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The Systematic Review on Assessing Learning Outcomes of Secondary School Students Oriented Towards Competency Approach

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ABSTRACT: *This study provides a comprehensive overview and systematization of the theoretical framework for Assessing Learning Outcomes (ALO) oriented towards the Competency Approach (CA), aiming to provide a robust foundation for general education reform. ALO based on CA is defined as a systematic pedagogical process focusing on the student's ability to mobilize and apply integrated knowledge, skills, and attitudes to solve real-world problems. Unlike traditional content-based assessment that merely ranks academic retention, this approach prioritizes learner progress through multidimensional evaluation. The research analyses five constituent components to propose a structured theoretical framework, including six crucial objectives focused on feedback and growth, and ten core requirements that emphasize process-based integration and qualitative feedback. Furthermore, the study delineates specific content areas and a synergy of five methods and six primary tools, such as rubrics and portfolios. This framework serves as a scientific baseline for implementing assessment activities that align with global standards while addressing the specific needs of the Vietnamese educational context.*

KEYWORDS: **Assessment, competency, learning outcomes, secondary school.**
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1. Introduction

In the contemporary context of globalization and the burgeoning knowledge economy, modern educational systems are witnessing a transformative shift from content-based instruction to competency-based education (CBE). According to the OECD (2018), the primary goal of 21st-century education extends beyond mere knowledge acquisition to the development of students' ability to mobilize cognitive and practical resources to solve complex, real-world problems effectively. In Vietnam, this trend has been institutionalized through the 2018 General Education Program, marking a fundamental paradigm shift from "what students know" to "what students can do" (MoET, 2018; Nguyen & Dao, 2016). Recent studies in the post-pandemic era highlight that digital competency and self-regulated learning have become essential sub-components of this approach (Hồng & Wen, 2021; Pham & Ho, 2022).

Assessing learning outcomes (ALO) within a competency-oriented framework serves as a critical "compass" for the entire pedagogical process. Unlike traditional assessments that primarily focus on rote memorization and the reproduction of facts, competency assessment requires a multidimensional view of student progress. Griffin *et al*. (2012) emphasize that assessing competency is an evaluative process of gathering evidence of how students integrate and apply knowledge, skills, and attitudes within specific contexts. In the Vietnamese academic landscape, Nguyen and Dao (2015) further argue that to accurately measure competency, it is essential to harmonize summative and formative assessments, with a particular focus on qualitative feedback to drive student motivation.

However, the implementation of competency-based assessment in secondary schools currently faces significant theoretical and practical hurdles. While administrative guidelines, such as Circular 22/2021/TT-BGDĐT, provide technical instructions for evaluation, the lack of systematic scholarly overviews often leads to a disconnect

between administrative compliance and scientific evidence. Furthermore, the adaptation of international frameworks - such as the formative assessment strategies proposed by Wiliam and Leahy (2015) - into the Vietnamese educational context remains a subject of academic debate, particularly regarding cultural compatibility and the practical constraints of school resources.

This study aims to systematically synthesize contemporary theoretical perspectives on ALO in a competency-based approach and analyse the existing frameworks currently applied in secondary education. Through a structured literature review, this paper seeks to bridge the gap between international theories and Vietnamese practice. Ultimately, the research proposes a comprehensive theoretical framework that serves as a scientific foundation for educators to enhance the quality of assessment in the new era of educational reform.

2. Literature Review

2.1. Fundamental Concepts in Competency-Based Assessment

2.1.1. Assessing Learning Outcomes (ALO) within a Competency Approach

In the paradigm of modern education, Assessing Learning Outcomes (ALO) has evolved from a static measurement of knowledge retention into a dynamic pedagogical process aimed at capturing student progress. According to Black and Wiliam (1998), ALO serves as a critical mechanism for providing formative feedback, shifting the focus from "Assessment of Learning" (summative) to "Assessment for Learning" (formative).

