



A QUALITY MATTERS WHITE PAPER

Building Quality Through Alignment: Connecting Course Design to Program Outcomes

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RECOMMENDED ACTIONS

- ✓ **Build a manageable alignment system.** Link a program overview map to course maps that document outcomes, content, learning experiences, assessments, feedback, support, and evidence. Assign responsibility for each view and derive learner-facing guidance from the validated internal maps.
- ✓ **Make alignment visible to learners.** Show students how courses, modules, assignments, feedback, milestones, and support resources connect to program outcomes and professional goals.
- ✓ **Use alignment evidence for continuous improvement.** Review curriculum maps, assessment results, learner feedback, faculty calibration, and external standards to identify gaps, overlaps, and needed revisions.
- ✓ **Embed equity and accessibility into the alignment review.** Examine whether all learners can access materials, technologies, assessments, feedback, and support needed to persist, achieve, complete, and apply their learning.



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Introduction: Intentional Design as the Pathway to Learner Success

A student enters an online degree program with a reasonable expectation: each course should help them move closer to degree completion, professional readiness, and personal growth. The learner expects assignments to build logically from one course to the next, feedback to guide improvement, and support to appear at the moments when it is most needed. In a well-aligned program, the pathway is visible. Weekly activities connect to course outcomes. Course outcomes connect to program outcomes. Assessments provide evidence of developing competence. Feedback helps the learner understand not only how they performed, but also how to improve. Skills are introduced, reinforced, and mastered across the curriculum until they become part of the learner's academic and professional identity.

In a poorly aligned program, the learner's experience is quite different. Each course may be functional on its own, but the program feels fragmented. Navigation changes from course to course. Assignment expectations are unclear or inconsistent. Feedback may arrive too late to support revision, or it may focus only on the score rather than the learning. Grading standards vary, communication practices differ, and assignments may feel disconnected from the degree's larger purpose. For online learners, many of whom are balancing work, family, caregiving, military service, or other

responsibilities, these forms of misalignment create more than inconvenience. These patterns may complicate the navigation of the program and suggest potential barriers to motivation and persistence (Baker & Tikhvatulina, 2023; Hakkarainen et al., 2024).

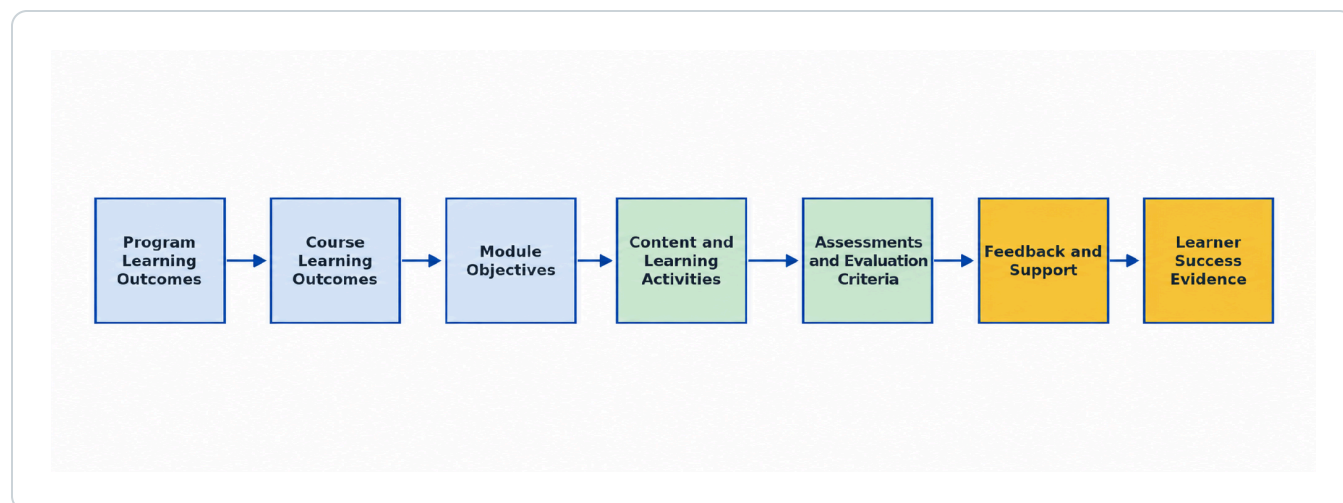
This is why intentional design is central to learner success. Flexibility alone does not guarantee that students will persist, achieve, or graduate. A program can be accessible in format while still being difficult to navigate, inconsistent in expectations, weak in feedback, or disconnected from support. Using national undergraduate data, Ortagus, Hughes, and Allchin (2024) found that students enrolled in exclusively online degree programs were less likely to complete a bachelor's degree or any degree than otherwise-similar students taking at least some face-to-face courses. These findings highlight a completion concern; they do not establish that curriculum alignment or particular support structures close the gap. This white paper proposes coherent pathways, clear expectations, meaningful interaction, and accessible support as priorities for program design and evaluation. Their contribution to learner success should be examined through program-specific evidence. In online programs, learner success must be designed. It cannot be assumed.

The systems view of online program quality established in *Building Quality from the Ground Up: A Systemic Approach to Online Degree Programs* provides the foundation for this paper. Grincewicz (2025) argues that quality in online degree programs depends on the integration of program design, teaching support, learner support, learner success, community, and quality assurance. These elements are not separate domains operating independently. They form an interdependent ecosystem in which

curriculum, instruction, support, and evidence must work together around a shared vision of student success. Alignment is the mechanism that makes this ecosystem coherent and measurable. It connects the program's intended outcomes to the learner's lived experience through a chain of objectives, learning activities, assessments, performance criteria, feedback, and support that culminates in evidence of learner success (see Figure 1).

FIGURE 1

Alignment chain: from intended outcomes to evidence of learner success.



Note. Author-created conceptual synthesis. Arrows show intended design connections, not a tested causal sequence.

Baker and Tukhvatulina's (2023) study of adult learners in asynchronous online degree programs illustrates what misalignment feels like from the learner perspective. Participants described limited human connection with instructors, difficulty receiving timely responses, technology challenges, inconsistent expectations, and uneven course design. They wanted clearer connections between assignments and learning objectives, more constructive feedback, consistent grading standards,

regular instructor communication, weekly announcements, and opportunities to connect coursework to professional or firsthand experiences. These findings suggest that alignment is not only a matter of curriculum planning. It is a learner experience concern. These learner reports support a design implication: make connections, expectations, communication, and feedback clearer. They do not establish that any one design feature causes persistence or belonging.

Alignment also matters because programs need a clear definition of learner success and a purposeful system for measuring it. That definition should connect the program's mission and outcomes with learners' progression, achievement, completion, and application beyond the degree. A curriculum map documents intended learning opportunities; evidence of learner success helps programs examine whether those opportunities are functioning as intended. Interpreting that evidence over time, against appropriate expectations and benchmarks, and through an equity lens connects measurement back to decisions about the learner pathway (Dogan & Harris, 2024; Hakkarainen et al., 2024; Yang et al., 2017; Krsmanovic & Foster, 2025).

Intentional design integrates constructive alignment, curriculum mapping, cognitive progression informed by Bloom's taxonomy, external review, evidence of learner success, and continuous evaluation to support measurable learner success (Frost & Ackrill, 2025; Lam & Tsui, 2016; Loughlin et al., 2021; Smith & Chittams, 2024). This white paper adopts a comprehensive view of intentional design by

positioning alignment as the structural beam that supports online program quality. It uses Program Alignment for Learner Success (PALS) as an organizing model because PALS expands alignment beyond the relationship between outcomes and assessments. PALS asks whether the full learning system is coherent: what is taught, how it is taught, how learning is assessed, and how alignment is documented, interpreted, reviewed, and improved over time.

When alignment is visible, pedagogically meaningful, faculty-owned, equity-centered, and continuously reviewed, online learners are better positioned to understand where they are, where they are going, how each learning experience supports their goals, and what evidence shows they are making progress. Alignment, then, is both a design practice and an evidence practice. It helps programs create coherent pathways and determine whether those pathways are working. Intentional design offers a framework for supporting these goals; evidence is needed to determine whether changes are associated with improved learner experiences and outcomes.

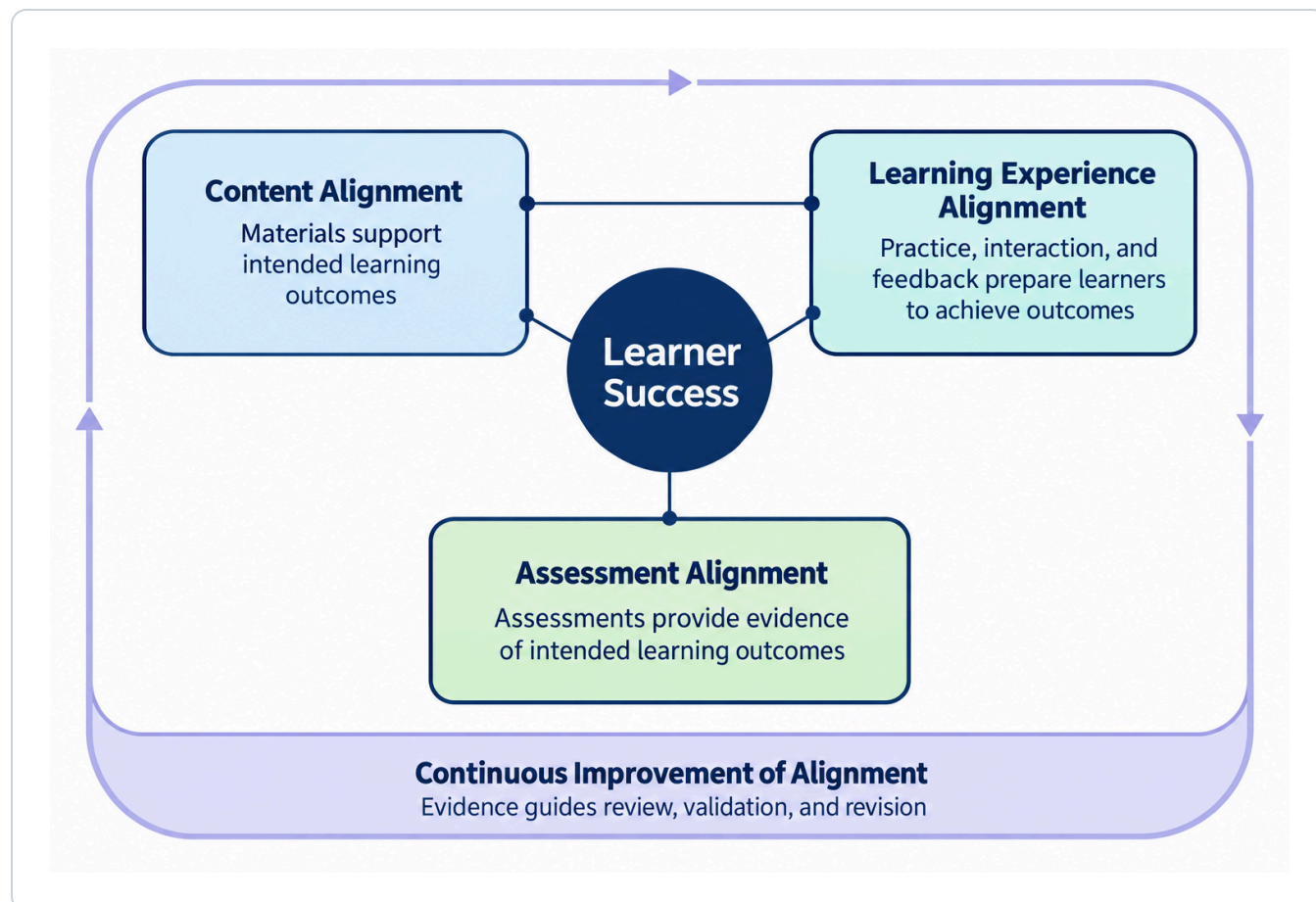
Conceptual Framework: PALS, Constructive Alignment, and Curriculum Mapping

Program Alignment for Learner Success (PALS) provides the organizing framework for this paper. PALS is a conceptual model that connects content, learning experiences, and assessments to intended learning outcomes within and across courses, while emphasizing the ongoing review and improvement of those connections. As shown in Figure 2, the model includes three interconnected dimensions—content alignment, learning experience alignment, and assessment alignment—and a fourth dimension: continuous improvement of alignment. Together, these dimensions guide examinations of what students encounter, how they practice and receive

feedback, how they demonstrate learning, and how evidence informs improvements to the program. This broader view is especially important in online degree programs, where visible pathways, consistent expectations, meaningful practice, transparent assessments, timely feedback, and accessible support help students progress toward program outcomes (Frost & Ackrill, 2025; Lam & Tsui, 2016; Loughlin et al., 2021; Smith & Chittams, 2024). Table 1 translates the PALS dimensions into practical alignment questions, identifies evidence to review, and explains how each dimension can support learner success.

