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Innovating Programmes with Sustainable Expected Learning Outcome Framework

Dao Phong Lam[1], Trinh Quoc Lap[2]✉, Nguyen Trung Cang[3]

[1] dplam@ctu.edu.vn
Can Tho University (CTU)
Campus II, 3/2 street, Ninh Kieu,
Can Tho City,
(Vietnam)
[2] tqlap@ctu.edu.vn
Can Tho University (CTU)
Campus II, 3/2 street, Ninh Kieu,
Can Tho City,
(Vietnam)
[3] ntcang@vnkgu.edu.vn
Kien Giang University (KGU)
320 A - Highway 61, Chau Thanh,
An Giang province,
(Vietnam)
✉ Corresponding author

ABSTRACT: *The United Nations' Sustainable Development Goal Number 4 (SDG 4) aims to ensure inclusive and equitable quality education and to promote lifelong learning opportunities for all people. The ASEAN University Quality Assurance Network (AUN-QA) recommends Outcome-based Education (OBE) and Constructive alignment approach are the heart of quality education. This paper discusses the findings from a self-assessment exercise in which 41 academic programmes of different disciplines from 5 universities in Vietnam assessed the quality of their programme learning outcomes (PLOs) using a PLO quality rubric and the findings from an expert judgment of 104 course learning outcomes (CLOs) of 11 capstone courses in an EFL programme offered by one of these 5 universities. The findings reveal there are areas for improvement to realize OBE into good practices in undergraduate programmes in Vietnam. Based on these findings, this paper proposes an alternative framework for PLOs, termed by the researchers as SUSTAINABLE. This alternative framework aligns with the SMART and WISER frameworks recommended by AUN-QA, the VASCULAR framework recommended by Sally Brown, a UK education expert, as well as the PLO mandates by the Vietnam Ministry of Education and Training (MOET). Given that the SUSTAINABLE framework illustrates the OBE and Constructive alignment approach in a bigger scope with more key elements to be considered and meanings to be conveyed, this framework may help academic programmes meet the ever increasing requirements of their stakeholders.*

KEYWORDS: **Expected learning outcomes, constructive alignment, quality education.**
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1. Introduction

Sustainable development, as defined by the United Nations (2015), refers to development that meets present needs without compromising the ability of future generations to meet their own needs. Within this agenda, Sustainable Development Goal 4 (SDG 4), which is supported by 10 targets, emphasizes inclusive and equitable quality education and the promotion of lifelong learning opportunities for all people. In particular, Target 7 highlights the need for learners to acquire the knowledge, skills, and values necessary to promote sustainable development, including human rights, gender equality, global citizenship, cultural diversity, and responsible lifestyles.

In light of Target 7, the current paper reviews the key features of the Outcome-based Education (OBE), which is believed to enable lifelong learning and sustainable education. OBE organizes teaching and learning around clearly defined expected (or intended) learning outcomes (Spady, 2020). These expected learning outcomes (ELOs) specify what learners are expected to know, understand, and be able to demonstrate upon completion of a learning process (Kennedy et al., 2006).

Empirical reviews indicate that OBE is increasingly viewed not only as a pedagogical model for accountability and measurable performance, but also as a mechanism for developing sustainable competencies, lifelong learning capacities, and socially responsible graduates (Mahrishi et al., 2025). Recent reviews of higher education sustainability research further suggest that existing ELO approaches remain conceptually fragmented and often insufficiently integrated with broader educational purposes

such as ethical reasoning, interdisciplinarity, and societal responsibility (Probst, 2022). Although several frameworks have attempted to strengthen the technical formulation and alignment of ELOs, comparatively limited attention has been paid to how ELOs may simultaneously support quality assurance, stakeholder expectations, and sustainable educational transformation within specific national contexts.

In Vietnam, OBE has been institutionalized through the Vietnamese Qualifications Framework (VQF) (Vietnamese Government, 2016), which defines programme learning outcomes (PLOs) in terms of knowledge, skills, and levels of autonomy and personal responsibility in application of knowledge and skills in implementation of professional tasks. The Vietnamese Ministry of Education and Training (MOET) mandates PLOs to be minimum requirements for learners (students) upon graduation (MOET, 2021, 2025b).

However, despite the widespread adoption of OBE and the existence of national and regional frameworks, there remains a lack of a coherent and contextually grounded principle for designing high-quality ELOs in Vietnamese higher education institutions (Vietnamese Ministry of Education and Training [MOET], 2025a). Existing frameworks such as *SMART*, *WISER*, *VASCULAR*, and the MOET mandate provide useful yet still fragmented criteria which should be tailored to the specific educational, cultural, and institutional context of Vietnam.

This study aims to address this gap by, firstly, reviewing the established ELO frameworks, and secondly, examining the quality of PLOs and course learning outcomes (CLOs) through a self-assessment exercise involving 41 academic programmes of different disciplines from 5 Vietnamese universities and an expert judgment of 104 CLOs in an English as a Foreign Language (EFL) undergraduate academic programme offered by one of these 5 universities, and finally, proposing a contextually relevant ELO framework for Vietnamese higher education.

The present study positions itself not merely as a practical exercise in curriculum improvement, but as a conceptual and practice-informed inquiry into how ELOs may be reconceptualised within the intersection of OBE, quality assurance, sustainability, and contextualised higher education reform. Therefore, this study contributes to the literature by proposing a context-sensitive and empirically informed ELO framework, termed by the researchers as *SUSTAINABLE*, which integrates established theoretical foundations with empirical insights from Vietnamese higher education practices. This framework is expected to enhance the OBE practices of undergraduate programmes in Vietnam and similar contexts and to support sustainable education goals of the SDGs.

2. Literature review

2.1. Outcome-based education

The Outcome-based Education approach can be traced back to the behavioural objectives movement of the 1960s and 1970s in the United States, although its conceptual roots emerged much earlier (Morcke et al., 2013). Early developments emphasized the formulation of explicit educational objectives and observable learning outcomes that could guide curriculum design and assessment practices. Ralph Tyler advocated the use of clearly defined educational objectives as a basis for curriculum planning, arguing that educational processes should be organized around the intended changes in learner behaviour. This orientation was further developed through Bloom's taxonomy of educational objectives, which provided a systematic way to classify educational goals and communicate ELOs. Later developments, including Bloom's work on mastery learning and Gagné's instructional design principles, further strengthened the emphasis on specifying intended learning and aligning teaching with assessment. Collectively, these developments established the foundations upon which contemporary OBE principles were later built (Morcke et al., 2013).

A revival of OBE emerged with William G. Spady's publications (2020, 2021; Spady & Marshall, 1991), recommending that OBE should mean basing education on intended outcome*s* that are deemed fundamental to learner success and lifelong empowerment. This powerful OBE

concept, model, philosophy, or paradigm rested on the firm, consistent use of the word 'based', a definitive construct that meant: defined by, focused on, organized around, operated around, and aligned with.

Morcke et al. (2013) evaluated that Spady's ideas were not based on any new theoretical insights and adhered closely to the behaviourist principles of the earlier competency movement. It was in some respects more restrictive, particularly regarding affects (i.e., attitudes, emotions, and values). Spady, in fact, acknowledged the importance of affects but regarded them as preconditions for outcomes rather than outcomes in themselves. Spady called affects 'goals', which he distinguished from 'outcomes' because they were not directly observable and could not, therefore, be included in the specification of an outcome-based curriculum.

