



## A comparison of students' competencies of Thai and international documents

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### Article Info

#### Article history:

Received 10 October 2020

Revised 25 January 2021

Accepted 30 January 2021

Available online 3 December 2021

#### Keywords:

comparative study,

competency,

competency-based curriculum,

transversal competencies

### Abstract

International policy documents address competencies as required tools in education to promote students' well-being. In the beginning phase of curriculum development in Thailand, The Office of the Education Council (2019) launched research for implementing competency-based curriculum. To compare three frameworks, this documentary research analyzed the differences and similarities between the core competencies in Thai document and the two above-mentioned international documents. The number of consistent competencies in the Thai document compared to the documents by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organization for Economic Co-operation and Development (OECD) were counted and then transformed into percentages for comparison. The findings showed that the proposed Thai competencies were more consistent with the OECD's framework (56.25%) than UNESCO's framework. The most consistent competencies between the Thai document and the other two frameworks were life skills and personal growth and collaboration, teamwork, and leadership (16.67%). In terms of differences, the Thai document integrated competencies unique to the Thai context, such as considering the sufficiency economy, efficiency economy and applying knowledge to design and create creative products through professional ethics and social responsibility. Curriculum developers and stakeholders in Thailand should consider the outstanding differences among the three frameworks in developing the curriculum for the Thai context.

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### Introduction

Education is the most significant tool to transform cultures and develop individuals (Battelle for Kids,

2019). To prepare students to be better citizens in the current complex and interconnected world, noncognitive skills and competencies are required as well as cognitive abilities (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2016; Organization for Economic Co-operation and Development [OECD], 2018). A growing attempt to embed noncognitive skills in education is explicitly addressed in the 2030 Agenda for Sustainable Development, which is a plan of action based on 17 sustainable development goals (United

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Nations, 2015; 2016). SDGs ensure human rights, achieve gender equality, and empower women and girls, as expressed in Goal 4: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations, 2016).

The competencies necessary for preparing students in today’s complex world are addressed in several policy documents based on research, including the Partnership for 21st Century Learning (Battelle for Kids, 2019); the Organization for Economic Co-operation and Development (OECD) Learning Framework 2030 (OECD, 2018); and the United Nations Educational, Scientific and Cultural Organization (UNESCO) Assessment for Transversal Competencies (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2019). Although the significance of preparing students to be equipped with skills, knowledge, and values is widely recognized, the ways to achieve that goal are debated and this gap would be explored in this study. The challenges of implementing competency-based curriculum may include the limited guidelines for teachers’ implementation (UNESCO, 2019), which may affect the preparation of competency-equipped workforce (Kim, 2019) and the promotion of students’ applying knowledge, skills, and values in their life (UNESCO, 2016), and the consideration of time and stakeholders to drive the curriculum (Gervais, 2016).

Palsa and Mertala (2019) analyzed how the competencies defined in the curriculum could guide educational practice and lower interpretative confusion to their practical implementation. Several countries have reformed their educational systems, revising the national curriculum to be a competency-based curriculum, such as Finland (Ministry of Education and Culture, Finland, 2017); Singapore (Ministry of Education, Singapore, 2013); and New Zealand (New Zealand Council for Educational Research, 2018). Similarly, there has been an explicit attempt to develop and implement competency-based curriculum in Thailand (Office of the Education Council, Thailand, 2019). Thailand’s Office of the Education Council (2019) launched research to develop students’ core competencies. The findings of this study, based on ten students’ core competencies, led to the adoption of a proposed framework in the national Thai document that details the proposed policy for implementing these competencies in the future.

Previous studies explored 21st century competences through several international document; for example, the synthesis of literature about the various policy frameworks developed to support the curricular integration of 21<sup>st</sup> century competence (Voogt & Roblin, 2012), the

exploration of the opportunities and challenges of conceptually formulating and constructing a competency framework (Child & Straw, 2019), the attempt to reform the curriculum by paying more attention to community service and workplace experience which are the competencies (Cheng, Jackson, & Lee, 2017), and the elaboration on equal emphasis on students’ well-being and educational achievement, which elaborated on the Programme for International Student Assessment (PISA) reported by OECD (Rappleye, Komatsu, Uchida, Krysz, & Markus, 2020). Nevertheless, there are few studies that compare the competencies addressed in the national curriculum to the international frameworks.

