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## Enhancing Vocational Education Employment Opportunities: Evaluating a Work-Integrated Learning (WIL) Management Model for Hotel and Tourism Courses

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### **Abstract**

*This research developed an integrative evaluation model for work-integrated learning (WIL) management, specifically tailored for hotel and tourism vocational education courses. The study was conducted in two phases. The first phase involved the creation and validation of the evaluation model, with input from education evaluation experts and WIL management specialists. In the second phase, the model's effectiveness was tested and evaluated among stakeholders, including employers, instructors, and undergraduate seniors (n=95). Statistical analyses revealed that the developed 'LEL (Learners, Employers, Lecturers) Model' exhibited high overall quality and suitability for assessment purposes. The findings suggest significant improvement in students' development scores post-implementation, highlighting the model's potential to enhance learning quality and meet industry demands.*

**Keywords:** Evaluation Model, Hotel and Tourism Courses, Comprehensive Assessment, Work-Integrated Learning, Thailand

### **Introduction**

Since the onset of the COVID-19 pandemic in 2022, the hotel and tourism industry has faced significant challenges, impacting both the economy and employment opportunities. Reports indicate staggering economic losses, with the United Nations estimating damages exceeding 76.88 trillion Baht (BBC NEWS, 2021). Moreover, job losses have been disproportionately high in this sector, affecting over 1.6 million individuals across various countries (International Labour Organization, 2021). Concurrently, technological advancements are reshaping industries, with predictions suggesting that over 54% of businesses will be affected by these changes (Frey & Osborn, 2015).

Amidst these challenges, vocational education in the hotel and tourism sector plays a crucial role in preparing a skilled workforce resilient to evolving industry demands. Quality education is essential to equip learners with the necessary knowledge and skills to navigate the complexities of the modern workforce (United Nations, 2022). However, ensuring that

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educational programs effectively prepare students for employment requires a comprehensive assessment process.

In Thailand, legislative amendments have been made to enhance the quality of higher education, emphasizing learning outcomes in knowledge, skills, ethics, and personal characteristics (Ministry of Education, 2022). Work-integrated learning (WIL) programs have emerged as a valuable approach to bridging the gap between education and industry demands, particularly in hospitality and tourism courses (Aprile & Knight, 2020; Leong & Kavanagh, 2013; Wang et al., 2023). Nevertheless, variations in learning environments, industry collaboration, and student support can impact the effectiveness of these programs (Lloyd, et al., 2021).

Therefore, there is a pressing need to develop a robust evaluation model for WIL in hotel and tourism courses. This model should encompass a comprehensive assessment process involving stakeholders such as employers, educators, and students. By evaluating learning management practices, institutions can ensure that graduates are adequately prepared to meet industry needs, thereby enhancing employment opportunities. The application of established models like ADDIE and Stake's responsive assessment approach can guide the development of this evaluation framework (DeSimone et al., 2002; Stake, 2004).

In summary, this introduction sets the stage for the exploration of a critical issue: the development of a learning management evaluation model for hotel and tourism vocational education. By addressing this challenge, educational institutions can better support students in securing meaningful employment opportunities in a rapidly evolving industry landscape.

### **Research Objectives**

The objectives of this research are to develop and evaluate a comprehensive assessment model for work-integrated learning (WIL) in hotel and tourism courses. The specific research objectives are as follows:

1. To create and validate an assessment model for WIL in hotel and tourism courses:
  - This involves designing a structured framework for assessing the effectiveness of WIL programs in bridging the gap between education and industry requirements in the hotel and tourism sector.
  - The assessment model will be developed based on a thorough analysis of existing practices, industry standards, and educational goals, ensuring its relevance and applicability to the specific context of hotel and tourism vocational education.
2. To pilot test and evaluate the effectiveness of the WIL assessment model in hotel and tourism courses:
  - This objective entails implementing the developed assessment model in selected educational institutions offering hotel and tourism courses.
  - Through the pilot test, the researchers aim to assess the practicality, feasibility, and impact of the assessment model on enhancing students' readiness for employment in the hotel and tourism industry.
  - The evaluation will involve collecting and analyzing data on various aspects, such as student performance, industry partnerships, and employer feedback, to gauge the effectiveness and

efficiency of the assessment model.

By achieving these objectives, the research aims to contribute to the enhancement of educational practices in hotel and tourism vocational education, ultimately leading to better employment opportunities and outcomes for graduates in the industry.

## **Literature Review**

### **Economic and Social Context**

The evolving economic and social landscape has reshaped educational policies, particularly regarding the provision of vocational skills aligned with career pathways (Ministry of Education, 2022). This shift has led to a transformation in learning methodologies, transitioning from traditional teacher-centric approaches to facilitator-led learning, emphasizing self-directed learning and skill development (Attard et al., 2010; Pimdee et al., 2023; Sukkamart et al., 2023).