Roy Killen (2000) views OBE in three different ways: (1) a theory of education, (2) a systemic structure for education, and (3) classroom practice. He repeats Spady's words back to 1994 that OBE means clearly focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of their learning experiences. As can be seen, Killen shares Spady's view of the four essential principles of OBE, namely (1) clarity of focus, (2) designing back, (3) high expectations, and (4) expanded opportunities. OBE also means starting with a clear picture of what is important for students to be able to do, then organizing the curriculum, teaching, and assessment to make sure this learning ultimately happens (AUN-QA, 2019; Johnson Ong, 2024).

Christopher D. Sessums (2020) sees OBE as an organizational structure and a non-prescriptive learning model as well. This structure and model offers a handful of principles, namely Student-centred (given that OBE seeks answers to the questions: what does a learner need to do to demonstrate mastery of a particular skill, knowledge, or behaviour?), Clarity (given that all learning objectives in an OBE model are clearly spelled out ahead of time, and therefore learners know what is expected of them, and learners can adjust their focus and questions more appropriately), and Flexibility (an OBE model must be flexible enough to adjust to a learner's strengths and weaknesses, and OBE provides learners enough time to attain fluency or proficiency).

Among criticisms of OBE, Stenhouse was a very influential critic (Morcke et al., 2013). Stenhouse rejected the view that the only way to organize a curriculum was to pre-specify outcomes in terms of measurable changes in student behaviour. Whilst learning objectives concerning factual knowledge and simple skills made good sense, Stenhouse argued that educational processes, which influenced the development of values, insight, and judgment (i.e., affective domain attributes), could not be subsumed into a curriculum model that focused strictly on behavioural objectives. In reality, when students learned affectively, socially, culturally, aesthetically, or ethically from experience, it was not possible to specify goals or assess them objectively but that did not mean such types of learning were unimportant.

According to Sessums (2020), there are challenges when applying OBE model. First, OBE costs time and energy because institutions and staff have to work collaboratively to produce meaningful content, construct reliable metrics for success, and support students with regular and substantive feedback and interactivity. Second, OBE requires unbundling instructional roles. A subject-matter expert is clearly needed to provide appropriate content for lessons. Last but not least, OBE might bring about disruption because such a shift in how teaching, assessment, and support is organized can be disruptive.

However, more recent empirical studies have highlighted the growing relationship between OBE implementation and institutional quality assurance systems. In particular, outcome assessment frameworks are increasingly expected to support evidence-based curriculum improvement, accreditation processes, and assurance of learning practices within higher education institutions (Mahalingam, 2026). This shift reflects the expanding role of ELOs as both pedagogical and governance instruments in contemporary higher education.

2.2. Constructive alignment

Constructive alignment curriculum framework, introduced by Biggs (1996) and Biggs and Tang (2011), is the heart of OBE (AUN-QA, 2019; Dao, 2025). This is a simple but powerful design idea that teachers support students in achieving the ELOs, by designing activities that support the learning, and assessments that test the learning. According to Laws et al. (2019), Biggs and Tang tell us that the term 'constructive alignment' was developed from an experiment involving the use of portfolios as a means of assessing students' achievement. In addition, Biggs and Tang explain that 'constructive' comes from the constructivist theory that learners use their own activity to construct their knowledge as interpreted through their existing schemata, and 'alignment' is a principle in curriculum theory that assessment tasks should be aligned to what it is intended to be learned.

This framework emphasizes teaching-learning processes as well as assessment and aligns them both with ELOs in a process comprising of 4 steps (Biggs, 2014): (1) defining the learning outcomes; (2) choosing teaching/learning activities likely to lead to the learning outcomes; (3) assessing students' actual learning outcomes, to see how well they match what was expected (or intended); and (4) arriving at a final grade.

The verbs that Biggs (2014) mentioned help to map levels of understanding that can be built into the ELOs and to create assessment criteria or rubrics. These verbs are known as learning taxonomies or educational taxonomies (Dao et al., 2025; Dao, 2025).

An example of constructive alignment at the course level is given in Figure 1.

The use of this aligned process ensures that there is consistency between ELOs, teaching and learning activities, and assessment tasks. And this aligned process is believed to have a positive effect on students' academic achievement. In other words, the correlation between ELOs, teaching and learning, and assessment helps make the overall learning experience more transparent and meaningful for students. According to Martin (2012, as cited in Dao et al., 2025), aligning assessment with ELOs helps students understand

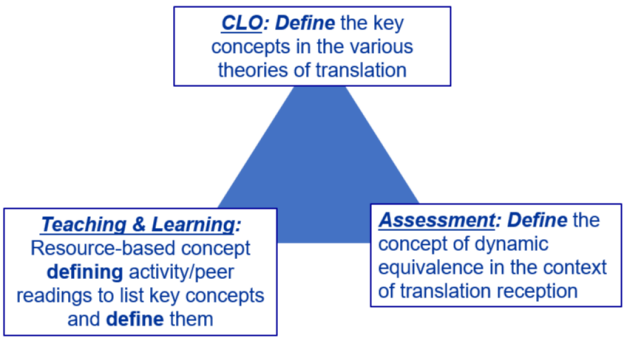


Figure 1: A constructive alignment at the course level

how their achievement will be assessed and measured.

In practice, however, achieving effective constructive alignment remains challenging. Empirical studies on OBE implementation have shown that many institutions struggle to establish systematic and reliable mechanisms for assessing CLO and PLO attainment, particularly when ELOs are vaguely formulated or insufficiently operationalised (Amirtharaj et al., 2022). These challenges suggest that the quality of ELOs themselves significantly influences the validity and effectiveness of assessment systems.

2.3. Expected learning outcomes and ELO frameworks

2.3.1. Expected learning outcomes

According to Kennedy et al. (2006), ELOs are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning. In Viet Nam, according to the Vietnamese Government (2016), ELOs include factual and theoretical knowledge, awareness, professional practice skills and communication skills, levels of personal autonomy and responsibility in the application of knowledge and skills while implementing professional tasks.

Circular 17 by the MOET (2021) defines programme level ELOS (PLOs) as requirements to be met in relation to qualities and competencies of learners after completing an academic programme, including minimum requirements for knowledge, skills, and levels of autonomy and personal responsibility of learners upon graduation, and these requirements are committed

by the programmes to learners and the society and publicly communicated in conjunction with conditions for assurance of programme implementation.

