibility. So, one is... it is your responsibility to yourself, to your growth for your personal growth. And then, it is your responsibility to your students as well.” (L2B–TH4)

Three sub-themes emerged: (1) Teacher as a lifelong learner (continual improvement). Technological changes are evolving across all facets of our lives. A decade ago, there was even a claim that machines or robots will replace human manpower in the future as

depicted from the earliest science fiction movies to the more realistic advances today in artificial intelligence, smartphones, cloud storage, and the Internet.

Among all the cases, the participants perceive that teachers are lifelong learners because they demonstrate the tendency to be self-directed individuals. They have a passion to teach, engage in continuous learning, and update their skills. The participants asserted that teachers have to improve themselves to be effective in their craft due to the following reasons: (1) the content of the lessons are changing; (2) the way we deal with students has to change; and (3) what is happening right now with emerging technologies. Thus, seeking continual improvement is a responsibility for both the teachers and the institution.

Education evolves so fast that techniques, skills, and technologies become obsolete within five years. It is, therefore, a necessity for teachers to have an attitude of a lifelong learner. As Jao [25] stated, teachers must “refine and redefine” their views, assumptions, and practices about teaching through professional development. It helps them incorporate new tools and strategies into learning process to boost students’ learning development.

Second, teachers became digital migrants (Progressive, Innovative, Adaptive). Ultimately, technology became an integral part of teachers’ lives. The pandemic altered the educational landscape around the world since last year illustrating a myriad of changes. Faculty development is not limited to face-to-face (F2F) workshops and seminars. The classroom is no longer a four-walled room, and students can experience field trips and perform laboratory experiments in a virtual environment. Even before the pandemic, teacher participants exhibited characteristics of being digital migrants such as the following: (1) searching the Internet for sample lessons, illustrations, or related instructional videos; (2) using online portals like Scholastic Learning Zone, and KooBits; (3) using Google Classroom and Edmodo in uploading and posting instructional materials and tasks for students to accomplish; and (4) attending online courses.

One positive thing about the pandemic that influences teachers is that they were forced to upgrade themselves.

“But in a way, it gave us a new perspective. Those who are still traditional teachers, at the moment they are learning new technology, platform, and how to teach using this mode, at least.” (T4B–TH4b)

Most often than not, teachers got so overwhelmed with classroom responsibilities and other institutional requirements, so that faculty development takes a backseat in their professional lives. But in the current high-tech, global, and instant-message culture, teachers are driven to enhance themselves to keep up with the trends. With the migration to online learning, they were pushed to become digital migrants. In this study, the teachers showed that they are progressive, innova-

tive, and adaptable when the situation required them to be.

In the third sub-theme, schools are considered as a provider of faculty development (Responsible, Accountable). A school that is committed to faculty development of the teachers, staff, and all other personnel conveys a strong and clear message to the community: pursue continuous improvement. School administrators and leaders should believe in investing in teachers. Their attitude toward faculty development will dictate the FD program in schools even the infrastructure and other resources related to the implementation of the program. To quote:

"I have a very strong support from the board. They fully understood what faculty development is, and that's very important. Of course, allocation of budget... very important." (SHC-TH4d)

Similarly, the schools in this study provide institutional and departmental FD aligned to their schools' vision and mission. This depends on the clientele and needs of teachers in each department. But the differences in the practices among all the cases stem from the attitude of school leaders or school boards toward faculty development. It demonstrates the need to: (1) get the buy-in of the school board, (2) consider teachers as key factors in schools, and (3) invest in teachers.

The following factors were found to hinder the implementation of faculty development in the three Filipino-Chinese schools. First, the composition of teachers impacted faculty development in terms of engaged and unengaged participants. Tenured teachers are more relaxed in their participation, unlike the teachers who are still on probation. Second, financial support is limited because it depends on tenure or the number of years in service in schools. To quote:

"There are qualifications to meet, or requirements to meet before we can support you." (SHB-BA2)

Third, the salary and benefits of teachers are not significant and at times it is not proportional to the heavy workload assigned to teachers.