FIGURE 2

Program Alignment for Learner Success (PALS): Alignment Supported by Continuous Improvement.



Note. Author-created PALS conceptual model informed by the cited alignment literature; the model is proposed here rather than presented as an empirically validated framework.

TABLE 1
PALS dimensions and learner success questions.

PALS dimension	Core alignment question	Evidence to review	Learner success value
Content alignment	Do topics, readings, media, examples, cases, and resources directly support stated outcomes?	Course map, reading list, multimedia inventory, module sequence, content coverage map	Reduces unnecessary content and helps learners understand why materials matter
Learning experience alignment	Do activities, interactions, practice opportunities, technologies, and feedback help students connect ideas, build on prior knowledge, and apply learning at the level expected in the outcomes?	Activity map, interaction design, practice sequence, technology rationale, feedback plan	Helps learners build competence through purposeful practice, interaction, and feedback
Assessment alignment	Do assignments, projects, exams, simulations, performance criteria, and performance tasks measure the outcomes students were taught and practiced?	Assessment blueprint, performance criteria crosswalk, assignment directions, and examples of performance evidence	Creates fair and valid opportunities for learners to demonstrate competence
Continuous improvement of alignment	Do review and improvement practices use evidence to identify, validate, and address alignment gaps within and across courses?	Curriculum map, review cycle, student feedback, faculty calibration notes, external review findings, documented revisions	Keeps learning pathways coherent and responsive as courses, standards, technologies, and student needs change

Note. Author-created synthesis of the PALS framework and cited alignment literature. The learner success column describes intended design value, not demonstrated causal effects.

Constructive Alignment Without Compliance Drift

Constructive alignment is an approach to instructional design that connects intended learning outcomes, learning activities, and assessments. The “constructive” element recognizes that learners develop understanding through meaningful engagement with ideas and tasks. The “alignment” element requires teaching activities and assessments to support the knowledge, skills, and level of thinking expressed in the outcomes. For example, an outcome requiring students to evaluate professional alternatives calls for opportunities to practice evaluation, receive feedback, and demonstrate reasoned judgments in an assessment. This foundational account follows Biggs (1996), who connects constructive learning processes with alignment of teaching and assessment.

Constructive alignment, therefore, provides an instructional foundation for PALS. Loughlin, Lygo-Baker, and Lindberg-Sand (2021), however, caution that constructive alignment can lose its educational value when it becomes primarily an audit or compliance mechanism. Alignment may appear in policy documents, templates, validation forms, and quality review materials without meaningfully shaping what students experience or learn.

This warning is especially important for online programs. A course may document connections among outcomes, modules, assignments, and performance criteria, yet provide insufficient opportunities for students to connect ideas, build on

prior knowledge, use feedback, or apply learning in professional contexts. Within PALS, these opportunities fall under learning experience alignment: the deliberate design of activities, interactions, practice, and feedback that prepare students to achieve the intended outcomes. Their inclusion should reflect the outcomes and the students’ learning needs.

PALS helps preserve the educational purpose of alignment by examining content, learning experiences, and assessments together, supported by continuous improvement of alignment. Documentation makes intended connections visible; review of student work, feedback, and learning experiences helps determine whether those connections function in practice. The aim is to use alignment evidence to strengthen students’ opportunities to construct knowledge, demonstrate competence, and progress across the program.

Constructive alignment and curriculum mapping apply across instructional modalities. Their application here concerns the conditions of online programs: connections among courses, expectations, feedback, and support often need to be communicated explicitly through the LMS, advising, and program communications because learners may have fewer opportunities for informal clarification. The broader principle is curricular coherence; the implication of online design is to make that coherence visible and usable at a distance.

Curriculum Mapping as Visibility, Deliberation, and Evidence

Curriculum mapping is the tool that makes alignment visible. It documents where outcomes are introduced, reinforced, assessed, and mastered across a program. It can show where program learning outcomes connect to course learning outcomes, module objectives, content, activities, assessments, and performance criteria. A strong curriculum map does not simply prove that outcomes appear somewhere in the curriculum. It helps programs examine whether learning develops logically, whether students have sufficient practice before assessment, whether cognitive complexity increases over time, and whether each course contributes meaningfully to the larger degree pathway (Frost & Ackrill, 2025; Lam & Tsui, 2016; Smith & Chittams, 2024; Wijngaards-de Meij & Merx, 2018).

Frost and Ackrill (2025) argue that traditional approaches to constructive alignment and curriculum mapping often focus too narrowly on individual modules or course units. Their framework extends attention to cumulative learning across the program. The section on internal, horizontal, and vertical alignment develops these relationships in detail.

Frost and Ackrill's concept of fracture points is especially useful for online program quality. Fracture points are gaps or breaks in alignment that disrupt curricular coherence. These fracture points may be actual, such as when content, pedagogy, and

assessments do not support the stated outcomes. They may also be perceived, such as when students, faculty, reviewers, or accreditors interpret the same outcome differently. This distinction matters because a program may appear aligned in its formal documentation, yet learners still experience it as repetitive, unclear, disconnected, or difficult to navigate.

Lam and Tsui (2016) add another important layer by framing curriculum mapping as a form of deliberation. Mapping is not only a technical coding process. It is also a professional conversation in which faculty develop shared meaning around outcomes, assessment tasks, course content, and the depth of learning expected across a program. Through structured mapping conversations, faculty can clarify what outcomes mean, determine where they are introduced and reinforced, and examine whether students have sufficient opportunities to practice and demonstrate learning.

Wijngaards-de Meij and Merx (2018) further strengthen the learner success argument by emphasizing curriculum visibility. They begin with a familiar problem: students often report that they have not encountered a concept or skill before, even when faculty believe it was addressed earlier in the program. This disconnect suggests that alignment is not only about what faculty design. It is also about what students can see, remember, activate, and apply. A curriculum map that sits in a program file may help with accreditation. A curriculum map that students and faculty use can help learners understand their growth.

Smith and Chittams (2024) extend the alignment conversation by emphasizing that curriculum mapping should be planned around a clear purpose and validated through a defensible process. Their nursing curriculum mapping study illustrates how programs can compare curriculum coverage to an external benchmark, identify gaps and overlaps, and evaluate the reliability of the mapping process through repeated review. This approach is especially relevant for online programs that must demonstrate alignment to accreditation standards, licensure requirements, professional competencies, workforce expectations, and institutional learning outcomes.

A manageable alignment system can use linked views rather than one all-inclusive matrix. The program-level map summarizes program outcomes, course contributions, progression, signature assessments, and major support checkpoints. Course-level maps provide details that connect course outcomes and module objectives to materials, practice, feedback, assessments, and performance criteria. Shared outcome and assessment identifiers link the views so changes can be traced without duplicating every detail. Faculty and instructional designers can maintain course maps; the program chair or coordinator can maintain the program view with assessment and support partners. Learner-facing pathway tools are derived from these validated internal maps and updated when the underlying curriculum changes. This architecture is the author's practical recommendation, informed by the literature on purposeful mapping, faculty deliberation, and team-based program design (Lam & Tsui, 2016; Mariasingam & Hanna, 2006; Smith & Chittams, 2024). Teams can begin with priority outcomes or gateway and capstone courses, then expand the linked system as capacity allows.

Alignment Across Organizational, Pedagogical, and Program Layers

Alignment also extends beyond individual courses. Joshi (2022) argues that online degree program design should be understood across organizational, pedagogical, and online-degree-program layers. The organizational layer includes strategy, digital competence, quality frameworks, and internal collaboration. The pedagogical layer includes teaching and learning environments, staff training, curriculum, course design, and program communication. The online degree program layer includes support, education, and community. This layered view matters because misalignment can originate outside the course itself. A course may be thoughtfully designed, but learners may still experience fragmentation if faculty are not supported, technologies are difficult to use, advising is disconnected, or program outcomes are unclear.

Similarly, Mariasingam and Hanna (2006) argue that quality online degree programs require a systematic approach to planning and delivery. Their model emphasizes defining program need and mission, specifying learning outcomes, developing concept maps that connect outcomes, courses, and modules, and using a team approach that includes content experts, instructional designers, technology staff, and librarians. They also stress that program delivery must account for target learners, technologies, and both academic and non-academic support. This reinforces the central claim of PALS: alignment is not only a curriculum task. It is a program design responsibility to connect mission, outcomes, instruction, assessment, support, and evidence to learner success.

Mapping Outcomes and Reviewing Internal, Horizontal, and Vertical Alignment

Outcome mapping begins with a clear distinction between program outcomes and course outcomes. Program outcomes describe the knowledge, skills, and attributes that students should develop throughout the degree. Course outcomes describe what students should know or be able to do within an individual course. Mapping the relationships between these levels establishes each course's contribution to the program pathway (Frost & Ackrill, 2025; Lam & Tsui, 2016; Wijngaards-de Meij & Merx, 2018).

A strong outcome map makes the learner pathway transparent by showing where each program outcome is introduced, reinforced, assessed, and mastered. Table 2 illustrates a learner-facing

curriculum map that makes this progression visible across foundations, midpoint, advanced, and capstone courses. This type of mapping helps faculty and students see whether learning develops with appropriate depth over time. For example, a program outcome related to data-informed decision-making might be introduced in an early foundations course, reinforced through applied case analysis midway through the program, assessed through a research or analytics project, and mastered in a capstone experience. When this progression is visible, students can recognize that assignments are not disconnected tasks. They are part of a developmental sequence that builds confidence, competence, and professional readiness (Frost & Ackrill, 2025; Lam & Tsui, 2016).

TABLE 2

Sample learner-facing I/R/A/M curriculum map. I = Introduced, R = Reinforced, A = Assessed, M = Mastery expected.

Program learning outcome	Foundations	Midpoint course	Advanced course	Capstone
PLO 1: Apply disciplinary concepts to authentic problems	I	R	R/A	M
PLO 2: Use evidence to support decisions	I/R	R	A	M
PLO 3: Communicate professionally for varied audiences	I	R/A	R	M
PLO 4: Evaluate ethical and inclusive implications	I	R	A	M
PLO 5: Integrate learning in a culminating project		I	R	M/A

Note. Author-created illustrative progression map informed by Frost and Ackrill (2025) and Lam and Tsui (2016). I = introduced; R = reinforced; A = assessed; M = mastery expected. Codes indicate planned opportunities, not verified student mastery.

Transparent outcome pathways also support equity by making expectations explicit rather than requiring learners to infer them. The equity section examines this design responsibility alongside accessibility, the hidden curriculum, and evidence of learner success.