Circular 17 (Vietnamese Ministry of Education and Training [MOET], 2021) mandates 7 requirements for PLOs, in particular: (1) be clear and realistic, and demonstrate the learning results that graduates need to achieve in terms of generic understanding and core competences at the education level, and the specific requirements of the area of education and the disciplines; (2) be measurable and evaluable according to the learning taxonomies so that there is a basis for design, implementation and improvement of teaching content and methods, assessment and evaluation of learning results and award of degrees to learners; (3) be aligned to the programme educational goals and demonstrate a clear contribution as well as reflect the highly representative requirements of employers and other stakeholders of the programme; (4) stipulate the specific qualification level and meet the ELOs of knowledge, skills, levels of autonomy and responsibility, and necessary competences as prescribed for the corresponding qualification level according to the VQF; (5) ensure the alignment with the required ELOs of the higher-level programmes (if any), and create horizontal alignment opportunities between programmes at the same education level, especially between programmes of the same group of disciplines or the same area of education; (6) be fully and clearly translated into the ELOs of the courses and components in the curriculum, and systematically implemented thanks to the alignment between the courses and components; and (7) ensure feasibility and suitability for the programme load so that most learners who have met the entrance requirements (or learning incomes) of the programme are able to complete the programme within the standard programme time.

2.3.2. SMART framework

SMART is the acronym for *Specific*, *Measurable*, *Attainable*, *Relevant*, and *Time-bound*. This framework is usually credited to Peter Drucker and discussed within the field of Management by Objectives, yet it is recommended by AUN-QA assessors since the components in this framework represent the rules of thumb to development of ELOs in academic programmes in higher education (AUN-QA, 2022). In particular, *Specific* means ELO statements are concise and well-defined, *Measurable* means ELOs are measurable or observable, *Attainable* means ELOs are realistic for students to achieve them, *Relevant* means ELOs meet the needs of programme stakeholders, and *Time-bound* means ELOs are formulated in consideration of the required time for students to achieve them (AUN-QA, 2022).

It should be arguable that beyond *SMART*, effective CLOs must be constructively aligned with PLOs and teaching and learning activities as well as assessment tasks (as in Biggs and Tang's framework), cognitively explicit thanks to frameworks like Bloom's Taxonomy (Dao, 2025), assessable through clear performance criteria in such tools as assessment rubrics (ASEAN University Network [AUN], 2020), transparent to learners thanks to various communication formats (Western Association of Schools and Colleges [WASC], 2007), developmentally progressive over the learning process (Kennedy et al., 2006), authentically grounded in real-world performance contexts (Dao et al., 2025), and meaningful for continuous quality improvement (AUN, 2020; AUN-QA, 2022).

2.3.3. WISER framework

Based on *SMART*, Johnson Ong recommended *WISER* framework, which represents a shift from outcome specification to system-level educational design, aligning curricula with societal and labour market transformations (Johnson Ong, 2024; Le et al., 2024).

WISER is the acronym for *Work of the future, Integrated constructive alignment, SMART, Ecosystem perspective*, and *Real-world experience*.

The new *WISER* framework has been introduced to supplement the longer established *SMART* framework taking into consideration the new context of higher education in ASEAN

communities, where ELOs should be formulated based on future ready skills (*Work of the future*), constructively aligned vertically and horizontally (*Integrated constructive alignment*), formulated in consideration of the ecosystem (*Ecosystem perspective*) (Johnson Ong, 2023), and related to the real-world experience (*Real-world experience*).

The *WISER* framework, as explained, covers *SMART* and focuses on the bigger context of higher education (i.e., the perspective of an ecosystem) and the connection between what the learners have achieved and what the learners are expected to perform in real life (i.e., *Real-world experience*).

2.3.4. VASCULAR framework

Williams (2012, as cited in Brown & Sambell, 2021) argued that ELOs were often constructed primarily to satisfy templates, namely aiming to be *Specific*, *Measurable*, *Attainable*, *Realistic* and *Timely*, rather than to fully integrate learning opportunities. Programmes need to move away from formulaic ways of writing ELOs to make them the lifeblood of learning, and for this the name *VASCULAR* learning outcome has been coined (Brown, 2019; Dublin City University, 2023).

Brown's justifications for *VASCULAR* are as below:

Verifiable: the programme can tell when the ELOs have been achieved, and if students can achieve these ELOs;

Action-orientated: ELOs lead to real and useful activities;

Singular: ELOs are not portmanteau, and they are readily matchable (i.e., comparable) to student work produced;

Constructively aligned: there is clear alignment between ELOs, teaching and learning, and learning assessment and evaluation;

Understandable: the language for the ELOs is meaningful to all stakeholders;

Level-appropriate: ELOs are suitable and differentiable between degree levels (e.g., Bachelor's degree, Master's degree,…) and phases or progression of study (e.g., year 1, year 2,…);

Affective-inclusive: ELOs should cover capabilities in the affective domain of learning;

Regularly reviewed: ELOs should not be stuck in history, frozen at a particular point in time, yet ELOS should always be fit-for-purpose.

It is clear that *VASCULAR* framework, similar to *WISER*, goes beyond *SMART*. In addition, while *WISER* provides a forward-looking, context-sensitive vision for ELO design, *VASCULAR* offers a more granular, operationally robust framework that ensures clarity, assessability, alignment, and continuous improvement (*Regularly reviewed*). Last but not least, the engagement of stakeholders, which has become a norm in quality assurance of academic programmes (Dao et al., 2025), is much highlighted.

This *VASCULAR* framework has also been discussed by Phil Race (2019), wishing that it should be communicated to the community of educational quality practitioners.

Taken together, the existing ELO frameworks demonstrate an important evolution from technically oriented outcome specification toward broader concerns of alignment, employability, learner engagement, and educational relevance. Nevertheless, the literature also reveals a continuing fragmentation in how ELOs are conceptualised. Some frameworks primarily emphasise measurability and operational clarity, whereas others foreground ecosystem responsiveness, affective learning, or curriculum integration. As a result, there remains no widely accepted framework capable of simultaneously integrating accountability requirements, learner development, ethical formation, interdisciplinarity, and sustainable societal contribution within a coherent model.

Recent studies emphasise that universities should integrate ethical reasoning, sustainability competences, and societal engagement into PLOs in order to prepare graduates for complex and interconnected global challenges (Kioupi & Voulvoulis, 2022). This expectation reinforces the need for ELO frameworks that are not only measurable and aligned, but also ethically and socially responsive.

Moreover, much of the existing research has focused either on theoretical advocacy of OBE principles or on technical implementation practices, while fewer studies have critically examined how ELO frameworks themselves are shaped by specific policy and institutional contexts. This issue is particularly significant in transitional higher education systems where international quality assurance models are rapidly adopted but pedagogical interpretations and implementation capacities remain uneven.

The Vietnamese context, namely the Qualifications Framework and such mandates as Circular 17/2021, therefore provides a useful site for examining broader theoretical questions concerning the localisation of OBE principles, the relationship between quality assurance and educational meaning, and the extent to which ELOs can reconcile institutional accountability with holistic educational purposes.

3. Research method and materials

Rather than merely evaluating the technical quality of ELOs, this study adopts an interpretive and developmental perspective toward OBE implementation. The purpose is not only to identify strengths and weaknesses in current practices, but also to examine how institutional understandings of ELOs reflect broader tensions between accountability, pedagogical coherence, learner development, and sustainable educational purposes. In this sense, the empirical component of the study functions as both evaluative evidence and a conceptual lens through which a more contextually responsive ELO framework may be developed.

The research aims to seek answers to the following questions.

1) To what extent do existing PLOs and CLOs in Vietnamese higher education reflect the core principles of OBE and constructive alignment?