### **Work-Integrated Learning (WIL) in Hospitality and Tourism**

WIL is an educational approach that aligns with contemporary educational management practices, fostering collaboration between employers and educational institutions to design learning experiences that enable students to learn from their own experiences and engage in real-world problem-solving (Konopka et al., 2015). Previous studies have highlighted the prevalence of WIL in industries such as manufacturing and services, where prominent hospitality and tourism businesses like Hilton and Marriott serve as training grounds (Baum, 2002). WIL not only enhances students' skills but also fosters continuous self-development and improves employability prospects (Boud & Falchikov, 2007).

### **Variability in WIL Implementation**

While WIL demonstrates strengths in workforce development, variations exist in its implementation across educational institutions offering hospitality and tourism courses. Factors such as learning environments, learning management processes, industry collaboration, and student support contribute to differences in the quality and outcomes of WIL programs (Lloyd et al., 2021). Addressing these disparities through evaluation and improvement processes is crucial to ensuring that educational practices align with employers' skill requirements (Okumus & Wong, 2004).

### **Evaluation of Learning Management Processes**

Assessment of learning management processes aims to generate positive outcomes for all stakeholders involved and address any identified gaps in learning management (Flórez & P. Sammons, 2013). Deale and Lee (2023) emphasized the importance of outcome-based assessment in higher education, focusing more on skills acquired rather than traditional grading systems. Non-grade assessments have been shown to enhance motivation for learning and development (Lim, 2024), echoing findings by Bjorvatn (2022) who suggested that assessments should reflect both knowledge and practical skills.

There are various assessment formats available, depending on the chosen evaluation approach. Relevant theoretical studies suggest that Stake's (2004) responsive evaluation approach

prioritizes stakeholders' concerns and needs, setting evaluation objectives and designing assessments based on stakeholders' requirements to identify issues, strengths, and weaknesses directly. This approach involves 12 evaluation steps:

- 1. Engaging Stakeholders:** Initiate discussions with stakeholders involved in WIL, including employers, course instructors, and students, to understand their needs and challenges.
- 2. Defining Assessment scope:** Based on stakeholder discussions, define the scope and components of the evaluation.
- 3. Reviewing Assessment Overview:** Present the evaluation format to stakeholders (employers, instructors, and students) for comprehension and feedback.
- 4. Setting Assessment Objectives:** Discuss with stakeholders to clarify evaluation objectives.
- 5. Framing assessment issues:** Use input from stakeholder discussions to outline assessment issues.
- 6. Determining Data Requirements and Sources:** Identify data requirements and sources from stakeholders (employers, instructors, and students) to design data collection methods.
- 7. Developing Data Collection Tools:** Design appropriate data collection tools based on identified requirements.
- 8. Collecting Data:** Gather data using the designed tools.
- 9. Preparing Assessment Reports:** Compile assessment results for each stakeholder group.
- 10. Reviewing Assessment Accuracy:** Validate assessment accuracy and completeness.
- 11. Tailoring Reports to Stakeholder Interests:** Present assessment reports tailored to each stakeholder group for improvement and development purposes.
- 12. Formalizing Reports:** Officially document assessment findings in a research format.

This evaluation approach aligns with multi-stakeholder WIL practices, involving employers, training facilities, instructors, and students. Therefore, Stake's evaluation model was adapted to create the 'LEL Model' for learning management assessment in this study.

## **Methodology**

### **Development of the Evaluation Model**

The ADDIE model is a systematic instructional design process used by instructional designers and training developers to create effective educational materials. The model originated in the 1970s and was developed by the Florida State University's Center for Educational Technology under contract by the US Army (Kemouss et al., 2023). While it has undergone various modifications over the years, the basic ADDIE framework remains widely used in instructional design and training development processes (Susanto et al., 2022). The 'ADDIE Model' comprises five steps for designing learning processes (Figure 1) (Branch, 2009; DeSimone et al., (2002).

The first step involved analyzing the behavioral objectives and expectations of desired outcomes for learners. This information serves as a guideline for designing assessments that align with the stakeholders' needs.

Step two involved designing assessment frameworks based on objectives, and specifying

components and indicators. Researchers synthesized documents, and research findings, and engaged stakeholders in WIL learning management processes. They enlisted experts in hotel and tourism management and WIL learning management with over five years of experience (19 individuals) to evaluate the appropriateness of components and indicators.

Step three, the development stage, consisted of three sub-steps: preparing assessment issues, creating assessment tools, and producing supporting documents. Researchers refined the assessment model, which necessitated assessing its quality. Kanchanawasri (2013) suggests that evaluating outcomes against objectives aids in determining effectiveness and providing insights for improvements.

