Inclusive Curriculum, Learner Support, and Student Success in Digitally Mediated Higher Education

Educational Equity, Accessibility, Learner Protection, and Meaningful Participation

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Open Christian Press, a publishing imprint of Open Christian University and Center for Faith and Work

Chapter DOI: https://doi.org/10.65655/ocp.m29.c104
Book DOI: https://doi.org/10.65655/ocp.m29

Abstract

A higher-education programme cannot be considered educationally effective merely because its curriculum is formally coherent, its learning platform operates, or its students can technically enrol. Its quality also depends on whether learners with different resources, responsibilities, abilities, histories and aspirations can participate meaningfully, demonstrate the intended standards, obtain timely support and progress without avoidable disadvantage. This chapter develops an integrated, Rwanda-anchored account of inclusive curriculum and student success in digitally mediated higher education. Through a critical, purposive synthesis of established scholarship, official Rwandan instruments, continental quality-assurance guidance and international accessibility standards, it brings capability-oriented equity, Universal Design for Learning, student-engagement theory, academic support and ethical learning analytics into dialogue. The analysis distinguishes access from use, accommodation from lowered standards, engagement from platform activity, and predictive risk from legitimate intervention. It examines admissions, orientation, digital exclusion, disability, language, self-regulation, advising, wellbeing, postgraduate supervision, complaints, career development and equity-sensitive evaluation. Its distinctive contribution is a proposed participation-to-success architecture connecting learner conditions, institutional responsibilities, evidence of enactment and proportionate corrective action. Four usable instruments are developed: an Inclusive Curriculum and Student Support Review Matrix, a student-lifecycle responsibility map, a digital-accessibility and accommodation checklist, and a student-support evidence and intervention register. The instruments are professional proposals, neither HEC-approved nor empirically validated. The central conclusion is that learner protection must be treated as an assessable component of programme readiness and continuing educational quality, rather than an optional service added after curriculum approval.

Keywords: inclusive higher education; learner support; student success; universal design for learning; digital accessibility; Rwanda; evidence-traceable quality assurance

7.1 Introduction: Educational quality, equity, and the right to meaningful participation

A student may be admitted to a well-designed online degree and still be effectively excluded from it. The university may provide a course site, schedules, video lectures, electronic reading lists and prompt assessment deadlines, yet the learner may share a phone with relatives, pay for data by the megabyte, encounter documents that a screen reader cannot interpret, or be required to join synchronous sessions during paid employment. Another learner may have reliable internet access but find no coherent academic advice after failing an early assessment. A doctoral candidate may have library access and an approved supervisor but no timely feedback on a research proposal. These examples differ in mechanism, yet each exposes the same quality problem: institutional provision exists formally without becoming a credible opportunity to learn.

The chapters preceding this one have established the educational purpose of higher education, the authority of regulation, the conditions of sustainable institutional capability, the architecture of curriculum, the design of online and blended provision, and the responsibilities accompanying artificial intelligence (AI). Those arguments remain incomplete unless the student's position within the institution is examined. Academic standards are not protected by ignoring barriers that prevent learners from demonstrating them. Nor is equity achieved by substituting favourable progression statistics for intellectually demanding education. The relevant

question is whether legitimate standards are made attainable through fair educational opportunities, and whether institutions can identify and remedy disadvantages arising from their own design and delivery decisions (Tinto, 2012; Kahu & Nelson, 2018).

In this chapter, **access** means a genuine opportunity to enter and use an educational provision; **accessibility** concerns the removal or reasonable reduction of barriers to accessing and operating learning environments and resources; **inclusion** refers to equitable participation and belonging under educationally defensible conditions; **learner support** is the coordinated set of academic, administrative, technical, informational and wellbeing functions enabling study; and **student success** includes worthwhile learning, progression, completion and sustainable transitions, not simply retention at any cost. These concepts intersect but are not interchangeable. A fully accessible website may contain academically trivial instruction; an inclusive classroom may still operate unfair assessment; an impressive retention rate may conceal exclusion through strict pre-entry filtering. Evaluation must therefore consider each claim in relation to the educational purpose and the evidence that could actually support it.

The right-to-education tradition reinforces this conceptual distinction. Article 24 of the United Nations Convention on the Rights of Persons with Disabilities (CRPD) recognises education without discrimination, including equal access to general tertiary education and reasonable accommodation. UNESCO's *Global Education Monitoring Report 2020* argues for examining the structural circumstances that exclude learners across educational sectors (United Nations, 2006; UNESCO, 2020). Such instruments supply important international rights-based and policy reference points, but the direct duties of a particular Rwandan university must be identified through applicable domestic law, institutional authorisation and competent official directions. A reference to international good practice does not by itself establish a specific nationally enforceable operational requirement.

The analytical approach is a critical documentary and conceptual synthesis. The approved master outline and the author's doctoral thesis identify the chapter's position within the book, while the completed chapters establish terminology and the provisional Integrated Evidence-Traceable Quality Governance (IETQG) and Evidence-Traceable Accreditation Judgement (ETAJ) architecture (Sangwa, 2026). Selected peer-reviewed scholarship is used to evaluate theoretical explanations and educational claims; official Higher Education Council (HEC) and Rwandan material establishes the published national policy and regulatory context; CAST, the World Wide Web Consortium (W3C), UNESCO and Jisc provide additional professional or international references. Sources are purposively selected for their explanatory, normative or practice-related relevance. This is neither an exhaustive systematic review nor a new institutional evaluation: no PRISMA counts, interviews, learner records, observational findings or measured intervention effects are asserted. Constructed examples are explicitly hypothetical, and proposed tools are not represented as regulator-approved or statistically validated measures.

A key proposition guides the discussion. Inclusion should be assessed through the relationship between **the learner's circumstances**, **the institution's opportunities and safeguards**, **the student's actual participation**, and **the standards legitimately achieved**. The same institutional provision can have different effects across learners; the same outcome can arise through different causal pathways. A useful review therefore cannot stop at counting services, disability statements, induction workshops or logins. It must ask what barriers are plausibly operating, how they are detected, who can act, whether an intervention is proportionate, and what evidence indicates that a meaningful educational opportunity has been restored. These considerations prepare the shift from programme design to the systematic internal monitoring explored in the next chapter.