2) What conceptual and pedagogical tensions emerge from the implementation of ELOs across programme and course levels?

3) How can empirical insights from Vietnamese higher education practices, together with international OBE insight and policy requirements, inform the development of a more context-sensitive and sustainability-oriented ELO framework?

3.1. PLO surveys using WASC rubric

In order to have an overall picture of PLO in different universities in Vietnam, the researchers conducted PLO surveys using the Rubric for Assessing the Quality of Academic PLOs recommended by the Western Association of Schools and Colleges (WASC) (Western Association of Schools and Colleges [WASC], 2007), which provides a structured framework for evaluating the robustness and effectiveness of PLOs across five key dimensions, namely (1) comprehensiveness of the PLO set, (2) assessability of the PLOs, (3) alignment of the PLOs with the curriculum and pedagogy, (4) PLO assessment planning, and (5) student engagement with the PLOs. Each dimension is described along a four-level developmental continuum (i.e., Initial, Emerging, Developed, and Highly Developed) representing progressive levels of the PLO quality and maturity.

The WASC Rubric was selected because it provides a widely recognised developmental framework for evaluating PLOs in higher education and has been used internationally as a reflective quality enhancement tool rather than a strictly psychometric instrument. In the present study, the rubric was not employed for high-stakes measurement purposes, but rather as a structured analytical framework to guide institutional self-reflection and comparative interpretation across academic programmes.

To enhance contextual appropriateness, the rubric was translated into Vietnamese by one of the researchers with expertise in OBE and educational quality assurance. The translated version was subsequently reviewed during the workshop sessions to ensure conceptual clarity and consistency of interpretation among participants. Although no formal statistical reliability testing was conducted, several procedural strategies were employed to strengthen interpretive validity, including common orientation training, shared explanation of rubric dimensions, illustrative examples, and opportunities for clarification during the workshops and the survey process.

Given the exploratory and developmental nature of the study, emphasis was placed on credibility, interpretive consistency, and conceptual usefulness rather than psychometric standardisation alone.

The 41 academic programmes participating in the surveys are from 5 universities, all of which adopt the AUN-QA quality model, with key information as described in Table 1.

Representatives of the programmes participated in a one-day OBE training workshop, which provided key concepts, illustrative examples, and best practices related to OBE, underlying PLO principles, and the WASC Rubric (in both its original English version and a Vietnamese version). Following the workshop, the programme heads were invited to complete an online survey via Google forms, in which they evaluated their PLOs using the Vietnamese WASC Rubric. The survey aim was clearly communicated. Upon completion of the agreed survey period, responses were collected and analysed (as presented in Table 1).

As such, the selection of participating universities and programmes followed a purposive and developmental sampling strategy rather than probability-based sampling. The study specifically targeted institutions that had formally adopted OBE principles and AUN-QA-oriented quality assurance practices, as these settings were considered more likely to provide information-rich cases for examining the implementation and interpretation of ELOs within the Vietnamese higher education context.

The inclusion of 5 universities from different geographical regions and disciplinary orientations was intended to enhance contextual variation rather than statistical representativeness. In this sense, the sampling strategy aligns with exploratory and interpretive approaches commonly adopted in educational quality research, where the objective is to generate conceptual insight into institutional practices rather than to establish population-level generalisations.

Furthermore, the participation of programmes through voluntary engagement after the OBE workshop was considered appropriate for encouraging reflective self-assessment and developmental dialogue. While this approach may introduce self-selection bias, it also enabled the collection of contextually informed perspectives from programme representatives actively involved in curriculum and quality assurance processes.

3.2. CLO judgment using Kennedy et al.'S guidelines

Taking into consideration that quality assurance of academic programmes is still a fresh concept to many lecturers in Vietnam, and many academic programmes still encounter genuine relevant tension (Dao et al., 2025; Do & Le, 2025), the researchers try to conceptualize a direction of quality assurance of academic programmes. Among the 41 academic programmes participating in the WASC Rubric self-assessment activities, one undergraduate programme (an EFL programme) was selected for a case study for CLO judgment.

This EFL programme was purposively selected as the case study for CLO judgment for several important reasons. First, the researchers possess an in-depth understanding of the programme, including its curriculum structure, pedagogical approaches, and assessment practices. This familiarity enables a more nuanced and

Table 1. Key information of the universities participating in the surveys

Universities	Areas of education	Geographical locations	Survey participating programmes
A	Multidisciplinary	Southern Vietnam	17
B	Multidisciplinary	Southern Vietnam	12
C	Multidisciplinary	Southwestern Vietnam	2
D	Medicine and Pharmacy	Southwestern Vietnam	2
E	Medicine and Pharmacy	Northern Vietnam	8

contextually grounded interpretation of the CLOs, thereby enhancing the validity of the analysis. Second, the researchers have full access to the course syllabi and related instructional documents. This level of access ensures that the CLO judgment is based on comprehensive and authentic data, allowing for systematic analysis across courses and facilitating accurate mapping, alignment checks, and identification of gaps or redundancies within the programme.

At the time of CLO judgment, the EFL programme was composed of 71 courses, among which 07 were capstone courses (including the *Thesis* and *Minor Thesis* courses) and 04 were requisite courses for these capstone courses. These 11 core courses (accounting for 15.5% of the programme courses) were selected for CLO judgment. As a result, a total of 104 CLOs from these 11 core courses were analysed applying 6 Thematic analysis steps by Braun & Clarke (2006) (i.e. Familiarizing with data; Generating initial codes; Searching for themes; Reviewing themes; Defining and naming themes; and Producing the report) and the innovative 6 steps by Naeem et al. (2023) (i.e. Transcription, familiarization with the data, and selection of quotations; Selection of keywords; Coding; Theme development; Conceptualization through interpretation of keywords, codes, and themes; and Development of conceptual model) and the popular ELO Guidelines (Kennedy et al., 2006) (Table 2).

Taking the ELO frameworks into consideration, the 7 criteria (Table 2) reflect ELO structure (Criterion 2 and Criterion 4), *Specific* and/or *Measurable* (Criterion 3), *Singular* (Criterion 5), different learning domains (Criterion 5), *Time-bound* and/or *Attainable* (Criterion 7), and ELO perspective (Criterion 1).

One researcher conducted the CLO judgment as part of the study's exploratory and developmental design. The evaluator possessed extensive contextual familiarity with the programme as a full-time lecturer and brought relevant expertise in OBE implementation and quality assurance practices, including professional experience as an AUN-QA assessor. This background facilitated informed and contextually grounded interpretation of the CLOs and their alignment with established ELO principles. Although the use of multiple experts is generally recommended to enhance reliability and reduce individual bias, previous literature suggests that the use of a single expert may be appropriate when the evaluator possesses highly specialised expertise and when the purpose is to obtain in-depth judgment rather than achieve consensus (Meyer & Booker, 1991; Morgan & Henrion, 1990). In the present study, the evaluator's disciplinary expertise and contextual knowledge supported nuanced interpretations of the CLOs that may not have been readily captured through standardised procedures alone. Nevertheless, the use of a single evaluator and the absence of inter-rater procedures may limit the reliability and generalisability of the findings. Therefore, the results should be interpreted as context-sensitive and exploratory insights intended to inform conceptual development and future refinement, rather than as psychometric measurement outcomes.