This study analyzed the similarities and differences between the proposed Thai competencies and the international frameworks, specifically UNESCO’s Assessment of Transversal Competencies and the OECD Learning Framework 2030. The comparison between national and international framework could better reveal what and how the curricular addressed the competencies which could promote students to be well-prepared citizens (Lähdemäki, 2019; Voogt & Roblin, 2012). The findings would indicate the emphasized competencies in the future competency-based curriculum in Thailand, and teachers can use the insights from this study to design lessons that enhance students’ competencies.

## Literature Review

### *What is Competency?*

Competencies are neither curricular nor learning objectives (Kim, 2015). The conception of competency presented in the OECD Learning Framework 2030 involves the mobilization of knowledge, skills, attitudes, and values to become a learner. Furthermore, UNESCO (2019) considered all mentioned aspects to promote “well-being” citizens. UNESCO (2015; 2016) adopted the term “transversal competencies” to encompass all skills, including twenty-first-century skills, soft skills, generic skills, and noncognitive skills, values, and attitudes, recognizing that these are the competencies required for learners’ holistic development and for learners to become capable of adapting to change. For this study, competencies are the required knowledge, skills, attitudes, and values for learners’ holistic development to become well-rounded citizens.

### *Why do We need Competencies?*

Since the shift from subject- and standard-based curricular to competency-based curricular is the trend in

several countries, the particular contexts are still the factors which make the differences among their competencies (Gervais, 2016; Palsa & Mertala, 2019). The revision of national curriculum may not represent the concepts from expectation to the practical implementation (Palsa & Mertala, 2019).

The major change in Thai national curriculum occurred in 2001 by encouraging the autonomy of institutions to integrate local wisdom into their own curriculum, but this attempt led to the misunderstanding of teachers and educators to develop the tight learning outcomes with unbalanced domain of knowledge, skills, and attitudes (Hallinger & Bryant, 2013; Ministry of Education, Thailand, 2008).

Then, the national curriculum was developed and launched in 2008 in order to solve above struggles. The attempts to encourage students applying knowledge and skills to their real life were addressed as purposes, especially the purposes of science teaching in Thailand. However, the curriculum seemed not to equally emphasize content and process of science, which were the main aspects to promote students to achieve the mentioned purpose (Sothayapetch, Lavonen, & Juuti, 2013). This could affect teachers' instruction, which emphasized delivering the knowledge of learning area instead of promoting students' applying knowledge to their life (Office of the Education Council, Thailand, 2019).

Nine years later, the national curriculum, particularly in learning areas of science, social studies, and geography, was revised to promote the students' non-cognitive skills and integrate diverse learning areas to live in challenging society (Ministry of Education, Thailand, 2017). Nevertheless, the trend of national curriculum has been moved to transversal competencies as a way to promote well-being citizens (UNESCO, 2015, 2016). Recently, the Thai national curriculum has attempted to develop and implement competency-based curriculum.

The proposed framework of competency for the Thai national document has been constructed, and the report of the pilot study has been launched by the Office of the Education Council, Thailand (2019) in order to ensure the possibilities to implement the competency-based curriculum and its impact on students to become well-being citizens. This seems to be the light for further education in Thailand in which students could apply their knowledge, attitudes, and skills in their real contexts, as in the definition of competency-based education proposed by Gervais (2016, p. 99): "competency-based education is an outcome-based approach to education that incorporates modes of instructional delivery and assessment efforts designed to evaluate mastery of

learning by students through their demonstration of the knowledge, attitudes, values, skills, and behaviors required for the degree sought."

### *What are the Components of Competency?*

There are various frameworks of 21<sup>st</sup> century skills that have been adopted in other studies (Care, Griffin, Scoular, Awwal, & Zoanetti, 2015; Child & Shaw, 2019; Kelley, Knowles, Han, & Sung, 2019; Rappleye et al., 2020). This study used the UNESCO and OECD frameworks for the analysis. The components of the competencies addressed in these two frameworks are described below.

#### *UNESCO's Assessment of Transversal Competencies*

In 2013, the Education Research Institutes Network (ERI-Net) conducted a study of transversal competencies in education policies and practices across ten countries and economies of the Asia-Pacific region. The framework of the study employed the five domains: (1) critical and innovative skills; (2) interpersonal skills; (3) intrapersonal skills; (4) global citizenship; and (5) an optional domain. The findings showed a diversity of skills and competencies mentioned in educational policies of ten countries and economies and the modes of integration into the curricula, and the types of transversal competencies (UNESCO, 2013; 2015).