The Rwandan context makes this issue more than an application of imported inclusion terminology. Rwanda acceded to the Convention on the Rights of Persons with Disabilities in December 2008, and the Ministry of Education's *Revised Special Needs and Inclusive Education Policy* sets out national priorities concerning access, support services, professional capacity and appropriate educational resources (United Nations Treaty Collection, 2008; Ministry of Education, 2018). These sources differ in normative status and operational reach. Treaty commitments, national policy priorities, specific legislation, HEC assessment instruments and institutional promises should be read together, but an evaluator must still establish the particular provision governing the programme under review. The relevant task is to connect legitimate inclusion expectations to testable curriculum and support obligations without inventing a universal checklist of statutory duties.

The unit of analysis should also be stated before a judgement is made. An individual learner may require a confidential adjustment; a module may need redesign; an entire programme may have an exclusionary timetable; and an institution may lack the funding, staffing or decision route needed to correct repeated problems. Evidence at one level does not prove performance at another. A single successful accommodation establishes that a particular difficulty was addressed, not that the university has a reliable service for future cohorts. Conversely, an isolated unresolved case warrants appropriate protection and investigation but cannot establish the frequency of institutional failure without further evidence. The chapter therefore combines student-pathway analysis with institution-level accountability, a distinction that is essential to proportionate external review.

7.2 Philosophical and theoretical foundations of inclusion, accessibility, and learner-centred education

The philosophical difficulty of educational equity is that formally identical treatment can produce materially unequal opportunity. Requiring every learner to watch a two-hour high-definition lecture at the same time may look procedurally neutral, but it imposes unequal burdens on students with unstable connectivity, caring responsibilities, disabilities or restrictive working schedules. Conversely, permitting unrestricted individual variation can undermine comparability when it changes what a qualification certifies. Sound inclusion therefore distinguishes the **academic standard** from contingent conventions about where, when and through which medium a student encounters learning. The purpose is not to remove demanding content; it is to ensure that avoidable design barriers do not masquerade as tests of academic merit.

A capability-oriented interpretation is instructive. Sen (1999) argues that development should be assessed with attention to people's substantive freedoms, not merely the resources formally available to them. Applied cautiously to higher education, a programme place, internet account or electronic textbook is an input, not proof of an educational opportunity. Students differ in their ability to convert inputs into valuable activity because of disability, social expectations, economic resources, prior preparation and institutional conditions. This perspective shifts evaluation from the number of services offered to the conditions through which learners can use those services. It also cautions against attributing educational failure solely to individual choice when the feasible options available to students differ markedly.

Human-rights reasoning contributes a complementary perspective: learners should not be excluded through unjustified discrimination, and reasonable accommodation may be necessary for equal participation (United Nations, 2006). The capability argument addresses the substantive possibility of learning; the rights argument strengthens the normative claim that institutions must take exclusion seriously. Neither determines all questions of academic standards, reasonable resource allocation or particular professional competencies. In programmes involving clinical safety, engineering performance or laboratory technique, the institution must specify essential outcomes and examine which adjustments preserve their meaning. Fairness is compatible with rigorous performance requirements when those requirements are justified, transparent, validly assessed and not contaminated by irrelevant barriers.

Student-centred learning adds the pedagogical dimension. Its strongest interpretation is not that learners should dictate content or grading, but that teaching decisions should be informed by how students actually learn and by the kinds of agency, feedback and intellectual participation a qualification requires. Biggs's (1996) constructive alignment remains necessary: outcomes, activities and assessments must correspond. Inclusion adds a further test, namely whether different learners can access the designed pathway and whether alternative routes, where offered, sustain comparable opportunities to reach the same defensible outcome. An accessible but unaligned assessment is inadequate; a rigorously aligned assessment delivered through an inaccessible interface is equally defective.

Tinto's (2012) institutional-action perspective directs attention to clear expectations, academic and social support, assessment and feedback, and active involvement in learning. Kahu and Nelson's (2018) educational-interface model deepens the analysis by locating engagement where student circumstances interact with institutional structures and cultures. The contribution of these theories is not a universal formula for retention. Their significance is to resist an exclusively deficit-based explanation in which insufficient motivation, poor time management or inadequate preparation are treated as complete causes of withdrawal.

Institutional timetabling, course design, staff availability, belonging and support responsiveness may mediate those outcomes, and their influence can differ across cohorts and delivery modes.

A socio-technical perspective further illuminates exclusion. A platform feature is never experienced in isolation from language, device design, finance, institutional rules, assessment practices and human support. A text-only course can be low bandwidth but inaccessible when its scanned PDFs have no semantic structure. A video-based course can offer captions but exclude learners when those captions are inaccurate or when captioned content still requires unaffordable data. An AI-powered study assistant may help some learners while disadvantaging those who cannot access the service or whose preferred language is poorly supported. Evaluating the technical function alone risks overlooking the social and academic arrangements that convert it into an actual learning opportunity (UNESCO, 2023; Cumming & Rose, 2022).

Theoretical plurality is essential here. Capability reasoning is attentive to substantive opportunity but does not specify a complete pedagogical method. UDL guides anticipatory design but cannot resolve every individual accommodation. Engagement theory explains relational and motivational processes but should not be reduced to a single behavioural score. Institutional theory warns that published commitments may become ceremonial, while critical realism distinguishes a stated policy, an observed event and the deeper processes potentially generating it (Sangwa, 2026). Their combined lesson is that an institution should not be credited with inclusion simply because it adopts the vocabulary of equity. The decisive question is whether its arrangements withstand scrutiny where learner circumstances and academic requirements meet.

The philosophical argument has a distributive dimension. An institution inevitably allocates limited teaching time, specialist expertise, support funds and access to facilities, and inclusion decisions are therefore not always costless. The relevant choice is not between unlimited accommodation and complete administrative uniformity. Decision-makers should identify the essential learning requirement, examine who bears the present burden of the delivery arrangement, consider effective alternatives, and document why a proposed allocation is academically and legally justified. Resource scarcity may explain a phased improvement plan; it cannot be used as a self-evident argument that an avoidable high-stakes exclusion is acceptable. A defensible decision states what is presently feasible, which immediate safeguards protect the learner, which remedy is funded, and what evidence will later justify closure.