Table 2. Kennedy et al.'s guidelines for writing ELOs

1	ELOs are not Learning aims
2	Begin each ELO with an action verb
3	Avoid vague terms (i.e., the ELO must be observable and measurable)
4	The action verb is followed by the object of the verb that is followed by a phrase that gives the context
5	Avoid complicated sentences. Ensure structural clarity.
6	Apply the 3 learning domains (i.e., cognitive, affective and psycho-motor domains)
7	Make sure the ELOs are achievable within the time and resources available (i.e., a manageable number of CLOs)

(Adapted from Kennedy et al., 2006, p.18)

Overall, the study adopts an exploratory and interpretive methodological orientation situated within educational quality research. The intention is not to produce definitive measurement claims regarding the effectiveness of OBE implementation, but rather to examine how ELOs are currently conceptualised, operationalised, and experienced across different programme contexts. The combination of structured rubric-based evaluation, qualitative thematic analysis, and conceptual synthesis was therefore considered appropriate for addressing the developmental and context-sensitive nature of the research questions.

4. Results

4.1. Results of PLO surveys using WASC rubric

Table 3 presents the results of the assessment of levels of PLO development made by representatives of the 41 programmes from the 5 universities (Table 1).

As shown in Table 3, the analysis of PLO development across the five criteria reveals a consistent pattern in which most responses cluster at the "Developed" level, followed by "Emerging." The "Highly Developed" category is comparatively limited, while "Initial" responses are minimal.

Taking the overall results into consideration, the most developed dimensions are *Assessable Outcomes* and *Alignment*, both of which share the Mean score of 2.8537. The least developed dimensions are *Assessment Planning* and *Student Experience*, both of which share the Mean score of 2.5854. Regarding individual dimension results, *Student Experience* and *Assessment Planning* are under developed to 19 and 18 out of 41 surveyed academic programmes respectively. This distribution suggests that while the 5 universities have largely established the structural foundations of OBE, the transition toward advanced, fully integrated systems remains incomplete. More importantly, Table 3 reveals an uneven pattern of OBE institutionalization across different dimensions of programme implementation. The comparatively stronger performance in *Assessable Outcomes* and *Alignment* suggests that the universities have prioritised those dimensions that are most visible within accreditation and external quality assurance processes, particularly curriculum mapping and outcome articulation. However, the weaker results in *Student Experience* and *Assessment Planning* indicate that OBE implementation may remain predominantly compliance-oriented rather than genuinely learner-centred. The findings therefore suggest that many programmes may have reached what could be termed a "documentation alignment stage," where PLOs are formally stated and mapped and communicated, yet are not fully operationalised through authentic student engagement and longitudinal assessment practices.

4.2. Results of CLO judgment using Kennedy et al.'s guidelines

The judgment of 104 CLOs against Kennedy et al.'s Guidelines resulted in the areas for improvements as presented in Table 4.

As shown in Table 4, 11 out of 11 courses (100% of the courses) do not meet the ELO Guidelines by Kennedy. Further analysis reveals several recurring patterns of non-compliance with the established ELO Guidelines. First, the most prevalent issue concerns the use of

Table 3. Assessment of PLOs of the 41 programmes attending the surveys

Assessment Criteria	Levels of PLO Development				
	Initial	Emerging	Developed	Highly Developed	Mean Scores
Comprehensive List	2	10	23	6	2.8049
Assessable Outcomes	1	12	20	8	2.8537
Alignment	0	12	23	6	2.8537
Assessment Planning	2	16	20	3	2.5854
Student Experience	0	19	20	2	2.5854

vague and non-measurable language (Criterion 3), identified in 10 CLOs across 6 courses. Many outcomes employ imprecise verbs that hinder observability and assessment, thereby limiting the validity of outcome-based evaluation. This indicates a systemic challenge in operationalizing measurable CLOs. Second, a substantial number of CLOs exhibit structural weaknesses. In particular, 06 CLOs do not follow the recommended structure of action verb – object – contextual condition (Criterion 4), while 08 CLOs are written in overly complex or unclear sentences (Criterion 5). Additionally, at least 01 CLO does not follow the rule of using an action verb (Criterion 2). These issues reduce clarity and consistency, making it difficult for both lecturers and students to interpret and assess expected learning performance. Third, the findings highlight conceptual misclassification across learning domains, including confusion between cognitive, psychomotor, and autonomy/ responsibility outcomes (Criterion 6). Although less frequent (01 ELOs in 3 different courses), this error is pedagogically significant, as they may lead to misalignment between ELOs, teaching and learning activities, and assessment tasks. Finally, the analysis reveals concerns regarding feasibility and workload (Criterion 7), with some courses containing an excessive number of CLOs (e.g., up to 22 CLOs in Course 9). Such overload risks weakening instructional focus and undermining the depth of student learning. Some examples are presented in Appendix 1.

Taken together, the patterns identified in Table 4 indicate that the weaknesses in CLO formulation are not isolated technical errors but reflect deeper conceptual tensions in the implementation of the constructive alignment approach and OBE. In particular, the frequent use of vague verbs and structurally inconsistent CLOs suggests that lecturers may still conceptualize ELOs as broad teaching intentions rather than demonstrable student performances. This finding reinforces earlier critiques of OBE implementation in which outcome statements are formally present yet insufficiently operationalized for authentic assessment and constructive alignment.

Furthermore, the misclassification across learning domains demonstrates that the challenge extends beyond linguistic formulation to pedagogical understanding. Confusion between cognitive, psychomotor, and autonomy-

Table 4. Areas for improvements of ELO identified from the selected courses

	Kennedy et al.'s ELO Guidelines	**Related ELOs and courses for improvements**
1	ELOs are not Learning aims	01 ELO (Course 10)
2	Begin each ELO with an action verb	01 ELO (Course 4)
3	Avoid vague terms (i.e., the ELO must be observable and measurable)	10 ELOs (Course 3; Course 4; Course 5; Course 7; Course 9; Course 11)
4	The action verb is followed by the object of the verb that is followed by a phrase that gives the context	06 ELOs (Course 2; Course 9; Course 10; Course 11)
5	Avoid complicated sentences. Ensure structural clarity.	08 ELOs (Course 2; Course 4; Course 7; Course 8; Course 9)
6	Cognitive CLO mistakenly used as Psychomotor CLO	01 ELO (Course 6)
	Psychomotor CLO mistakenly used as Autonomy and Responsibility CLO	01 ELO (Course 8)
	Autonomy and Responsibility CLO mistakenly used as Psychomotor CLO	02 ELOs (Course 9)
7	Make sure the ELOs are achievable within the time and resources available (i.e., a manageable number of CLOs)	Course 9: 22 CLOs Course 1: 15 CLOs Course 7: 10 CLOs

related CLOs may lead to inappropriate teaching strategies and invalid assessment practices. For example, when autonomy and responsibility are framed as psychomotor competencies, assessment activities may fail to capture higher-order judgment, ethical reasoning, or independent professional performance expected at the programme level.