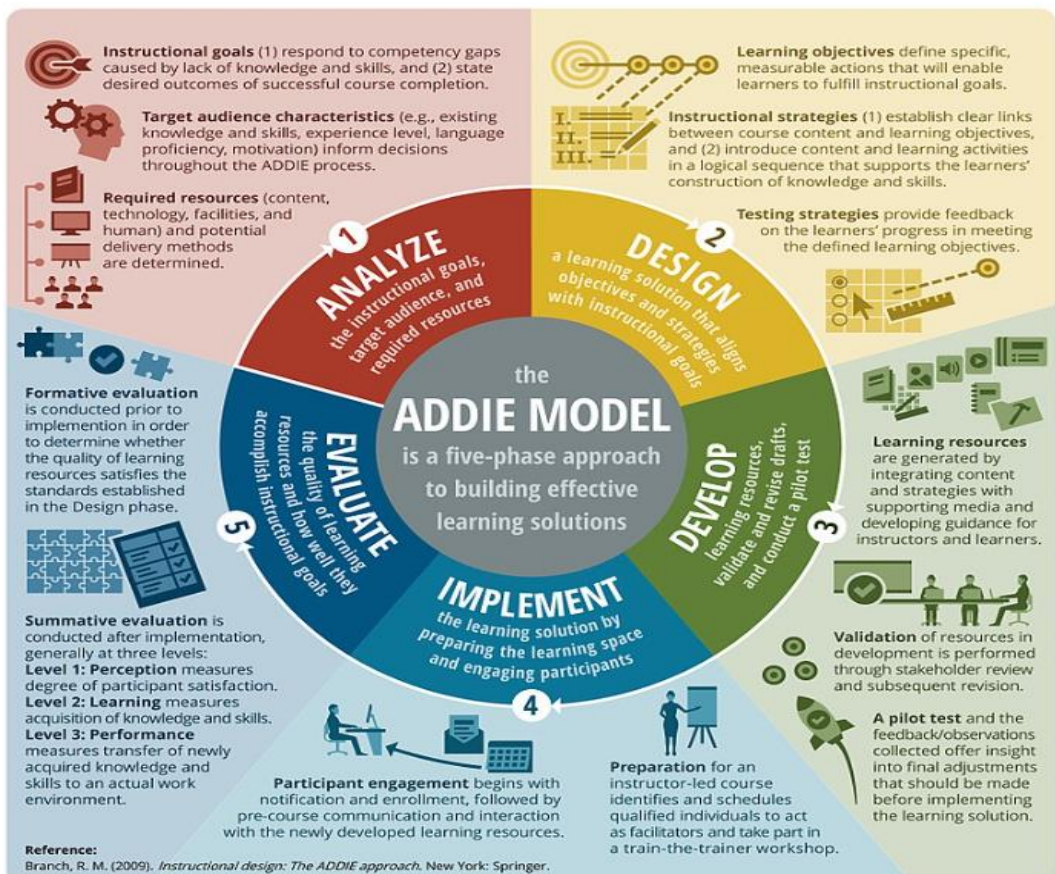


Fig. 1: The ADDIE Model.

Source: Branch (2009).

Step four involved implementing the developed assessment model by stakeholders. Researchers tested the assessment model with three stakeholder groups: employers, instructors, and students, to identify strengths and weaknesses during formative assessment. Feedback from the trial led to refinements.

Step five, the evaluation stage, involved assessing the model's effectiveness (summative). Researchers compared pre- and post-implementation assessment results, aligning with Martínez-Caro et al. (2015), who highlighted the importance of evaluating quality and

effectiveness to enhance learning management processes. This approach fosters stakeholder satisfaction by achieving desired quality standards.

## Work-Integrated Learning (WIL) Assessment Format Development

### Step 1: Generating and Validating the Learning Management Assessment Format

The researchers scrutinized documents and research relevant to creating a Work-Integrated Learning (WIL) assessment format for hotel and tourism courses (Braak, 2022; Nguyen et al., 2023; Nomnga, 2021). Subsequently, they applied the ADDIE principles (DeSimone et.al., 2002) and Stake's (2004) responsive assessment model to synthesize and develop a suitable assessment format. Following the development of the assessment format, the researchers evaluated its quality through feedback from assessment measurement experts and WIL learning management experts (hotel and tourism courses) with at least 5 years of experience.

The research tools used in this step were the developed assessment manual and evaluation forms for assessing the format, characterized by a 5-level ordinal scale. The evaluation criteria included four key evaluation standards often used in education assessment studies. Meta-evaluation, as defined by Stufflebeam (2015), involves obtaining and applying descriptive and judgmental information regarding the utility, feasibility, propriety, accuracy, and accountability of an evaluation. In this context, the evaluation adheres to the criteria outlined by the JCSEE (Yarbrough et al., 2010). However, the authors chose only four evaluation criteria. These were 1) accuracy standards, 2) utility standards, 3) feasibility standards, and 4) propriety standards (Stufflebeam, 2015; Wongrugsu et al., 2022; Yarbrough et al., 2010). The research tools were also content-validated by five content experts using the indexes of item-objective congruence (IOC) scoring method (Pimdee, 2020).

### Step 2: Pilot Testing and Studying the Effectiveness of the Assessment Format

In this step, the researchers applied the assessed assessment format from Step 1 to a sample group consisting of stakeholders from the hotel and tourism courses (employers, instructors, and final-year undergraduate students) at Panyapiwat Institute of Management (PIM) in Thailand's Nonthaburi Province (Domínguez & Pholphirul, 2020). The sample group consisted of 95 individuals, selected using cluster random sampling. The distribution of sample group members is detailed in Table 1.

