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Needs Assessment for Academic Management of Secondary Schools Based on the Concept of Intercultural Competence

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Abstract

This study aimed to assess the needs of academic management of secondary schools based on the concept of intercultural competence (IC). This study used a population of 19 public secondary schools implementing international program (IP) under the Educational Hub Project. Respondents included school administrators and teachers, accounting for 307 respondents. A five-point Likert scale survey questionnaire was used to collect data. Data were analyzed using frequencies, percentages, mean, standard deviation, and modified priority needs index (PNI_{modified}). Results showed that measurement and evaluation had the highest need compared to the other three functions, and teaching and learning had the lowest need. Among the ten components of IC, the top three highest needs included intercultural team effectiveness, interpersonal communication, and intercultural empathy, and the top three lowest needs included respect for otherness, intercultural goal orientation, and nonjudgmentalness.

Keywords: Needs Assessment, Academic Management, Intercultural Competence

Introduction

Geopolitical and societal changes are a result of globalization and multiculturalism (Hong & Cheon, 2017), and as society evolves, identities are not monolithic, stable, or binary; rather, they are negotiated and renegotiated through a process of cultural syncretism (Hajisoteriou & Angelides, 2016). Communities all around the world are becoming increasingly cosmopolitan as a result of the coexistence

of people from many cultural backgrounds (Zhang & Zhou, 2019). Thailand has gradually evolved into a global society that requires its residents to have a deeper awareness of many cultures as a result of ASEAN integration and globalization.

Increases in prejudice, intolerance, and discrimination against minority religious and ethnic groups, which are worse now than they have ever been in the preceding 50 years, can pose intercultural issues (European Commission, 2014; European Union Agency for Fundamental Rights, 2015, as cited in Barrett, 2018). Serious crimes may also be the outcome of these issues. Many misdeeds and crimes have recently surfaced in some countries. Examples of these violations and crimes were documented by the British Broadcasting Corporation (BBC). These include the death of an elderly immigrant who was pushed to the ground, a foreigner who was stabbed in the face with a box cutter, a foreign woman who was smacked and set on fire, and eight people were slain in a shooting rampage that spanned three foreign spas in one night (Cabral, 2021). As Thailand becomes a more globalized society, the aforementioned issues must be addressed. The greatest approach to accomplish this is to train everyone in society, particularly young people, to be culturally competent so that they can learn, live, and work effectively and appropriately in varied situations. Educators have expressly said that they are accountable not simply for training students for work but also for the complex interactions that go with global citizenship (Bennett, 2009).

Individuals who thrive in these culturally diverse settings have been referred to as effective interculturalists with high levels of intercultural competence (IC) (Eriksen, 2018; Sercu, 2010). In globalized situations, IC has been highlighted as a crucial indicator of interculturalism, and it has frequently been mentioned in the mission statements of governmental and educational organizations that strive to develop knowledgeable and skillful people (Bennett, 2013). As a result, one of the important outcomes of a nation's citizens is IC. Given the diversity of Thai society, it is vital that schools equip their students with IC.

To develop the IC of the students, academic management plays a crucial role. Academic management is a primary task of an educational institution. It is generally involved in curriculum development, instruction, and assessment.

Recently, the Office of Basic Education Commission (OBEC) announced “Student Acceptance from the Development of Thailand as an Educational Hub in the Region Project” (Office of Basic Education Commission, 2020). This project consists of three distinct programs: a multilingual program (MP), an international program (IP), and a bilingual program for science and mathematics (SMBP). The project's inception underlines the significance of the intercultural settings that the Thai students must

immerse. The project objective is to work on developing secondary education management to meet quality and international standards, preparing for Thai students to enter the ASEAN community, opening a special classroom for the project (Office of Basic Education Commission, 2017). In developing IC among students, IP is significant. Therefore, Schools under the Education Hub Project are significant for studying to equip their students with IC.

Given the significance of developing IC in students, this study aims to study needs assessment for the academic management of secondary schools based on the concept of intercultural competence.

Research Objective

To assess the needs of academic management of secondary schools based on the concept of intercultural competence.