Fourth, the number of training is perceived as limited by some teachers because not all are sent to outside training. Fifth, the consistency and frequency of FD delivery are affected by class suspensions. Most of the time, the schedule for FD is already plotted in the calendar of activities for the whole school year. However, due to class suspensions or disruptions, the schedule is pushed back and at times coincides with other activities resulting in conflict with other deadlines of institutional requirements, like submission of grades, lesson plans, or quarterly tests. Sixth is the absence of follow-up after evaluation of FD activities. Last is leaders' perception or attitude towards FD.

The participants' perceptions regarding the future direction of faculty development were also stated. Furthermore, these challenges manifested in the faculty development practices found common in this study.

The solutions given are summarized as follows: (1)

provision of incentives (pointing system tied to performance appraisal and salary increase, flexible working arrangement, substitution system with compensation, and financial assistance/loans); (2) soliciting inputs from teachers; (3) technological infrastructure upgrade (internet subsidy; laptop loan; and school's class disruption plan), (4) technology-focused training; (5) mentoring/coaching (indoctrination, Solomon-Effect mentoring style, and customizes/personalized FD); (6) succession planning; and (7) promoting parents' involvement (equipping parents-role as co-educators at home).

Now more than ever, FD should address the need to enhance teachers' competencies related to curriculum, particularly on content, methods, and strategies of teaching content and theories and the use and integration of ICT in online teaching.

3. Conclusion

Based on the findings of the study, it can be concluded that faculty development gears towards instructional excellence, and the end goal should be student learning. Holistic activities that are aligned to the goals of the school must be provided, tied to performance evaluation. Consequently, faculty development synergizes the development of leaders. Career mapping or succession planning must be incorporated into the FD program. To develop a leadership culture, these practices must be cultivated: modeling or practicing what is preached, mentoring, empowering, and delegating tasks to the right people.

Faculty development advances community endeavor through collaborative planning and providing institutional support. This collegial atmosphere encourages teachers to become collaborative learners. Finally, faculty development bears the responsibility of individual teachers and the school to seek continual improvement. The growth mindset of teachers combined with the accountability of schools to ensure the provision of effective FD will lead to institutional excellence.

From the findings and conclusions derived from the study, the researcher hereby put forward the following recommendations. Faculty development programs should be balanced or holistic, vision-driven, growth-oriented and productive, and reward-oriented. It must be planned with specific goals; thus, goal setting is important to individual teachers or the institution.

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Decision-making process for purchasing organic vegetable products through electronic commerce systems and multi-channel marketing

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Abstract

This research aims to: 1) study the decision-making process to purchase organic vegetable products through electronic commerce systems and multi-channel marketing; and 2) compare the decision-making processes for purchasing organic vegetable products through electronic commerce and multi-channel marketing when classified by personal factors and consumer behavior. The researcher collected data from 750 customers who have purchased organic vegetable products through electronic commerce derived by convenient sampling. Additionally, the statistics used for data analysis consisted of percentage, independent t-test, one-way ANOVA, confirmatory factor analysis, and path analysis using structural equation model (SEM).

The results found that: (1) the behavior after deciding to purchase organic vegetables products through multi-channel marketing caused by the combined influence of purchasing decision (TE = 0.95), alternative evaluation (TE = 0.94), searching for information (TE = 0.85), and recognizing the needs of the problem (TE = 0.82) respectively with 91% of predictive value (2) the decision to purchase organic vegetable products through electronic commerce and multi-channel marketing classified by consuming behavior of the respondents, was different in factors such as status, education, income, occupation, media channels, and purchase time with statistical significance at the .01 level, while age showed statistically significant difference at the .05 level.