Learner-centred education must equally preserve agency. Students should be offered intelligible choices and opportunities to contest an inaccurate interpretation of their needs, rather than being assigned an identity or intervention on the basis of a category. An adult learner may prefer asynchronous study without requiring a remedial label; a student with a disability may reject an arrangement that unnecessarily segregates them from scholarly collaboration. Involving affected learners does not displace the expertise of lecturers or accessibility specialists. It makes the intervention more accountable by ensuring that professional judgements are tested against the educational task and the experience of those expected to use it.

7.3 Universal Design for Learning and inclusive curriculum planning

Universal Design for Learning (UDL) offers a preventive design strategy: instead of constructing a single standard pathway and retrofitting alternatives after exclusion becomes apparent, educators anticipate learner variability while preserving meaningful academic intentions. CAST's UDL Guidelines 3.0 identify three broad principles: multiple means of engagement, representation, and action and expression. The 2024 revision places greater emphasis on learner agency and the removal of barriers associated with bias and exclusionary systems (CAST, 2024). UDL is not a formula requiring every activity to appear in three formats, nor does it establish that all learners have interchangeable needs. It asks curriculum teams to identify unnecessary obstacles and intentionally expand the ways learners may develop and demonstrate knowledge.

The first principle concerns engagement. Students may differ in their reasons for studying, prior experiences of academic success, confidence, safety, personal obligations and tolerance for particular participation modes. A programme can diversify meaningful engagement through clear relevance, appropriately challenging tasks, respectful collaboration, opportunities for choice, timely feedback and predictable milestones. Yet choice needs disciplined limits. A learner cannot simply opt out of a safety-critical clinical competency or a research-methods outcome essential to the award. The productive design question is which features of participation

may be varied without changing what students are academically required to know and do (CAST, 2024; Biggs, 1996).

Multiple means of representation concern the accessibility and intelligibility of subject matter. Meaningful alternatives may include an accurate transcript accompanying spoken exposition, accessible diagrams with explanatory text, readable electronic documents, selected multilingual terminology support, worked examples and short downloadable files. Alternatives should be functionally designed rather than mechanically multiplied. An audio narration may be a useful alternative to extended print for some purposes, but equations, citations, tables and technical diagrams often require carefully structured text or specialist accessible notation. Complex knowledge also needs intellectual scaffolding. Offering a document in three file types does not make it understandable if its argument is disorganised or its prerequisite concepts remain unexplained.

Multiple means of action and expression address the ways learners interact, practise, communicate and demonstrate achievement. The construct being assessed should determine the acceptable modes. A historical argument might be defendable through an appropriately assessed essay or oral examination if both capture source criticism and reasoning. Written-language proficiency, however, cannot be fully certified through an oral presentation when written expression is itself an essential outcome. Similarly, a supervised practical test cannot always be replaced with a simulated quiz. The principle is to vary irrelevant conventions, while making the essential intellectual, professional and safety requirements transparent and independently assessable.

The evidence base for UDL warrants critical interpretation. Cumming and Rose's (2022) review identifies growing application and potential benefits for accessibility in higher education, alongside variation in studies and implementation. It does not justify treating all UDL-labelled courses as effective or assuming that particular combinations of options will produce identical outcomes across disciplines. Institutions should therefore evaluate actual artefacts and experiences: accessible navigation, equivalent assessment conditions, successful assistive-technology use, feedback from affected learners, and samples of learning achieved. UDL is a design and evaluation reference, not a substitute for direct evidence of effective teaching or a waiver of individual accommodation responsibilities.

Rwanda's March 2026 distance-learning guidelines explicitly address accessible blended-learning materials informed by UDL, online learner orientation, staff and student preparation, and student support. Those provisions are official national guidance and assessment criteria; CAST and WCAG remain separate professional and technical reference frameworks whose legal force must not be assumed without a competent national basis (HEC, 2026a). Inclusive curriculum planning should occur at programme approval rather than at the final stages of course production. The programme team should examine the graduate profile, credit structure, module prerequisites, common assessment bottlenecks, required placements, synchrony, laboratory arrangements and disciplinary language demands. Its review record should identify potential participation barriers, justified essential requirements, planned universal accommodations, individual adjustment routes, resource commitments and a process for reporting problems. Where digital provision is planned, content authors, disability-support professionals, librarians, ICT specialists and prospective learner representatives should test representative tasks before recruitment. Requiring a learner to discover an inaccessible assessment during the examination week is a design failure, not an unavoidable by-product of technological innovation.

UDL also changes how lecturers use AI. Automated captioning, simplified explanations, translation and alternative-format generation may reduce some barriers, but machine outputs can distort specialist vocabulary, disciplinary distinctions, culturally situated meaning and the student's preferred communication mode. Generative systems should therefore be treated as provisional assistance requiring checking, accessible alternatives and accountable human review. Students should not be compelled to use commercial AI services as the exclusive route to support without assessment of cost, privacy, accessibility, availability and academic appropriateness. This position extends the previous chapter's insistence that technological assistance never removes institutional accountability (Miao & Holmes, 2023; Sangwa, 2026).

The operational standard emerging from UDL is **anticipatory flexibility with evidentiary equivalence**. Anticipatory flexibility requires that common barriers be addressed before individual complaints accumulate. Evidentiary equivalence requires that varied teaching and assessment routes preserve a defensible inference about achievement of the intended learning outcomes. Neither condition can be determined by counting

resource formats. They must be examined through curriculum logic, accessibility testing, moderation and students' ability to use the resulting learning pathway.

Inclusive design is particularly demanding when an award includes practical or work-integrated learning. The programme may have to verify access to laboratory benches, adjustable equipment, safe placements, accessible transport, alternative communication arrangements and suitably prepared external supervisors. A student should not discover at placement allocation that an approved adjustment applies on campus but has no agreed counterpart at the placement site. Neither should a university certify a safety-critical competency through an alternative that does not test the required performance. The appropriate process begins with an outcome-level specification, identifies the functional barrier and the place where it arises, tests credible adjustments or alternative placement arrangements, and records who has authority to approve them. Where professional approval is implicated, the competent professional authority must be consulted rather than presumed to accept a university's unilateral equivalence judgement.

A programme-level UDL review can be organised around an assessment pathway rather than a collection of design principles. Consider an explicitly hypothetical environmental-science module requiring students to interpret remote-sensing imagery and justify a land-use recommendation. Downloadable datasets, accessible explanatory descriptions, keyboard-operable analytical tools and scheduled access to suitable workstations can widen participation without replacing the core requirement to interpret evidence. An alternative that merely supplies the lecturer's interpretation, however, would undermine the intended competence. The reviewer should examine whether each available route enables students to produce their own analysis, whether the assessment demands remain comparable, and whether any learner is excluded by a supposedly optional technology that has become functionally compulsory.

