

Life and career skills assessment for high school students

Preeda Nittayaros¹, Jatuphum Ketchatturat¹, Patrawadee Makmee²

¹Department of Educational Measurement and Evaluation, Faculty of Education, Khon Kaen University, Khon Kaen, Thailand

²Department of Research and Applied Psychology, Faculty of Education, Burapha University, Mueang Chonburi, Thailand

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ABSTRACT

This study assessed life and career skills among high school students in Thailand using survey research. The sample consisted of 1,050 high school students from six regions of Thailand was selected through multi-stage random sampling. The research instrument was a life and career skills assessment test for high school students and satisfaction with the life and career skills assessment for high school students. Five experts validated the instrument, which yielded a content validity index (CVI) of 0.82 and a Cronbach's alpha coefficient of 0.89. The research results indicated that overall high school students' life and career skills were high ($M=4.50$, $SD=0.62$). Students had a very high level of satisfaction with the overall assessment of life and career skills ($M=4.59$, $SD=0.81$). In conclusion, this life and career skills assessment can solve the problem of measuring and evaluating life and career skills for high school students. The data obtained can help school directors plan for developing the quality of students. Most importantly, the life and career skills assessment allow high school students to know the results of their own skill assessments so that they can use them to improve and develop their own skills.

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Corresponding Author:

Patrawadee Makmee

Department of Research and Applied Psychology, Faculty of Education, Burapha University

169 Long-Had Bangsaen., Saensuk, Mueang, Chonburi, 20131, Thailand

Email: patrawadee@gmail.com

1. INTRODUCTION

The world in the 21st century is undergoing rapid transformations driven by technological advancements, globalization, and complex societal challenges. As a result, 21st century skills have emerged as crucial competencies that individuals need to thrive in this fast-paced, digital age. These skills include critical thinking, creativity, collaboration, communication, problem-solving, and digital literacy abilities that empower individuals to adapt and succeed in an ever-changing environment [1]. However, within the broad framework of 21st century skills, life and career skills stand out as particularly vital for preparing individuals not just for work, but also for managing their personal lives effectively [2]. Life and career skills encompass a range of competencies such as adaptability, initiative, leadership, responsibility, and interpersonal skills essential tools for navigating both the professional world and daily life [3].

In the context of today's society, where careers are no longer linear and individuals often need to adapt to shifting job markets, life and career skills are indispensable. These skills enable individuals to plan meaningful careers, solve real-life problems, work collaboratively across cultures, and maintain well-being in the face of rapid change [4]. As technology continues to reshape industries and create new opportunities and challenges, students and workers alike must be able to think critically, make informed decisions, and continually reinvent themselves [5]. While 21st century skills provide a broad set of competencies for success in the modern world, life and career skills form the practical foundation that allows individuals to apply these

abilities in real-life contexts. They bridge the gap between knowledge and action, ensuring that people are prepared not just for the workforce, but for life as adaptable, thoughtful, and proactive members of society [6]. It makes them ready to adjust themselves mindfully and carefully, plan for careers that are appropriate for themselves, without conflict, and manage their lives appropriately and happily [7].

The assessment of life and career skills of high school students in Thailand is an assessment of 21st-century skills, which are skills that show the overall picture of students' skills. From the study of related work and research, high schools under the Office of the Basic Education Commission in Thailand still lack the assessment of life and career skills of high school students that specifically separates life and career skills. By separating individual skills to clearly show life and career skills, high school students have life and career skills that are lower than their true quality. The results of the assessment of life and career skills may not reflect the skills of students that are consistent with their true skill levels. From such conditions and problems, we are interested in studying the assessment of life and career skills of high school students, specifically life and career skills, in a particular skill. Unlike previous studies, which often assessed these skills broadly or as part of combined 21st-century skills, to obtain the assessment results that clearly reflect the life and career skills of high school students in line with the skills that students have. It can solve the problem of students' skills that are lower than the quality level of the education management standards. Students who have been assessed for life and career skills, which are important skills for high school students who graduate to live and work in today's global society, because life and career skills are skills that people need to have quality and potential in society, can live in a world that is rapidly changing and are life skills combined with work in their careers.

2. LITERATURE REVIEW

Life and career skills encompass a range of abilities essential for individuals to navigate complex environments in both personal and professional domains. These skills involve the capacity to process knowledge effectively and leverage information and technology to support career development [8]. Additionally, they include the ability to adapt and respond appropriately to life's challenges, managing daily stimuli effectively [9]. The ability to confront and resolve various everyday problems through adaptability and correct behavior is also a crucial aspect [10], [11]. Furthermore, working proficiency requires multiple competencies, such as analytical thinking, creativity, decision-making, and problem-solving, which are fundamental in professional contexts [12]. These competencies also integrate emotional intelligence and a service-oriented mindset, fostering collaboration and flexibility in professional interactions [13], [14].