Literature Review and Conceptual Framework

INCA project team (2004) constructed a framework of IC for evaluating young professionals in intercultural work environment or team, which consists of six components: tolerance for ambiguity, behavioral flexibility, communicative awareness, knowledge discovery, respect for otherness, and empathy. Deller and Stahl (2015) recommended seven components of IC, including tolerance for ambiguity, behavioral flexibility, goal orientation, sociability and interest in other people, cultural empathy, nonjudgmentalness, and metacommunication skills. Matveev (2002) suggested four dimensions of IC in intercultural team effectiveness, including interpersonal skills, team effectiveness, intercultural uncertainty, and intercultural empathy. By synthesizing IC literature as mentioned above, a conceptual framework of IC consists of interpersonal communication, tolerance for ambiguity, behavioral flexibility, intercultural empathy, intercultural team effectiveness, intercultural knowledge discovery, intercultural sociability, respect for otherness, intercultural goal orientation, and nonjudgmentalness (Deller & Stahl, 2015; INCA project team, 2004; Matveev, 2002).

By reviewing relevant literature, academic management can be synthesized into four components: curriculum development; teaching and learning; learning media and resources; and measurement and evaluation (Asawapoom, 2008; Ministry of Education, 2007; Pooprasert, 2002; Wahachat, 2007; Wonganutaroj, 2010).

Based on frameworks of IC and academic management, a conceptual framework of the study can be constructed as shown in Figure 1.