7.4 Digital divides: Connectivity, devices, geographic disparities, language, disability, and affordability

Digital exclusion is not a single shortage that disappears when a mobile network becomes available. It is a layered problem of coverage, affordability, service reliability, electricity, equipment, digital capability, language, accessible content, private study space and institutional expectations. The International Telecommunication Union's *Facts and Figures 2025* estimates that 36% of individuals in its Africa region used the internet in 2025, compared with 74% worldwide; the regional estimates were 55% in urban areas and 21% in rural areas (International Telecommunication Union [ITU], 2025). These are regional population estimates rather than measurements of university-student connectivity in Rwanda, and they cannot support an invented claim about how many Rwandan undergraduates are offline. Their relevance is to establish that nominal network expansion has not abolished materially unequal conditions for digital participation.

Geographic disadvantage is commonly experienced through the cumulative costs of participation. A rural learner may live within an area of nominal coverage while facing weak signal indoors, frequent interruptions, long journeys to reliable charging facilities and more expensive access to equipment repair. A commuter student can live near a campus yet have limited time for its services because of paid employment or caring responsibilities. A university that defines its provision solely in terms of campus access or assumed household connectivity can reproduce these disadvantages unintentionally. Programme planning should therefore test the learning route under plausible conditions, not only under the broadband available in an academic developer's office.

Device inequality is pedagogically consequential. A phone can support communication, audio instruction and some reading, but the practical experience of reviewing a complex statistical dataset, editing a lengthy dissertation, interpreting technical drawings or operating specialist software may differ sharply from using an adequately configured computer. Even among laptop owners, storage capacity, operating-system compatibility, assistive-technology support and software licensing can determine whether an academic task is feasible. Institutions should specify minimum functional requirements in language understandable to applicants and identify alternatives such as loan equipment, accessible on-campus workstations, remote laboratories or supervised access to specialised facilities. A recommendation to 'bring your own device' is inadequate when a mandatory task requires equipment that prospective students cannot reasonably obtain.

Affordability is another curriculum variable. Tuition is only one component of the effective price of study. Data bundles, electricity, travel to examinations, printed materials, software subscriptions, assistive technologies, accommodation, childcare and lost employment time can influence persistence. Changes in assessment design may quietly transfer costs from the university to students, as when a programme replaces a campus activity with repeated uploads of large video files or imposes a paid third-party examination service. UNESCO's 2023 assessment of technology in education cautions against equating the existence of an educational technology with fair educational value (UNESCO, 2023). Financial support policies should therefore be read together with course architecture and information about hidden compulsory expenditure.

Language is not simply a preference that can be accommodated by pressing a translation button. Academic success requires command of disciplinary vocabulary, genre conventions, argumentation and assessment instructions. Students moving from earlier education conducted substantially in another language may understand a concept before they can express it fluently in the institutional language of assessment. A just curriculum makes the required language standard explicit, teaches disciplinary language where relevant, distinguishes linguistic proficiency from the substantive disciplinary construct, and provides glossaries, examples and appropriate writing support. It should not assume that every language adjustment is automatically acceptable. Where professional safety or public communication is assessed, particular language competencies may be essential; what must be justified is their relationship to the award rather than the convenience of an inherited examination format.

Disability-related digital exclusion can intersect with poverty and geography. The capacity to use a screen reader depends not only on a student acquiring software but also on keyboard-operable interfaces, semantically structured documents, accessible authentication, usable data tables and responsive technical support. A captioned lecture remains exclusionary if required discussions are conducted in an inaccessible external application or if an oral examination cannot be arranged without unreasonable delay. Similarly, students experiencing cognitive, sensory, motor or episodic health-related functional difficulties may require flexible participation patterns without being compelled to disclose sensitive diagnoses to every lecturer. Inclusion calls for confidential, function-focused processes that protect academic standards while limiting unnecessary information sharing (United Nations, 2006; W3C, 2023).

Gendered and social expectations can affect the time and privacy available for study, without authorising generalisations that all members of a group share the same constraints. Learners who are parents, carers, refugees, employed adults or returning students may face discontinuous study time and administrative obstacles. Some may encounter financial or social pressures that cannot be removed by university action alone. Yet the institution can avoid compounding them through unpredictable deadlines, discriminatory assumptions, unnecessary campus visits and fragmented services. Equity analysis should be intersectional in its practical method, examining how barriers combine in individual pathways rather than treating each student as the representative of a single category.

An effective digital-equity response should distinguish **universal design controls**, **targeted resources** and **individual adjustments**. Universal controls include downloadable, sensibly sized files, clear course navigation and recorded alternatives where academically permissible. Targeted resources may include connectivity assistance, evening access to laboratories, a device-loan scheme, or additional academic-language provision. Individual adjustments respond to barriers not adequately addressed through universal provision. Their selection should be evidence-informed and reviewed with affected learners, with responsibility assigned to a competent institutional function. A grant for data bundles cannot resolve inaccessible examination software; a lecture transcript cannot remedy a scholarship policy that excludes eligible part-time learners. Matching remedy to mechanism is essential.

Digital-divide monitoring itself poses an evidentiary challenge. A questionnaire may overestimate access if it asks only whether students own a mobile phone. A platform log may underestimate learning undertaken offline, while a student who logs in daily might remain unable to complete required software exercises. Stronger evidence comes from task-specific accessibility testing, device and connectivity diagnostics, anonymised financial and support patterns, participation records interpreted in context, and direct evidence of learning. Institutions should report uncertainty and non-response. They should also avoid publishing subgroup tables from which learners with uncommon conditions or very small cohorts could be identified (ITU, 2025; Jisc, 2026).

Digital equity also requires a realistic continuity test. A course that functions under ordinary conditions may become inaccessible to students during a network interruption, an electricity outage, a platform suspension or an unforeseen campus closure. Programmes should distinguish activities that can be postponed without loss of integrity from activities requiring an approved substitution, a safe physical alternative or an extension of supervised provision. Students need a reliable channel for learning about disruption even when the learning-management system is unavailable. Those arrangements belong to ordinary inclusive design because the effects of disruption are not evenly distributed: a learner who can afford redundant devices and connectivity has options unavailable to a classmate sharing a single phone. The broader governance of emergencies is examined later in the volume; here the immediate concern is to prevent apparently neutral contingency rules from deepening educational exclusion.