5. Discussions

5.1. Development of PLOs

As shown in Table 3, there are different levels of PLO development in some universities across Vietnam. In particular, the dimensions of *Assessable Outcomes* and *Alignment* developed more than the dimensions of *Comprehensive List, Student Experience* and *Assessment Planning*.

The relatively high scores for *Assessable Outcomes* indicate that most PLOs are formulated in measurable terms, reflecting alignment with established OBE principles. This finding suggests that the lecturers demonstrate a functional understanding of how to articulate ELOs using observable and assessable indicators.

Similarly, the absence of "Initial" responses and the strong concentration in the "Developed" category for *Alignment* imply that the universities have made substantial progress in aligning PLOs with teaching and learning activities as well as assessment tasks. This alignment is often associated with external quality assurance pressures and frameworks, which emphasize Biggs and Tang's framework of constructive alignment as a core principle of curriculum design.

However, the relatively small proportion of "Highly Developed" responses indicates that alignment may be procedural rather than deeply embedded. In other words, while alignment exists in formal documentation, its effectiveness in driving effective teaching practices and meaningful learning experiences may vary.

In contrast, *Assessment Planning* exhibits a lower Mean score and a higher concentration of responses in the "Emerging" category. This suggests that the universities face challenges in translating well-defined and aligned PLOs into robust, systematic assessment systems. This gap reflects a common issue in OBE implementation, where the design of outcomes and alignment frameworks progresses more rapidly than the development of sophisticated assessment skills and infrastructures (AUN-QA, 2019). Consequently, the reliability and validity of PLO measurement may be constrained. Given that PLOs are better planned than implemented in the curricula, there should be further support to lecturers to design and implement their assessment plans.

Student Experience criterion also records one of the lowest Mean scores, with very few responses in the "Highly Developed" category. This finding suggests that, despite institutional efforts in curriculum design, the students may not fully perceive or engage with PLOs as intended. According to WASC (2007), students cannot be held responsible for mastering PLOs unless they have participated in a programme that systematically supports PLO development. This result suggests there should be better engagement among students in the process of PLO development.

Last but not least, since learning occurs within and outside the classroom, relevant student services (e.g., advising and tutoring centres) and co-curriculum (e.g., student clubs and campus events) should be designed to support the PLOs.

5.2. Development of CLOs

As shown in Table 4, the principles for ELO development have not been adequately achieved at the course level.

When analysed, the CLOs in the EFL programme do not fully meet the ELO Guidelines. Most issues are found in *Observable* and *Measurable* (Criterion 3), ELO structure (Criterion 4), *Clear* or *Specific* (Criterion 5), and *Time-bound* (Criterion 7).

These problems with measurability and clarity undermine the OBE and affect assessment validity and quality accreditation results. Lack of clarity and overly complex sentences in writing ELOs also contributes to inconsistent grading across lecturers and confusion among students about what they are expected. The issue in relation

to workload and feasibility is a major design problem. For *Time-bound*, there is no strict rule concerning the optimum number of ELOs, but quality is more important than quantity (AUN-QA, 2022).

The findings based on the analyses of the results from the WASC rubric self-assessment (Table 3) and the CLO judgment (Table 4) suggest that existing PLOs and CLOs in Vietnamese higher education reflect the core principles of OBE and constructive alignment to a moderate extent. While many programmes demonstrated progress in outcome assessability and curriculum alignment, implementation remains uneven. PLOs generally showed stronger development at the documentation level, whereas CLOs frequently exhibited weaknesses related to measurability, structural clarity, learning domain classification, and feasibility.

The findings of the present study are broadly consistent with recent international discussions suggesting that OBE implementation often progresses more rapidly at the level of curriculum documentation than at the level of authentic assessment practice and learner engagement (Mahalingam, 2026). Similarly, previous studies have reported that weakly articulated ELOs frequently undermine the reliability of attainment measurement and the effectiveness of constructive alignment processes (Amirtharaj et al., 2022).

The findings from both Table 3 and Table 4 collectively suggest that Vietnamese higher education institutions are transitioning from the initial adoption of OBE terminology toward a more mature understanding of outcome quality, alignment, and educational sustainability. However, this transition remains incomplete and uneven across institutional and course levels. As a result, there should be an ELO framework that is comparable to the established ELO frameworks and fits the context of higher education in Vietnam.

5.3. Vietnam higher education specific ELO framework

In terms of a framework for academic programmes in Vietnam to meet the requirements in the new scenarios of programme assessment and contribution of higher education to SDGs, this paper recommends the *SUSTAINABLE* framework, which is the acronym for *Subject-specific, Understandable, Stakeholders engaged, Transferrable (or Transversal), Achieved, Interdisciplinary, National qualifications framework referenced, Aligned, Broadly defined, Learner-centric,* and *Ethical thinking*.

The components of the new ELO framework are explained as following:

Taking into consideration **the content** of ELOs, *Subject-specific* (S) means ELOs should reflect the specific and significant requirements of the area of education and the disciplines in which the academic programme is located; *Interdisciplinary* (I) means ELOs help learners develop more advanced epistemological beliefs, enhanced critical thinking ability and metacognitive skills, and an understanding of the relations among perspectives derived from different academic disciplines; *Broadly defined* (B) means since outcomes take different forms – from small skills to complex configurations of life-performance competences and roles (Spady, 2022), ELOs should be broadly stated so as to avoid a too rigid or fixed definition. It should be noted that parts of ELOs should be achieved thanks to relevant extracurricular and co-curricular activities (Dao, 2025); and *Transversal* (or *Transferrable*) (T) means ELOs consist of skills and competencies that can be effectively applied to a wide variety of situations in life and in work.

Taking into consideration **the deployment** of ELOs in the curriculum, *Aligned* (A) means ELOs are aligned constructively to teaching and assessment, aligned constructively both vertically (e.g., to the programme educational goals) and horizontally (i.e., contribution across the courses in the curriculum to the PLOs.

Taking into consideration **the benchmarks** for level descriptors, *National qualifications framework referenced* (N) means ELOs should meet the required ELOs of knowledge, skills, levels of autonomy and responsibility, and necessary competences as prescribed for the corresponding qualification level (e.g., Bachelor,

Master, Doctoral) (Brown, 2019) according to the national qualifications framework (NQF), for example the VQF in the context of Vietnamese higher education.

Taking into consideration **the role of learners** in higher education, *Learner-centric* (L) means ELOs should put the learner (student) at the centre of the learning process, as an active constructor of knowledge. Learner-centric also means learner equality, i.e., all students can learn and succeed.

Taking into consideration the role of programme stakeholders in the design and development of ELOs, Stakeholders engaged (S) means ELOs are formulated using and reflecting inputs from and highly representative requirements of key programme stakeholders (i.e., the industries, policy-makers, learners, and lecturers) (AUN, 2020; Dao et al., 2025).

Taking into consideration **the achieved ELOs** among the learners, *Achieved* (A) means ELOs are real and useful results that can be demonstrated by the learners and then graduates of the programme. Learners should do something that is visible and tangible, or in other words, an action or performance that requires attainment of competence that can be measured (Brown, 2019; Johnson Ong, 2024).