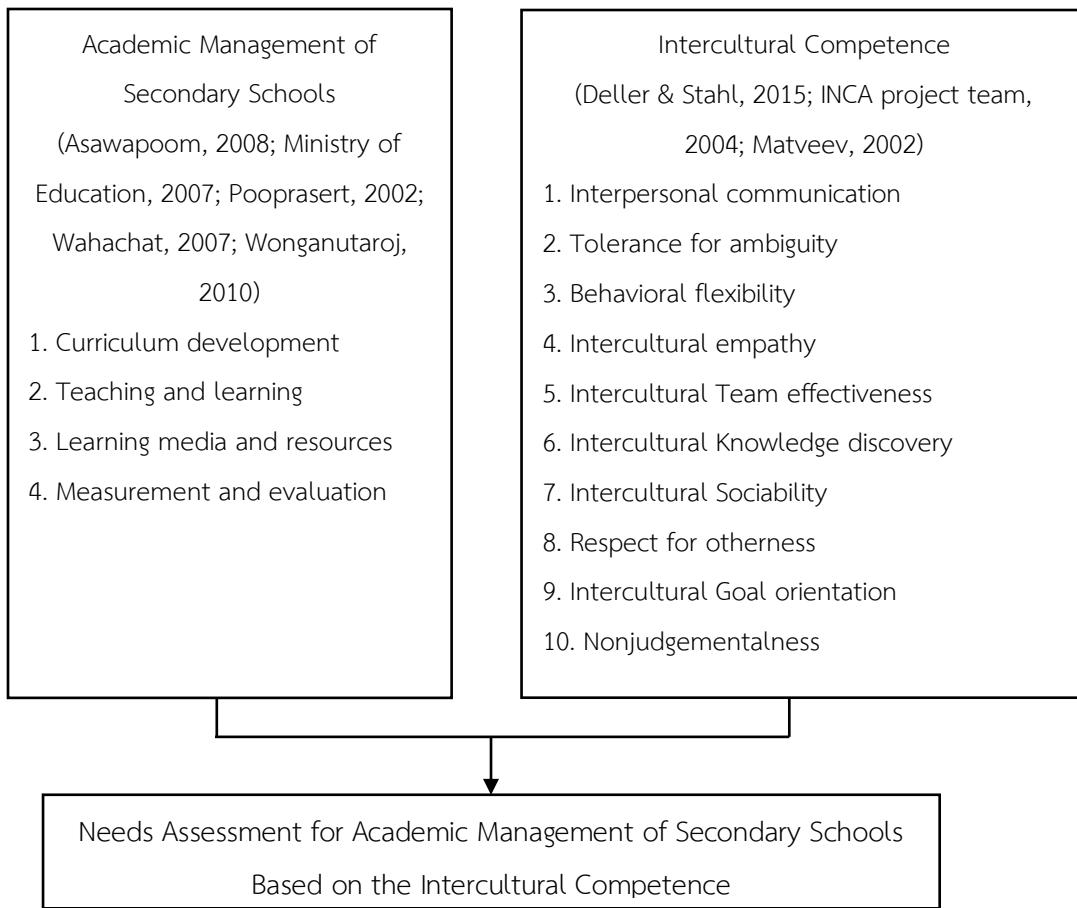


Figure 1 Conceptual Framework of the Study

Research Methodology

Population

The study population was all 19 public secondary schools under the OBEC, which took part in “the Development of Thailand as an Educational Hub in the Region Project” and opened international program (IP). All 17 special large and two large school-sized schools across five regions took part in the study. Thirteen instructors were conveniently chosen from each school, together with the vice school director in charge of academic affairs and the school director. 380 copies of questionnaires were sent to respondents, including school directors, vice school directors in charge of academic affairs, head teachers, and teachers. Of 380 copies of questionnaires sent, 307 (80 %) were returned, so it was acceptable. The responses were on-site (78.2 %) and online (21.8 %). Among respondents, 161 (52.4 %) were male. Most of the respondents were between the ages of 31 and 50 (70 %). Most of the respondents held bachelor's and master's (48.5 % and 44.6 %, respectively). About a half of the respondents (52.7 %)

had the position of head teacher, and about one-third of the respondents (34.2 %) were teachers. Over a third of the respondents (39.1 %) had work experience between 11 and 20 years. Respondents with work experience of 21-30 years (26.1 %) and less than 11 years (26.4 %) accounted for slightly less than a third, respectively.

Research Instrument

A survey questionnaire developed by the researchers was used to collect data. The questionnaire comprises two sections: demographic characteristics and existing and desirable conditions of academic management based on the concept of intercultural competence. Section 1 consisted of five questions, including gender, age, education level, position, and work experience in the current position. Section 2 was comprised of 40 questions for existing conditions and 40 questions for desirable conditions in a dual format. On a five-point Likert scale (1 = the least practiced and 5 = the most desired, respectively), respondents were asked to score each item for its existing and desirable conditions. Sample questions regarding curriculum development were “1. At what level does your school develop the curriculum that aims at developing students’ intercultural competence as follows: 1.1 interpersonal communication, 1.2 tolerance for ambiguity ...etc.”

To scrutinize the instrument quality, the instrument was sent to five content experts using the Item Objective Congruence (IOC) index. IOC indices of all items were equal to 1 or above 0.5, suggesting that content validity was met. The instrument was tried out with 38 respondents. The reliability of the instrument using Cronbach alpha coefficient was calculated to be 0.994. The reliability of data obtained from the online protocol was insured by coordinating with each school director in order that the questionnaire was sent to the target population.

Data Collection

The researchers asked the faculty for authorization letters before starting to collect data. Questionnaires were submitted both online (google form) and through the postal service. Information sheet for research participants was attached to the questionnaire, which inform the research participants about the research aim, research beneficiaries, voluntary participation, associated risks, confidentiality, and data analysis, reporting and deletion. The completed and returned surveys were viewed as evidence of participation.

Data Analysis

Quantitative data from the questionnaire was analyzed by frequencies, percentages, mean, standard deviation, and $\text{PNI}_{\text{modified}}$. The interpretation of mean scores is as follows (Srisaat, 1996):

4.51-5.00 is interpreted as the highest level
 3.51-4.50 is interpreted as the high level
 2.51-3.50 is interpreted as the moderate level
 1.51-2.50 is interpreted as the low level
 1.00-1.50 is interpreted as the lowest level

Research results

Table 1 displays the priority of need for academic management based on the concept of intercultural competence in terms of academic management components.

Table 1 Existing Conditions, Desirable Conditions, and Needs of Academic Management Based on the Concept of Intercultural Competence Regarding Academic Management Components ($n = 307$).