Keywords: Decision-making process, organic vegetables, electronic commerce systems, multi-channel marketing

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1. Introduction

The advantage in terms of geography and fertility makes Thailand a leading country in the world to produce quality agricultural products, and can be updated to be the kitchen of the world. For this reason, the governments of every era give importance to policies related to agriculture. However, the final result was not as successful as it should be, considering the income of Thai farmers which is still at a low level. According to the survey result from the Office of Agricultural Economics, the net income of agricultural households was 269,449bath/household/year in 2019 while agricultural household debt was 221,490bath/household/year in 2019. In addition, 55% of the debt is borrowed for agriculture [1]. It is a good sign that the current government's policies have taken more care of agriculture, resulting in the income of Thai farmers tending to expand better.

The popular trend of the world in this era is "health-loving" which has reflected in widespread attention to

exercise doing, daily use of natural or chemical-free products, and decision to purchase organic vegetables. Vegetables are considered an important healthful food that Thai people like to eat. Vegetables are rich in both vitamins and minerals and are highly beneficial to the body [2]. Consumers tend to choose to consume vegetables that are beautiful without signs of worm infestation and insect pests. Therefore, vegetable farmers use chemicals to prevent and kill insects spraying in large quantities in order to get beautiful vegetables according to the needs of consumers in the market. When buyers consume them, they may be harmed by toxic substances that remain in the vegetable. Therefore, a new market segment, "Safe vegetables", that is not harmful to the environment and consumers was born. The safe growing of vegetables improves the production system in accordance with nature. The gain products are safe for both farmers and consumers. The main principle of safe vegetable products is to focus on reducing the use of chemicals in production by using the factors of production available in the area for maximum benefit to reduce the cost of production [3]. Regarding the results of the market survey of safe vegetable products in Thailand in 2019, the value is not

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less than 3,000 million baht, the export value is about 2.1 billion baht, and the growth rate is about 10% per year. The cultivated area of Thailand from the original 357,091 rai increased by 83%, or equivalent to 0.65 million rai. In ASEAN, Thailand is the 3rd after Indonesia and the Philippines [4]

Furthermore, the pandemic of COVID-19 has driven consumers to work from home and use a mobile phone for purchasing online, having more time with technology. These also include the push from the government to use financial transactions via mobile phones that can cause the change of the consumer behavior to buy products and services using more technology. The purchasing decisions through electronic commerce and multi-channel marketing began to play an essential role in making the business successful [5–7].

Additionally, the success factors in multi-channel marketing are understanding consumer behavior and designing appropriate multi-channel marketing channels with digital or modern media; designing a database system to manage information in multiple marketing channels effectively; and having a good partner in marketing [8]. The main objective of the research on the decision-making process for purchasing organic vegetable products through electronic commerce and multi-channel marketing is to study the behavior of consumers. It had been expected that the research results will be a helpful case study for organic vegetable traders in adapting to a new world of technology in marketing, scholars, and those who are interested.

2. Research Objectives

1. To study the decision-making process for purchasing organic vegetable products through electronic commerce and multi-channel marketing.
2. To compare the decision-making process for purchasing organic vegetable products through electronic commerce and multi-channel marketing, as classifies by personal factors and consumer behavior.

3. Literature Review

For the literature review, this research focuses on key variables including:

3.1 Purchase decision making process

It refers to the process of choosing to do something from a variety of options under the information and the constraints of the situation. In the minds of consumers, [9] it is the process of choosing a product from two or more options by consumer behavior. It will consider in connection with the decision-making process in both mental (feelings) and physical behaviors. The decision-making process is a sequence step in consumer decision making with a sequence of 5

steps as follows: [10] 1) problem of Need Recognition, 2) search for Information, 3) evaluation of alternative, 4) decision making, and 5) post-purchase behavior. For online shopping decision theory, it focuses on consumer response or consumer decision. As follows [11] 1) product choice, 2) brand choice, 3) dealer choice, 4) purchase timing, 5) purchase amount, and 6) Criteria.