**Table 1:** Number of Sample Groups Classified by Stakeholder Group.

Stakeholder groups	Respondents
Employer	28
Instructor/lecturer	8
Seniors (Bachelor's degree students in the final year of the program)	59
Total	95

The researcher designed the research to be a single group with measurements before and after giving the experimental items (One Group Pretest-Posttest Design) to study the effectiveness of the following research design (Knapp, 2016), as can be seen in Table 2.

The tool used in this research step was a practice evaluation form in which five experts used a 5-level estimation scale to check for accuracy (Validity) and reliability.

**Table 2:** Model Effectiveness Assessment Characteristics.

Item	Application	Description
E	group	E means the experimental group using the WIL learning management evaluation model.
T1	Pre-test	T1 means the evaluation score before using the WIL learning management evaluation model.
X	Experiment	X means the WIL learning management assessment model.
T2	Post-test	T2 means the evaluation score after using the WIL learning management evaluation model.

## Data Collection

The researchers collected data following the steps of each research phase as follows:

### Data Collection for Step 1: Generating and Validating the Learning Management Assessment Format

The researchers collected data using evaluation forms to assess the quality of the assessment format. They sent the assessment format developed by the researchers to assessment measurement experts and WIL learning management experts (hotel and tourism courses) with at least 5 years of relevant experience. The researchers coordinated this process themselves.

### Data Collection for Step 2: Pilot Testing and Studying the Effectiveness of the Assessment Format

The researchers conducted two rounds of data collection using the developed assessment format with the sample group. The data collection occurred during two periods: mid-semester and end of semester. They used performance assessment forms to compare the effectiveness before and after implementing the assessment format.

## Data Analysis

The researchers analyzed the data collected from each research phase as follows:

### Analysis of Data from Validating the Learning Management Assessment Format

The data were analyzed by calculating the mean and SD and comparing them with the criteria.

### Analysis of Data from Pilot Testing and Studying the Effectiveness of the Assessment Format

The data were analyzed by calculating the mean and SD and then calculating the development score or growth score using Kanchanawasri's (2013) formula as follows:

$$GS (\%) = \frac{(Y-X)100}{(F-X)} \quad (1)$$

Where:

- GS (%) represents the development score or growth score.
- X represents the initial measurement score.
- Y represents the measurement score after implementation.
- F represents the maximum score.

Then, the mean scores before and after implementing the assessment format were compared using the dependent t-test, and the mean scores for each component of the assessment were compared with the absolute criteria obtained from the expert recommendations using the One Sample t-test.

## Results

### Results of Developing and Validating the Work-Integrated Learning Assessment Format for Hotel and Tourism Management Programs

Based on the study of principles and theories related to the assessment of Work-Integrated Learning (WIL) for hotel and tourism management programs, it was found that in WIL, there are significant stakeholders, including employers, instructors, and students. This aligns with Stake's (2004) assessment theory, which emphasizes the importance of addressing the diverse needs and problems of stakeholders. Similarly, the *LEL Model* assessment format synthesized and developed by the researchers, as shown in Figure 2, demonstrates evaluation by each group as follows:

- Students are responsible for assessing the learning environment and learning management processes (Rafique et al., 2021). The assessment results are then reflected to the instructors for improvement or development (Songkram et al., 2021).
- Employers assess the learning outcomes experienced by students, enabling students to use the assessment results for improvement or development (Sokhanvar et al., 2021). This is a one-way assessment process.
- The assessment between employers and instructors is a two-way process. Instructors assess employers' participation in learning management activities, while employers assess instructors regarding the learning management processes to drive expected learning outcomes for students.



**Fig. 2:** The Learners, Employers and Lecturers (LEL) Model.

**Source:** The Authors.

The evaluation of the assessment format by experts in educational evaluation measures, along



with feedback from 9 WIL learning management experts specializing in hotel and tourism courses, revealed that the assessment format consistently met overall assessment standards at a high level ( $\bar{x} = 4.41$ ,  $SD = 0.32$ ). Upon closer examination, it was evident that the appropriateness aspect scored the highest mean rating ( $\bar{x} = 4.53$ ,  $SD = 0.40$ ), closely followed by the comprehensive accuracy aspect, which also received evaluation results at the highest level ( $\bar{x} = 4.49$ ,  $SD = 0.30$ ). Experts expressed a favorable opinion regarding the usefulness of the assessment model, indicating a high likelihood of its application in evaluating learning management ( $\bar{x} = 4.39$ ,  $SD = 0.49$  and mean = 4.22,  $SD = 0.57$ ) as depicted in Table 2.

**Table 3:** Mean ( $\bar{x}$ ) and Standard Deviation (SD) of Experts on the Standards of the WIL Learning Management Assessment Model ( $N=9$ ).

Aspects evaluated	$\bar{x}$	SD	Results Interpretation
1) Accuracy Standard	49.4	30.0	the most
2) Utility Standard	39.4	49.0	a lot
3) Feasibility Standard	22.4	57.0	a lot
4) Propriety Standard	53.4	40.0	the most
Averages	41.4	32.0	a lot

### Results of the Experimentation and Effectiveness of the Work-Integrated Learning (WIL) Assessment Model for the Hotel and Tourism Management Program

Table 3 presents the findings of the assessment model used in the Hotel and Tourism Management program, particularly focusing on Work-Integrated Learning (WIL). The analysis includes the relational development scores of 59 students who participated in the trial of the assessment model.