Academic Management Based on the Concept of Intercultural Competence	Existing			Desirable			Needs	
	Conditions		Result	Conditions		Result	PNI _{modified}	Rank
	M	SD		M	SD			
1. Curriculum Development	3.31	0.504	Moderate	4.73	0.453	Highest	0.428	2
2. Teaching and Learning	3.73	0.264	High	4.73	0.449	Highest	0.269	4
3. Learning Media and Resources	3.43	0.337	Moderate	4.68	0.433	Highest	0.364	3
4. Measurement and Evaluation	3.29	0.594	Moderate	4.73	0.452	Highest	0.439	1
Total	3.44	0.400		4.72	0.443			

As shown in Table 1, measurement and evaluation were rated as the highest priorities of need. Curriculum development and learning media and resources were ranked as the second and third priorities of need, respectively. Teaching and learning were scored as having the lowest priority of need.

Table 2 illustrates the priority of need of academic management based on the concept of intercultural competence in terms of intercultural competence components.

Table 2 Existing Conditions, Desirable Conditions, and Needs of Academic Management Based on the Concept of Intercultural Competence Regarding intercultural competence Components ($n = 307$).

Intercultural Competence	Existing		Desirable		Needs		$PNI_{modified}$	Rank
	Conditions	Result	Conditions	Result				
	M	SD	M	SD				
1. Interpersonal communication	3.37	0.449	Moderate	4.73	0.455	Highest	0.405	2
2. Tolerance for ambiguity	3.48	0.386	Moderate	4.73	0.449	Highest	0.358	5
3. Behavioral flexibility	3.49	0.384	Moderate	4.73	0.451	Highest	0.354	6
4. Intercultural empathy	3.37	0.485	Moderate	4.73	0.451	Highest	0.404	3
5. Intercultural team effectiveness	3.32	0.582	Moderate	4.73	0.449	Highest	0.426	1
6. Intercultural knowledge discovery	3.44	0.484	Moderate	4.73	0.450	Highest	0.374	4
7. Intercultural Sociability	3.50	0.389	Moderate	4.73	0.449	Highest	0.35	7
8. Respect for otherness	3.52	0.302	High	4.69	0.435	Highest	0.333	10
9. Intercultural goal orientation	3.51	0.296	High	4.68	0.440	Highest	0.333	9
10. Nonjudgmentalness	3.50	0.344	Moderate	4.68	0.434	Highest	0.336	8

As shown in Table 2, intercultural team effectiveness, interpersonal communication, and intercultural empathy were ranked first, second, and third in terms of needs, respectively. Respect for otherness, intercultural goal orientation, and nonjudgmentalness were the top three with the lowest $PNI_{modified}$ values.

Table 3 Needs of Academic Management Based on the Concept of Intercultural Competence ($n = 307$).

Academic Management		1. Interpersonal communication	2. Tolerance for ambiguity	3. Behavioral flexibility	4. Intercultural empathy	5. Intercultural team effectiveness	6. Intercultural knowledge discovery	7. Intercultural Sociability	8. Respect for otherness	9. Intercultural goal orientation	10. Nonjudgmentalness	Total	Rank
1. Curriculum Development	PNI _{modified}	0.607	0.387	0.282	0.377	0.483	0.499	0.478	0.366	0.373	0.476	0.428	2
	Rank	1	6	10	7	3	2	4	9	8	5		
2. Teaching and Learning	PNI _{modified}	0.479	0.389	0.300	0.298	0.289	0.199	0.202	0.200	0.200	0.199	0.269	4
	Rank	1	2	3	4	5	10	6	8	7	9		
3. Learning Media and Resources	PNI _{modified}	0.293	0.471	0.464	0.467	0.464	0.352	0.377	0.325	0.237	0.237	0.364	3
	Rank	8	1	3	2	4	6	5	7	10	9		
4. Measurement and Evaluation	PNI _{modified}	0.288	0.390	0.384	0.489	0.488	0.489	0.374	0.468	0.582	0.480	0.439	1
	Rank	10	7	8	3	4	2	9	6	1	5		

As shown in Table 3, regarding curriculum development, the top three prioritized needs included interpersonal communication, intercultural knowledge discovery, and intercultural team effectiveness. In terms of teaching and learning, interpersonal communication, tolerance for ambiguity, and behavioral flexibility were the top three prioritized needs. Regarding learning media and resources, tolerance for ambiguity, intercultural empathy, and behavioral flexibility were the top three prioritized needs. Intercultural goal orientation, intercultural knowledge discovery, and intercultural empathy were the top three prioritized needs in measurement and evaluation.