Life and career skills further emphasize the ability to engage in continuous self-learning, effectively manage work responsibilities, and foster positive interpersonal relationships within society [15]. This includes conflict resolution, problem management, and the ability to adjust to social and environmental changes while avoiding behaviors that could negatively impact oneself or others [16], [17]. Moreover, these skills are crucial in preparing individuals to address contemporary social challenges, such as gender roles, substance abuse, family dynamics, health considerations, media influences, and environmental and societal issues [18], [19].

There are five key components of life and career skills include: i) flexibility and adaptability, the capacity to modify and adjust work processes to suit different circumstances while remaining receptive to diverse perspectives and integrating them appropriately [20], [21]; ii) initiative and self-direction, the ability to work with determination, take responsibility, embrace new challenges, and set strategic goals to achieve success within a specified timeframe [22], [23]; iii) social and cross-cultural skills, the competence to function effectively in diverse cultural and social settings without experiencing stress, thereby ensuring successful interactions and collaborations [24]; iv) productivity and accountability, the ability to apply knowledge and skills in a structured manner to produce high-quality outcomes. This component includes efficient time management and resource allocation to optimize productivity [25], [26]; and v) leadership and responsibility, encompasses leadership qualities that enable individuals to guide teams towards achieving objectives while maintaining ethical standards. Leaders must demonstrate accountability, integrity, and a commitment to collective interests over personal gains.

Previous studies highlight that these five components serve as fundamental attributes for individuals striving to succeed in their careers. They enable individuals to adapt to dynamic environments, take proactive steps in goal-setting and self-management, engage effectively across cultural boundaries, optimize productivity, and exhibit ethical leadership. Collectively, these competencies ensure that individuals can navigate the evolving demands of the global workforce successfully [27].

This study aims to investigate the development and evaluation of life and career skills among high school students within the Thai educational context. The specific objectives are to assess the life and career skills of high school students in Thailand and to satisfaction with the assessment of life and career skills of high school students. This conceptual framework establishes the theoretical relationship between five

independent variables of life and career skills (flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility) and two dependent variables (life and career skills development of high school students and their satisfaction with assessment processes), hypothesizing that enhanced competency in these five skill domains will result in improved student developmental outcomes and increased satisfaction with evaluation methodologies. This model aligns with contemporary competency-based educational theories and 21st century skills frameworks in secondary education contexts, as shown in Figure 1.

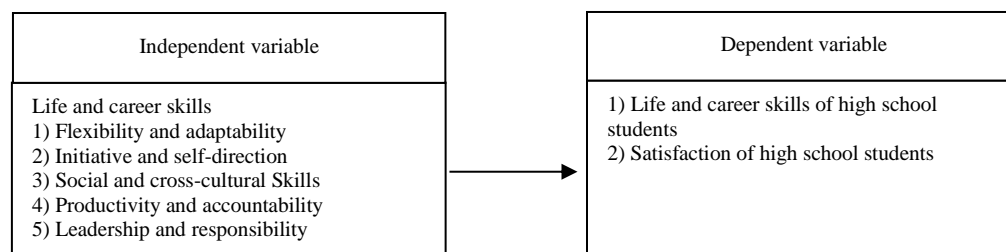


Figure 1. Conceptual framework

3. METHOD

This study utilized a quantitative survey research methodology to develop and validate an assessment tool for measuring life and career skills among high school students in Thailand. The research specifically aimed to evaluate five essential competencies that contribute to students' overall readiness for academic and professional success. These competencies include: i) flexibility and adaptability, which reflects the ability to adjust to changing circumstances; ii) initiative and self-direction, which emphasizes goal-setting and independent decision-making; iii) social and cross-cultural skills, which facilitate effective interaction in diverse environments; iv) productivity and accountability, which focus on time management and responsibility in task completion; and v) leadership and responsibility, which highlight the ability to guide others and make ethical decisions [8].

To control potential confounding variables, several strategies were employed: i) multi-stage random sampling was used to ensure representativeness of students from diverse regions; ii) all participants received standardized instructions to ensure that all students understood the assessment process consistently; iii) data collection was conducted under controlled and uniform conditions to minimize environmental variability; and iv) the research instruments were thoroughly validated and tested for reliability before actual data collection to reduce measurement errors and biases.

3.1. Population and sample

The population for this study comprised high school students enrolled in schools under the Office of the Basic Education Commission, Ministry of Education in Thailand. Based on Krejcie and Morgan's table [28], for determining sample size for research activities should be more than 384 samples. Given the large population of high school students under the Office of the Basic Education Commission in Thailand, this number ensured adequate representation and sufficient statistical power for the study. The sample selected through a multi-stage random sampling technique further guaranteed that the sample was diverse and representative of students from all six regions of Thailand, which served as the primary sampling units. After that, random selection of five provinces from each region, totaling 30 provinces. Then, random selection school from each province, resulting in 30 schools. Finally, selection of 35 students from each school, culminating in a total of 1,050 students. The details are shown in Table 1.