Among the participants, the majority, 37 students (62.71%), demonstrated highly developed learning outcomes, specifically practical skills, at a high level ( $GS\%=76-100$ ). Only a small proportion of students, four students (6.78%), scored at the elementary level ( $GS\%=0-25$ ) in relational development. The provided table further breaks down the number and percentage of students assessed according to their development level, categorizing them into beginner, intermediate, high, and very high levels based on their scores.

In essence, the analysis indicates that the majority of students exhibited significant development in practical skills as assessed by the WIL assessment model, while only a small fraction demonstrated lower levels of development.

**Table 4:** Number and % of Students Assessed according to Development Level.

Students	Developmental results level				Total
	Beginner level (25-0)	Intermediate level (50-26)	High level (75-51)	Very high level (76-100)	
Students	4	9	9	37	59
%	78.6	15.25	15.25	62.71	100.00

Table 4 presents a comparison of the average scores in practical skills of students who participated in the trial use of the WIL Learning Management Assessment Model for Hotel and Tourism Courses between Round 1 and Round 2. The independent variable is the evaluation score, with ' $\bar{x}$ ' representing the mean, 'SD' representing the standard deviation, ' $\bar{d}$ '

representing the difference in means, 'SD' representing the standard deviation of the differences, 't' representing the t-value, and 'Sig' representing the significance level. The table provides a concise overview of the assessment, focusing on the comparison of average scores in practical skills before and after the implementation of the assessment model.

**Table 5:** Comparison of Average Student Scores in Practical Skills Before and after Implementing the WIL Learning Management Assessment Model for Hotel and Tourism Courses (N=28).

Independent variable	$\bar{x}$	SD	$\bar{d}$	S <sub>d</sub>	t	Sig
1st evaluation score (before using the assessment model)	4.18	0.33	0.58	0.34	13.22	.00
2nd evaluation score (after using the evaluation model)	4.76	0.25				

\*p<.05.

The comparison of average scores of employers participating in the trial use of the Work-Integrated Learning (WIL) learning management assessment model for hotel and tourism courses reveals that the average assessment score in the second round is significantly higher than that of the first round at a statistical significance level of .05, as shown in Table 5.

**Table 6:** Comparison of Average Employer Scores Participating in the Trial Use of the WIL Learning Management Assessment Model for Hotel and Tourism Courses between Round 1 and Round 2 (N=28).

Independent variable	$\bar{x}$	S	$\bar{d}$	S <sub>d</sub>	t	Sig
1st evaluation score (before using the assessment model)	14.4	19.0	64.0	18.0	91.18	.00
2nd evaluation score (after using the evaluation model)	79.4	14.0				

\*p<.05.

The comparison of average scores of instructors participating in the trial use of the Work-Integrated Learning (WIL) learning management assessment model for hotel and tourism courses reveals that the average assessment score in the second round is significantly higher than that of the first round at a statistical significance level of .05, as shown in Table 6.

**Table 7:** Comparison of Average Instructor Scores Participating in the Trial Use of the WIL Learning Management Assessment Model for Hotel and Tourism Courses between Round 1 and Round 2 (N=8).

Independent variable	$\bar{x}$	S	$\bar{d}$	S <sub>d</sub>	t	Sig
1st evaluation score (before using the assessment model)	4.42	0.37	0.23	0.16	4.06	0.00
2nd evaluation score (after using the evaluation model)	4.65	0.24				

\*p<.05.

Table 7's evaluation results of the Work-Integrated Learning (WIL) learning management assessment model for hotel and tourism courses, comparing average scores with set criteria for each component, show that the average scores for all four components: Learning Environment

( $\bar{x}$ =4.71, S=0.32), WIL Success Factors ( $\bar{x}$ =4.86, SD=0.14), Learning Process ( $\bar{x}$ =4.77, SD=0.16), and Learning Outcome Expectations ( $\bar{x}$ =4.76, SD=0.25). The data indicates that the average scores for all four components—Learning Environment, WIL Success Factors, Learning Process, and Learning Outcome Expectations—were higher than the established criteria. Additionally, the statistical analysis reveals that these differences are significant at the .05 level.

Additionally, the data shows consistency in performance across all components, with each average score exceeding the established criteria. This consistency suggests that the WIL learning management assessment model effectively meets the predetermined standards across various aspects of the learning process.

**Table 8:** Comparison of Average Scores with Set Criteria for Each Component (N=95).

Independent variable (component)	Full score	Criteria	$\bar{x}$	SD	t	Sig
Learning Environment	5	00.4	71.4	32.0	68.11	0.00
WIL Success Factors	5	50.4	86.4	14.0	2.136	0.00
Learning Process	5	70.4	77.4	16.0	1.27	0.02
Learning Outcome Expectations	5	4.60	4.76	0.25	5.00	0.00

\*p<.05.