Discussion

This study shows that measurement and evaluation had the highest need, and teaching and learning had the lowest need, which is consistent with the study of Songkitipisal (2020). It might be stated that IC measurement and evaluation require significant improvement. The findings support Chitayawong (2019)'s argument that measurement and evaluation are the OBEC's weaknesses, as it focuses primarily on classroom achievement rather than comprehensive measurement and evaluation across all aspects. To remain current, educational institutions must keep enhancing the measurement

and evaluation process, focusing on measuring the skills needed and 21st-century skills. The measurement and evaluation may be standardized, misleading, to inaccurate assessment. The assessment of IC should be authentic, reflecting the actual performance of the students. One purpose of the authentic evaluation is to examine how successfully a student's knowledge and abilities can be applied outside of the classroom (Burrack, 2018). The examples of authentic assessment include simulations and role plays, application letters, laboratory experiments, and budget proposals, according to Burrack. In an example of authentic assessment in an international entrepreneurial class, the score can be divided into two parts (Curtis, Moon, & Penaluna, 2020). A 10-minute live video presentation, screencast, animation, or other creative technique developed by the students will count for 50 % of their final grade. The remaining 50 % is for a 1,500-word report that includes a critical appraisal and reflection of the students' first approach.

Regarding teaching and learning, the findings indicate that teachers are adopting the international curriculum as planned. In their teaching, they may use effective instructional tactics, methods, and activities, such as cooperative learning. This finding is consistent with the findings of Eisenchlas and Trevaskes (2007), who proposed three programs for internationalizing students' cultural experiences: 1) internationalizing the experience of culture through research, 2) exploring internationalization and culture via interviews, and 3) arranging an exchange program in the regional community. Schools should maintain their strength in teaching and learning and continue to adopt the above programs as recommended by literature. In addition, the schools must continuously use study abroad programs and intercultural service learning. The best predictor of positive development score change in intercultural competence between the pre- and post-study abroad periods was pre-departure orientation (Hanada, 2019). More importantly it has a more significant influence if the program is academic-credited, according to the same study. As the world is rapidly changing, technology also plays a crucial role in the study abroad program in enhancing intercultural competence. Machado, Klein, Freitas, Schlemmer, and Pedron (2016) found that the digital virtual world can develop IC as it provides rich experiential and relational or conversational learning opportunities, particularly due to the affordances of immersion, interaction in society, content creation, and knowledge sharing.

If looking into IC components, intercultural team effectiveness, interpersonal communication, and intercultural empathy were the top three prioritized needs that academic management must emphasize. Shonk (1982) stated that the process of team development or teambuilding is bringing together a group of people who share a shared goal to form an efficiently operating unit. Shonk suggested the critical factors imperative for team effectiveness, including 1) clear communication

(i.e., intercultural team members have to be sensitive to both verbal and nonverbal communication cues, which can mean different things in different cultural contexts); 2) common objective (i.e., intercultural team members have to understand the common goal or why the team exists and what is the responsibility of individual team members; 3) rewards/recognition (i.e., intercultural team members need to understand the incentives the company provides for working on the team and how the team's contributions will be recognized; 4) trust (i.e., intercultural team members need to trust each other.), and 5) decision-making process (i.e., intercultural team members have to understand how decisions are made and what process is being used to make those decisions). Wheelan and Hochberger (1996) argued that the development of multicultural team follows the four-stage process: dependency and inclusion, counterdependency and fight, trust and structure, and work. Uncertainty may occur during the early stages.

Regarding interpersonal communication in an intercultural environment, team members have to 1) acknowledge differences in communication and interaction styles, 2) be flexible in dealing with communication misunderstandings, 3) feel comfortable when communicating with foreign nationals, 4) be aware of own cultural conditioning, and 5) have a basic knowledge an information about the country, the culture, and the language of another team member (Matveev, 2002). Concerning intercultural empathy, effective intercultural team members have to understand the world from others' cultural perspectives; have a spirit of inquiry about other cultures, values, beliefs, and their communication patterns; have an appreciation for different working styles; and view the ways things are done in other cultures not as bad, but as different.