Taking into consideration the contribution of higher education to good values and sustainable development in the wider society, ethics which has been gaining significance from industries (International Business Machines [IBM], 2023) and academia (Aubrey, 2024) should be part of the ELOs. Therefore, *Ethical thinking* (E) means ELOs should educate and train students to identify and describe ethical issues in different contexts, articulate the ethical considerations involved in different responses to those issues (Dao, 2017; Lorié, 2023), and provide a rationale for a position that addresses those considerations, including sustainable development in any related aspects. In other words, ethics should be DNA of graduates from academic programmes (Aubrey, 2024). Furthermore, the inclusion of *Ethical thinking* within the *SUSTAINABLE* framework also reflects broader international trends in higher education, where sustainability-oriented learning increasingly incorporates ethical judgment, responsible citizenship, and societal contribution as essential graduate attributes (Kioupi & Voulvoulis, 2022). In this sense, *Ethical thinking* is positioned not as an optional supplement to disciplinary competence, but as an integral dimension of sustainable higher education.

Taking into consideration **the language** of the ELOs, *Understandable* (U) means ELOs are articulated using the language that helps convey adequately the unique features of the programme and is meaningful to all programme stakeholders.

The proposed *SUSTAINABLE* framework did not emerge solely from theoretical synthesis. Rather, it was informed by the convergence of three sources: (i) established international ELO frameworks and OBE literature, (ii) Vietnamese regulatory and quality assurance requirements, and (iii) empirical patterns identified through the WASC rubric self-assessment and CLO judgment presented in Table 3 and Table 4 respectively.

More specifically, the empirical findings helped reveal recurring implementation gaps that existing frameworks did not fully address within the Vietnamese higher education context. The *SUSTAINABLE* framework therefore represents an attempt to conceptually respond to those observed gaps. First, the relatively weak performance in *Student Experience* and *Assessment Planning* (Table 3) informed the inclusion of the components *Learner-centric* (L) and *Achieved* (A). The findings suggest that many programmes have not yet sufficiently embedded learner engagement and evidence-based assessment into OBE implementation. Consequently, the framework emphasizes that ELOs should not only be formally articulated but also demonstrably achieved and meaningfully experienced by learners. Second, the widespread use of vague and non-measurable CLOs (Table 4) reinforced the importance of *Understandable* (U) and *Achieved* (A). These components directly address the need for clearer, assessable, and operationalizable ELO statements that can support valid teaching, learning, and assessment practices. Third, the structural inconsistencies and misalignment between CLOs and learning domains highlighted the importance of *Aligned*

(A), *National qualifications framework - referenced* (N), and *Subject-specific* (S). These components collectively emphasize constructive alignment, appropriate competency categorization, and discipline-sensitive articulation of ELOs. Fourth, the excessive number of CLOs identified in several courses informed the inclusion of *Broadly defined* (B). Rather than fragmenting learning into numerous narrow behavioural statements, the alternative framework encourages broader yet meaningful competencies that preserve curricular coherence while still allowing assessability and flexibility. Last but not least, the empirical findings also revealed that stakeholder engagement and ethical considerations were largely implicit or absent in many existing ELO frameworks. This observation contributed to the inclusion of *Stakeholders engaged* (S) and *Ethical thinking* (E), reflecting the growing expectation that higher education should prepare graduates not only for employment but also for responsible participation in society and sustainable development.

The proposed *SUSTAINABLE* framework should be interpreted as an empirically informed and context-sensitive conceptual framework developed through literature synthesis, policy analysis, and illustrative empirical evidence rather than as a fully validated model. Its purpose is not to claim universal applicability at this stage, but rather to provide a coherent interpretive and developmental framework for strengthening ELO design and implementation within Vietnamese higher education and similar emerging OBE contexts. As such, the framework is intended to serve as a foundation for further empirical examination and refinement across diverse educational settings.

To make initial judgment on the recommended ELO framework, the researchers align the *SUSTAINABLE* framework with the *SMART* and *WISER* frameworks (Table a, Appendix 2) and *VASCULAR* framework (Table b, Appendix 2). The symbol √ indicates alignment between the components of the frameworks. This √ is absent where there is no alignment between those components. The alignment results show that the *SUSTAINABLE* framework is comparable to almost all the components of the *SMART* and *WISER* frameworks. The *SUSTAINABLE* framework even goes beyond the other two frameworks when emphasizing the importance of *Ethics* and *Ethical thinking* as graduates' attributes. Furthermore, the *SUSTAINABLE* framework strongly aligns with the *VASCULAR* framework. It is necessary to bear in mind that *Verifiable* in the *VASCULAR* implies evidences of student achievement of ELOs in addition to the curriculum mapping and the programme assessment plans.

As such, the *SUSTAINABLE* ELO framework may represent a potential extension in learning outcome design, extending beyond the structural rigor of the *VASCULAR* and the systemic orientation of the *WISER* toward a holistic, future-oriented, and value-driven paradigm. While the *WISER* emphasizes alignment with the future of work and educational ecosystems, and the *VASCULAR* ensures precision, assessability, and internal coherence, the *SUSTAINABLE* integrates these dimensions while explicitly embedding societal relevance, interdisciplinarity, and especially ethical responsibility as graduates' attributes.

The aforementioned 7 PLO mandates by the MOET (2021) reflect the principles by AUN-QA and international good practices. In particular, Requirement (1) asks for *Specific*, *Understandable*, *Real-world experience*, and *Level-appropriate*; Requirement (2) asks for *Measurable, Learning taxonomies* and *Constructively aligned*; Requirement (3) asks for *Strategic alignment* and *Ecosystem* perspective; Requirement (4) is about *Qualification framework, Level-appropriate*, and *Domains of competency*; Requirement (5) focuses on *Integrated constructive alignment* and Requirement (6) focuses on *Curriculum integration and constructive alignment*; and Requirement (7) asks for *Student workload, Attainable* and *Time-bound*.

The *SUSTAINABLE* framework is aligned with the 7 PLO requirements of the MOET (Vietnamese Ministry of Education and Training [MOET], 2021). Overall, the *SUSTAINABLE* framework appears to demonstrate substantial alignment with these 7 PLO requirements (Table 5).

The mapping results (Table 5; Table 1 and Table 2, Appendix 2) demonstrate that the *SUSTAINABLE* framework aligns strongly with the normative and strategic dimensions of the ELO principles and requirements. This alternative framework can help develop a 'quality culture' where good practices come with evidence of proactive institutional alignment rather than reactive compliance. This clear and explicit strength makes *SUSTAINABLE* particularly suitable in regulated systems such as Vietnam's.