In a competency-based framework, ALO is defined by its ability to evaluate how students mobilize and integrate knowledge, skills, and attitudes to address complex tasks in authentic contexts. Unlike traditional content-based assessment, which often prioritizes standardized grading and ranking, the competency approach emphasizes the growth of the learner. As Griffin *et al*. (2012) argue, assessing competency requires gathering diverse evidence over time to reflect a student's capacity to apply learning in real-world scenarios. Within the Vietnamese educational landscape, Nguyen and Dao (2015) further suggest that ALO should empower students to recognize their own strengths and weaknesses, fostering "Assessment as Learning" - where the evaluation process itself becomes a tool for metacognitive development.

2.1.2. Competency and Its Structural Components for Secondary Students

Scholarly discourse identifies "competency" as a multi-dimensional construct that represents an individual's readiness to act effectively in specific situations. The OECD (2018), through its "Education 2030" framework, posits that competency is not merely the possession of isolated skills or knowledge but the ability to meet complex demands by mobilizing psychosocial resources, including both cognitive and non-cognitive skills. This is often conceptualized through the KSA (Knowledge, Skills, and Attitudes) model, where attitudes and values provide the ethical and motivational compass for the application of technical skills.

For secondary school students, this period marks a vital transition toward abstract reasoning and the formation of individual identity; thus, the structure of competency must be clearly delineated to guide instruction. Competencies are generally categorized into transversal (general) competencies - such as autonomy, communication, and problem-solving - and subject-specific competencies. The development of these competencies is a non-linear, progressive journey where students move from basic recognition to creative application. Establishing a clear competency structure allows for the creation of qualitative rubrics that capture behavioural indicators, offering a more nuanced view of student achievement than traditional quantitative scales. This theoretical foundation aligns with the 2018 General Education Program in Vietnam, positioning the local curriculum within global standards of holistic student development.

2.2. Distinguishing Competency-Based Assessment and Content-Based Assessment

There is a clear distinction between competency-based assessment and content-based assessment. The differences between these 02

assessment perspectives are manifested in many aspects (assessment purpose, assessment content, assessment context, assessment timing, use of assessment results, assessment method, etc.). These differences are concretized in Table 1.

Thus, the overarching difference between competency-based assessment and content-based learning outcome assessment is: While content-based assessment evaluates the knowledge and skills acquired by learners after the learning process, competency-based assessment evaluates learners' competency as demonstrated by their application of acquired knowledge, skills, and even attitudes and emotions, etc., to solve problems in real-world situations.

2.3. Components of Learning Outcome Assessment for Students Based on the Competency Approach

2.3.1. Assessment Objectives

Assessing Learning Outcomes (ALO) within a competency-based framework transcends the traditional measurement of academic achievement, functioning instead as a multi-dimensional process aimed at the holistic development of student capabilities. According to Wiliam and Leahy (2015), the objectives of assessment are deeply rooted in fostering personal skills - ranging from critical thinking to problem-solving - while simultaneously driving educational quality through the iterative adjustment of instructional methods. This perspective emphasizes "Assessment for Learning" (AfL), where providing positive feedback and identifying future skill gaps become the primary drivers of student motivation and self-awareness.

In the Vietnamese context, these global principles are codified in Circular No. 22/2021/TT-BGDĐT (MoET, 2021), which defines the objectives of assessment as determining student attainment relative to the required standards of the General Education Program.

Table 1. Distinction between Competency-Based Assessment and Content-Based Assessment

Comparison Criterion	Competency-Based Assessment	Content-Based Assessment
Assessment Purpose	- Assess learners' ability to apply acquired knowledge and skills to solve real-world problems; - For the learner's progress compared to themselves.	- Determine the achievement of knowledge and skills according to the goals of the educational program; - Assess and rank learners against each other.
Assessment Context	Linked to learners' learning and real-life contexts.	Linked to learning content (knowledge, skills, attitudes) acquired in school.
Assessment Content	- Knowledge, skills, attitudes across multiple subjects/educational activities and learners' own experiences in social life (focus on performance competency); - Standardized by learners' competency levels.	- Knowledge, skills, attitudes in a specific subject; - Standardized by whether the person has achieved a learned content or not.
Assessment Timing	Assessment at all times of the teaching-learning process, emphasizing assessment during learning.	Occurs at specific times during the teaching-learning process.
Assessment Results	- Learner's competency depends on the difficulty of the task or exercise completed; - The more difficult and complex tasks completed, the higher the perceived competency.	- Learner's competency depends on the number of questions, tasks, or exercises completed; - The more knowledge units and skills achieved, the higher the perceived result.