7.5 Student admissions, orientation, academic induction, and digital literacy

Learner protection begins before admission. Prospective students should be given accurate information about qualification recognition, programme duration, credits and workload, delivery modality, compulsory attendance or synchronous components, practical placements, assessment conditions, technology requirements, tuition and additional costs, accessible support and complaint routes. An institution may be legally entitled to admit a learner while still behaving irresponsibly if it conceals a compulsory laboratory residency or advertises a programme as self-paced while imposing frequent fixed-time assessments. Admissions transparency is therefore a substantive quality control, not simply a marketing obligation. It enables candidates to judge the feasibility of participation and allows the regulator to evaluate whether the institutional offer matches authorised provision (HEC, 2026a; Republic of Rwanda, 2026).

Academic access should not be conflated with admission without preparation. Prior qualifications, disciplinary prerequisites, language capacity and professional requirements must be checked through fair, lawful and consistently documented processes. Equally, entry arrangements should avoid unnecessary barriers such as inaccessible application forms, unexplained documentary demands or inaccessible verification appointments. Where recognition of prior learning or bridging routes are legitimately available, students need transparent criteria and evidence requirements. The academic standard for entering a regulated programme cannot be waived solely to widen enrolment, but institutions should not impose requirements unrelated to capacity for successful study. Exceptions and appeals must be authorised, recorded and applied consistently.

Orientation is an institutional transition process rather than a ceremonial welcome. Students need to understand the sequence of learning, academic calendar, expected study hours, grading criteria, academic integrity and AI-use rules, support pathways, technical contingencies, library access, assessment appeals, respectful conduct and data protection. For digital provision, induction should include authentic practice: locating a reading, accessing an accessible document, participating in a discussion, uploading a low-stakes assignment, locating feedback and contacting a human support adviser. A completed online orientation quiz may provide modest evidence of familiarity, but the stronger test is whether learners can complete representative activities without avoidable assistance or confusion.

Digital literacy extends beyond ordinary social-media use. It includes secure account management, source evaluation, file formats, collaborative scholarship, accessible document handling, library databases, citation practices, research-data hygiene, responsible AI use and awareness of fraud and misinformation. Academic digital literacy is context specific: a mathematics student may need equation-editing and coding tools, while a nursing student must learn privacy-sensitive records handling and safe simulation access. Diagnostic assessment should therefore identify the actual capabilities required by a programme, followed by supported development and later verification. A single general computer-literacy workshop cannot establish readiness for all award levels or disciplines (UNESCO, 2023; Miao et al., 2024).

Induction should also create a realistic understanding of intellectual expectations. New students need examples of adequate and excellent work, explanation of disciplinary citation conventions, formative opportunities to practise argumentation, and early feedback that makes academic standards intelligible. Transition is particularly challenging when students enter through different secondary, vocational, work-based or international pathways. An academically rigorous institution should neither assume uniform preparation nor lower demand indiscriminately. It should diagnose prerequisites and build a structured

bridge to independent university learning, with clear records of support provided and the standards subsequently demonstrated (Tinto, 2012; Kahu & Nelson, 2018).

For adult, part-time and distance learners, induction should be repeatable and available beyond a single welcome week. Students may enrol late under lawful arrangements, return after interruption, or require renewed training following platform changes. Programmes should make core guidance persistently available, provide accessible self-service explanations alongside scheduled human support, and appoint a named owner for unresolved entry problems. A technically efficient admissions system that generates an account but fails to connect the learner to an academic adviser has completed an administrative transaction, not a successful transition to higher education.

The evidence necessary for review therefore includes the published prospectus and approved programme specification, documented admission criteria, accessibility testing of applications, orientation content, task-completion evidence, diagnostic learning activities, support enquiries and improvements made from recurrent problems. These records should not disclose individual medical or financial information to a programme committee unless there is a lawful and necessary reason. Evaluators should examine whether records support credible student pathways rather than reward the sheer number of onboarding emails or promotional messages.

The effectiveness of admission and induction arrangements should be evaluated through a bounded early-study diagnostic. Rather than assuming that enrolment establishes readiness, a programme may provide a low-stakes task involving library retrieval, interpretation of a rubric, use of the approved submission channel and identification of the correct help route. Students who encounter obstacles should receive guidance and a chance to repeat the task before the first consequential deadline. Such a diagnostic is not a disguised selection examination unless it is explicitly authorised and justified as one. Its purpose is to reveal remediable barriers early, distinguish digital confusion from disciplinary preparation, and create evidence for improving induction. Where responses reveal access requirements, records should be limited to what is necessary for support and handled under applicable confidentiality rules.

7.6 Learner engagement, persistence, motivation, self-regulation, and academic success

Engagement is often measured in ways that confuse visibility with learning. A student who posts frequently may be performing attendance rather than inquiry; another may read deeply, prepare careful notes offline and engage less often on a discussion board while producing excellent assessed work. Platform activity can be useful operational information, but educational engagement concerns the meaningful investment of attention, thought, effort and interaction in learning. Kahu and Nelson (2018) conceptualise engagement through the educational interface, where structural and psychosocial conditions shape what learners do and experience. This approach is especially valuable in digitally mediated provision, where institutional observers may see abundant clicks but little evidence of intellectual progress.

Motivation should be understood as dynamic rather than as a fixed possession of the learner. Interest, confidence, belonging, perceived relevance, feedback experiences and life circumstances can alter the student's willingness and capacity to persist. The institution influences these conditions through the coherence of academic tasks, the respect shown to learners, the predictability of assessment, the opportunity to seek help and the visibility of progress. A support strategy focused only on motivational workshops misses causes of disengagement embedded in unsustainable workloads or confusing course designs. The more useful professional question is which aspects of the learning environment are within institutional control and which patterns of disengagement they may be producing.

Self-regulated learning remains central to flexible education. Zimmerman (2002) distinguishes processes of planning, performance monitoring and reflection, and Broadbent and Poon's (2015) systematic review identifies associations between several self-regulation strategies and achievement in online higher education. These findings should not be converted into a claim that all students need identical study habits or that a deficit in self-regulation explains every academic difficulty. Self-regulation develops partly through instructional support. Effective courses provide clear milestones, accessible calendars, practice tasks, opportunities to monitor mastery, formative feedback and routes for recovering from an early error. In this

sense, teaching learners how to manage demanding work is a legitimate component of tertiary education rather than a concession to weakness.