The revised framework included six domains of transversal competencies and was adopted to be the framework of another study conducted by the ERI-Net in 2014 (UNESCO, 2016). The aim of this study was to understand how transversal competencies were being implemented at the school level in various contexts across the Asia-Pacific region (UNESCO, 2016). The study found there were efforts by educators within schools to develop transversal competencies in their students. Similarly, another relevant report launched by UNESCO (2019) showed 17 subskills in the appendix of the report, and they were employed as the transversal competency framework of the current study including (1) critical and innovative thinking; (2) interpersonal skills; (3) media and information literacy; (4) global citizenship; (5) intrapersonal skills; and (6) physical health and religious values.

Regarding the OECD (2018) framework, "well-being" involves material resources and quality of life in terms of health, civic engagement, social connection, education, security, life satisfaction, and the environment. The approach to prepare current students to be citizens with well-being is education to help them become active,

responsible, and engaged citizen. Transformative competencies, which are the way to achieve the goal of well-being in the OECD (2018) framework, covered three categories of competencies, including creating new value, reconciling tensions and dilemmas, and taking responsibility. The third transformative competency, taking responsibility, was the prerequisite of the other two. The constructs of each competency are presented in Table 1.

#### *Competencies proposed for the Thai national document*

The proposed framework of competency for the Thai national document has been constructed, and the report of the study has been launched by the Office of the Education Council, Thailand (2019). There are four categories of 10 core competencies for students. The first category is “Literate Thais,” including (1) Thai language for communication; (2) mathematics in everyday life; (3) scientific inquiry and scientific mind; and (4) English for communication. The second category is “Happy Thais,” including (5) life skills and personal growth and (6) career skills and entrepreneurship. The third category is “Smart Thais,” including (7) higher-order thinking skills and innovation and (8) media, information, and digital literacy (MIDL). The fourth category is “Active Thai Citizen,” including (9) collaboration, teamwork, and leadership and (10) active citizens and global mindedness. These 10 core competencies, which were selected as the framework for the Thai competencies, also addressed descriptions and sub competencies. All four categories and the ten core competencies were addressed.

#### **Methodology**

The present study was documentary research that aimed to compare the competencies between the Thai document by The Office of the Education Council, Thailand (2019) consisting of ten core competencies, the UNESCO’s Assessment of Transversal Competencies (UNESCO, 2019) consisting of five domains of competencies, and the OECD Learning Framework 2030

(OECD, 2018) consisting of three categories of competencies. The comparison of Thai competencies to international frameworks could reveal the direction and guidelines for Thai teachers to develop their instructions by considering not only how Thai competencies were determined but also realize the uniqueness and distinct competencies in Thai national curriculum. The description of 24, 12, and 10 competencies from the respective sources were analyzed through content analysis. The segments of the competencies from each document were comprehended and then compared to the others in order to explore the similar occurrence. The number of relevant competencies in the Thai document compared to the UNESCO and OECD frameworks were counted and then transformed into percentages to compare them (part 1 of the results). In contrast, the uniqueness of the competencies could be explored from the unaligned segments of competencies. One Thai competency could be matched to more than one competency in each international framework. The descriptions of similarities and differences among those competencies were presented (part 2 of the results). The two authors separately analyzed the data and then discussed the analyses to confirm agreement. A negative case analysis was employed to recheck the analyzed data to confirm the trustworthiness of the study (Creswell & Miller, 2000; Mertens, 2015). The contradictory aspects of analysis were reconsidered, and the two authors developed an understanding about why they existed leading to better comprehension of the data.

#### **Results**

##### *Part 1: Percentages of Competencies compared among Thai, UNESCO, and OECD*

The number of consistent conceptions of competencies between the Thai document and UNESCO’s framework and between the Thai document and OECD’s framework was 54 (56.25%) and 42 (43.75%), respectively. The number of consistent competencies between the Thai document and UNESCO’s framework was counted

**Table 1** Competencies from the OECD Learning Framework 2030

Creating new value	Reconciling tensions and dilemmas	Taking responsibility
- Adaptability	- Equity and freedom	- Self-control
- Creativity	- Autonomy and community	- Self-efficacy
- Curiosity	- Innovation and continuity	- Responsibility
- Open-mindedness	- Efficiency and the democratic process	- Problem-solving