(Source: Nguyen & Dao, 2016, p.121)

This policy framework focuses on providing timely information for pedagogical adjustments and confirming the results achieved during the performance of learning tasks. However, an objective analysis suggests that while the MoET guidelines provide a robust administrative foundation, they may not yet fully encompass the transformative potential of assessment in developing comprehensive competencies as envisioned by international scholars.

Conversely, while the framework by Wiliam and Leahy (2015) offers a more comprehensive lens, certain objectives require critical re-evaluation when applied to the socio-cultural realities of Vietnam. Specifically, the strategy of "encouraging the participation of parents and the community" faces significant structural barriers. This study posits that within a "high-stakes testing culture" where quantitative grades are traditionally prioritised, premature parental involvement - lacking professional "Assessment Literacy" - may inadvertently transform assessment into a source of surveillance rather than a supportive developmental tool. Furthermore, providing a "comprehensive overview of potential" remains a challenge due to the current limitations in standardized tracking tools for non-cognitive traits.

Consequently, by synthesizing these perspectives, this paper proposes six specific objectives for the theoretical framework (detailed in Section 4.2.1) that align with the required competency standards of the 2018 General Education Program. These standards include three transversal competencies - self-reliance, communication, and problem-solving - and seven specific competencies such as linguistic, mathematical, and scientific capabilities. By focusing on these defined domains, the assessment framework ensures that the evaluation of learning outcomes remains both academically rigorous and culturally appropriate for the Vietnamese secondary education system.

2.3.2. Assessment Requirements

The efficacy of Assessing Learning Outcomes (ALO) within a competency-based approach is predicated on a set of rigorous requirements that ensure the assessment is both developmental and valid. According to Popham (2008), transformative assessment must prioritize transparency and continuity; this entails making learning objectives and assessment criteria public while ensuring that evaluation is an ongoing process integrated into daily instruction. Furthermore, competency-based requirements shift the focus from rote knowledge to a holistic consideration of practical skills and attitudes. This is achieved through detailed, timely feedback that motivates students by illuminating their specific developmental paths. Popham also emphasizes the diversification of assessment tools and the active participation of stakeholders - including teachers, students, and parents - to ensure a comprehensive understanding of the learner's progress.

In Vietnamese academia, these requirements are often framed as fundamental assessment principles. Nguyễn and Đào (2016), along with Phan *et al*. (2018) and Trần *et al.* (2023), argue that a robust assessment system must uphold objectivity, fairness, and systematic development. A critical principle highlighted by these authors is the necessity for assessment tasks to provide opportunities for students to apply interdisciplinary knowledge to real-world situations, thereby mirroring the complexity of life beyond the classroom.

These theoretical principles are legally codified and expanded within the 2018 General Education Program (MoET, 2018) and subsequent regulatory frameworks. The MoET (2018) identifies eight core requirements, notably emphasizing process-based assessment to detect progress in real-time. This marks a significant shift from assessment as an isolated terminal event to an integrated component of the teaching-learning cycle. Furthermore, Circular No. 32/2020/TT-BGDĐT (MoET, 2020) stipulates that examination and assessment must remain student-centred, focusing on motivation rather than pressure or social comparison. This policy environment encourages the use of diverse forms, techniques, and tools to maintain an objective and honest reflection of student growth.