Belonging similarly requires attention to academic practice, not merely social events. Students may feel connected when lecturers acknowledge their reasoning, peers respond constructively, disciplinary identities become accessible and institutional decisions are predictable. Isolation can be intensified by anonymised communication, unmoderated hostile forums or inaccessible group activities. Yet mandatory peer interaction is not a universal remedy. A research student may need protected time for independent analysis; a learner with a particular functional limitation may find large real-time discussions inaccessible; a mature student may prefer purposeful short consultations. Participation design should relate interaction to intended learning rather than equate inclusion with constant communication (Garrison et al., 2000; Thomas, 2012).

Assessment and feedback are powerful mechanisms of persistence because they influence students' interpretations of their own progress. A learner receiving a low grade without intelligible comments may infer personal inability; a similarly demanding assessment with prompt, specific guidance can establish a pathway for improvement. Institutions should make assessment schedules coherent across modules, moderate decisions, provide opportunities to practise before high-stakes examinations and ensure that reasonable adjustments can be requested without fear of academic penalty. Late marking, unexplained rubric changes and inconsistent rules are not merely administrative inconveniences. They can disrupt planning, erode trust and create avoidable progression risk (Tinto, 2012; Biggs, 1996).

Retention must nevertheless remain subordinate to educational integrity. A programme that retains every student by relaxing essential standards may inflate its completion indicator while diminishing the value of the award. Conversely, a programme with a demanding curriculum may record withdrawals that arise partly from honest changes in academic interest, lawful transfers, family responsibilities or economic shocks rather than failed teaching. Analysis should distinguish continuation, transfer, temporary interruption, academic dismissal, voluntary departure and programme closure where records permit. It should also consider students who are technically enrolled but not progressing, and those whose study path requires a legitimate part-time duration. The evaluative object is educational opportunity and appropriate achievement, not the maximum attainable percentage on one dashboard.

A stronger retention inquiry links cohort characteristics and programme arrangements to patterns of learning, without claiming causal certainty from administrative associations. It asks whether first-semester assessment has disproportionate failure, whether compulsory online meetings coincide with working hours, whether feedback delays cluster in large modules, and whether certain disability adjustments are repeatedly implemented too late. Corrective action should be proportionate to the plausible mechanism: redesign an assessment sequence, improve mentoring, adjust service hours, clarify navigation, provide an alternative participation route or review the admissions information. Subsequent evidence should test whether the specific difficulty declined without weakening standards or relocating the barrier elsewhere.

A further distinction concerns recovery from interruption. Programmes often publish excellent rules for uninterrupted full-time study but give little attention to students returning after illness, employment changes, financial difficulty, parental responsibilities or displacement. Re-entry should involve an authorised academic review of completed credit, changed module prerequisites, expired professional competencies, outstanding financial or administrative obligations and the learner's feasible study load. Such review must neither erase legitimately achieved learning nor promise automatic credit equivalence when the curriculum has materially changed. Clear re-entry routes protect both academic integrity and the substantive possibility of completing a qualification. They also make withdrawal and readmission statistics more interpretable because temporary interruption is no longer treated as indistinguishable from permanent educational failure.

7.7 Student advising, mentoring, psychosocial support, academic counselling, and referral systems

Learner support is best understood as a coordinated service system rather than a collection of offices. Academic advising concerns curriculum choices, progression, prerequisites, workload and degree requirements. Tutoring and mentoring address disciplinary learning and professional development. Counselling and wellbeing services may address personal distress, while accessibility professionals coordinate educational adjustments. Technical and library support provide other distinct forms of assistance. Students

often experience these functions as a single problem: they cannot proceed with study until someone resolves an obstacle. The institution's quality depends partly on whether learners can navigate this complexity without repeatedly explaining confidential circumstances to staff unable to help (Walsh et al., 2024; Mireku et al., 2024).

Effective advising requires identifiable ownership. Each learner should be able to locate a competent first contact, understand the expected response window and see how an unresolved issue is escalated. Programme leaders should determine which decisions belong to course lecturers, advisers, academic boards, the registrar, finance or specialist offices, and how referrals move across those boundaries. A 'warm referral' involves a service arranging the next contact or transferring a case with appropriate consent rather than merely giving the student another email address. Case records should be proportionate, access controlled and sufficiently informative to prevent requests from disappearing when staff change roles.

Academic mentoring is especially important where learners are undertaking unfamiliar intellectual work or navigating transitions into new disciplines. A credible scheme provides appropriate matching, clarity about whether mentors are peers or qualified academics, scope of advice, referral rules and safeguards against conflicts of interest. Mentoring should not be used to transfer to unpaid students responsibilities requiring professional academic judgement. Nor should an institution infer effectiveness from the number of mentoring meetings. Evidence of benefit may include resolved problems, improved understanding of academic expectations, timely progression and student accounts of support, interpreted alongside workload and completion data (Tinto, 2012; Thomas, 2012).

Psychosocial support requires particularly careful boundary-setting. Universities should acknowledge that financial stress, bereavement, isolation, harassment, displacement and other difficulties can affect study, while avoiding the assumption that every lecturer is a qualified therapist. Staff need training to respond respectfully, identify when immediate safeguarding action may be necessary, and refer learners to appropriately competent services. Institutions with limited specialist capacity can establish clear partnerships and referral arrangements, but those arrangements must be real, accessible and suitable for the risk involved. A directory of external telephone numbers is not an adequate crisis process if students cannot reach the services or if no one knows who is responsible for urgent escalation.

Digitally mediated wellbeing provision must also account for confidentiality and limitations of remote communication. A student may participate from a shared household device, have limited private space for a call, or reside outside the university's normal service jurisdiction. Institutions should explain what can and cannot be offered remotely, arrange secure communication, obtain consent where required, and avoid storing highly sensitive narratives in ordinary course discussion tools. Student-support data should not be accessible simply because a lecturer or platform administrator possesses broad system privileges. Rwanda's Law No. 058/2021 relating to the protection of personal data and privacy supplies a domestic legal context for lawful, purpose-limited and protected processing; the precise institutional compliance arrangements require assessment under the law and any applicable implementing instruments (Republic of Rwanda, 2021).