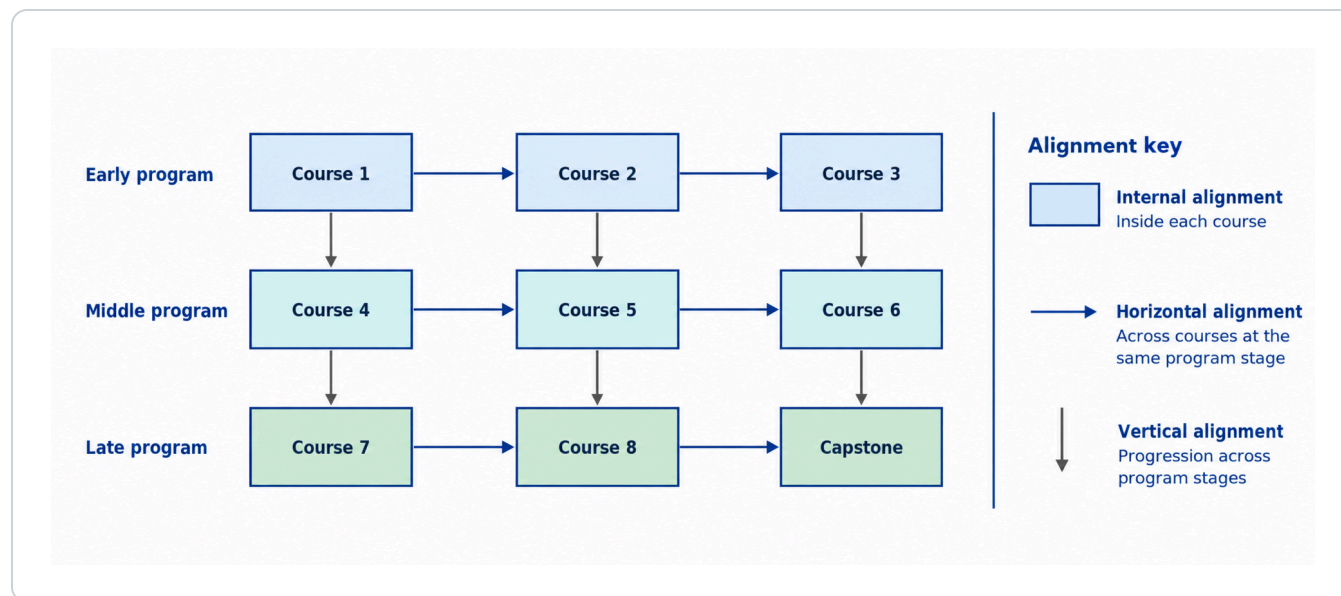
Internal, Horizontal, and Vertical Alignment

Internal, horizontal, and vertical alignment make program coherence visible across the full learner journey. Internal alignment examines connections within an individual course, ensuring that content, learning activities, assessments, performance criteria, and feedback support the intended course

learning outcomes. Horizontal alignment examines how courses at the same point in a program work together through complementary expectations and coordinated development of shared outcomes. Vertical alignment examines how learning develops over time, from introductory concepts to advanced application and culminating in demonstrations of competence. In online programs, these dimensions are especially important because learners often rely on explicit course organization, module sequencing, performance criteria, feedback, and program communication to understand how their work fits into the larger degree pathway (Frost & Ackrill, 2025).

FIGURE 3

Internal, horizontal, and vertical alignment across a program sequence.



Note. Author-created illustration of internal, horizontal, and vertical alignment, informed by Frost and Ackrill (2025).

Internal alignment supports learner success by connecting what students are expected to achieve with what they study, practice, and demonstrate. For example, a course outcome requiring students to evaluate alternative solutions should be supported by relevant content, opportunities to practice evaluation, feedback on their reasoning, and an assessment that measures their judgments using clear performance criteria. These connections help students understand how course materials and activities prepare them for assessed performance.

Horizontal alignment supports success by reducing unnecessary variation across courses. This does not mean that every course should look identical. Rather,

courses at the same level should use a shared language for expectations, contribute intentionally to program outcomes, and avoid unnecessary duplication or contradiction. Adult learners in asynchronous online programs have reported valuing consistent course design, clear links between assignments and learning objectives, constructive feedback, regular communication, and consistent grading standards (Baker & Tikhvatulina, 2023). These preferences reveal why horizontal alignment is not only a faculty or accreditation concern. It affects the learner's ability to navigate the program, manage time, interpret expectations, and persist.

Vertical alignment supports learner success by ensuring that students are prepared before they are expected to perform at higher levels. A foundational course may introduce terminology, concepts, and tools. A mid-program course may ask students to apply those tools to authentic cases or discipline-specific problems. A later course or capstone may ask students to synthesize evidence, defend decisions, design solutions, or demonstrate professional judgment. This type of progression helps students build confidence because rigor is scaffolded rather than sudden (Frost & Ackrill, 2025; Lam & Tsui, 2016).

A program can review vertical and horizontal alignment through a sequence of practical questions. Where in the program is each outcome introduced? Where does the learner receive guided practice? Where is performance assessed? Where does the learner receive feedback before a high-stakes demonstration? Which courses at the same level use similar expectations, performance criteria, or milestone language? Where is repetition intentional because it deepens learning? Where is repetition unintentional because faculty are unaware of what is taught elsewhere? These questions move alignment from abstract principles to design practice.

Bloom's Taxonomy as a Tool for Progression, Rigor, and Equity

The revised Bloom taxonomy (Anderson & Krathwohl, 2001) can help programs examine whether learning outcomes progress in cognitive complexity across the degree. Outcome mapping should not only ask whether an outcome appears in a course. It should ask what level of learning students are expected to demonstrate when they receive practice and how they are prepared for more advanced work. If a program outcome expects students to analyze, evaluate, design, or create, the curriculum should show where students first gain foundational knowledge, where they practice applying it, and where they demonstrate higher-order performance (Bryan et al., 2021; Loughlin et al., 2021).

Used well, Bloom's taxonomy strengthens rigor by making expectations developmental. Rigor should not be defined only by workload or difficulty. It should be defined by the quality and complexity of thinking students are asked to demonstrate. Bryan et al. (2021) used Bloom's taxonomy to review outcome wording and measurability. They reported 95% QM compliance for measurable program outcomes and stated that all course outcomes across the ten courses were measurable. This work supported the development of course- and program-alignment maps. This type of review helps faculty identify whether students are being asked to perform at an appropriate level and whether expectations grow across the program sequence.

Bloom's taxonomy also supports equity by making rigor more transparent. When students are expected to demonstrate higher-order thinking without adequate practice, rigor can become hidden and uneven. Students who already understand academic expectations may infer what is required, while others may struggle to decode the task. Bloom's taxonomy can help faculty make these expectations explicit by clarifying what students are being asked to do and how that level of learning connects to later success.

Bloom's taxonomy should not become a mechanical checklist. It is most useful when paired with professional judgment, course context, learner needs, and evidence of student performance. Loughlin et al. (2021) caution that alignment loses educational value when it is reduced to documentation rather than used as a tool for designing meaningful learning activities. In this sense, Bloom's taxonomy supports learner success when it helps faculty design coherent progression, not when it simply labels verbs.

The revised taxonomy considers both the cognitive process and the kind of knowledge involved. The six cognitive process categories—remember, understand, apply, analyze, evaluate, and create—offer a vocabulary for reviewing task demands, rather than a requirement that every course move through a fixed staircase. An outcome verb alone does not establish the complexity of an assessment; the content, context, and performance criteria also matter (Anderson & Krathwohl, 2001).

PALS Dimensions in Practice

Content Alignment: Selecting Materials that Support the Pathway

Content alignment examines whether course topics, readings, multimedia, examples, cases, simulations, and resources directly support stated course and program outcomes. Content should not be included simply because it has always been part of the course or because it is interesting to the instructor. It should help learners build the knowledge and skills needed to achieve the intended outcomes. In an aligned online program, students can see why a reading, video, case, or simulation appears at a particular moment in the course.

Content alignment also helps programs manage workload and cognitive load. Online learners often balance coursework with employment, caregiving, military service, or other responsibilities. When courses include excessive or weakly connected materials, students may spend time navigating volume rather than building competence. A content alignment review asks whether each item has a clear purpose, whether essential content is sequenced before application, whether examples reflect varied learner contexts, and whether materials are accessible to all learners (Baker & Tukhvatulina, 2023; Hakkarainen et al., 2024).

A curriculum map can reveal content gaps and unnecessary duplication. Some repetition is valuable when it deepens learning. For example, students may

revisit research methods, ethical decision making, communication, or data interpretation across multiple courses. Repetition becomes misalignment when learners restart the same introductory task without advancing complexity. Content alignment helps faculty distinguish reinforcement from redundancy.

Within PALS, content alignment focuses on the materials students encounter. Learning experience alignment examines what students do with those materials, while assessment alignment examines the evidence students produce to demonstrate achievement.

Learning Experience Alignment: Preparing Learners to Achieve Outcomes

Learning experience alignment examines whether activities, interactions, practice opportunities, technologies, and feedback prepare students to achieve intended learning outcomes at the expected level. It includes teaching strategies that help learners connect ideas, build on prior knowledge, develop understanding, and apply learning in new contexts. Outcomes and assessments can appear aligned on paper, while students have insufficient opportunities to practice the required thinking or performance.

Learning experiences should prepare students for the thinking and performance required by the outcomes. When outcomes call for analysis, students need opportunities to examine relationships, compare perspectives, interpret evidence, and explain their reasoning. When outcomes call for evaluation, students need clear performance criteria, examples, practice making and justifying judgments, and feedback that helps them refine those judgments. When outcomes call for creation, students need opportunities to plan, draft, test, revise, and reflect on their work. Aligning these experiences with the outcomes turns instructional intentions into purposeful practice and prepares learners to demonstrate their learning.

Loughlin et al. (2021) emphasize that constructive alignment loses its educational purpose when attention shifts from student learning to documentation. Within PALS, learning experience alignment keeps attention on students' opportunities to engage with content, test ideas, collaborate, receive feedback, and apply learning in authentic contexts. A structured online course supports learning when its organization enables these experiences and makes their purpose clear.

Technology selection is part of learning experience alignment. A discussion tool may support analysis when students compare perspectives and refine their reasoning. A simulation may support a learning application when students make decisions, observe consequences, and reconsider their approach. A portfolio may support reflection and integration when students connect artifacts across courses. The question is whether the technology enables activities and interactions that prepare learners for the intended outcomes, assessments, and future application (Joshi, 2022; Loughlin et al., 2021).

Learning experience alignment should also be reviewed across the program. Faculty can examine whether students receive sufficient opportunities to practice collaboration, communication, research, design, reflection, and professional judgment, as required by program outcomes. A program activity map, practice sequence, and feedback plan can reveal gaps or inconsistent expectations and show whether learning experiences develop appropriately over time.

Assessment Alignment: From Assignments to Evidence of Learning

Assessment alignment examines whether assignments, projects, exams, simulations, portfolios, field experiences, and other performance tasks provide evidence of intended learning outcomes. Assessments should reflect both the outcomes and the learning that students have had opportunities to practice. A quiz may appropriately measure foundational knowledge, whereas a professional scenario, a complex problem, or a disciplinary product may be needed to demonstrate application, judgment, or creation (Loughlin et al., 2021; Smith & Chittams, 2024).

Performance criteria are central to assessment alignment because they identify what counts as evidence of achievement. If an outcome requires evaluation, the criteria should address judgment, use of evidence, and reasoning. If an outcome requires creation, the criteria should address the quality and appropriateness of the resulting product. Assignment directions, assessment blueprints, and performance criteria crosswalks help faculty examine whether the task and its scoring criteria measure the intended learning.

Feedback connects assessment alignment with learning experience alignment. Assessment feedback communicates how performance compares with the criteria; opportunities to interpret and use that feedback support subsequent learning. Baker and Tukhvatulina (2023) found that adult learners wanted constructive feedback, consistent grading standards, and clearer connections between assignments and objectives. These findings highlight the importance of making expectations understandable and feedback usable.

Authentic assessments can make the relationship between academic learning and professional application visible. Yang, Baldwin, and Snelson (2017) connected persistence in a fully online program with perceived learning utility, skill mastery, satisfaction with learning outcomes, and

professional relevance. Dogan and Harris (2024) found that graduates of a fully online graduate program reported increases in professional practices aligned with program learning outcomes. These studies support attention to assessments that allow learners to demonstrate relevant knowledge and skills in meaningful contexts.