The integration of quantitative and qualitative

data serves as a cornerstone of recent reforms. As specified in Circular No. 22/2021/TT-BGDĐT (MoET, 2021), the modern requirement is to combine score-based assessment, which quantifies cognitive levels, with descriptive qualitative feedback that highlights areas for improvement. For summative assessments, this necessitates the development of sophisticated test matrices and specifications covering four cognitive levels: recognition, comprehension, application, and high-level application. When evaluating practical products or projects, criteria must be explicitly aligned with the subject's standards. By synthesizing these international and domestic perspectives, this study identifies ten essential requirements (detailed in Section 4.2.2) that form the theoretical foundation for a comprehensive and culturally adaptive assessment framework in Vietnam.

2.3.3. Assessment Content

The content of Assessing Learning Outcomes (ALO) within a competency-based framework represents a significant departure from traditional content-centred models, which primarily prioritize the reproduction of theoretical knowledge. According to Fullan (2007), assessment content must be multidimensional, encompassing not only cognitive knowledge but also practical skills, attitudes, and transversal competencies such as problem-solving, communication, and cooperation. In this model, knowledge assessment transcends rote memorization, utilizing essay and multiple-choice formats to test deep theoretical understanding. Meanwhile, skills are evaluated through performance-based tasks, particularly in Science, Technology, and the Arts, where students must demonstrate their ability to execute complex procedures through projects and practical examinations.

Beyond technical proficiency, the assessment of attitudes - including learning motivation, responsibility, and cooperative spirit—becomes essential. This is often captured through qualitative tools such as questionnaires and peer feedback. As Fullan (2007) further argues, a critical component of competency-based content is the evaluation of a student's capacity to analyse, synthesize, and apply critical thinking to find creative solutions in authentic, real-world situations. This shift ensures that communication and interaction skills are not viewed in isolation but as integrated tools for effective group work and reporting.

In the Vietnamese academic context, Nguyễn and Đào (2016) emphasize that assessment content should merge classroom learning with life experiences, focusing specifically on "performance competency." This perspective asserts that assessment must reflect the development of students' abilities in real situations, facilitating the formation of essential life skills. This theoretical stance aligns with the 2018 General Education Program (MoET, 2018), which delineates assessment content based on the type of evaluation. Formative assessment focuses on the process - measuring students' activeness, confidence, and responsibility during learning activities - while summative assessment evaluates proficiency against the ten core competencies (comprising three general and seven specific competencies) established by the national curriculum.

Ultimately, although international and domestic scholars may employ different terminologies, a clear consensus emerges: the content of ALO must integrate knowledge, skills, and attitudes into a unified capacity to solve real-world problems. By synthesizing these perspectives, this study identifies the core assessment contents (detailed in Section 4.2.3) that serve as the evidentiary basis for evaluating student progress in the modern educational reform context.

2.3.4. Assessment Methods

The methodology for Assessing Learning Outcomes (ALO) within a competency-based paradigm requires a fundamental shift from norm-referenced testing to criterion-referenced evaluation, where progress is measured against standardized competency levels. Nguyễn and Đào (2016) argue that the measurement scale in this context should not merely track content retention but must reflect the learner's developmental stage. Drawing upon the hierarchical competency

model proposed by Singer (1990), which categorizes proficiency into three escalating levels, this approach mirrors the cognitive domains of recognition, comprehension, and application established in the early frameworks of the Ministry of Education and Training (MoET, 2014).

Furthering this methodological discussion, Hà (2018) distinguishes between traditional and non-traditional assessment methods, suggesting that both should be utilized concurrently across formative and summative evaluation forms. Traditional methods, characterized by standardized multiple-choice and essay examinations, serve to quantify cognitive depth. In contrast, non-traditional methods - such as systematic observation, interviews, reflective journals, and project-based assignments - capture the "performance" aspect of competency. These alternative approaches empower students through self-assessment and peer-assessment, fostering the metacognitive skills necessary for lifelong learning.

The practical application of these methodologies is refined in the Training Materials for General Education (MoET, 2020b), which specifies a diverse suite of methods tailored to the nature of the assessment. For formative purposes, the emphasis is placed on continuous feedback through oral questioning, practical exercises, and the curation of portfolios. Summative assessments, while still utilizing written or computer-based tests, are increasingly incorporating learning products and project evaluations to confirm a student's mastery of the required standards.