*Source:* OECD (2018)

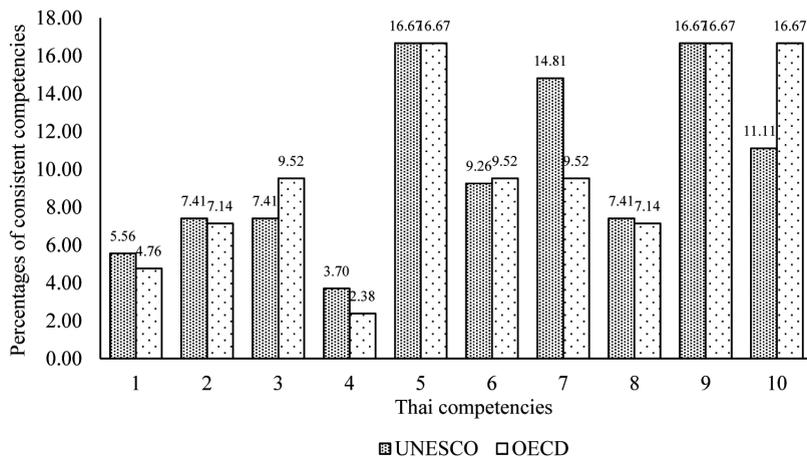
and then transformed to a percentage. This process was repeated to analyze the consistent competency between the Thai and OECD frameworks. In those results, the most consistent competencies between the Thai document and UNESCO’s framework were (5) life skills and personal growth and (9) collaboration, teamwork, and leadership (16.67%), while these two core competencies and (10) active citizens with global mindedness were the most consistent competencies between the Thai document and the OECD’s framework (16.67%). In contrast, (4) English for communication was the most inconsistent competency between the Thai document and the OECD’s framework (3.70%) and Thai document and the UNESCO’s framework (2.38%). The overall consistency among the three frameworks is presented in Figure 1.

Considering the consistency between UNESCO’s framework and the Thai document, 13 out of 24 of UNESCO’s subskills were consistent to one Thai competency, such as three subskills of *media and information literacy* and two subskills of physical health and religious values. However, respect for the environment was the only inconsistent competency between the UNESCO and Thai frameworks. Among those consistencies, reflective thinking was the most consistent in the Thai document. The consistent competencies between the Thai document and the UNESCO’s Assessment of Transversal Competencies are presented in Table 2.

According to the OECD’s framework, (3) taking responsibility was the most consistent in the Thai document, especially (3.2) self-efficacy. However, three competencies of the OECD’s framework, including (1.3) curiosity, (1.4) open-mindedness, and (2.3) innovation and continuity, were consistent to one Thai competency, while the others were consistent with at least two Thai competencies. Further analysis of consistency between the Thai document and the OECD framework is seen in Table 3.

*Part 2: The Details of Similarities and Differences of Thai Competencies compared to the UNESCO and OECD Frameworks*

The consistent competencies between the Thai and UNESCO frameworks and between the Thai and the OECD frameworks are described conceptually instead of being referred to by their titles. The first similarities among the three frameworks were the necessary competencies for working with diverse teams. Three frameworks addressed the ability of people to work with others toward achieving a common goal with respect for diverse teams and environments. Another consistent competency was the notion of self-realization or self-improvement. People need to recognize their personal strengths and weaknesses, behaviors, and areas of needed development to improve themselves and seek learning opportunities to gain expertise. The excerpts of those similarities are shown below.