Assessment maps can reveal outcomes assessed only once, assessed too late, or assessed without sufficient preparation. They can also identify inconsistent criteria across courses or capstone expectations that students have not previously practiced. Table 3 illustrates assessment evidence and questions to examine its alignment with different outcome requirements. The level of learning depends on the task's demands and performance criteria, rather than its format alone.

TABLE 3

Assessment alignment questions by type of learning evidence.

Outcome requirement	Assessment evidence	Alignment check
Remember or understand	Quiz, knowledge check, annotated concept map, concise explanation	Does the task measure foundational knowledge needed for later application?
Apply	Case response, problem set, simulation decision, worked example	Did students practice with feedback before the graded task?
Analyze	Comparison, diagnosis, critique, data interpretation, argument map	Are the criteria and examples provided so students know what quality analysis looks like?
Evaluate	Decision memo, peer review, policy analysis, and defended recommendation	Do the performance criteria measure judgment, evidence use, and rationale rather than only correctness?
Create or design	Capstone project, professional artifact, portfolio, proposal, prototype	Does the program provide earlier practice in component skills before the culminating task?

Note. Author-created examples informed by Anderson and Krathwohl (2001), Biggs (1996), and the cited alignment literature. Task demands and criteria determine cognitive complexity.

Continuous Improvement of Alignment: Using Evidence and External Review

Continuous improvement of alignment sustains the connections among content, learning experiences, assessments, and intended outcomes. It examines whether review and improvement practices use evidence to identify, validate, and address alignment gaps within and across courses. This dimension supports the other three as courses are revised, faculty change, technologies evolve, professional expectations shift, and student needs become clearer (Bryan et al., 2021; Frost & Ackrill, 2025; Smith & Chittams, 2024).

Curriculum maps, student work, student feedback, faculty calibration notes, and review findings provide complementary evidence. A map documents intended connections. Student work helps faculty examine demonstrated learning. Student feedback can reveal whether expectations and pathways are understandable. Faculty calibration helps establish shared interpretations of outcomes and performance criteria. Together, these sources support decisions about where alignment needs strengthening.

External review contributes an independent perspective on the clarity and credibility of alignment evidence. Bryan et al. (2021) describe the

use of Quality Matters standards, internal peer review, faculty development, accessibility training, and course certification to strengthen the quality of online programs. Smith and Chittams (2024) emphasize defining the purpose of mapping, orienting faculty, calibrating expectations, managing bias, and validating selected mapping results. These practices support evidence-based review and improvement.

External review is most useful when its findings inform an ongoing improvement cycle. Internal review can identify priorities before external review; external findings can prompt revisions; and subsequent evidence can help determine whether those revisions addressed the identified gaps. Reviewing schedules, assigning responsibilities, and documenting changes make this cycle actionable.

Within PALS, continuous improvement asks both whether alignment is documented and whether it functions in students' learning experiences. When evidence reveals a gap, faculty can revise materials, strengthen practice and feedback, clarify assessment criteria, or adjust the program sequence. The follow-up review then examines whether those changes improved the intended connections and students' opportunities to achieve the outcomes.

From Mapping to Action: Using Alignment Evidence to Improve the Learner Pathway

Curriculum mapping becomes most valuable when it leads to action. A map can show where outcomes are located. Still, the program improvement work begins when faculty, instructional designers, assessment leaders, and student support partners ask what the map means for learners. If an outcome is introduced but never reinforced, students may reach advanced coursework without enough practice. If an outcome is assessed before it is taught, students may experience rigor as surprise rather than progression. If two courses repeat the same introductory content without increasing complexity, students may perceive the program as inefficient or disconnected. These are alignment findings, but they are also learner success findings, as each may signal a risk to preparation or learner experience that warrants further investigation (Bryan et al., 2021; Frost & Ackrill, 2025; Lam & Tsui, 2016; Smith & Chittams, 2024). Alignment findings should be treated as diagnostic signals rather than a punitive checklist or a requirement that every course look the same.

A useful alignment review, therefore, moves through four questions:

1. What does the evidence reveal about the learner pathway?
2. How might students experience this pattern in the course or program?

3. What design change would reduce the barrier or strengthen the progression?
4. How will the program know whether the change improved learning, clarity, or persistence?

The following examples extend the review questions to course contributions, cognitive demands, and preparation for assessed performance. Each call for examination of the mapped connections alongside course materials and student work.

One diagnostic question is whether course outcomes clearly support program outcomes. Individual courses may be well designed, while their contribution to the larger degree pathway remains unclear. This can lead to duplication, incomplete preparation, or uneven coverage of important competencies. Programs can investigate by mapping course outcomes to relevant program outcomes and identifying where each is introduced, reinforced, assessed, and expected to reach mastery. Program maps, course maps, assessment plans, and faculty mapping notes help determine whether the curriculum is coherent across the pathway (Frost & Ackrill, 2025; Lam & Tsui, 2016; Smith & Chittams, 2024).

Assessment alignment gaps often emerge when the assessment measures a lower level of learning than the outcome requires. For example, an outcome may ask students to analyze, evaluate, design, or create, while the assessment asks students only to recall information or identify terms. A Bloom-related cognitive review can help faculty compare outcomes, learning activities, assignments, performance criteria, and student work samples. When misalignment is identified, the assessment should be revised so students are evaluated at the intended level of thinking and performance, with activities and feedback that prepare them for that level (Bryan et al., 2021; Loughlin et al., 2021).

Pedagogy can also become misaligned when teaching strategies do not prepare students for the assessment. A course may ask students to solve authentic problems, collaborate, design a product, or

defend a decision, while the learning activities rely primarily on reading, videos, or quizzes. In these cases, students may understand the content but lack practice with the expected level of performance. Corrective strategies include guided problem-solving, authentic scenarios, collaborative structures, models, feedback, reflection, and opportunities to apply concepts before assessment. Activity maps, discussion designs, practice tasks, and assessment results can help determine whether pedagogy is supporting the intended learning (Joshi, 2022; Loughlin et al., 2021).

These questions keep mapping from becoming a static document. They turn the curriculum map into a shared decision-making tool. Table 4 illustrates how programs can connect mapping findings to learner impacts, select improvement actions, and identify evidence to review after revision.

TABLE 4
From mapping findings to improvement action.

Mapping finding	Learner impact	Improvement action	Evidence to review after revision
Outcome is introduced but not reinforced	Students encounter the outcome once and may not have enough opportunities to build confidence or fluency.	Add practice opportunities in a mid-course module, revise module activities, or create a low-stakes assignment to prepare students for later performance.	Performance criteria scores, student reflections, course evaluations, instructor observations, and progression to later assignments.
Outcome is assessed before it is taught or practiced	Students experience assessment as unclear, unfair, or disconnected from instruction.	Move assessment later, add guided practice, provide examples, and revise module sequencing so students practice before being evaluated.	Assignment performance, grade distribution, feedback themes, student questions, and revision quality.

TABLE 4

From mapping findings to improvement action. (continued)

Mapping finding	Learner impact	Improvement action	Evidence to review after revision
Multiple courses repeat the same introductory content	Students may perceive redundancy, lose motivation, or fail to see increasing complexity.	Clarify which course introduces the concept, which course reinforces it, and where higher-order application should occur.	Curriculum map updates, faculty review notes, student feedback about repetition, and assessment evidence at higher Bloom levels.
Capstone expects mastery that is not intentionally scaffolded	Students reach a high-stakes point without sufficient prior preparation.	Create milestone assignments, portfolio checkpoints, or recurring skill demonstrations that build toward capstone performance.	Capstone performance criteria data, milestone completion, faculty assessment notes, and student self-assessment.
Faculty interpret the same outcome differently	Students receive inconsistent expectations, performance criteria, or feedback across courses.	Hold a calibration session, develop shared performance criteria, and create examples of novice, developing, proficient, and advanced work.	Inter-rater agreement, shared performance criteria use, faculty meeting notes, and student perceptions of consistency.
Support appears after students struggle rather than before high-stakes work	Students may not know help is available until they are already behind.	Embed support links, advising prompts, library resources, tutoring, accessibility guidance, or technology help at the point of need.	Use of support resources, early alert data, completion of milestone assignments, withdrawal, or incomplete patterns.

Note. Author-created diagnostic examples informed by the cited mapping literature. Learner impacts are possibilities to investigate, not established effects.

The literature in this paper supports this action orientation. Frost and Ackrill (2025) articulate fracture points that may not be visible in a traditional outcome table. Lam and Tsui (2016) show that faculty deliberation is necessary because outcomes are interpreted through professional judgment. Smith and Chittams (2024) emphasize that mapping

should begin with a clear purpose and include validation so that programs can trust the evidence they use to improve. Bryan et al. (2021) demonstrate how alignment maps, Quality Matters review processes, faculty development, and evaluation cycles can work together to address inconsistency and support continuous improvement.

From this perspective, the map is not the end product. The end product is a better learner pathway. Programs should document not only where alignment exists but also what changes were made based on evidence of alignment. This creates a

record of intentional improvement that can be used for accreditation, Quality Matters review, faculty onboarding, assessment planning, and student communication.

Making Alignment Visible to Learners

Alignment is often designed for faculty, reviewers, and accreditors, but students are the people who must navigate it. Students should be able to see their online degree program as a coherent pathway, not a series of disconnected courses. A curriculum map that remains in a program file may support documentation, but it does little to help learners understand the purpose of their work. Learner-facing alignment translates the internal map into language, visuals, and checkpoints that help students see what they are building, why it matters, how they will practice it, how it will be assessed, and where they can find support (Baker & Tukhvatulina, 2023; Wijngaards-de Meij & Merx, 2018).

Students need clear signals of purpose throughout the program. A program orientation can introduce major competencies and milestones. A course welcome page can explain how the course contributes to the larger degree pathway. A module overview can connect weekly work to course outcomes. An assignment prompt can explain the professional purpose of a task, while performance criteria describe what quality work looks like before students submit their work. Feedback can then identify the next opportunity to apply or improve their learning.

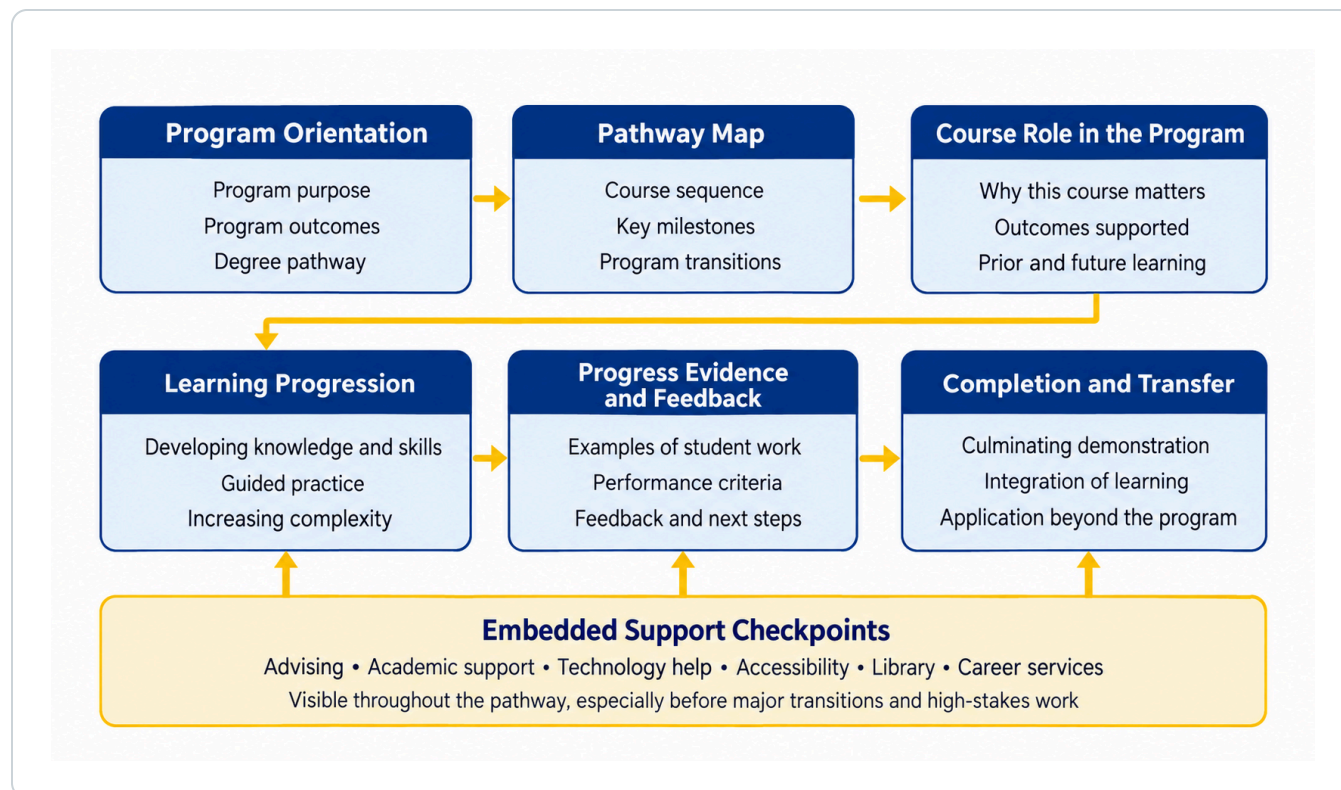
Three related elements make this pathway understandable. Learning progression shows how knowledge and skills develop through practice and increasing complexity. Progress evidence and

feedback help students interpret their current performance, recognize growth, and identify next steps throughout the program. Completion and transfer show how students integrate their learning in a culminating experience and apply it beyond the degree. An assessment may contribute to more than one element, but each serves a distinct communication purpose.