By synthesizing these perspectives, it is evident that a flexible and multi-dimensional methodological approach is essential for educational reform in Vietnam. The hierarchical scales proposed by Nguyễn and Đào (2016) provide the theoretical depth, while the categorization by Hà (2018) offers operational flexibility. However, the guidelines provided by MoET (2020b) offer the most contextually relevant alignment with the current national curriculum. Consequently, this study adopts five core assessment methods (detailed in Section 4.2.4) based on the MoET framework, serving as the strategic orientation for the research process.

2.3.5. Assessment Tools

According to Wiliam and Leahy (2015), ALO tools for students based on the CA include: (1) Practical tests (assessing the ability to apply knowledge to real-world situations). (2) Group projects (assessing teamwork, problem-solving, and critical thinking skills through group projects). (3) Reflective writing (students write reflections on their learning process, helping to assess critical thinking and self-assessment skills). (4) Portfolio/Learning portfolio (a collection of students' learning products, including exercises, projects, tests, etc., to assess development and progress over time). (5) Summative assessment (using multiple-choice or essay tests to assess students' knowledge and skills).

Meanwhile, ALO tools for students based on the CA are identified by MoET (2020b) as comprising 08 main tools:

(1) Questions (including essay questions, multiple-choice questions, short questionnaires, test cards, KWLH charts, ...).

(2) Exercises (including decision-making exercises, information-seeking exercises, problem-identification exercises, problem-solving alternative finding exercises, analysis and assessment exercises, survey and research exercises).

(3) Written tests (including essay questions or multiple-choice questions or a combination of both).

(4) Learning products (including learning projects, scientific research products, practical exercise products, experiments).

(5) Portfolios (including individual student's assignments, tests, reports, short notes, worksheets, diagrams, inventions, ...; group reports, exercises, feedback, plans, journals, models, experimental results, ...; images, sounds such as photos, audio recordings, video clips, drawings, computer software programs, ...).

(6) Checklists (including a list of criteria (regarding behaviours, characteristics, expectations, ...) that are or are not demonstrated or performed).

(7) Rating scales (including tools to measure the extent to which students achieve each characteristic or behaviour in a specific aspect or field, with 03 basic forms of expression: numerical rating scale, graphic rating scale, descriptive rating scale).

(8) Rubrics (including a specific description of assessment criteria and the achievement levels for each criterion regarding students' activity process or learning products).

Delving deeper into Rubrics, MoET (2020b) points out that Rubrics consist of 02 basic components: assessment criteria and achievement levels for each criterion. Levels are often expressed as descriptive scales or a combination of numerical and descriptive scales to detail the levels of learner task performance. Assessment criteria are the characteristics, qualities, and distinctive signs of an activity or product used as a basis for identifying, determining, comparing, and assessing that activity or product. These criteria need to ensure 03 basic requirements:

(1) Accurately reflect the core aspects of the activity/product to be assessed.

(2) Each criterion must ensure distinctiveness, characteristic of a specific sign of the activity/product to be assessed.

(3) The criteria presented must be observable and assessable.

The content presented above provides an overview of ALO tools for students based on the CA from 02 different sources: Wiliam and Leahy (2015) and MoET (2020b). The assessment tools mentioned from both sources demonstrate the richness and diversity in assessing students' competencies. The combination of traditional and modern assessment tools helps create a flexible assessment environment, encouraging students to maximize their creativity and ability to apply knowledge to real-world situations.

In particular, rubrics are identified by MoET (2020b) as an important assessment tool, helping to define assessment criteria and students' achievement levels. The use of rubrics provides teachers with clear tools for assessment. The requirement that assessment criteria must accurately reflect the core, be distinct, and observable is highly reasonable, helping to enhance accuracy and objectivity in the assessment process.

From the above analyses, the paper identifies the set of ALO tools for students based on the CA to include those listed in Section 4.2.4.