## Discussion

The development of the Work-Integrated Learning (WIL) learning management assessment model, termed the 'LEL Model' for hotel and tourism courses, reveals that stakeholders involved in WIL assessment extend beyond educators. The evaluation encompasses all participants contributing to learning management: employers, instructors, and students.

This aligns with Stake's (2004) responsive evaluation concept and Bjorvatn's (2022) suggestion to involve stakeholders in assessment, reflecting Hansen and Patton's (1994) idea that evaluations should be suitable, useful, and feasible for application.

The assessment model's comprehensive nature was confirmed by expert evaluation (Bagstad et al., 2013; Prommun et al., 2022; Ruenphongphun et al., 2022; Wongrugsu et al., 2022), with an overall high standard ( $\bar{x}$ =4.41, SD=0.32). Notably, *propriety* and *accuracy* were rated highest ( $\bar{x}$ =4.53, SD=0.40 and  $\bar{x}$ =4.49, SD=0.30), with high *utility* and *feasibility* for learning management assessment ( $\bar{x}$ =4.39, SD=0.49 and  $\bar{x}$ =4.22, SD=0.57).

These findings support Okumus and Wong's (2004) assertion that assessments should reflect learners' practical skills and knowledge for improvement, echoing Calamia et al.'s (2012) recommendation for repeated assessments to enhance development. Moreover, statistical analysis indicated significant improvement in assessment scores post-implementation, supporting Flórez and Sammons' (2013) findings on the benefits of recurrent evaluations.

Comparing mean scores to set criteria, each aspect of the WIL learning management

assessment model surpassed expectations ( $\bar{x}=4.71$ ,  $SD=0.32$ ;  $\bar{x}=4.86$ ,  $SD=0.14$ ;  $\bar{x}=4.77$ ,  $SD=0.16$ ;  $\bar{x}=4.76$ ,  $SD=0.25$ ), reflecting Wiliam's (2003) correlation between assessed and standard scores. Chuenchaikit et al. (2023) also stress the importance of evaluating various course components to meet assessment objectives, affirming the model's inclusivity in assessing stakeholders and potential for self-improvement. Thus, the implemented assessment model facilitates effective learning management and fosters continual improvement in alignment with educational goals.

## Conclusion

The research findings conclude that the Work-Integrated Learning (WIL) learning management assessment model for hotel and tourism courses is accurate, beneficial, feasible, and appropriate, with an overall high standard. The implementation of the '*LEL Model*' for WIL learning management assessment, involving lecturers, employers, and students (learners) as stakeholders, led to significant development in students' practical learning outcomes, with the majority (62.71%) achieving a high level of proficiency ( $GS\%=76-100$ ). Comparing pre- and post-assessment scores revealed improvements, highlighting areas for learning management refinement to ensure students meet course learning outcomes and address various challenges, thereby enhancing workforce skills and elevating education quality, which contributes to economic stability and sustainable tourism development in Thailand.

Similarly, WIL learning management is not universally compatible with conventional assessment contexts reliant on unilateral evaluation. The research suggests that governmental or relevant agencies should adopt the developed assessment model as a guideline for evaluating learning management quality and producing graduates who meet workforce demands.

## Limitations and Further Studies

While this research addresses gaps in WIL learning management, there are limitations to consider for future research. The data obtained from this study serve as a framework for evaluating learning management in Thai hotel and tourism courses, yet it does not fully cover WIL management in other courses or countries. Hence, future research should encompass WIL programs to produce skilled graduates in alignment with evolving learning management principles.

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## References

- Aprile, K. T., & Knight, B. A. (2020). The WIL to learn: Students' perspectives on the impact of work-integrated learning placements on their professional readiness. *Higher Education Kurdish Studies*