Learner-facing alignment is especially important in asynchronous programs because students often rely on written structure, LMS organization, assignment directions, performance criteria, and announcements to interpret expectations. The learner experience and curriculum visibility findings discussed earlier support the communication of these connections throughout the pathway (Baker & Tukhvatulina, 2023; Wijngaards-de Meij & Merx, 2018).

Figure 4 illustrates how programs can make these connections visible, from orientation and course purpose to learning progression, evidence of progress, and application beyond the program. Embedded support checkpoints are distributed along the pathway, making assistance visible before major transitions and high-stakes work. Table 5 describes the purpose of each visibility element and provides examples of implementation. These elements are complementary practices that recur across the learner journey.

FIGURE 4
Program visibility pathway.



Note. Author-created pathway illustration informed by the cited learner experience and curriculum visibility literature.

TABLE 5
Program visibility practices.

Visibility element	What learners need to understand	Implementation example
Program orientation	The purpose of the program, the program outcomes, and the overall degree pathway from entry to completion.	A program orientation page or visual pathway that introduces the major competencies, required courses, key milestones, support points, and culminating experiences.
Pathway map	The course sequence, important milestones, and transitions across the degree.	A learner-facing curriculum map showing how courses connect and where outcomes are introduced, reinforced, assessed, and mastered.

TABLE 5
Program visibility practices. (continued)

Visibility element	What learners need to understand	Implementation example
Course role in the program	How each course contributes to the program outcomes and connects to prior and future learning.	A course homepage explaining why the course matters, which program outcomes it supports, and how it prepares students for subsequent coursework.
Learning progression	How knowledge and skills develop through practice and increasing complexity.	A progression guide showing the movement from foundational concepts and guided practice to independent application and advanced performance.
Progress evidence and feedback	What their work demonstrates about current achievement, how it compares with expectations, and what to improve next.	Annotated examples, shared performance criteria, portfolio checkpoints, and feedback prompts that help students recognize growth and plan subsequent practice.
Embedded support checkpoints	Where help is available, how to access it, and when to use it before major transitions or demanding assignments.	Advising prompts, tutoring resources, technology help, accessibility guidance, library assistance, and career support are embedded before major transitions and high-stakes assignments.
Completion and transfer	How culminating work demonstrates program outcomes and how that learning can be applied beyond the credential.	A capstone, portfolio, applied project, or reflection connecting demonstrated achievement to professional, academic, personal, or civic goals.

Note. Author-created implementation examples informed by the cited learner experience and curriculum visibility literature.

When alignment is made visible, students can participate more actively in their own success. They can monitor progress, connect earlier work to later expectations, use feedback to guide improvement, and seek support before difficulties accumulate. This

visibility also strengthens trust by helping students understand how the program's elements fit together and contribute to their goals (Baker & Tukhvatulina, 2023; Wijngaards-de Meij & Merx, 2018).

Measuring Success: From Design Evidence to Learner Outcomes

Alignment matters because it shapes the conditions under which students persist, achieve, graduate, and apply what they learn beyond the program. Learner success should not be reduced to end-of-program statistics alone. Grades, retention, progression, completion, satisfaction, and career outcomes matter, but they are most useful when interpreted alongside evidence of the design students experienced. A program should ask not only whether students succeeded, but how the design supported or hindered that success (Dogan & Harris, 2024; Hakkarainen et al., 2024; Krsmanovic & Foster, 2025; Yang et al., 2017).

The Online MBA example discussed in Building Quality from the Ground Up illustrates this broader view of quality (Grincewicz, 2025). The program used a unifying Responsible Leadership theme, an aligned curriculum and quality review, and program-level QM certification to support coherence, rigor, career readiness, and measurable quality standards (Grincewicz et al., 2022, 2023; Grincewicz & Simunich, 2024). These practices document design and quality review; assessment results and learner feedback are needed to examine how the pathway functions for students. The measurement framework that follows connects these complementary forms of evidence.

An alignment-centered evidence model begins with a clear definition of learner success and selects measures of progression, achievement, completion, and application. It interprets evidence across

successive cohorts, connects findings to revisions, and examines equity. The recommended number of measures and review intervals in this paper are the author's implementation guidance informed by the literature and professional practice; they are not universal research standards.

Defining Learner Success in an Alignment-Centered Program

For alignment work, learner success can be defined as follows:

DEFINITION: LEARNER SUCCESS

In an intentionally aligned online degree program, learner success means that students can enter a clearly structured pathway, persist through well-supported learning experiences, achieve the program outcomes through meaningful practice and assessment, complete the credential, and apply their learning in ways that advance their academic, professional, personal, or civic goals. Learner success is demonstrated through multiple forms of evidence, including persistence, completion, mastery of outcomes, learners' perception of value, and post-completion application.

This definition matters because online learners do not enter programs with identical goals, resources, responsibilities, or prior educational experiences. Some learners may be returning to higher education after years away. Some may be balancing coursework with full-time employment, caregiving, military service, or professional licensure expectations. Some may be seeking promotion, career transition, advanced practice, or personal transformation. A meaningful definition of learner success must therefore be consistent with the program's mission and outcomes while also mindful of the learner population the program serves.

A narrow definition of success can unintentionally distort program design. If success is measured solely by enrollment growth, programs may prioritize access without ensuring students have a clear, supported pathway to completion. If success is measured only by grades, programs may overlook whether learners can apply what they have learned in authentic contexts. If success is measured only by graduation, programs may miss whether graduates leave with the competencies, confidence, and professional readiness that the degree promises. A broader definition asks whether the program helps learners move from entry to completion with

increasing clarity, competence, agency, and connection (Krsmanovic & Foster, 2025; Ortagus et al., 2024; Yang et al., 2017).

This definition positions learner success as both an outcome and a design responsibility. It does not place the full burden of success on the learner. Instead, it asks whether the program has created the conditions for diverse learners to understand expectations, access support, practice important skills, receive feedback, demonstrate competence, and apply their learning beyond the course.

Selecting Measures of Learner Success

Once learner success is defined, programs need a small set of meaningful measures that can show whether students are succeeding according to that definition. The most useful measures are not merely convenient data points. They are indicators that connect directly to the program's mission, goals, outcomes, learner population, and theory of success. A program that defines success by persistence, mastery, completion, and professional application should not rely on a single metric. It should use a balanced evidence set that includes progression data, learning evidence, learner experience data, and post-completion indicators, when available (Dogan & Harris, 2024; Hakkarainen et al., 2024; Krsmanovic & Foster, 2025; Yang et al., 2017).

For most online degree programs, a focused set of three to five learner success measures can provide a manageable and meaningful evidence profile. This number should be understood as the author’s practical implementation guidance rather than a fixed research standard. The scholarly foundation is the need to use multiple, purposeful indicators that reflect the multidimensional nature of learner success. Too few measures may oversimplify learner success by reducing it to a single indicator such as grades, retention, or completion. Too many measures may create an unfocused reporting burden that is difficult to interpret or act upon. The goal is not to collect every data point. The goal is to select

evidence to help faculty, instructional designers, assessment leaders, and program administrators determine whether the aligned pathway is producing the intended learner outcomes. A meaningful evidence profile may include persistence, course completion, program completion, program learning outcome mastery, and learner perception of value or professional relevance (Bryan et al., 2021; Dogan & Harris, 2024; Hakkarainen et al., 2024; Krsmanovic & Foster, 2025; Yang et al., 2017). Table 6 illustrates five possible learner success measures, their data sources, their connections to the program’s definition of success, and questions to guide interpretation.

TABLE 6
Alignment-based measures of learner success.

Learner Success Measure	Possible Data Source	Connection to the Learner Success Definition	Interpretation Question
Persistence or retention	Institutional enrollment data, term-to-term or year-to-year continuation, stop-out patterns	Shows whether learners can remain on the pathway after entering the online program.	Are students continuing through the program at rates that indicate the pathway is navigable and support is timely?
Course completion or gateway course success	Course pass rates, DFW rates, withdrawal rates, LMS gradebook data, student information system data	Shows whether learners are successfully moving through key courses without avoidable design or support barriers.	Are particular courses creating barriers to progression, and do those barriers suggest alignment, workload, clarity, or support issues?
Program completion or graduation rate	Institutional completion data, time to degree reports, and degree audit data	Shows whether learners are supported through the full pathway to credential completion.	Are students completing within expected timelines, and how do completion patterns compare with institutional or disciplinary benchmarks?

TABLE 6
Alignment-based measures of learner success. (continued)

Learner Success Measure	Possible Data Source	Connection to the Learner Success Definition	Interpretation Question
Program learning outcome mastery	Signature assignments, capstone performance criteria, portfolio assessments, assurance of learning data, licensure, or certification results, where applicable	Shows whether learners are achieving the competencies the program promises.	Are students demonstrating the intended level of learning, and are outcomes introduced, reinforced, assessed, and mastered across the curriculum?
Learner perception of value and professional relevance	End of program surveys, alumni surveys, exit surveys, course evaluations, focus groups, employer, or field supervisor feedback, where available	Shows whether learners experience the program as coherent, relevant, supportive, and applicable beyond the classroom.	Do learners understand the value of the pathway, see connections among courses, and report that learning supports their goals?

Note. An author-created menu of possible measures was synthesized from the cited learner success literature. The five measures are examples, not a required set.

The selection of measures should also reflect the level at which the program is making claims. If a program claims to prepare graduates for professional practice, then course grades alone are insufficient. The program should include evidence of applied performance, such as capstone work, portfolios, field-based projects, licensure outcomes, or alumni reports of professional application. Dogan and Harris (2024), for example, evaluated a fully online graduate program by examining changes in graduates' reported professional practices aligned with program-level student learning outcomes. This kind of evidence is useful because it connects program design to how learners apply their learning in professional contexts.

If a program claims to support adult learners, the evidence profile should include indicators that reflect adult learner needs. Baker and Tukhvatulina (2023) suggest the importance of clarity, feedback, communication, consistency, flexibility, and relevance. These dimensions can be measured through learner surveys, course evaluations, advising data, LMS engagement patterns, and qualitative feedback. If a program claims to support professional advancement, alumni surveys, career progression data, employer feedback, or post-completion outcomes may be especially important. If a program claims to support equitable access, the measures should be disaggregated where possible to determine whether diverse groups of learners are experiencing comparable opportunities to persist, achieve, and complete.