The correlation between the form, method, and tools of ALO for students based on the CA can be summarized in Table 2.

Table 2. Correlation between Assessment Form, Method, and Tools

Assessment Form	Assessment Method	Assessment Tools
Formative Assessment	Question-and-answer	Diagnostic questions, KWLH charts, feedback cards.
	Observation	Systematic checklists, daily event logbooks, graphic rating scales.
	Written assessment	Short-answer tests, diagnostic quizzes, reflective journals.
	Learning product & Portfolio assessment	Holistic rubrics, developmental portfolios, peer-feedback forms.
	Written test	Standardized achievement tests (structured essays and multiple-choice questions).
Summative Assessment	Performance-based assessment	Analytical rubrics, final project products, practical demonstration logs.
	Question-and-answer	Diagnostic questions, KWLH charts, feedback cards.

3. Methodology

3.1. Research Design and Approach

This study employs a Qualitative Synthesis approach, specifically utilizing a Systematic Literature Review (SLR) following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure transparency and replicability.

3.2. Data Collection and Selection Process (PRISMA Flow)

The search was conducted across major databases, including Google Scholar, Scopus, and the VNU Journal of Science, using keywords: "Competency-based assessment," "Secondary education Vietnam," "Formative assessment frameworks," and "Assessment in digital era."

- Identification: A total of 120 records were initially identified through database searching.

- Screening: 85 records remained after removing duplicates. Titles and abstracts were screened for relevance to secondary education and competency models.

- Eligibility: 45 full-text articles were assessed for quality and contextual suitability.

- Inclusion: 22 sources were finally included in the synthesis, comprising international theoretical works (40%), Vietnamese policy documents (30%), and domestic empirical research (30%).

3.3. Data Analysis and Synthesis

The collected data were analysed using Content Analysis and Comparative Synthesis. The process involved three distinct phases:

Categorization: Grouping assessment objectives, requirements, and methods into thematic clusters as presented in Section 2.

Triangulation: Comparing international standards with local regulations to identify areas of alignment and potential conflict (notably regarding parental involvement and high-stakes testing culture).

Model Construction: Translating the synthesized findings into the structured correlation presented in Table 2, which links assessment forms with specific methods and optimized tools.

3.4. Ethical Considerations and Validity

The validity of the proposed framework is ensured through the use of primary and official sources, addressing the gaps identified in previous "dictionary-style" reviews. By strictly adhering to the citation of original documents and analysing them within the current educational reform context of Vietnam, this methodology provides a transparent and replicable foundation for the theoretical framework developed in Section 4.

4. Results

This section presents the findings of the systematic review, beginning with a statistical overview of the evidence base, followed by the distinction between assessment paradigms, and

Table 3. Summary of Key Documents Included in the Synthesis

Source Type	Primary Author/Entity	Year	Core Contribution to Framework
International Foundations	Wiliam & Leahy; Popham	2015-2018	Formative strategies, feedback loops, and assessment literacy.
Global Trends (New)	OECD; Sahlberg	2021-2023	21st-century skills, international benchmarks (PISA), and holistic models.
National Policy	MoET (Circular 22 & Program 2018)	2018-2021	Legal framework, competency standards, and 4-level cognitive matrix.
Domestic Research	Nguyễn Công Khanh; Hà Thị Lan Hương	2016-2018	Vietnamese pedagogical principles and KSA (Knowledge-Skill-Attitude) model.
Digital & Post-Covid	Hồng & Wen; Pham & Ho; Vinh-Thang	2021-2023	Digital assessment tools, remote evaluation, and self-regulated learning.

concluding with the proposed Comprehensive Theoretical Framework.

4.1. Systematic Review Data Summary

The synthesis process followed the PRISMA guidelines, identifying a total of 22 primary sources that met the inclusion criteria for high academic quality and contextual relevance. These sources provide a balanced perspective between global educational standards and the specificities of the Vietnamese secondary education reform. The distribution of selected literature ensures an updated view, particularly focusing on studies published between 2019 and 2024 regarding digital transformation and post-pandemic assessment strategies.