AI chatbots and automated triage may provide information after office hours but must not be represented as competent counselling or unqualified advice on legal, medical or crisis matters. A safe arrangement clearly identifies automated interaction, limits data collection, provides accessible human escalation, tests for harmful misinformation and records responsibility for consequential responses. It also avoids making a student's willingness to disclose sensitive information to a commercial platform the price of obtaining ordinary academic assistance. Ethical monitoring and human judgement remain necessary even where automated tools improve response speed (Miao & Holmes, 2023; Jisc, 2026).

Support quality must include responsiveness and resolution rather than service visibility alone. Programme and quality units should review anonymised inquiry categories, time to first meaningful response, overdue cases, referral failures, accessibility complaints and feedback on fairness. Response-time targets should distinguish ordinary inquiries from urgent safety concerns, and they should be locally resourced rather than borrowed as universal numerical standards. The strongest evidence of improvement is a demonstrated change to the process generating repeated problems, accompanied by confirmation that learners can now complete the affected educational activity. In the language of quality governance, learner support becomes credible

when the institution can move from a claim of service availability to an auditable record of competent action and verified resolution.

In Rwanda, support-system design should be compared explicitly with published HEC expectations rather than assessed only against broad international advice. The March 2026 distance-learning instrument addresses orientation, student preparation, a support ticketing mechanism, and advance communication of essential equipment. It also describes an online student-support helpdesk expected to operate continuously for relevant online provision (HEC, 2026a). Reviewers should distinguish the availability of a channel around the clock from a claim that every enquiry can be resolved immediately at all hours. An institution needs to show how submissions are received, categorised, escalated and answered by competent personnel, including how urgent risk is identified and how service continuity is maintained. The published HEC assessment tool should be examined for the programme's particular classification and assessment context; the author's additional quality indicators cannot be substituted for those official provisions.

Referral governance must also be tested through the boundary between academic and specialist judgement. A lecturer can identify that a student is struggling with disciplinary work, explain an assessment and connect the learner to a service, but should not infer a mental-health condition from an LMS trace or conduct unsupported clinical triage. Similarly, an adviser may explain academic options but should not override the senate's or examination authority's rules through an informal reassurance. Where a student raises several linked concerns, such as inaccessible assessment, financial strain and a supervision dispute, an appointed coordinator should arrange the necessary decisions without centralising all sensitive information in an unprotected record. The principle is coordinated responsibility with minimum necessary disclosure, not unlimited visibility of a student's personal circumstances.

7.8 Supporting students with disabilities and other access requirements in online and blended environments

Disability inclusion tests whether a university understands the difference between equal academic expectations and identical conditions of access. Accessible education is not a specialised afterthought reserved for a small group of declared students. Its design concerns navigation, information, interaction, assessment, facilities and support across the student population, while particular learners may also require reasonable individual accommodation. The CRPD supplies an important international rights framework, including its Article 24 protections concerning tertiary education, but an institution must examine the domestic legal obligations governing its own operations and must not equate voluntary adherence to a technical benchmark with a complete legal opinion (United Nations, 2006). The institutional obligation is best implemented through clear responsibility, confidential procedures and repeated verification of educational access.

For digital environments, WCAG 2.2 offers an established testable framework organised around perceivable, operable, understandable and robust web content (W3C, 2023). Perceivability requires that information and interface elements be available through usable sensory alternatives; operability concerns the ability to navigate and activate functions; understandability concerns intelligible information and predictable interaction; and robustness concerns compatibility with relevant user technologies. These principles are necessary technical reference points but do not, by themselves, settle whether every pedagogical resource or learner-support service is accessible. As the W3C explains in its accessibility evaluation guidance, automated tools cannot perform every necessary check, and informed manual evaluation remains essential (W3C, 2024).

An accessible-learning audit should begin with authentic journeys rather than a platform's compliance logo. Can a keyboard-only user find the assignment and upload work? Does screen-reader output convey heading structure, table relationships, error messages and feedback? Can a student enlarge text without losing controls? Are video captions accurate and synchronised? Can learners understand content that depends on colour, arrows or unlabelled diagrams? Are mathematical expressions, specialised symbols and laboratory materials accessible in appropriate forms? Can a student request assistance when an authentication step fails? These questions should be tested across the LMS, library, videoconferencing, admissions, assessment, payment, complaints and student-record systems, including third-party services.

Documents merit specific scrutiny because a visually polished file may be functionally unusable. An image-only scan of a reading cannot reliably substitute for structured text. A PDF with apparent headings but no tagging,

incorrect reading order or unlabelled figures may be inaccessible to assistive technologies. Likewise, a Word file with manually enlarged text but no semantic headings may impair navigation. Universities should establish accessible authoring templates, meaningful alternative text, readable contrast, real heading styles, tagged exports and systematic remedial processes for legacy resources. Publication of a general accessibility statement without training authors or checking exported resources provides weak evidence of implementation (CAST, 2024; W3C, 2024).

Reasonable adjustment requires academic judgement as well as procedural justice. An individual request should establish the functional barrier, the relevant academic task, the essential outcome, the possible adjustments and their likely consequences. For a timed written examination, additional time or assistive input may remove an irrelevant motor or processing barrier while preserving the construct being assessed. In a clinical examination, an adjustment must be assessed against essential patient-safety competencies and applicable professional standards. Decisions should be reasoned, documented, timely, confidential and appealable through the appropriate institutional process. Neither automatic approval nor unexplained refusal is sufficient. The objective is a defensible match between need, academic validity and lawful institutional responsibility.

The disclosure process itself can exclude students when it requires repeated medical narratives, costly documentation or contact with numerous offices. A better design uses a competent central accommodation function, communicates only the educational arrangements necessary to implement the decision, limits retention and sharing of sensitive records, and provides a route for urgent provisional measures. Lecturers need enough information to apply agreed adjustments, but they do not automatically need to know a student's full diagnosis. Where the institution relies on outside professionals, it must ensure that referral and verification practices are proportionate, accessible and fair rather than indefinitely delaying ordinary educational participation.