3.2 Multi-Channel Marketing

Multi-channel marketing is a new marketing concept that enters a highly competitive business by focusing on reaching customers first to create a competitive advantage, merging multiple marketing channels, communicating and delivering various information to reach customers, and attracting them to buy products [12]. Multi-channel marketing will play a role as part of a strategy to generate sales and profits with the objective that customers can choose a channel to purchase products according to their convenience. It helps develop a supply chain system by selecting the appropriate channels which may be considered based on the return of investment in each channel or based on customer feedback compared to sales [6]. Multi-channel marketing strategy has developed rapidly in many businesses. It has seen the need to compete for market share to reach customers and attract and maintain a good relationship with customers by defining a marketing channel structure with more than one channel to reach customers [13]. The main elements of multi-channel marketing consist of: 1) exist of Omni-channel marketing which helps to connect by emphasizing the consistency of products across marketing channels, and marketing promotion in marketing channels; 2) design of efficient information systems; 3) order and delivery processes through all marketing channels; and 4) finding partners in marketing channels in this digital era which has changed due to modern media. The integration of media roles will be a channel that makes consumers more likely to adjust the platform to purchase products appropriately. If it is convenient to access, use and have an easy way to use, it will cause a chance to buy the product [14]. The results of the study on the development of such concepts over the past 10 years found that the development of information systems has evolved greatly. The concept of multi-channel marketing systems has continually developed until there is a research in the marketing that mentioned multi-channel marketing develops the market beginning from a single channel to multi-channel at the moment. However, the current trend of electronic commerce has started to have entrepreneurs stepping over to the market through cross-channel and including marketing through Omni-channel. The development of information technology will make it possible to bring information from all channels and all scattered parties to be consolidated and processed together [7], [15], [16], [17]

The results of the literature review led the research team to formulate the conceptual framework as follows:

4. Research Methodology

4.1 Sample population

The researcher collected data using a questionnaire from 750 consumers who have purchased organic vegetable products through electronic commerce. The sample size criterion of Hair et al. [18], which defines 20–50 samples per observed variable, was used in this research. Since this research has 14 observed variables, the researcher defined the criteria for 50 samples per one observed variable and used a convenient sample selection method.

4.2 Research tool

The tool used for this research was a questionnaire that passed the content validity test from 3 experts. The reliability of Alpha Cronbach was tested in a non-sample group of 30 and got an alpha coefficient value between 0.79–0.94. This assumed that the tool is of sufficient quality to store data.

4.3 Data analysis

Percentage, independent t-test, One-Way ANOVA, confirmatory factor analysis and path analysis of structural equation model (SEM) were used for data analysis.

5. Research Results

The results demonstrated that most of the respondents were female (68.00%), aged 21–30 years old (70.67%), single (59.47%), bachelor's degree (60.13%), and income less than 20,000 baths per month (81.60%), Student/scholar (53.07%). Regarding the consuming behavior of the respondents, it was found the platform to purchase organic vegetables through electronic commerce. The first three were caused by advertising media (41.20%). Time spent per day to buy organic vegetables was average less than an hour (56.73%). The frequency of buying organic vegetables was 1–2 times per month (45.87%). The time to purchase organic vegetables was mostly 12:01 pm–4:00 pm (33.07%). The average price for purchasing organic vegetables per time was between 100–300 baths (55.87%). The main application to buy organic vegetables was Facebook (66.33%). In addition, the payment selection was paying cash to a delivery man when receiving the product (Cash on Delivery) (61.47%). The most popular product purchasing through electronic commerce, except organic vegetables, was clothing/accessories (38.00%). More than one in three consumers (37.87%) agrees that the electronic commerce system is suitable for Thai customers