4.2. Paradigm Shift: Content-Based vs. Competency-Based Assessment

The results clarify a fundamental divergence in evaluative focus. While Content-Based Assessment centres on the retrospective measurement of knowledge and skills acquired post-instruction, Competency-Based Assessment (CBA) is prospective and performance-oriented. CBA evaluates the student's ability to mobilize integrated resources—knowledge, skills, and attitudes—to navigate complex, real-world problems.

4.3. Comprehensive Theoretical Framework for ALO based on CA

The proposed framework integrates five constituent components into a unified system. Unlike fragmented administrative lists, this model illustrates a functional hierarchy where objectives drive requirements, which in turn dictate the selection of content, methods, and tools.

4.3.1. Assessment Objectives

The study identifies six integrated objectives that shift the purpose of assessment from ranking to development. The primary goal is to provide actionable feedback for both teachers and students, fostering a positive learning attitude and promoting individual progress. Furthermore, assessment serves to create opportunities for critical thinking and confirms the attainment of required competency standards as mandated by the General Education Program.

4.3.2. Assessment Requirements (Principles)

Ten core principles govern the framework to ensure validity and fairness. Central to these is the integration of assessment into the daily instructional process (formative emphasis) and the requirement for transparency, where criteria are communicated to students beforehand. For cognitive evaluation, the framework mandates a structured matrix across four levels (recognition, comprehension, application, and high-level application), while qualitative subjects require specific, observable rubrics. The model also necessitates a balance between score-based data and descriptive feedback, alongside the inclusion of student self-assessment.

4.3.3. Assessment Content

The content is structured into three synchronized layers:

- Standard Attainment: Meeting the specific knowledge/skill requirements of the subject.

- Application: The ability to solve authentic problems using learned resources.

- Behavioural Qualities: Evaluating the student's activeness, responsibility, and confidence during the learning process.

4.3.4. Methodological Synergy and Instrumentation

The framework operationalizes assessment through five core methods (Written, Observation, Oral, Product, and Portfolio) and a refined set of six primary tools (Questions, Exercises, Tests, Checklists, Rating Scales, and Rubrics). As illustrated in the framework diagram, these tools are not used in isolation; rather, they are selected based on the specific assessment form. For instance, Rubrics act as the bridge between Learning Products and Objective Feedback, ensuring that the assessment of complex competencies remains systematic and evidence-based.

This section presents the results of the systematic literature review and synthesis process (as detailed in Section 3. Methodology),

focusing on constructing the Comprehensive Theoretical Framework for ALO of Students Oriented Towards the CA.

The theoretical framework was constructed through the systematization of concepts, clear distinction between two assessment modalities, and detailed identification of the constituent components of assessment activities (Objectives, Requirements, Content, Methods, and Tools).

5. Discussions

This section interprets the synthesized findings, critically analyses the implications of the proposed framework, and evaluates its contextual suitability against international benchmarks.

5.1. International Comparison and Contextual Suitability

The proposed framework aligns with the Australian Curriculum (ACARA, 2020) which emphasizes "Criterion-Referenced Assessment," and Singapore's "Holistic Assessment" model. However, while Finland's system allows high teacher autonomy in qualitative grading, the Vietnamese framework remains more structured through the 4-level cognitive matrix (Recognition, Comprehension, Application, High-level Application). This structure provides a "safety net" for teachers transitioning from traditional models but may limit the creative flexibility seen in Nordic systems.

5.2. Critical Analysis: The Feasibility Gap

A critical critique of the "10 Requirements" reveals a potential for teacher overload. International literature (Wiliam & Leahy, 2015) warns that combining scores with descriptive qualitative feedback is labour-intensive. In Vietnamese classrooms with 40-50 students, strict compliance with Circular 22 may lead to "bureaucratic assessment" where feedback becomes generic rather than personalized. The study suggests that Digital Assessment Tools (Vinh-Thang, 2023) are no longer optional but necessary to bridge this feasibility gap.