This study provided a new insight into academic management at the secondary level on purpose of developing IC among students. Academic affairs is the core of educational institutions. Many scholars place the imotance of academic management. Upper Secondary Education Bureau (2017) stated that academic management is the heart of an educational institution. In particular, it is a task to develop learners to have characteristics in the 21st century in order to become individuals with a good quality of life in the future. Academic management is an administration that clearly gives importance to learners and educational management processes. The important role of educational institutions must be based on the principle of responding to learners based on the principle that all learners have knowledge and ability and can develop themselves. Learners are the most important. Teaching and learning management must arrange supporting activities appropriate to learners' interests and aptitudes, focusing on assessing learners' development, desirable characteristics, participation in learning activities, measuring and evaluating learners using a variety of methods suitable for level and form of education management.

Faber and Shearron (1970) claimed that academic management is teaching and learning as an important mission. Administrators must plan things well, accurately and appropriately in order to develop learners to reach the destination as planned. In this regard, the teaching and learning management or academic administration must be arranged appropriately in accordance with the learners and should be open to learners to be curious all the time both inside and outside the classroom, and most importantly, for students to be good people.

Recommendations

Recommendations for Practices

School administrators should emphasize measurement and evaluation and formulate a policy on measurement and evaluation of IC as this study found that measurement and evaluation had the highest need.

Teachers should design effective measurement and evaluation on IC since this study found that measurement and evaluation had the highest need.

Teachers should continue to implement the international curriculum with the use of various teaching methods, such as cooperative learning, to enhance internationalized experiences of the students because the current study indicates that teaching and learning have the lowest needs.

Teachers emphasize developing intercultural team effectiveness because this study yields the highest need for intercultural team effectiveness.

Recommendations for Future Research

Further research should focus on developing IC measurement and evaluation approaches because this study yields the highest need for measurement and evaluation.

Further studies should explore teaching strategies that the teachers use to develop IC of the students as this study shows that teaching and learning had the lowest need, meaning that teaching and learning were the strength.

Further research should investigate instructional strategies to enhance intercultural team effectiveness because this study found the highest need for intercultural team effectiveness.

References

Asawapoom, S. (2008). *Modern educational administration: Concepts, theories, and practices* (4th ed.). Ubon Ratchathani: Ubonkit Offset Printing. [In Thai]

Barrett, M. D. (2018). How schools can promote the intercultural competence of young people. *European Psychologist*, 23(1), 93-104. doi:10.1027/1016-9040/a000308

Bennett, J. M. (2009). Cultivating intercultural competence: A process perspective. In D. K. Deardorff (Ed.), *The Sage Handbook of Intercultural Competence* (pp. 121-140). Los Angeles: Sage Publication.

Bennett, M. (2013). *Basic concepts of intercultural communication: Paradigms, principles, and practices*. Boston: Intercultural Press.

Burrack, F. (2018). Authentic assessment. In B. B. Frey (Ed.), *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation* (pp. 149-151). Thousand Oaks, California: SAGE Publications.

Cabral, S. (2021, May 21). Covid 'hate crimes' against Asian Americans on rise. *BBC*. Retrieved from <https://www.bbc.com/news/world-us-canada-56218684>

Chitayawong, S. (2019). *Report on the teach less learn more policy*. Bangkok: Ministry of Education. [In Thai]

Curtis, V., Moon, R., & Penaluna, A. (2020). Active entrepreneurship education and the impact on approaches to learning: Mixed methods evidence from a six-year study into one entrepreneurship educator's classroom. *Industry and Higher Education*, 0(0), 1-11. doi:10.1177/0950422220975319

Deller, J., & Stahl, G. K. (2015). Assessment centers. In J. M. Bennett (Ed.), *The SAGE Encyclopedia of Intercultural Competence* (pp. 11-17). Los Angeles: Sage.

Eisenchlas, S., & Trevaskes, S. (2007). Intercultural competence: Examples of internationalizing the curriculum through students' interactions. In D. Palfreyman & D. L. McBride (Eds.), *Learning and Teaching Across Cultures in Higher Education* (pp. 177-192). London: Palgrave Macmillan UK.