Table 1. Descriptive statistical analysis results

	Mean	SD.	Skewness	Kurtosis
NEED01	4.02	0.79	-0.35	-0.56
NEED02	3.98	0.81	-0.36	-0.52
NEED03	3.98	0.80	-0.25	-0.76
INFS01	4.00	0.79	-0.38	-0.32
INFS02	3.95	0.82	-0.45	-0.10
INFS03	3.94	0.82	-0.37	-0.46
EVAL01	3.99	0.81	-0.37	-0.52
EVAL02	3.98	0.80	-0.41	-0.35
EVAL03	4.00	0.81	-0.41	-0.44
DECI01	4.01	0.79	-0.38	-0.46
DECI02	3.96	0.80	-0.39	-0.30
DECI03	3.99	0.80	-0.42	-0.19
POST01	3.97	0.78	-0.36	-0.25
POST02	3.98	0.80	-0.32	-0.59

who buy organic vegetables such as multi-channel marketing.

The results showed that the decision process to purchase organic vegetables through electronic commerce is safe with an average of 3.95–4.02. As for consideration benefit distribution of variables was found between –0.25 to –0.45, not more than ± 2 . It is considered acceptable at the 0.05 level of confidence. The kurtosis of variables found between –0.10 and 0.76, not more than ± 2 , which is considered acceptable [19], [20]

The decision process to purchase organic vegetable products through electronic commerce and multi-channel marketing

In this research, the researcher used path analysis of the structural equation. The model was adjusted to be consistent with the empirical data. The results of an index analysis were used to verify the consistency and harmony of the model with the empirical data. The results of the harmonization assessment were $\chi^2 = 242.90$, $df = 65$, $\chi^2/df = 3.74$, $RMSEA = 0.050$, $NFI = 0.97$, $CFI = 0.98$, $GFI = 0.96$, $SRMR = 0.02$ and can be presented the results as follows

The post-purchase behavior to buy organic vegetables through multi-channel marketing caused by the combined influence of purchasing decision ($TE = 0.95$), evaluation of alternative ($TE = 0.94$), information search ($TE = 0.85$), and problem or need recognition ($TE = 0.82$) respectively, with the predictive power of 91%.

The decision-making to purchase organic vegetables through multi-channel marketing is caused by the combined influence of alternative evaluation ($TE = 0.99$), information search ($TE = 0.89$), and problem or need recognition ($TE = 0.86$), with the predictive power of 98%

The alternative evaluation of decision-making to purchase organic vegetables through multi-channel marketing is caused by the combined influence of information search ($TE = 0.90$) and problem or need recognition ($TE = 0.87$), with a predictive power value

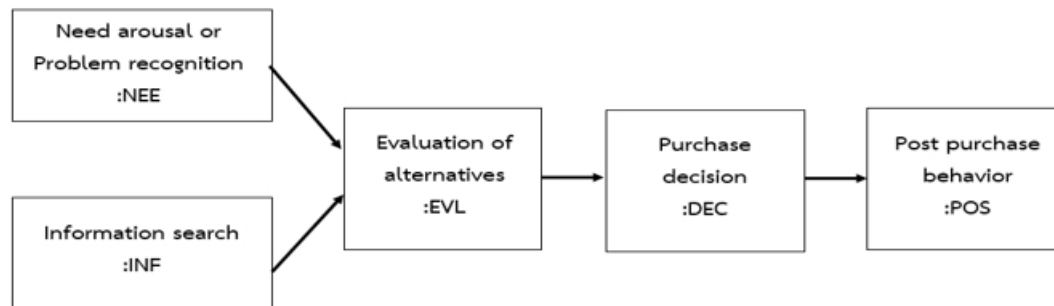
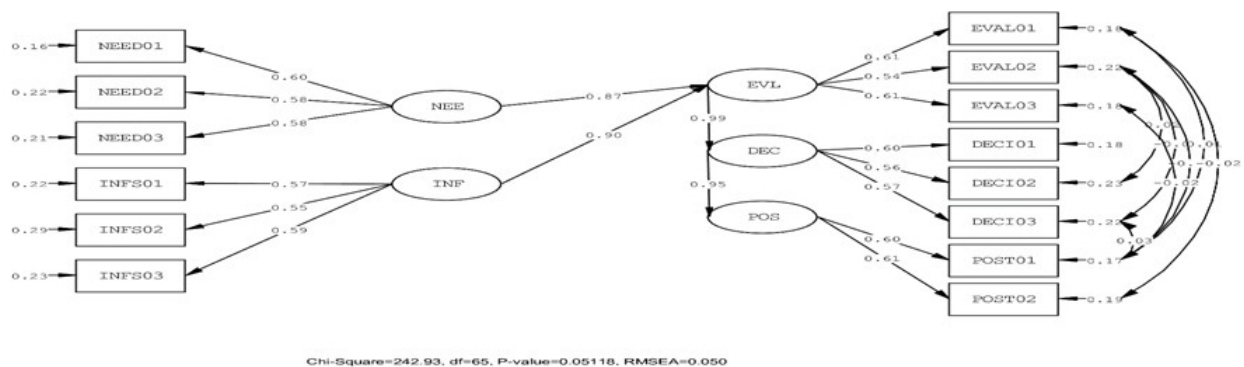