5.4. Limitations

This study is conceptual in nature rather than

Table 5. An alignment of SUSTAINABLE with the MOET's PLO mandates

MOET's PLO mandates	**SUSTAINABLE's alignment**	**Justifications**	
1. *Specific, Understandable, Real-world experience,* and *Level-appropriate*	Strong	*Subject-specific Understandable Transferrable Broadly defined NQF referenced*	These components ensure ELOs are clearly articulated, contextually grounded within disciplines, referenced to the NQF, and meaningful to learners. ELOs also support flexibility while still capturing core competences
2. *Measurable, Learning taxonomies* and *Constructively aligned*	Strong	*Achieved NQF referenced Aligned*	*Achieved* implies measurability; *NQF* guides the taxonomies for ELOs; and *Aligned* implies constructive alignment practices
3. *Strategic alignment* and *Ecosystem/ Stakeholders*	Strong	*Aligned Stakeholders engaged Learner-centric*	*Stakeholders engaged* and *Learner-centric* not only reflect stakeholder expect ations but also emphasize their active involvement in developing ELOs, positioning stakeholder input as a co-constructive force in curriculum design *Aligned* implies constructive alignment practices
4. *Qualification framework, Level-appropriate,* and *Domains of competency*	Strong	*NQF referenced Subject-specific*	*NQF referenced* to ensure ELOs are anchored in prescribed levels of knowledge, skills, as well as levels of autonomy and responsibility
5. *Integrated constructive alignment*	Strong	*Aligned Interdisciplinary*	*Aligned* and *Interdisciplinary* support ELO coherence across programmes and disciplines
6. *Curriculum integration* and *Constructive alignment*	Strong	*Aligned Interdisciplinary*	*Aligned* provides a foundation for constructive alignment between PLOs and CLOs; *Interdisciplinary* supports curriculum integration
7. *Student workload, Attainable* and *Time-bound*	Strong	*Achieved Learner-centric*	*Achieved* implies ELOs must be *Attainable* and *Time-bound*; *Learner-centric* takes into consideration the student workload

a fully empirical investigation, and the self-assessment dataset is used primarily to illustrate and support the proposed *SUSTAINABLE* ELO framework rather than to provide definitive evidence. In addition, the proposed framework largely reflects the perspectives and interpretations of the researchers, which may be influenced by contextual assumptions and subjective judgment.

It should be noted that the study design may be subject to potential bias. As the participants engaged in self-assessment of their own programmes, there is a risk of subjective inflation or social desirability bias. In addition, the prior OBE training workshop might have influenced the participants' interpretations of the WASC rubric, potentially leading to more favourable or aligned evaluations. While these factors may affect the objectivity of the findings, the approach was considered appropriate for capturing insider perspectives and promoting the participants' reflective, developmental engagement with OBE practices.

Regarding the CLO judgment and framework alignments, given the exploratory and developmental nature of the study, the judgment and alignments were conducted as a single-rater analysis (Meyer & Booker, 1991; Morgan & Henrion, 1990), and no additional inter-rater reliability procedures were employed. While this approach may limit the generalizability and objectivity of the findings, it allows for a nuanced, expert-informed interpretation of the CLOs and ELO frameworks, which is appropriate for the study's purpose.

While the *SUSTAINABLE* offers a theoretically grounded and practice-informed framework, it has not yet been systematically tested across diverse settings. This framework should currently be interpreted as an empirically informed conceptual framework rather than a fully validated predictive model. Further empirical studies involving multiple institutions, stakeholder groups, and inter-rater validation procedures are needed to examine the explanatory power and practical applicability of each framework component to ensure its robustness, reliability, and broader applicability.

6. Conclusions and recommendations

According to Spady (2022), getting wiser about learning 'Outcomes' makes us much wiser about both what they are and the vast range of options educators have in developing these outcomes. Apart from the contents and intents that they put in the ELOs, educators do need some kind of framework or principles to follow when formulating and developing ELOs for their curricula and programmes.

It is noted that the ELO frameworks currently in use are introduced by educators and practitioners outside Vietnam. They do not necessarily reflect the Vietnamese higher education context, and neither do they clearly convey the expectation for sustainable development of academic programmes and universities. The idea of an alternative framework for ELOs also results from the reality of higher education in Vietnam where requirements for basic and comprehensive innovation of education and higher education has been a must, and challenges have been recognized when assuring the right path of OBE with the constructive alignment approach and the ELOs as the core parts.

The results of the WASC rubric-based PLO assessments and the CLO judgment suggest that while ELO principles have been introduced, their implementation remains inconsistent. The observed issues reflect not only technical limitations but also deeper challenges related to pedagogical alignment and shared understanding of ELO frameworks. Addressing these gaps is essential to ensure coherence, assessability, and effectiveness in curriculum design.

The review of the 3 established ELO frameworks, together with the MOET mandate and the empirical patterns identified through the PLO and CLO analyses, informed the development of the proposed *SUSTAINABLE* ELO framework. While this proposed framework offers a coherent and theoretically informed framework, it remains preliminary and requires further empirical investigation. Future studies should seek to test and refine the components across diverse contexts, using robust methodological designs and multiple data sources. Successfully validated, the *SUSTAINABLE* ELOs may provide a useful

framework for addressing the requirements of the contemporary world of employment and ever-increasing demands of stakeholders in higher education, contributing to good and ethical values and sustainable development in the wider society.

More importantly, beyond the Vietnamese context, the study also contributes to broader scholarly discussions concerning the evolving purposes of ELOs in higher education (Mahrishi et al., 2025; Probst, 2022). The findings suggest that contemporary ELO frameworks may need to move beyond narrowly technical formulations toward more holistic models capable of integrating accountability, interdisciplinarity, learner agency, ethical reasoning, and sustainable societal engagement within increasingly complex higher education environments.

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APPENDIX 1.

Identified CLO areas for improvement	Example excerpt from the evaluated CLO	Initial code	Analytical theme
Vague verbs	"…có tinh thần trách nhiệm cao trong công việc và làm việc chuyên nghiệp trong lĩnh vực biên/phiên dịch" "…có thái độ đúng mực với giảng viên và bạn học; có tinh thần hợp tác trong học tập" "Nắm vững quy trình thực hiện một nghiên cứu khoa học."	Non-observable action verbs	Measurability problem
Overly broad CLO	"Làm việc độc lập và theo nhóm, có trách nhiệm đối với bài tập cá nhân và bài tập của nhóm. Hướng dẫn, giám sát các thành viên trong nhóm hoàn thành bài tập nhóm. Đưa ra lý lẽ xác đáng cho ý kiến của mình khi trao đổi trong nhóm. Lập kế hoạch, điều phối và quản lý nguồn lực để hoàn thành bài tập nhóm."	Multiple competencies combined	Structural ambiguity
Misclassified domain	"Giao tiếp hiệu quả trong môi trường làm việc và học tập đa văn hóa" classified as Autonomy and responsibility	Domain confusion	Pedagogical misalignment
Excessive CLO quantity	Course 9 with 22 CLOs Course 1 with 15 CLOs Course 7 with 10 CLOs	Curriculum overload	Feasibility and manageability

APPENDIX 2.

Table a. An alignment of SUSTAINABLE with SMART and WISER frameworks.

	S	**M**	**A**	**R**	**T**	**W**	**I**	**S**	**E**	**R**
S	√							√		
U	√							√		
S				√		√		√	√	√
T										√
A		√	√		√		√	√		
I						√			√	
N					√				√	
A	√	√		√			√	√	√	√
B									√	
L					√					
E										

Table b. An alignment of SUSTAINABLE with VASCULAR framework.

	V	**A**	**S**	**C**	**U**	**L**	**A**	**R**
S					√			
U					√			
S								√
T		√						
A	√	√	√					
I							√	
N						√	√	
A				√				
B			√					
L		√						
E							√	√