The measures should also connect to curriculum mapping. A curriculum map shows where outcomes are intended to be developed. Learner success evidence shows whether students are demonstrating that development. When a map shows that a program outcome is introduced, reinforced, assessed, and mastered across multiple courses, the program should be able to identify evidence from those points in the pathway. If the program cannot identify meaningful evidence, the map may document intent more than learning. In this way, measures of learner success help assess whether alignment is present not only in design documents but also in learner performance and experience (Frost & Ackrill, 2025; Lam & Tsui, 2016; Smith & Chittams, 2024).

ILLUSTRATIVE EXAMPLE: CONNECTING DESIGN AND EVIDENCE

Suppose a program outcome requires students to use evidence to defend a professional decision. The map locates guided analysis in a foundations course, a decision memo with feedback in a midpoint course, and a capstone assessment of independent judgment. Faculty examine capstone work using shared performance criteria and find that students' recommendations are stronger than their evidence-based justification. They compare earlier assignments, feedback, and learner comments to investigate whether evidence appraisal received sufficient practice. If that review identifies a preparation gap, the team adds an evidence appraisal checkpoint at the midpoint of the course, assigns responsibility for implementation, and records which cohorts experience the change. After those cohorts reach the capstone, faculty review the same criteria using calibrated scoring, alongside learner feedback and contextual changes. Improved results would support further inquiry into the revision's contribution; they would not alone establish causation. This hypothetical sequence illustrates how maps, performance evidence, interpretation, revision, and reassessment can work together.

Interpreting Learner Success Evidence Over Time

Learner success evidence becomes more meaningful when interpreted over time. A single year of data may signal a concern, while evidence across successive years can help programs distinguish isolated fluctuations from persistent patterns. Ongoing evaluation of progression, completion, and longer-term outcomes supports this broader understanding of learner success (Bryan et al., 2021; Hakkarainen et al., 2024). An assurance of learning cycle gives this review a purposeful structure: programs gather evidence, compare results with expected learning outcomes (Dogan & Harris, 2024), implement improvements, and reassess outcomes. The cycle should allow sufficient time for curricular revisions to reach relevant student cohorts and for their effects to be examined, while providing opportunities for further refinement. Its timing should reflect program length, cohort size, and the scope of the changes being evaluated.

As a practical starting point, the author recommends examining three consecutive years of comparable evidence when available. This is not a minimum established by the cited studies, and three observations alone do not establish a reliable trend or demonstrate that a revision caused improvement. Programs should use shorter windows for timely monitoring and longer windows when program length, small cohorts, or the timing of revisions warrants them. Record when changes were implemented, which cohorts experienced them, and other contextual changes before interpreting differences.

Interpretation should begin with a clear threshold. A threshold identifies the level of performance the program expects learners to meet. The threshold may be based on institutional expectations, disciplinary standards, accreditation expectations, historical program performance, national benchmarks, or a locally defined improvement goal. For example, a program might expect a defined percentage of students to persist from the first term to the second term, complete gateway courses successfully, meet or exceed expectations on a capstone performance criterion, or report that coursework is relevant to their professional goals. The threshold should be ambitious enough to support quality improvement but realistic enough to account for the learner population, program context, and available resources.

Programs should also identify benchmarks. Benchmarks provide context for interpreting whether results are strong, concerning, or warranting further investigation. Some benchmarks may be external, such as national data, disciplinary norms, licensure pass rates, accreditation expectations, or comparable programs. Others may be internal, such as institutional averages, historical program trends, performance in similar modalities, or prior review cycles. The benchmark does not replace program judgment. Instead, it helps program teams interpret whether results are meaningful and whether action is needed.

Table 7 presents five complementary interpretation lenses. Notice that trends describe patterns, thresholds express local expectations, benchmarks provide comparison, and equity and alignment questions guide further inquiry; none independently establishes the cause of a result.

TABLE 7
Interpreting learner success evidence

Interpretation Lens	Guiding Question	Why It Matters
Trend	Is the measure improving, declining, or remaining stable across comparable cohorts and an appropriate time window?	Trends help distinguish isolated variation from recurring patterns that require program attention.
Threshold	Did the program meet the level of performance it defined as acceptable or aspirational?	Thresholds clarify how the program judges whether learners are succeeding according to its own definition.
Benchmark	How do the results compare with institutional, disciplinary, accreditation, or national reference points?	Benchmarks provide context and prevent programs from interpreting data in isolation.
Equity	Are outcomes consistent across learner groups, entry points, course sections, or other meaningful categories?	Disaggregation helps programs identify whether some learners face barriers that overall averages may hide.
Alignment diagnosis	What does the evidence suggest about content, learning experiences, assessment, support, communication, or the review and improvement of alignment?	Learner success data should prompt questions about the pathway's design, not only conclusions about student performance.

Note. An author-created interpretation framework informed by the cited evaluation and mapping literature. Review windows and thresholds require local judgment.

The final lens, alignment diagnosis, is especially important. When students do not meet a learner success measure, programs should not begin by assuming the problem lies with student motivation or ability. Instead, the program should ask whether the pathway gave learners what they needed to succeed. Were outcomes clearly communicated? Were students given enough opportunities to

practice before being assessed? Did the learning activities prepare students for the expected level of performance? Were the performance criteria transparent before submission? Was feedback timely enough to support improvement? Were support resources visible when needed? Were accessibility practices consistent across courses? Were faculty interpreting and assessing outcomes in similar ways?

Interpretation should therefore move from data description to design inquiry. It is not enough to report that a percentage increased or decreased. Program teams should explain what the result means, why it may have occurred, how it relates to the learner success definition, and what changes will be made in response. This is where curriculum maps, assessment reports, student feedback, faculty deliberation, and quality review processes come together. Each measure becomes part of an evidence cycle that helps the program determine whether alignment is supporting learners as intended.

From Evidence to Reform: Closing the Alignment Loop

Learner success evidence has value only if it leads to informed action. Programs should use evidence not merely to demonstrate quality, but to improve it. Closing the alignment loop means reviewing data on persistence, completion, outcome mastery, learner perception, and professional application in relation to the curriculum map and translating them into specific reforms. These reforms may involve curriculum sequencing, course design, assessment strategy, faculty development, student support, technology, accessibility, advising, or communication (Bryan et al., 2021; Smith & Chittams, 2024).

The goal is not to respond to every data point with a large-scale redesign. Some findings may call for targeted adjustments. Others may reveal deeper structural issues. A single course with declining completion may require clearer assignment directions, improved feedback timing, or embedded

support links. A recurring pattern of weak capstone performance may require a program-level review of how the relevant outcomes are introduced and reinforced. A learner survey showing that students do not understand the relevance of assignments may require better learner-facing alignment language throughout the program. A pattern of unequal success across groups may require an equity and accessibility audit.

Bryan et al. (2021) illustrate ongoing improvement through formative, summative, confirmative, and meta-evaluation in an RN-to-BSN program seeking Quality Matters Program Design certification. Their account includes course review and faculty development already underway, as well as plans for longer-term evaluation. Curricular revisions required restarting the collection of retention, graduation, and satisfaction data, so the article presents an evolving evaluation process rather than a completed longitudinal cycle. The continuous evaluation section and Table 9 explain how these four functions can support ongoing review and improvement.

A strong reform process should include documentation. Programs should record what evidence was reviewed, what interpretation was made, what change was selected, who is responsible for the change, when implementation will occur, and what evidence will be used to evaluate the change. This documentation supports accountability, but its larger purpose is learning. It helps the program remember why a change was made and whether the change improved the learner pathway.

Closing the loop also requires faculty deliberation. Lam and Tsui (2016) argue that curriculum mapping is not only a technical process but also a deliberative one in which faculty clarify shared meanings around outcomes, assessments, content, and expected levels of learning. This matters because reforms are more likely to succeed when faculty understand the evidence, agree on the nature of the problem, and participate in designing the response. If faculty interpret an outcome differently, they may design different activities, apply different standards, or assess different forms of performance. Calibration conversations, shared performance criteria reviews, assessment retreats, and course-sequence discussions can turn data into collective improvement.

Smith and Chittams (2024) add that curriculum mapping should be planned around a clear purpose and validated through a defensible process. Their work is useful because it reminds programs that maps and measures are not automatically trustworthy. Faculty expertise is essential, but it can also introduce bias if expectations, measures, and protocols are unclear. Alignment reforms should therefore be based on evidence that has been reviewed, interpreted, and validated through appropriate processes. When programs use reliable maps and meaningful evidence of learner success, improvement decisions become more credible.

The result of closing the loop is not simply a revised map. It is a stronger learner pathway. Students encounter clearer expectations, more intentional practice, more transparent assessments, better-timed support, and a more coherent progression from entry to completion. Alignment evidence becomes actionable when it helps programs ask not

only whether students succeeded, but also whether the program gave them a fair, visible, and well-supported opportunity to succeed.

Equity, Accessibility, and the Hidden Curriculum: Design Conditions and Learner Success Evidence

A program cannot claim full alignment if only some learners can access the pathway needed to achieve the outcomes. Equity must therefore be built into evidence of learner success. It is not enough to know whether the average student persists, completes, or demonstrates mastery. Programs also need to ask whether diverse groups of learners experience comparable opportunities to succeed. Overall averages can mask crucial differences in access, performance, belonging, use of support, and completion (Baker & Tukhvatulina, 2023; Mead et al., 2023; Ortagus et al., 2024).

The hidden curriculum refers to the expectations students are assumed to understand, but that are not always explicitly taught or communicated. In online programs, the hidden curriculum can appear as inconsistent navigation, unstated technology requirements, unclear norms for participation in discussion, unexplained academic language, hidden assumptions about prior writing or research experience, and assignment directions that do not explain how the task connects to course or program outcomes. These hidden expectations can create uneven burdens for adult learners, first-generation students, learners with disabilities, students returning after time away, and learners balancing coursework with work, caregiving, military service, or other responsibilities (Baker & Tukhvatulina, 2023; Mead et al., 2023; Ortagus et al., 2024).

An equity-aligned program, therefore, reviews the learner pathway before problems appear in outcome data. It asks whether learners encounter consistent navigation across courses, whether performance criteria are available before submission, whether examples clarify expectations, whether feedback arrives early enough to support improvement, whether support resources are embedded at points of need, and whether course materials meet accessibility expectations. These questions keep equity connected to content, learning experience, and assessment alignment, supported by continuous improvement rather than treating it as a separate compliance layer (Akers et al., 2021; Mead et al., 2023; Rotar, 2022).

The equity purpose of alignment is not to lower expectations. It is to make expectations reachable through clear design, sufficient practice, meaningful feedback, and accessible support. A rigorous online program can still be equitable when students understand the pathway and have repeated opportunities to develop the outcomes the program promises. Equity-aligned design allows programs to ask a stronger question than whether all students were given access to the same course shell. It asks whether all students were given a fair, visible, and well-supported opportunity to succeed.

This concern is especially important in fully online programs. Ortagus, Hughes, and Allchin (2024) found that students in exclusively online degree programs had a lower likelihood of completing their programs, with negative effects across several student groups. Their findings reinforce the idea that online access does not automatically lead to online success. If online programs expand access without building coherent pathways, visible support,

meaningful interaction, and strong quality assurance, students may enter programs without receiving the conditions needed to complete them. Alignment must therefore be evaluated not only for structure but also for equity.

Mead et al. (2023) illustrate why accessibility evidence should be considered alongside learner outcomes. Their comparative case study examined equivalent online and in-person biology degree programs at one large public research university. Online students were offered a narrower range of formal accommodations, although some online features may provide built-in supports. However, students registered with disability services in the online program performed better in course grades relative to peers without registered disabilities than did their in-person counterparts. The authors caution that students' selection into online study and decisions to register for disability services may influence these results. A narrower range of accommodation types, therefore, does not, by itself, establish poorer support or outcomes. For program review, these findings support examining accessibility, the suitability of accommodations, and learner outcomes together, rather than judging support solely by the number of accommodation types available.