Figure 1: Conceptual Framework.



Chi-Square=242.93, df=65, P-value=0.05116, RMSEA=0.050

Figure 2: Decision-making process for purchasing organic vegetable products through electronic commerce and multi-channel marketing (after adjustment).

Table 2. Analysis of the e-commerce marketing mix model path analysis in the decision to purchase organic vegetable products through multi-channel marketing.

	Evaluation of Alternative: EVL $R^2 = 0.79$			Decision-making: DEC $R^2 = 0.98$			Post Purchase Behavior: POS $R^2 = 0.91$		
	DE	IE	TE	DE	IE	TE	DE	IE	TE
The problem or need recogni tion: NEE	0.87 0.07 14.59	- - -	0.87 0.07 14.59	- - -	0.86 0.07 17.54	0.86 0.86 17.54	- - -	0.82 0.06 14.54	0.82 0.06 14.54
Search for information: INF	0.90 0.08 14.52	- - -	0.90 0.08 14.52	- - -	0.89 0.07 16.12	0.89 0.07 16.12	- - -	0.85 0.04 14.48	0.85 0.04 14.48
Evaluation of Alternative: EVL	- - -	- - -	- - -	0.99 0.04 26.12	- - -	0.99 0.04 26.12	- - -	0.94 0.03 24.79	0.94 0.03 24.79
Decision- making: DEC	- - -	- - -	- - -	- - -	- - -	- - -	0.95 0.04 24.68	- - -	0.95 0.04 24.68

Value offered EP = Estimation Parameter, (SE = Standard Error), t-value (get $** < .01$ all value)

DE=Direct Effect/ IE = Indirect Effect/ TE = Total Effect.

of 79%. The results also showed that before deciding to purchase organic vegetables through various marketing channels, consumers spend most of their time on evaluating options. However, such factors will continue to affect the post-purchase behavior to buy organic vegetables as well. The most influential factor in evaluating choice was consumer search.

The confirmatory factor analysis of the model of the decision-making process for purchasing organic vegetable products through electronic commerce and multi-channel marketing revealed that the problem or need recognition is caused by the weight of the decision-making awareness factor (λX_4). A part of searching information is based on the weight of the

Table 3. Confirmative component analysis model of the decision-making process for purchasing organic vegetable products through electronic commerce and multi-channel marketing.