Table 1. Number of students in all six regions nationwide

No.	Regions	Provinces	Number of schools	Number of students per school	Total number of students per region
1	Northeast	5	5	35	175
2	Eastern	5	5	35	175
3	North	5	5	35	175
4	Central Region	5	5	35	175
5	South	5	5	35	175
6	Western	5	5	35	175
	Total	30	30		1,050

3.2. Research instruments

The research instruments include a life and career skills assessment and a satisfaction assessment form for high school students. The development and validation process involved several steps: i) a review of relevant documents and prior research related to the variables under investigation was conducted; ii) definitions and measurement frameworks for each variable were established; and iii) questionnaire items aligned with these variables were created. The content validity of the questionnaire was examined by five experts in educational measurement and evaluation, using an item-objective congruence (IOC) index. The evaluation resulted in a content validity index (CVI) of 0.82, indicating acceptable content validity. Furthermore, a pilot study was conducted with 30 high school students and administrators to assess the reliability of the instrument from Chaiphum Girls' School, under the Chaiphum Secondary Educational Service Area Office. The internal consistency of the instrument was confirmed through Cronbach's alpha coefficient, which yielded a value of 0.89, indicating high reliability and internal consistency.

3.3. Research data collection

The data collection process followed a systematic approach to ensure completeness and accuracy. The researcher prepared the necessary documents for school submission, including an official letter informing schools about the research and the life and career skills assessment and satisfaction assessment forms. Data collection was conducted through three channels: i) contacting school administrators via telephone to inform them of the research, followed by mailing the research documents; ii) Sending research documents by postal mail directly to schools; and iii) delivering research documents through online channels to school administrators and teachers. Coordination between school administrators and academic supervisors was maintained to facilitate efficient data collection, resulting in a 100% data collection rate from the target sample.

3.4. Data analysis

Descriptive analysis of respondent demographics, including gender, position, and work experience, was conducted using frequency and percentage calculations. Additionally, the life and career skills assessment and satisfaction assessment were evaluated using mean and standard deviation (SD). Interpretation of the mean scores followed the following criteria: mean scores between 4.50 and 5.00 indicated a very high level of life and career skills or satisfaction; mean scores between 3.50 and 4.49 indicated a high level; mean scores between 2.50 and 3.49 indicated a moderate level; mean scores between 1.50 and 2.49 indicated a low level; and mean scores between 1.00 and 1.49 indicated a very low level. This analytical framework provided a comprehensive understanding of the life and career skills and satisfaction levels of high school students in Thailand.

4. RESULTS AND DISCUSSION

The data analysis results provide insights into both the assessment of life and career skills among high school students and their overall satisfaction with the evaluation process. The findings highlight the effectiveness of the assessment tool in measuring key competencies and its reception among students. A detailed summary of these results is presented, offering a comprehensive understanding of students' skill levels and their perceptions of the assessment experience.

4.1. Results of data analysis of the life and career skills assessments for high school students

The analysis revealed that high school students demonstrated very high levels of life and career skills overall ($M=4.62$, $SD=0.29$). Examining individual components shows that productivity and accountability scored highest ($M=4.67$, $SD=0.28$), followed by social and cross-cultural skills ($M=4.65$, $SD=0.29$), leadership and responsibility ($M=4.62$, $SD=0.30$), initiative and self-direction ($M=4.60$, $SD=0.29$), and flexibility and adaptability ($M=4.59$, $SD=0.29$). These findings align with Makmee research [29] on learning and innovation skills assessment criteria for upper secondary students, which similarly found that properly structured assessment frameworks can effectively measure complex student competencies. The high scores in productivity and accountability particularly echo Makmee findings [29] on future skills assessment criteria, which identified self-management and productivity as crucial components of student success. The details are shown in Table 2.

4.2. Results of data analysis of the satisfaction of users of the life and career skills assessment for high school students

Students reported very high overall satisfaction with the assessment tool ($M=4.59$, $SD=0.81$). The usefulness dimension received the highest rating ($M=4.78$, $SD=0.60$), followed by performance ($M=4.60$, $SD=0.82$), efficiency ($M=4.58$, $SD=0.80$), suitability ($M=4.57$, $SD=0.86$), and validity ($M=4.48$, $SD=0.89$).

Similar to how Chiv *et al.* [24] found that systematic assessment tools effectively evaluated well-being status among health professionals, these results demonstrate that structured assessment approaches can successfully measure student satisfaction and competency levels. The strong satisfaction results, particularly regarding usefulness, support Chase *et al.* [25] research on assessment tools' role in student development. The details are shown in Table 3.