**Figure 1** The percentages of consistent competencies between the Thai document and the UNESCO’s/OECD’s frameworks

**Table 2** The consistent competencies between the Thai document and the UNESCO transversal competency framework

UNESCO	Thai competencies									
	1	2	3	4	5	6	7	8	9	10
<b>1. Critical and innovative thinking</b>										
1.1 Creativity		✓	✓			✓	✓			
1.2 Entrepreneurship						✓				
1.3 Application skills							✓			
1.4 Reflective thinking	✓	✓	✓		✓	✓	✓	✓	✓	✓
1.5 Reasoned decision-making			✓				✓			
<b>2. Interpersonal skills</b>										
2.1 Communication skills	✓	✓	✓	✓			✓		✓	
2.2 Organizational skills						✓				
2.3 Teamwork									✓	
2.4 Collaboration									✓	
<b>3. Media and information literacy</b>										
3.1 Ability to obtain and analyze information through ICTs									✓	
3.2 Ability to critically evaluate information and media literacy									✓	
3.3 Ethical use of ICTs									✓	
<b>4. Global citizenship</b>										
4.1 Respect for diversity									✓	✓
4.2 Intercultural understanding	✓			✓			✓		✓	✓
4.3 Democratic participation										✓
4.4 Conflict resolution					✓		✓		✓	✓
4.5 Respect for the environment										
<b>5. Intrapersonal skills</b>										
5.1 Self-discipline					✓					
5.2 Ability to learn independently					✓					
5.3 Flexibility and adaptability					✓		✓		✓	✓
5.4 Self-awareness					✓	✓				
5.5 Self-motivation					✓					
<b>6. Physical health and religious values</b>										
6.1 Respect for religious values					✓					
6.2 Appreciation of healthy lifestyle					✓					
<b>Total (54)</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>5</b>	<b>8</b>	<b>4</b>	<b>9</b>	<b>6</b>

**Table 3** The consistent competencies between the Thai document and the OECD framework

OECD	Thai competencies									
	1	2	3	4	5	6	7	8	9	10
1. Creating new value										
1.1 Adaptability					✓				✓	✓
1.2 Creativity						✓	✓			
1.3 Curiosity			✓							
1.4 Open-mindedness									✓	
2. Reconciling tensions and dilemmas										
2.1 Equity and freedom									✓	✓
2.2 Autonomy and community			✓		✓			✓	✓	✓
2.3 Innovation and continuity							✓			
2.4 Efficiency and the democratic process					✓					✓
3. Taking responsibility										
3.1 Self-control					✓	✓				
3.2 Self-efficacy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.3 Responsibility	✓				✓	✓		✓	✓	✓
3.4 Problem-solving			✓		✓		✓		✓	✓
Total (42)	2	3	4	1	7	4	4	3	7	7

**Table 4** The excerpts of the similar aspects among three frameworks

Aspect	Framework		
	Thai competencies	UNESCO	OECD
Work with teams	“...collaborate with others, share ideas, open-minded and respect to diverse opinions...” (Office of the Education Council, Thailand, 2019; p.19)	“Teamwork refers to skills necessary to be able to work with others towards a common goal.” (UNESCO, 2019; p.45)	“...dealing with novelty, change, diversity and ambiguity assumes that individuals can think for themselves and work with others” (OECD, 2018; p.6)
Self-realization or self-improvement	“...recognize their personal strengths and weaknesses, ... seek learning opportunities to gain expertise” (Office of the Education Council, Thailand, 2019; p.13)	“... be self-directed learners ... explore and expand one’s own learning and opportunity to gain expertise” (UNESCO, 2019; p.46)	“...learn to think and act in a more integrated way... learn to be systems thinkers” (OECD, 2018; p.5)

In contrast, there were two main aspects underpinning the recognizable differences among these competencies. The first aspect was the integration of the specific context within the statements of competencies. This notion could be seen clearly in the Thai document, while the UNESCO and OECD frameworks did not address the issue of context. In the Thai document, there were statements that were explicitly bound by cultural and linguistic contexts. For example, the Thai and English languages

were addressed as tools to share ideas and experiences relevant to Thai culture in an international context. In terms of Thai culture, the integration of Thai and international personal characteristics, appreciation for aesthetics, the inheritance of Thai traditions and culture, the acknowledgement of religions and beliefs, and physical and mental health, including avoiding temptation, were mentioned in the Thai document. The conceptions of religious values and health were consistent in the

UNESCO framework, but they were more context-specific in the Thai document, while this aspect was not seen in the OECD framework. The excerpts of those differences are shown in Table 5.

Besides considering the Thai context, some uniqueness in the Thai competencies was not seen in the two international frameworks. First, Thai competency addressed the integration of math and other disciplines to solve real-world problems and addressed the relevancy of nature in providing scientific explanations and argumentations, developing models, and engaging in inquiry. Second, inspiration from other team members was named as the source for developing oneself. Next, the sufficiency economy was another underlying competency for framing the thoughts and the work of people. Lastly, apply knowledge to design, and creating products through professional ethics and social responsibility.