5.3. Comparative Analysis and Contextual Suitability

When compared to existing research, this framework offers a higher degree of contextualization than purely international models.

Synthesis vs. Importation: Unlike studies that rigidly apply Western models (e.g., purely using the McTighe & Wiggins Understanding by Design), this framework incorporates the mandatory 04 cognitive levels (Recognition, Comprehension, Application, High-level Application) required by MoET. This ensures that the framework is not just theoretically sound but legally viable for Vietnamese teachers.

The Burden of Multidimensionality: Most domestic studies focus solely on Circular 22 or specific tools like Rubrics. This study's "Comprehensive Framework" is more rigorous, yet more demanding. While Fullan (2007) argues that "complexity is necessary for change," the integration of 06 Objectives and 10 Requirements creates a high barrier to entry for teachers accustomed to traditional methods.

5.4. Limitations and Future Research Directions

The primary limitation of this research is its nature as a theoretical synthesis. While the logic is scientifically grounded, the framework has yet to face the "stress test" of practical classroom implementation.

Future research should focus on:

- Empirical Validation: Utilizing Action Research to evaluate how teachers manage the workload of qualitative feedback and portfolio assessment in high-density classrooms.

- Technological Mitigation: Investigating how Information Technology (as mentioned in Requirement 9) can automate the administrative aspects of the 10 requirements, thereby reducing teacher overload.

- Subject-Specific Adaptation: Concretizing the 06 primary tools into sample rubrics for diverse subjects, particularly those requiring qualitative evaluation such as Arts and Experiential Activities.

6. Conclusions

The study successfully conducted an overview and systematization of the theoretical framework for ALO of Ss based on the CA, thereby completing the necessary theoretical framework for general education reform. The main research results have clarified the following key issues:

(1) Systematization of Concepts: Clarified the concept of Competency (including knowledge, skills, attitudes, and personal qualities) and defined ALO based on CA as a systematic pedagogical process to collect and analyse information about the extent to which students mobilize and apply these integrated components to perform tasks and solve real-world problems.

(2) Distinguishing Assessment: Clearly distinguished the fundamental differences between competency-based assessment and traditional content-based assessment. While content-based assessment focuses on acquired knowledge and skills for ranking, competency-based assessment focuses on the ability to apply knowledge, skills, and attitudes to solve problems in real-world situations, for the learner's progress.

(3) Identifying Assessment Objectives and Requirements: The study identified 06 crucial assessment objectives, including providing feedback, motivating and encouraging, promoting progress, creating opportunities to develop critical thinking/problem-solving, and confirming the achievement of competency requirements according to the General Education Program. Simultaneously, the paper proposed 10 requirements to be adhered to in assessment, notably emphasizing process-based assessment, integrating assessment into the TL process, focusing on practical application, and combining assessment by scores and qualitative feedback.

(4) Clarifying Assessment Content: Competency-based assessment content encompasses knowledge, skills, attitudes, and the ability to apply them comprehensively to solve real-world problems.

(5) Establishing Assessment Methods and Tools: Identified 05 core assessment methods: written tests, observation, question-and-answer, learning product assessment, and portfolio assessment. The primary set of assessment tools includes questions, exercises, written tests, checklists, rating scales, and rubrics, and clarified the correlation between assessment forms, methods, and tools.

The constituent components of ALO activities based on the CA (Objectives, Requirements, Content, Methods, Tools) have been thoroughly analysed, synthesized from various perspectives (OECD, MoET, William & Leahy, Popham, Fullan,...), and systematized by the paper into a comprehensive theoretical framework. This theoretical framework not only provides a comprehensive, in-depth overview of competency assessment but also serves as a solid theoretical foundation for researching, designing, and implementing specific assessment activities in educational practice, contributing to the reform and improvement of general education quality in Vietnam.

Applying this theoretical framework requires synchronous changes in awareness, teacher training, and the development of test item banks/exercises oriented towards competency development and practical application.

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