Design review identifies potential barriers before outcome differences appear. Disaggregated learner success evidence then helps programs investigate who is progressing, who is encountering difficulties, and what conditions warrant closer examination. Differences prompt inquiry; they do not, by themselves, establish that misalignment caused an outcome.

Equity analysis should begin with disaggregation where data are available and appropriate. Programs might examine learner success measures by part-time or full-time enrollment, first-generation status, transfer status, adult learner status, military affiliation, Pell eligibility, disability registration, entry pathway, course section, or other institutionally meaningful categories. The purpose is not to label

students as deficient. The purpose is to determine whether the program's design is working equitably for the learners it serves. Table 8 provides guiding questions and potential evidence sources for examining equitable access to expectations, learning materials, practice, feedback, support, a sense of belonging, and completion.

TABLE 8
Equity and Accessibility Questions for Learner Success Evidence

Equity Focus	Guiding Question	Possible Evidence
Access to expectations	Do all learners receive clear information about outcomes, assignments, performance criteria, due dates, and support resources?	Syllabus review, course design review, learner surveys, and assignment clarification patterns.
Access to learning materials	Are materials accessible, usable, and available in formats that support diverse learners?	Accessibility reports, documents, and media review, captioning status, and student feedback.
Access to practice	Do learners have enough low-stakes or scaffolded opportunities to practice before high-stakes assessment?	Curriculum map, assignment sequence, formative assessment data, student reflections.
Access to feedback	Is feedback timely, specific, and useful for improvement across courses and sections?	LMS feedback timestamps, course evaluations, performance criteria comments, and student surveys.
Access to support	Are advising, tutoring, library, technical, accessibility, and career supports embedded at points of need?	LMS support links, advising data, service use patterns, and student feedback.
Access to belonging	Do learners experience connection to faculty, peers, program identity, and professional goals?	Belonging surveys, discussion participation, peer mentoring data, and qualitative feedback.
Access to completion	Are persistence, course success, and graduation patterns equitable across learner groups?	Disaggregated retention, completion, DFW, withdrawal, and graduation data.

Note. Author-created equity review questions were synthesized from the cited accessibility and learner experience literature.

Equity evidence could be interpreted through the lens of the alignment model. If one group of learners is less likely to complete a gateway course, the program could examine course expectations, navigation, workload, prerequisite knowledge, technology demands, feedback timing, and support visibility. If students with disabilities are less likely to request an accommodation online, the program could examine whether support pathways are visible and whether course design already incorporates accessible practices. If adult learners report difficulty balancing workloads, the program could examine pacing, assignment distribution, flexibility, and communication. If first generation or returning learners struggle to interpret expectations, the program could examine whether hidden assumptions are built into assignment directions, performance criteria, advising language, or program milestones.

Evidence of equity-centered learner success should lead to design reform. If disaggregated data reveal uneven outcomes, the response should not be limited to additional reminders or generic encouragement. Programs should ask what can be redesigned. Can support be embedded earlier? Can performance criteria be clarified? Can examples of successful work be provided? Can assignment sequences include more guided practice? Can navigation be standardized? Can materials be made more accessible? Can advising be connected to course milestones? Can faculty calibrate grading expectations? These reforms treat equity as a design responsibility rather than an afterthought.

When equity is included in evidence of learner success, alignment becomes more than coherence. It becomes a commitment to ensuring that all learners have meaningful access to the opportunities the curriculum promises. A program is not truly aligned if outcomes, content, pedagogy, assessment, and support are connected only for students who already know how to navigate the system. Alignment is strongest when every learner can see the pathway, understand expectations, access support, practice with feedback, demonstrate mastery, and carry learning forward.

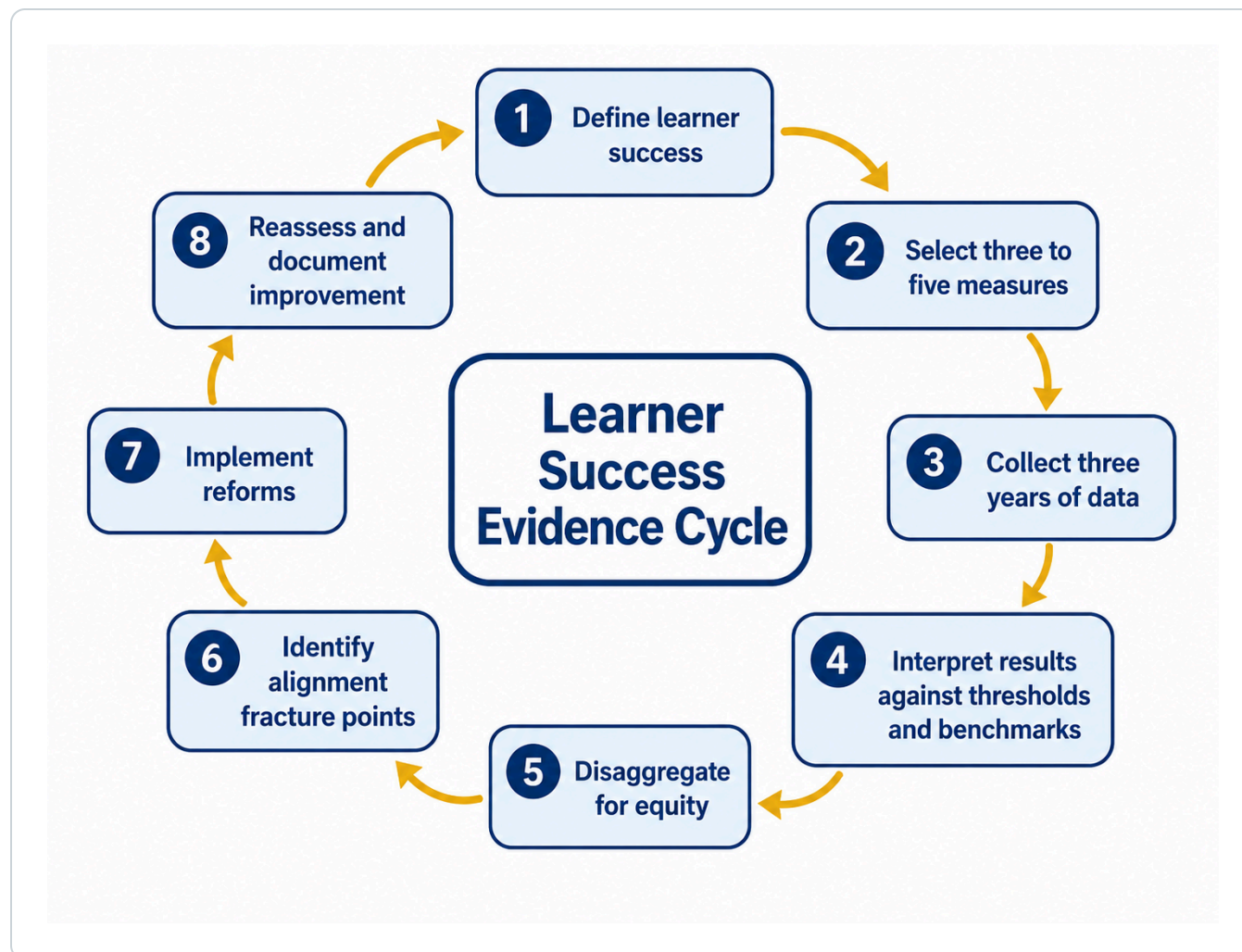
Learner Success Evidence Cycle

The relationship between alignment and learner success can be represented as a continuous evidence cycle (Figure 5). Notice the return to the definition of success after reassessment: the cycle should refine both design and evidence decisions. The figure brings together the preceding guidance on selecting measures, interpreting evidence, examining equity, implementing revisions, and reassessing. The three-to-five measures and three-year window shown in the illustration are suggested starting points, not fixed research requirements. Reassessment should allow revisions to reach relevant cohorts before conclusions are drawn.

The evidence cycle brings learner success data back to curriculum and teaching decisions. The preceding closing-the-loop section describes how teams document interpretations, assign responsibility, and evaluate reforms; continuous evaluation provides the broader quality assurance structure for sustaining that work.

FIGURE 5

Learner success evidence cycle



Note. Author-created practical evidence cycle informed by the cited evaluation literature. Three to five measures and three years of data are suggested starting points; adapt the window to cohorts, implementation timing, and local needs.

Continuous Evaluation: Formative, Summative, Confirmative, and Meta Evaluation

The learner success evidence cycle (Figure 5) identifies which programs should be measured and how those measures should be interpreted. Continuous evaluation provides the quality assurance structure for acting on that evidence over time. Alignment should not be treated as something confirmed once during program approval, accreditation, or course review. Courses change, faculty rotate, technologies evolve, professional expectations shift, and learner needs become visible through data and feedback. Continuous evaluation helps programs determine whether the intended, taught, assessed, supported, and experienced curricula remain connected (Bryan et al., 2021).

Bryan et al. (2021) provide a useful model for online program quality through their use of formative, summative, confirmative, and meta-evaluation in an RN-to-BSN program seeking Quality Matters Program Design certification. Their model is valuable because it positions quality as an ongoing process rather than a single review event. Alignment is planned before launch, assessed during implementation, examined through learner and reviewer evidence, and reconsidered over time in relation to retention, satisfaction, progression, graduation, and stakeholder feedback. Table 9 summarizes the purpose of each evaluation type, the alignment questions it addresses, and possible evidence sources for guiding review and improvement.

TABLE 9
Evaluation types

Evaluation Type	Primary Purpose	Alignment Questions	Possible Evidence
Formative evaluation	Improve design before and during implementation	Are outcomes, content, activities, assessments, performance criteria, navigation, accessibility, and support resources aligned before students encounter the course or program?	Course design reviews, faculty design meetings, curriculum maps, accessibility checks, pilot feedback, informal peer review
Summative evaluation	Judge the immediate quality after delivery or formal review	Did the course or program meet expected quality standards, and did students experience the design as clear and supportive?	Formal course review, QM review results, student evaluations, assignment performance, and course completion data

TABLE 9
Evaluation types (continued)

Evaluation Type	Primary Purpose	Alignment Questions	Possible Evidence
Confirmative evaluation	Examine longer-term value and sustainability	Are alignment practices supporting persistence, completion, outcome mastery, satisfaction, and professional application over time?	Retention trends, graduation rates, capstone results, alumni surveys, progression data, professional outcomes
Meta evaluation	Review the quality and usefulness of the evaluation process itself	Are the program's maps, measures, review processes, and improvement decisions credible, useful, and sustainable?	Stakeholder reflection, assessment committee review, faculty calibration notes, comparison of evidence sources, and documentation of reforms

Note. Adapted conceptually from the evaluation types discussed by Bryan et al. (2021); alignment questions and evidence examples developed by the author.

These evaluation types can be understood as a sequence, but in practice, they often overlap. A program may use formative review when revising a course, summative evidence after a course runs, confirmative evidence during annual program review, and meta-evaluation when determining whether its assessment and mapping processes remain useful. The critical point is that each evaluation type serves a distinct function. Formative evaluation improves the design. Summative evaluation examines immediate quality and performance. Confirmative evaluation asks whether the design continues to produce value. Meta evaluation asks whether the review system itself is helping the program learn.

This is why evaluation should return to the map. If summative evidence shows that students are struggling with a signature assignment, the program could examine where the relevant outcomes were introduced and practiced. If confirmatory evidence indicates declining persistence, the program could examine early-course design, support, timing, workload, navigation, and advising touchpoints. If learner feedback shows that students do not understand the relevance of assignments, the program could strengthen learner-facing alignment language. If meta-evaluation shows that faculty interpret outcomes differently, the program could incorporate calibration and deliberation, as Lam and Tsui (2016) recommend.

Implementation Framework: Building an Alignment System

Building an alignment system requires more than completing a curriculum map. It requires a shared purpose, faculty engagement, evidence routines, external validation, learner-facing communication, and continuous review. The system should help students, faculty, instructional designers, advisors, assessment leaders, and program administrators understand how the curriculum works and how learner success is supported (Bryan et al., 2021; Joshi, 2022; Mariasingam & Hanna, 2006). Table 10 summarizes the implementation steps, key participants, and primary outputs needed to build and sustain an online program alignment system.