## Discussion

The competencies addressed in the proposed Thai document were quite aligned to the UNESCO's Assessment of Transversal Competencies (UNESCO, 2019) and the OECD Learning Framework 2030 (OECD, 2018), especially the competencies of (5) life skills and personal growth and (9) collaboration, teamwork, and leadership (Office of the Education Council, Thailand 2019). These two core competencies serve as evidence of common goals among the three frameworks that aim to develop students as whole persons and prepare them to be well-developed individuals to live with other people in the global community.

The context of national curriculum is one of several factors to inform what the competency-based curriculum should look like (Rappleye et al., 2020). It was clear that the Thai document addressed more context-bound competencies than the international frameworks. Thai context addressed and integrated in the competencies included the Thai language, which was considered a tool to share ideas and experiences, and Thai traditions, such as the acknowledgement of religions and beliefs. Thai students can be prepared for living in Thai culture,

which develops their ability to live in the broader global society. Students can apply the competencies through their daily performance in society. This finding aligns with Child and Shaw's (2019) study that addressed how students could meaningfully enact the competencies when they were relevant to the students' context.

The different competencies addressed in the several frameworks may occur due to the interpretation and their level of importance (Gervais, 2016; Palsa & Mertala, 2019). Respect for the environment was the competency not explicitly addressed in the proposed Thai document but addressed in UNESCO's (2019). However, the research report launched by The Office of the Education Council (2019) presented criteria for assessing students' levels of competencies. There was a statement relevant to the respect of the environment mentioned in the highest level under competency (3) scientific inquiry and scientific mind, as follows: "implement scientific method to inquire daily-life knowledge... and engage in environmental conservation". However, there was no further description about respect for the environment. Similar to the OECD (2018) framework that did not address respect for the environment as a competency, there was concern for human values, which was the immediate use of the competencies to transform society and shape students' futures. The uniqueness of Thai competencies would promote Thai citizens to be well-prepared citizens not only in Thai contexts but also international world views, especially in the particular context of workforce (Kim, 2015).

## Conclusion and Recommendation

The competencies in the proposed Thai document were developed to engage students with skills, knowledge, and values for living in complex societies. These competencies were compared to international frameworks, which were the references for developing national curricula for several countries. The Thai competencies were more aligned to the UNESCO's Assessment of Transversal Competencies than the OECD framework, especially the aspects of (5) life skills and personal

**Table 5** The excerpts of the differences in terms of communication among three frameworks

Thai competencies	UNESCO	OECD
"...communicate fluently and appropriately to society, the community, and share experience and Thai culture with others..." (Office of the Education Council, Thailand, 2019; p.11)	"...articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts" (UNESCO, 2019; p.45)	"...innovation springs not from individuals thinking ..., but through cooperation and collaboration with others to draw on existing knowledge to create new knowledge (OECD, 2018; p.5)

growth and (9) collaboration, teamwork, and leadership, while (4) English for communication was the most inconsistent competency. Several aspects of Thai competencies were distinct from the international frameworks, including the integration of Thai culture such as the Thai language as a tool to communicate with others, Thai context such as traditions and inherited wisdom. Nevertheless, some competencies were omitted in the Thai document, such as respect for the environment.

This research compared the Thai competencies to the UNESCO's Assessment of Transversal Competencies and the OECD Learning Framework 2030, and the differences among them represent which competencies were emphasized in the Thai document and why some were discarded. The differences may inform the national Thai curriculum developers to design a curriculum appropriate to the Thai educational context yet aligned to the international viewpoints. The teachers in the Thai education system can better comprehend through this study how Thai competencies are addressed and emphasized; therefore, they can design activities to help students develop Thai competencies by emphasizing not only the competencies that align to the international frameworks but also the unique Thai framework.

Since the international frameworks in this study illustrate the competencies that can be generalized in other contexts, the specific contexts cannot be addressed. To explore how the frameworks are applied and implemented in various countries, further studies can assess the similarities and differences between the Thai competencies and other national competency-based curricula, such as those of Finland (Ministry of Education and Culture, Finland, 2017) and New Zealand (New Zealand Council for Educational Research, 2018). The findings may show how other nations develop and implement competency-based curriculum, which the Thai curriculum developers may adapt to strengthen Thai education.

### Limitation of the Study

This study focuses on Thai competency framework proposed by the Office of the Education Council, Thailand (2019). This manuscript was developed during the transitional phase of the critical development of a new competency-based curriculum. At that point of time, there was no national competency-based curriculum framework.

### Conflict of Interest

There is no conflict of interest.

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