Matrix LAMDA-Y	AVE=	0.67	CR=	0.80
Post Purchase Behavior: POS	λ_y		t-value	R²
After deciding to buy organic vegetables, consumers feel good, impressed until coming back to repeat purchases: POST01.	0.60		-	0.59
Willing to recommend purchasing organic vegetables through various marketing channels to friends to become customers as well: POST02.	0.61		24.97	0.74
Decision Making: DEC	AVE=	0.59	CR=	0.81
Decision making by considering the suitability in all aspects that it is worth it: DECI01.	0.60		-	0.72
Decision making because of reliability, ensuring quality and safety: DECI02.	0.56		23.79	0.68
Decision making to purchase organic vegetables through various marketing channels because of their preferences and personal satisfaction: DECI03.	0.57		24.44	0.71
Evaluation of Alternative: EVL	AVE=	0.64	CR=	0.84
Compare details of organic vegetables from multiple providers: EVAL01.	0.61		-	0.62
Trust in quality of organic vegetables that will provide a worthwhile return: EVAL02.	0.54		23.80	0.56
Evaluation of alternatives for the cost before making a purchase: EVAL03.	0.61		26.86	0.65
Matrix LAMDA-X	AVE=	0.57	CR=	0.80
Search for Information: INF	λ_y		t-value	R²
Searching for information from many sources before making a purchase decision: INFS01.	0.57		24.77	0.56
Inquiries from close people who have bought: INFS02.	0.55		24.62	0.55
See reviews or purchaser's opinion who have bought: INFS03.	0.59		25.01	0.53
Matrix LAMDA-X	AVE=	0.64	CR=	0.84
Problem or Need Recognition: NEE	λ_y		t-value	R²
Realize the importance of decision making: NEED01.	0.60		26.08	0.50
Multi-channel marketing application can encourage you to come and shop: NEED02.	0.58		24.97	0.49
Having a feel to purchase organic vegetables when opened to view in the application: NEED03.	0.58		24.87	0.47

review or opinions of previous buyers (λX_3).

The evaluation of alternative is dependent on the weight of detailed comparison factors of organic vegetables across multiple service providers (λY_7) and the alternative evaluation for the cost before making a purchase (λY_9).

The decision Making is caused by the weight of purchasing decision factors by considering appropriateness in all aspects as being worthwhile (λY_4) and post-purchase behavior caused by the weight of readiness factor to recommend buying organic vegetables through various marketing channels to friends (λY_1).

The results of comparison of the decision-making processes for purchasing organic vegetable products through electronic commerce and multi-channel marketing when classified by personal factors and consumer behavior

The research results showed that the decision-making process for purchasing organic vegetables through multi-channel marketing. When classified by personal

factors, it was found the differences in both overall and many aspects, age, status, education, income, and occupation.

Decision-making for purchasing organic vegetable products when classified by consumer behavior was

found different in media channels time spent in purchasing organic vegetables through an electronic commerce system on average.

6. Conclusion, Discussion of the Results and Recommendations

6.1 Conclusion and discussion of the results

1. The research results demonstrated that consumers pay attention to the decision-making processes for purchasing organic vegetables through multi-channel marketing. Consumers spend the most time and focus on the evaluation of alternatives the most (by comparing the details of organic vegetable products from various providers and alternative evaluation for the cost before making a purchase). Such factors will continually affect the behavior after deciding to purchase organic vegetables as well. Consumers who have already decided to purchase, will not change their purchasing channels and are willing to recommend buying organic vegetables through various marketing channels to their friends. The consistent with the proposed idea that alternative evaluation is important as such a process. It makes consumers make the next decision easier by considering the relationship between

Table 4. The decision-making process for purchasing organic vegetables through multi-channel marketing classified by personal factors.

Decision making processes for purchasing organic vegetables	Gender	Age	Status	Education	Income	Occupation
The problem or need recognition	0.95	0.01**	0.00**	0.00**	0.00**	0.00**
Search for information	0.77	0.42	0.00**	0.00**	0.00**	0.00**
Evaluation of alternative	0.46	0.03*	0.00**	0.00**	0.00**	0.00**
Decision making	0.68	0.05*	0.00**	0.00**	0.00**	0.00**
Post purchase behavior	0.95	0.09	0.00**	0.00**	0.00**	0.00**
The decision making to purchase organic vegetables	0.76	0.05*	0.00**	0.00**	0.00**	0.00**

Table 5. The decision-making process for purchasing organic vegetables through multi-channel marketing when classified by consumer behavior.