Eriksen, E. (2018). *Promoting intercultural competence in the English classroom by using the novel: Does my head look big in this?* [Unpublished master's thesis]. Østfold University College., Retrieved from [https://hiof.brage.unit.no/hiof-xmlui/bitstream/handle/11250/2502086/18-00497-5%20The%20Master%20Thesis,%20Elisabeth%20Eriksen%20\(1\)%20336561_1_1.pdf?sequence=1](https://hiof.brage.unit.no/hiof-xmlui/bitstream/handle/11250/2502086/18-00497-5%20The%20Master%20Thesis,%20Elisabeth%20Eriksen%20(1)%20336561_1_1.pdf?sequence=1)

Faber, C. F., & Shearron, G. F. (1970). *Elementary school administration: Theory and practice*. Holt, Rinehart and Winston.

Hajisoteriou, C., & Angelides, P. (2016). Conceptions of intercultural education from around the globe. In C. Hajisoteriou & P. Angelides (Eds.), *The globalisation of intercultural education: The politics of macro-micro integration* (pp. 35-64). London: Palgrave Macmillan UK.

Hanada, S. (2019). A quantitative assessment of Japanese students' intercultural competence developed through study abroad programs. *Journal of International Students*, 9(4), 1015-1037. doi:10.32674/jis.v9i4.391

Hong, Y.-Y., & Cheon, B. K. (2017). How does culture matter in the face of globalization? *Perspectives on Psychological Science*, 12(5), 810-823. doi:10.1177/1745691617700496

INCA project team. (2004). *The INCA project: Intercultural competence assessment*. Retrieved from <https://ec.europa.eu/migrant-integration/librarydoc/the-inca-project-intercultural-competence-assessment>

Machado, L., Klein, A. Z., Freitas, A., Schlemmer, E., & Pedron, C. D. (2016). The use of virtual worlds for developing Intercultural Competences. *International Journal of Information and Communication Technology Education*, 12(3), 51-64. doi:10.4018/IJICTE.2016070105

Matveev, A. V. (2002). *The perception of intercultural communication competence by American and Russian managers with experience on multicultural teams*. [Doctoral dissertation, Ohio University Ann Arbor]. ProQuest Dissertations & Theses Global database. (3062639)

Ministry of Education. (2007). *Ministerial regulations: Prescribe the criteria and methods for decentralization of educational administration and management*. Retrieved from <http://backoffice.onec.go.th/uploaded/Category/Laws/RuleMetDistEdMnt2550-02-12-2010.pdf> [In Thai]

Office of Basic Education Commission. (2020). *Information on Student Acceptance from the Development of Thailand as an Educational Hub in the Region Project*. Retrieved from <https://www.obec.go.th/archives/218601> [In Thai]

Office of Basic Education Commission. (2017). *Announcement of the Office of the Basic Education Commission: Recruitment of students in special classrooms of the project of developing Thailand as a regional education hub, academic year 2018*. https://www.kkzone1.go.th/administrator-control/data/003/04-12-2017-17-23-52_1130137788.pdf [In Thai]

Pooprasert, K. (2002). *Academic administration in schools* (2nd ed.). Bangkok: Tips Publication. [In Thai]

Sercu, L. (2010). Assessing intercultural competence: More questions than answers. In A. Paran & L. Sercu (Eds.), *Testing the Untestable in Language Education* (pp. 17-34).

Songkitipisal, I. (2020). *Secondary schools academic management strategies based on the concept of entrepreneurial leadership competencies*. [Doctoral dissertation, Chulalongkorn University]. Retrieved from <https://cuir.car.chula.ac.th/handle/123456789/76691>

Srisaat, B. (1996). Interpretation when using the estimation scale data collection tool. *Journal of Educational Measurement Mahasarakham University*, 2(1), 64-70.

Upper Secondary Education Bureau. (2017). *Driving Thai Secondary Education 4.0 for Employment in the 21st century*. Bangkok: The Agricultural Co-operative Federation of Thailand.

Wahachat, R. (2007). *Academic administration of basic education institutions*. Bangkok: Book Center, Thaksin University. [In Thai]

Wonganutaroj, P. (2010). *Academic administration*. Samut Sakhon: Pimdee. [In Thai]

Zhang, X., & Zhou, M. (2019). Interventions to promote learners' intercultural competence: A meta-analysis. *International Journal of Intercultural Relations*, 71, 31-47. doi:<https://doi.org/10.1016/j.ijintrel.2019.04.006>