First, define the purpose and scope of the alignment work. A map created for accreditation may require different evidence than a map created for course redesign, licensure preparation, workforce alignment, or learner success review. Smith and Chittams (2024) argue that curriculum mapping should begin with a clear purpose, appropriate standards, measures at the correct level of detail, faculty calibration, and validation processes.

Second, establish shared language around outcomes. Faculty should clarify what each program outcome means, what level of learning it requires, where it is introduced and reinforced, how it is assessed, and where mastery is expected. Lam and Tsui (2016) frame curriculum mapping as a form of deliberation

because it helps faculty build a shared understanding, interpret outcomes, examine assumptions, and strengthen the curriculum through collaborative review.

Third, construct linked course maps and a program overview, then examine their connections within and across courses. Document outcomes, materials, learning experiences, assessments, and performance criteria using shared identifiers. Review internal alignment within courses, horizontal alignment among courses at the same stage, and vertical alignment across successive stages. Record gaps, overlaps, and uncertain connections that need investigation (Frost & Ackrill, 2025).

Fourth, use the findings to revise content, learning experiences, assessments, and learner support. Faculty and instructional designers can strengthen materials, practice, feedback, task demands, and performance criteria where the review identifies a need. Student support partners can locate advising, library resources, accessibility services, technology assistance, and other supports at relevant points in the pathway. These changes connect instructional decisions with organizational strategy, staff development, technology, quality frameworks, and community (Joshi, 2022; Mariasingam & Hanna, 2006).

Fifth, validate the linked maps and their interpretations. Faculty calibration can establish shared expectations for outcome coverage, cognitive complexity, and performance criteria. Peer and external review can assess whether the documented connections are clear and supported by course materials, assessment tasks, and student work. Validation helps programs distinguish intended alignment from connections that require further evidence or revision (Smith & Chittams, 2024).

Sixth, make the pathway visible to learners. Wijngaards-de Meij and Merx (2018) argue that curriculum visibility helps students understand where they are in the larger curriculum, how prior learning connects to current expectations, and how skills build over time. Learner-facing tools should explain the degree pathway, major milestones, each course's contribution, opportunities to use feedback, and available support. Students should be able to see their online degree program as a coherent pathway, not a series of disconnected courses. Derive learner-

facing tools from validated internal program and course maps and update them when the underlying curriculum changes.

Finally, as the author's practical recommendation, establish an annual evidence review routine within a broader cycle of continuous improvement of alignment. Reviews should bring together assessment evidence, student feedback, faculty reflections, accessibility data, course review findings, and measures of persistence, progression, completion, and professional application. Programs should document priorities, assign responsibility for revisions, and identify when follow-up evidence will be available. Annual monitoring can identify emerging concerns, while reassessment of curricular changes should allow sufficient time for implementation and learner progression. This cycle keeps the alignment system responsive to evidence and changing program needs (Bryan et al., 2021; Smith & Chittams, 2024).

TABLE 10

Implementation framework for building an online program alignment system.

Implementation step	Key participants	Primary output
Define purpose and scope	Program leader, assessment lead, instructional designer, faculty	Alignment project charter and selected evidence standards
Clarify outcomes and cognitive levels	Faculty, program coordinator, assessment lead	Shared outcome language and Bloom-related progression expectations
Map content, learning experiences, and assessments; identify support touchpoints	Faculty, instructional designer, librarian, accessibility specialist, student support staff	Linked course maps and a program overview documenting instructional connections and support locations
Review internal, horizontal, and vertical alignment	Faculty team, instructional designer, program leadership	Analysis of gaps, unnecessary duplication, preparation, and progression

TABLE 10

Implementation framework for building an online program alignment system. (continued)

Implementation step	Key participants	Primary output
Validate the map	Faculty reviewers, external reviewers, accreditation, or professional standard experts	Calibration notes, validation sample, review findings
Create learner-facing pathway tools	Instructional designer, advisor, faculty, student success staff	Student pathway map, milestone language, support touchpoints
Monitor on a locally defined schedule, implement revisions, and reassess	The program quality team and those responsible for changes	Updated map, documented action plan, evidence summary, and follow-up evaluation schedule

Note. Author-created implementation guidance informed by the cited program design and mapping literature. Roles and schedules should be adapted locally.

Sustaining Alignment Through Governance and Review

Alignment must have an owner, a process, and a review rhythm. Without governance, even a strong curriculum map can become outdated as faculty change assignments, courses are copied into new terms, technologies shift, accreditation requirements evolve, and students' needs change. Governance does not mean removing faculty autonomy. It means creating shared responsibility for the coherence of the learner pathway (Joshi & Kantola, 2022; Lam & Tsui, 2016; Smith & Chittams, 2024).

A sustainable alignment system usually includes multiple roles. Program faculty define disciplinary expectations, interpret outcomes, and make curricular decisions. Instructional designers help translate those expectations into coherent online learning experiences. Assessment and accreditation leaders help determine what evidence is needed and how it will be interpreted. Student support professionals identify points in the pathway where learners need guidance, advising, tutoring, accessibility support, or career preparation. Program leaders ensure that alignment review is scheduled, documented, resourced, and connected to decision-making.

This shared governance model is consistent with the systems view of online program quality described in the first white paper, which argues that quality

depends on integrating program design, teaching support, learner support, learner success, and continuous quality assurance. It also aligns with Joshi's (2022) layered view of online degree program design and Mariasingam and Hanna's (2006) emphasis on team-based development that includes content experts, instructional designers, technology staff, and learner support partners.

Governance should also clarify the cadence of review. Some alignment work should occur before a course launches, such as design review, accessibility checks, and review of outcome-assessment alignment. Some should occur during delivery, such as monitoring student questions, early alerts, and feedback patterns. Some should occur after delivery, such as analysis of performance criteria data, course evaluations, and instructor reflections. The literature supports ongoing evaluation and validation (Bryan et al., 2021; Lam & Tsui, 2016; Smith & Chittams, 2024). To make that work manageable, the author recommends annual evidence monitoring and a more comprehensive alignment review every three to five years, with earlier review when major curricular changes or emerging concerns warrant it. These intervals are suggested planning practices, not intervals established by the cited studies. Adapt them to institutional requirements, program length, cohort size, resources, and the time needed to implement and reassess revisions.

Alignment Toolkit for Online Program Teams

The alignment toolkit brings together the artifacts developed in this paper. Teams can use the following tools during design, review, and improvement to derive learner-facing guidance from validated internal maps.

Linked PALS-informed program and course maps	Use the architecture described under curriculum mapping to connect detailed course views with the program overview through shared identifiers. Assign course and program ownership as described in the governance section.
I/R/A/M progression map	Use Table 2 during faculty mapping conversations to examine introduction, reinforcement, assessment, and expected mastery across the degree pathway.
Bloom progression check	Use Bloom's taxonomy guidance and Table 3 when reviewing outcomes, learning activities, assessments, and performance criteria. Examine task demands, knowledge, and verbs; do not impose a fixed staircase.
Fracture point diagnostic	Use the four review questions and Table 4 during faculty retreats, curriculum reviews, student feedback analyses, or external review preparation to connect findings with corrective actions and follow-up evidence.
Learner-facing pathway map	Use Figure 4 and Table 5 to develop guidance for orientation, advising, course welcome pages, milestones, and capstone preparation. Update these tools when the validated internal maps change.
Equity and accessibility audit	Use Table 8, which includes LMS reviews, accessibility checks, support planning, and disaggregated learner success evidence, to examine both proactive design conditions and experienced barriers.
Evidence review calendar	Record what evidence will be reviewed, by whom, when findings will be documented, and when revisions can be reassessed. Use the locally adaptable cadence described in the governance section and the evaluation functions in Table 9.

Recommendations: Building Alignment Systems for Measurable Learner Success

The following recommendations translate the paper's framework into actions for online program teams. The preceding sections provide the supporting rationale, examples, and evidence qualifications.

1

Build linked PALS-informed program and course maps.

Build linked PALS-informed program and course maps with shared identifiers and clear responsibility for each view. Begin with priority outcomes or courses and expand as capacity allows. Use the curriculum mapping architecture and Table 10 to organize the work.

2

Make alignment visible to learners throughout the online pathway.

Derive learner-facing tools from validated internal maps and communicate course purpose, outcome connections, milestones, feedback opportunities, and support throughout the pathway. Use Figure 4 and Table 5 to select appropriate visibility practices.

3

Define learner success before selecting measures.

Adopt a learner success definition that reflects institutional mission, program goals, learner population, resources, and professional expectations before selecting measures. Pay attention to persistence, achievement of outcomes, completion, learner experience, and application beyond the degree.

4

Select a focused evidence set and interpret results across an appropriate review window.

Select a focused evidence set linked to the adopted definition. Three to five measures are the author's suggested starting point; Table 6 provides a menu rather than a required set. Include direct evidence of learning alongside progression and learner experience indicators.

For each measure, identify the data source, its connection to the learner success definition, the interpretation approach, and the cohorts represented. The author recommends using three consecutive years of comparable evidence, when available, as a starting point, rather than a research-established minimum. Adapt the window to program length, cohort size, data quality, and the timing of curricular changes reaching learners. Interpret patterns using thresholds, benchmarks, equity, and context; examine alternative explanations before attributing improvement to a design revision.

5

Disaggregate learner success evidence to examine equity, accessibility, and the hidden curriculum.

Disaggregate learner success evidence by institutionally meaningful categories when data are available and appropriate. Use Table 8 to connect differences in outcomes with inquiry into accessibility, expectations, practice, feedback, support, and the hidden curriculum. Examine design conditions both proactively and in response to outcome patterns.

6

Validate maps and measures through faculty deliberation, calibration, and review.

Use structured faculty deliberation, calibration, and appropriate peer or external review to validate outcome interpretations, mapping connections, and performance criteria. Clarify protocols and evidence sources so that maps and measures are sufficiently credible to guide improvement (Lam & Tsui, 2016; Smith & Chittams, 2024).



Close the loop through documented reforms and continuous evaluation.

Evidence of learner success should lead to action. Programs should document what evidence was reviewed, what interpretation was made, what change was selected, who is responsible, when implementation will occur, and what evidence will be used to evaluate the change. This documentation supports accountability, but its deeper purpose is continuous learning. It helps program teams determine whether revisions improve the learner pathway (Bryan et al., 2021; Smith & Chittams, 2024).

Use the distinct formative, summative, confirmative, and meta evaluation functions summarized in Table 9, with ownership and review schedules established through governance. Reassess changes after they have reached the relevant learners and use the findings to refine both the pathway and the review system.

Conclusion: Alignment as the Bridge Between Design and Learner Success

Alignment is the structural beam of quality in online degree programs because it connects what a program promises to what learners experience. Outcomes, content, pedagogy, assessment, feedback, support, accessibility, and review cannot operate as separate parts if students are expected to move through a coherent pathway. When these elements are intentionally connected, online learners can see where they are, understand why the work matters, practice the skills they are expected to demonstrate, receive feedback that supports improvement, and carry learning into academic, professional, personal, or civic contexts.

This paper has argued that alignment is more than documentation. A curriculum map may show where outcomes appear, but the deeper question is whether the map reflects a pathway students can navigate. Alignment becomes meaningful when it shapes course design, supports learner confidence,

clarifies expectations, guides assessment, strengthens feedback, embeds support, and creates evidence that the program is working as intended. In this sense, alignment is both a design practice and an evidence practice.

Building quality through alignment requires a shift in how online programs understand success. Quality is not proven by design documents alone. Learner success is not proven by completion rates alone. The strongest online programs connect design evidence, learner experience evidence, and outcome evidence into a continuous improvement system. When programs align intentionally, measure thoughtfully, interpret evidence honestly, and revise responsively, online learners are better positioned not only to complete the program, but to understand, apply, and carry forward the learning the program was designed to make possible.

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