- Research & Development, 39(5), 869-882.  
<https://doi.org/10.1080/07294360.2019.1695754>
- Attard, A., Di Iorio, E., Geven, K. & Santa, R. (2010). Student-centered Learning - Toolkit for Students, Staff, and Higher Education Institutions.  
<https://files.eric.ed.gov/fulltext/ED539501.pdf>
- Bagstad, K. J., Semmens, D. J., Waage, S., & Winthrop, R. (2013). A comparative assessment of decision-support tools for ecosystem services quantification and valuation. *Ecosystem services*, 5, 27-39. <https://doi.org/10.1016/j.ecoser.2013.07.004>
- Baum, T. (2002). Skills and training for the hospitality sector: a review of issues. *Journal of Vocational Education and Training*, 54(3), 343-364.  
<https://doi.org/https://doi.org/10.1080/13636820200200204>
- BBC News, (2021). COVID-19: The UN reports global tourist businesses would be unable to return to pre-COVID levels until 2023. <https://www.bbc.com/thai/international-57668896>
- Bjorvatn, T. (2022). Assessment criteria for work-integrated learning in a generalist postgraduate university programme, 8th International Conference on Higher Education Advances, 1069-1076. <https://doi.10.4995/HEAd22.2022.14460>
- Boud, D., & Falchikov, N. (2007). Introduction: Assessment for the longer term. *Rethinking assessment in higher education learning for the long term* (pp. 14-26). Routledge.
- Braak, D. (2022). A multi-case study on the implementation of work-integrated learning (WIL) in the hospitality education sector in the Western Cape [Doctoral dissertation, Stellenbosch: Stellenbosch University] <https://scholar.sun.ac.za/items/4e7ff6b1-b992-495e-add4-26db8b7db68f>
- Branch, R. M. (2009). *Instructional design: The ADDIE approach* (Vol. 722). Springer.
- Calamia, M., Markon, K., & Tranel, D. (2012). Scoring Higher the Second Time Around: Meta-Analyses of Practice Effects in Neuropsychological Assessment. *The Clinical Neuropsychologist*, 26(4), 543-570. <https://doi.org/10.1080/13854046.2012.680913>
- Chuenchaikit, T., Kiddee, K., & Ratanaolarn, T. (2023). Professional facilitator: Development of training courses to enhance the facilitator technique for Thai community enterprises through online media. *Humanities and Social Sciences Letters*, 11(3), 260-270.  
<https://tinyurl.com/566ftzs2>
- Deale, C. S., & Lee, SH. (2023). Hospitality and Tourism Educators' Perceptions of Grading. *Journal of Hospitality & Tourism Education*, 35(1), 1-14.  
<https://doi.org/10.1080/10963758.2021.1963746>
- DeSimone, R. L., Werner, J.M., & Harris, D.M. (2002). Human resource development. Harcourt College. <https://www.kroobannok.com/m/mview.php?id=35953>
- Domínguez, J. M., & Pholphirul, P. (2020). Service facilities and hotel performance: empirical evidence from hotel-level data in Thailand. *International Journal of Services and Operations Management*, 36(3), 381-402. <https://doi.org/10.1504/IJSOM.2020.108120>
- Flórez, M. T., & Sammons, P. (2013). *Assessment for Learning: Effects and Impact*. ERIC.
- Frey, C. B., & Osborne, M. (2015). *Technology at work: The future of innovation and employment*. Citi GPS Oxford, England.
- Hansen, J. B., & Patton, M. Q. (1994). The Joint Committee on Standards for Educational Evaluation's "The Program Evaluation Standards: How to Assess Evaluations of Educational Programs. *Educational and Psychological Measurement*, 54(2), 550-567.
- International Labour Organization (2021). COVID-19 and employment in the tourism sector in the Asia-Pacific region <https://www.ilo.org/asia/publications/issue->

briefs/WCMS\_827495/lang--en/index.htm

- Kanchanawasri, S. (2013). *Evaluation theory* (10th ed.). Chulalongkorn University Press. [In Thai]
- Kemouss, H., Abdenmour, O., Erradi, M., & Khaldi, M. (2023). The ADDIE Pedagogical Engineering Model: From Analysis to Evaluation. In *Handbook of Research on Scripting, Media Coverage, and Implementation of E-Learning Training in LMS Platforms* (pp. 42-70). IGI Global.
- Knapp, T. R. (2016). Why Is the One-Group Pretest–pretest–posttest design Still Used? *Clinical Nursing Research*, 25(5), 467-472. <https://doi.org/10.1177/1054773816666280>
- Konopka, C. v. L. s., Adaime, M. B., & Mosele, P. H. (2015). Active Teaching and Learning Methodologies: Some Considerations. *Creative Education*, 6(14),1536-1545. <https://doi.org/10.4236/ce.2015.614154>
- Leong, R., & Kavanagh, M. (2013). A work-integrated learning (WIL) framework to develop graduate skills and attributes in an Australian university's accounting program. *Asia-Pacific Journal of Cooperative Education*, 14(1), 1-14. <https://www.proquest.com/docview/2231262525>
- Lim, K. (2024). Assessing beyond grades: unravelling the implications on student learning and engagement in higher education. *Assessment & Evaluation in Higher Education*, 49(1), 1-15. <https://doi.org/10.1080/02602938.2024.2314703>
- Lloyd, G. A., Dean, B. A., Eady, M. J., West, C., Yanamandram, V., Moroney, T., Glover-Chambers, T., & O'Donnell, N. (2021). Academic perceptions of work-integrated learning in non-vocational disciplines. *Higher Education, Skills and Work-Based Learning*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/HESWBL-09-2021-0181>
- Martínez-Caro, E., Cegarra-Navarro, J. G., & Cepeda-Carrión, G. (2015). An application of the performance-evaluation model for e-learning quality in higher education. *Total Quality Management & Business Excellence*, 26(5-6), 632-647. <https://doi.org/10.1080/14783363.2013.867607>
- Ministry of Education 2022. (2022, July). Standard of Higher Education Ministry Announcement. Royal Gazette 139. Special Chapter 20, 28-31.
- Nguyen, I., Goh, E., & Murillo, D. (2023). Living through the lives of hospitality students during work-integrated learning (WIL) internships: An application of the critical incident technique to explore factors affecting students' WIL experience. *Journal of Hospitality & Tourism Education*, 35(3), 225-236. <https://doi.org/10.1080/10963758.2021.1963755>
- Nomnga, V. J. (2021). Work Integrated Learning as a Strategic Tool for Enhancing Professional Development of Tourism and Hospitality Students. *Work*, 15(10). [https://ww.ijcc.net/images/Vol\\_15/Iss\\_10/151064\\_Nomnga\\_2021\\_E\\_R.pdf](https://ww.ijcc.net/images/Vol_15/Iss_10/151064_Nomnga_2021_E_R.pdf)
- Okumus, F., & Wong, K. (2004). A Critical Review and Evaluation of Teaching Methods of Strategic Management in Tourism and Hospitality Schools. *Journal of Hospitality & Tourism Education*, 16(2), 22-33. <https://doi.org/10.1080/10963758.2004.10696790>
- Pimdee, P. (2020). Antecedents of Thai student teacher sustainable consumption behavior. *Heliyon*, 6(8), e04676. <https://doi.org/10.1016/j.heliyon.2020.e04676>
- Pimdee, P., Ridhikerd, A., Moto, S., Siripongdee, S., & Bengthong, S. (2023). How social media and peer learning influence student-teacher self-directed learning in an online world under the 'New Normal'. *Heliyon*, 9(3). <https://doi.org/10.1016/j.heliyon.2023.e13769>
- Prommun, P., Kantathanawat, T., Pimdee, P., & Sukkamart, T. (2022). An integrated design-based learning management model to promote Thai undergraduate computational thinking skills and programming proficiency. *International Journal of Engineering Pedagogy*, 12(1). <https://doi.org/10.3991/ijep.v12i1.27603>