Table 2. Life and career skills of high school students

No.	Evaluation standards	Mean (M)	SD	Evaluation results
1.	Flexibility and adaptability	4.59	0.29	Very good
2.	Initiative and self-direction	4.60	0.28	Very good
3.	Social and cross-cultural skills	4.65	0.29	Very good
4.	Productivity and accountability	4.67	0.28	Very good
5.	Leadership and responsibility	4.62	0.30	Very good
	Overall mean score	4.62	0.28	Very good

Table 3. Satisfaction of high school students

No.	Evaluation standards	Mean (M)	SD	Evaluation results
1.	Performance	4.60	0.82	Very good
2.	Validity	4.48	0.96	Good
3.	Efficiency	4.58	0.80	Very good
4.	Suitability	4.57	0.86	Very good
5.	Usefulness	4.78	0.60	Very good
	Overall mean score	4.59	0.81	Very good

4.3. Implications for educational practice

The high scores across all life and career skill dimensions suggest that the assessment tool effectively captures student competencies. This aligns with Prasertcharoensuk *et al.* [26] findings on the importance of comprehensive assessment models in understanding student achievement. The strong performance in social and cross-cultural skills (M=4.65) particularly reflects Kunjukunju *et al.* [30] research on self-directed learning behaviors, which emphasized the importance of social interaction in skill development.

4.4. Limitations and future directions

While the results are promising, future research should explore the long-term impact of life and career skills assessment on student development. Longitudinal studies could help predict how early career skill assessment relates to future academic and professional success. Additionally, incorporating multiple assessment methods, as suggested by Fernando and Bual [11] mixed-method design research, could provide deeper insights into student skill development. The high satisfaction rates suggest that students find value in structured assessment tools, but further research could explore how these assessments translate into practical skill development and career readiness. This aligns with Makmee [29] emphasis on connecting assessment criteria to real-world applications and echoes Fernando and Bual [11] findings on the importance of comprehensive assessment approaches in professional development contexts.

5. CONCLUSION

The assessment of life and career skills for high school students is critical in equipping youth with the competencies needed for success in modern life and work. This assessment focuses on five essential dimensions include: i) flexibility and adaptability; ii) initiative and self-direction; iii) social and cross-cultural skills; iv) productivity and accountability; and v) leadership and responsibility. By aligning with the United Nations sustainable development goal 4 (SDG4), particularly target 4.4, it aims to increase the number of young people with relevant skills for employment and entrepreneurship. The assessment tool enables educational institutions, such as those under the Office of the Secondary Education Area, to systematically evaluate and develop students' skills, promoting inclusive, equitable quality education, and lifelong learning opportunities. This supports SDG4's goal of enhancing students' preparedness for future challenges and careers, with positive outcomes indicated by high satisfaction levels among users.

In addition, a newly validated life and career skills assessment tool, specifically designed for high school students in Thailand, addresses existing gaps in educational assessments and aligns with both national standards and global development goals. This tool disaggregates the five key competencies necessary for

success, ensuring a comprehensive framework for evaluating and fostering life and career skills. By incorporating user satisfaction metrics, the tool remains practical and relevant in real educational settings, offering actionable insights for educators and policymakers. This innovative tool contributes to SDG4's broader objective of promoting quality education and sustainable development by providing detailed feedback to students, helping them identify areas for improvement and proactively develop the skills required for future success.

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Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Preeda Nittayaros	✓	✓	✓	✓	✓	✓		✓	✓	✓			✓	
Jatuphum Ketchatturat		✓				✓		✓	✓	✓	✓	✓		
Patrawadee Makmee	✓	✓	✓	✓		✓	✓			✓	✓	✓	✓	

C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

DATA AVAILABILITY

The data that support the findings of this study are available from the first and corresponding authors [PM], upon reasonable request.




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BIOGRAPHIES OF AUTHORS






Preeda Nittayaros    is currently pursuing doctoral studies as a researcher in the Faculty of Education, Kaen University, Thailand. His academic focus centers on developing and validating measurement instruments for educational outcomes, particularly in the context of life and career skills assessment among secondary education students. He can be contacted at email: preedani@kkumail.com.



Jatuphum Ketchatturat    is an associate professor at the Faculty of Educational Measurement and Evaluation, Khon Kaen University. He obtained a Ph.D. in Educational Measurement and Evaluation from Chulalongkorn University, Thailand. He can be contacted at email: jketcha@kku.ac.th.



Patrawadee Makmee    is an associate professor at the Department of Research and Applied Psychology, Faculty of Education, Burapha University, Chonburi, Thailand. She obtained a Ph.D. in Educational Measurement and Evaluation from Chulalongkorn University, Thailand. She can be contacted at email: patrawadee@gmail.com.