Decision making processes for purchasing organic vegetables	Media channels	Time period	Frequency	Time period	Average price	Applications	Payment method	Other products	Multi-channel marketing
The problem or need recognition	0.02*	0.03*	0.71	0.56	0.79	0.19	0.50	0.29	0.03*
Search for information	0.01**	0.01**	0.78	0.16	0.47	0.14	0.80	0.09	0.03*
Evaluation of alternative	0.01**	0.01**	0.94	0.11	0.76	0.15	0.66	0.14	0.01**
Decision-making	0.03*	0.02*	0.33	0.67	0.40	0.15	0.58	0.16	0.05*
Post purchase behavior	0.12	0.01**	0.68	0.32	0.04*	0.05*	0.71	0.09	0.18
The decision-making for purchasing organic vegetables	0.01**	0.01**	0.78	0.28	0.44	0.11	0.84	0.11	0.02*

Attributes, Degree of Importance, Brand Beliefs, Utility Function, and Evaluation Procedure [10].

2. Finding strategies will make customers ready to make a purchase decision. Entrepreneurs must have the facility to search for customer information through various channels. In today's trade, the development of multi-channel marketing is becoming more and more important whether multiple channels marketing through channel combination or integration of all channels. This marketing can help customers to access information, and make them more likely to make purchasing decisions easier than single-channel marketing. Entrepreneurs need access the to adapt to modern commerce that tends to be easier to access [5], [16], [21].

3. The difference in age, status, education, income, and occupation affect the decision-making process for purchasing organic vegetables through multi-channel marketing. The results of this research are consistent with the study of the organic vegetable purchasing decision process through both online [22] and traditional

trade [23].

4. Regarding channels for receiving media and the time of purchasing organic vegetables through electronic commerce, on average, it will be affected the decision-making process for purchasing organic vegetables in multi-channel marketing. This is because the media receiving channels have the objective is to keep the existing audience and to expand the new audience base [24]. Furthermore, new customers tend to use social media for selecting reliable, accurate, and systematic information [25].

6.2 Suggestions for use in this research

1. The results showed that consumers value the decision-making process for purchasing organic vegetables through multi-channel marketing. The result of the alternative evaluation process is quite high. Due to the short life of organic vegetable products, entrepreneurs who pay attention to consumers needs with an understanding of consumer behavior and different needs between age, status, education, and occu-

pation, will encourage to have a better chance of being chosen.

2. The research results demonstrated that when consumers made a decision to purchase organic vegetables, the products have passed the evaluation of alternatives. The products are likely to remain in the consumer's next decision and trend to create desirable post-purchase behaviors, that is consumers are ready to recommend buying organic vegetables through various marketing channels to friends. With regard to this matter, the seller will get customers who are ready to be good partners in word of mouth and have loyalty in the next order. It is the seller's duty to pay attention to laying out the right strategies to drive buying decisions and impress customers through the evaluation of alternatives.

3. The results of the component analysis have the least effect in the aspects of the reliability and quality of organic vegetables. That will provide a worthwhile return which is an element in the process of alternative evaluation. Furthermore, this is a point that entrepreneurs should focus on and promote customers trust in such elements. If entrepreneurs can do it, they will build strength and create a competitive advantage in the organic vegetable product market.

6.3 Suggestions for further research

1. The research studied a group of retail customers in the country only. Those who are interested may modify the study area to big buyers of customers abroad which may have different research results.

2. The research focuses only on quantitative research which makes it ineffective in depth. Those who are interested can be continued to do more qualitative research.

3. The research is collected data only from the perspective of customers. Those who are interested can study more on the operator side to get information covering both demand and supply aspects.

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