- Rafique, G. M., Mahmood, K., Warraich, N. F., & Rehman, S. U. (2021). Readiness for Online Learning during COVID-19 pandemic: A survey of Pakistani LIS students. *The Journal of Academic Librarianship*, 47(3), 102346. <https://doi.org/10.1016/j.acalib.2021.102346>
- Ruenphonphun, P., Sukkamart, A., & Pimdee, P. (2022). Developing Thai undergraduate online digital citizenship skills (DCS) under the new normal. *Journal of Higher Education Theory & Practice*, 22(9). <https://doi.org/10.33423/jhetp.v22i9.5358>
- Songkram, N., Chootongchai, S., Khlaisang, J., & Koraneekij, P. (2021). Education 3.0 system to enhance twenty-first-century skills for higher education learners in Thailand. *Interactive Learning Environments*, 29(4), 566-582. <https://doi.org/10.1080/10494820.2019.1592197>
- Sokhanvar, Z., Salehi, K., & Sokhanvar, F. (2021). Advantages of authentic assessment for improving the learning experience and employability skills of higher education students: A systematic literature review. *Studies in Educational Evaluation*, 70, 101030. <https://doi.org/10.1016/j.stueduc.2021.101030>
- Stake, R. E. (2004). *Standards-Based & Responsive Evaluation*. Sage Publications Ltd.
- Stufflebeam, D. L. (2015). CIPP evaluation model checklist: A tool for applying the CIPP model to assess projects and programs. Western Michigan University Evaluation Center. <http://tinyurl.com/mucdxtm7>
- Sukkamart, A., Pimdee, P., & Kantathanawat, T. (2023). Predicting student-teacher self-directed learning using intrinsic and extrinsic factors: a Theory of Planned Behavior adoption. *Frontiers in Psychology*, 14, 1211594. <https://doi.org/10.3389/fpsyg.2023.1211594>
- Susanto, T. T. D., Dwiyantri, P. B., Marini, A., Sagita, J., Safitri, D., & Soraya, E. (2022). E-book with problem-based learning to improve student critical thinking in science learning at elementary school. *International Journal of Interactive Mobile Technologies*, 16(20). <https://doi.org/10.3991/ijim.v16i20.32951>
- United Nations, (2022). *The Sustainable Development Goals (SDGs)*. <https://www.undp.org/sustainable-development-goals/quality-education>
- Wang, J., Gill, C., & Lee, K. H. (2023). Effective mentoring in a work-integrated learning (WIL) program. *Journal of Teaching in Travel & Tourism*, 23(1), 20-38. <https://doi.org/10.1080/15313220.2022.2056561>
- Wiliam, D. (2003). National curriculum assessment: how to make it better. *Research Papers in Education*, 18(2), 129-136. <https://doi.org/10.1080/0267152032000081896>
- Wongrugsu, A., Kanjanawasee, S., & Ratchusanti, S. (2022). The efficiency of an evaluation model for undergraduate vocational education programs: An application of multiple evaluation approaches. *Kasetsart Journal of Social Sciences*, 43(3), 769-776. <https://doi.org/10.34044/j.kjss.2022.43.3.32>
- Yarbrough, D. B., Shulha, L. M., Hopson, R. K., & Caruthers, F. A. (2010). *The program evaluation standards: A guide for evaluators and evaluation users*. (3rd. Ed.), Sage Publications. <http://tinyurl.com/39txh4v6>