Quality assurance should examine both prospective readiness and actual operation. Prospective evidence includes accessible procurement criteria, course templates, staff training, assessment adjustment rules, assistive-technology provision, accessible complaints procedures and tested user journeys. During delivery, reviewers should examine the timeliness of adjustment, recurrent barriers, remedial actions and the student's capacity to complete required learning activities without unnecessary disclosure. Accessibility quality is not established by a single favourable scan, an undated supplier certificate or the fact that no complaints have been recorded. Silence may indicate that students cannot find a trustworthy or accessible complaint channel.

For Rwanda, disability inclusion should be interpreted through the interaction of the CRPD, applicable national law, ministerial policy and programme-specific HEC material. The Ministry of Education's 2018 policy expressly recognises barriers across educational levels, including tertiary education, and identifies responsibilities concerning specialist support, personnel development and resources (Ministry of Education, 2018). Its policy objectives should not be mechanically recast as individually enforceable numerical standards for every institution. Nonetheless, their presence rules out a defensible institutional approach in which accessibility is treated solely as a discretionary favour. Reviewers should specify whether a finding concerns a legal right, an official programme-assessment provision, an institutional commitment or a professional accessibility benchmark, then examine the evidence appropriate to that claim.

Third-party technology is a recurrent point of vulnerability. A university may have an accessible institutional LMS while using a commercial proctoring, library, payments or simulation service that fails a critical user journey. Supplier statements can help identify a system's claimed conformance but do not verify how the configured version works for the institution's tasks and user population. Procurement should therefore include accessibility criteria, access to testing information, contractual remedies, procedures for reporting defects, a feasible alternative during outages and a plan for transferring records if the vendor changes. A high-risk assessment interface should be tested with relevant assistive technologies before examination deployment and again after material updates. Accessibility assurance is a continuing programme duty, not a one-time purchase condition (W3C, 2023, 2024).

7.9 Postgraduate supervision, research mentoring, and academic writing support

Postgraduate inclusion deserves separate attention because research degrees often expose students to long periods of independent inquiry, uneven supervisory availability and complex academic expectations. The doctoral candidate's principal barriers may not be access to lecture slides but the absence of topic-specific advice, research methods training, specialist literature, ethical review, scholarly community and timely interpretation of feedback. A programme that admits candidates remotely must demonstrate how supervision, proposal approval, progression review, examination and research integrity will operate throughout the candidate's actual pathway. Generic LMS access cannot establish the educational feasibility of advanced research (HEC, 2026b; Sangwa, 2026).

Rwanda's Higher Education Council issued a *Postgraduate Degree Framework* dated July 2026, subsequently listed on its official guidelines portal in October. It addresses the research-degree lifecycle through admission, supervision, programme administration, study milestones, progress monitoring, changes of supervisors and examination arrangements (HEC, 2026b). Particularly relevant to learner protection, the framework discusses written supervisory agreements, the identification of a lead supervisor, continuity where supervision changes, research management and periodic progress review. Its own text differentiates national minimum expectations from good-practice recommendations and states that applicable law, the Rwanda Qualifications Framework and programme accreditation conditions prevail where there is conflict. Institutional teams should therefore check the operative status, wording, disciplinary applicability and approved programme conditions of each relevant clause. They should neither overlook the new framework nor treat every aspirational statement within it as a separately enforceable statutory requirement. The substantive professional test remains whether research candidates can obtain the academic guidance and fair institutional decisions necessary to pursue the award's actual intellectual demands.

A credible supervision agreement should clarify intellectual responsibilities, communication arrangements, anticipated feedback periods, supervisory workload, milestones, procedures for resolving disagreement and contingencies if a supervisor becomes unavailable. Such arrangements protect academic independence rather than standardise research outcomes. Intellectual discovery is not perfectly predictable, but students should not be left uncertain about whether a research proposal has been received, whether ethics approval is required, which methodological standards apply or how a delayed response affects their progression. An institutional monitoring system should detect missing milestones and unresolved supervision breakdowns without converting scholarly supervision into routine surveillance.

Research mentoring must attend to differences in disciplinary preparation and access to the knowledge infrastructure. A learner entering through professional experience may possess strong practical judgement but require sustained instruction in epistemology, research design, source criticism or scholarly writing. A candidate working in another language may need academic-language support without having their analysis undervalued. A distance student may need secure database access, reference-management assistance and workable approaches to specialised software. Effective provision combines postgraduate seminars, writing groups, library instruction, methods clinics, responsible peer feedback and supervisor guidance, with accessibility and asynchronous options where feasible. Academic writing support should help students produce defensible scholarship rather than silently replace their authorship.

The increasing availability of generative AI complicates research supervision. A candidate may use approved technology to explore terms, organise a literature map, correct language or test alternative interpretations, but must still establish the authenticity of sources, the accuracy of methods, the originality of arguments and compliance with institutional disclosure rules. Supervisors should provide explicit guidance about permitted assistance, confidential data, publication ethics and verification of references rather than relying on undocumented assumptions. Where a research degree permits recognition of published work, prior-learning pathways or practice-based evidence, the institution must preserve the award's intellectual demands and the independent assessment of the candidate's contribution (Miao & Holmes, 2023; Sangwa, 2026).

Evidence of postgraduate support includes supervisor appointment and expertise, research-active resources proportionate to the qualification, candidate-supervisor agreements, anonymised progression trends, records of training, timely feedback, research ethics arrangements and transparent examination processes. An excellent research proposal from one candidate cannot validate a whole institutional system; conversely, a

difficult individual project does not prove general supervisory failure. Evaluation should look for repeated capability, access to competent challenge, equity in supervisory allocation and safe routes for reporting problems. This domain connects learner support to the institutional research and governance capacities described earlier in the book.

The supervisory relationship also requires attention to power. A candidate may depend on a supervisor for access to research opportunities, progression recommendations, funding information and eventual examination arrangements. This dependence can make it difficult to raise concerns about unreasonable delay, inappropriate expectations, research misconduct or discrimination. A credible university establishes a route for confidential, independent review, defines when additional supervisors or an alternative supervisor may be appointed, and separates legitimate academic disagreement from procedural mistreatment. It must preserve the candidate's ownership of scholarly arguments and respect the supervisor's responsibility to challenge deficient work. The distinction is particularly significant for distance and part-time candidates who have limited informal access to departmental leadership.

Evaluation should also avoid equating a fixed timetable with sound research formation. An institution may legitimately establish milestone reviews, but discovery, archival access and ethical approvals do not always follow a predetermined sequence. A delayed thesis can reflect poor supervision, under-resourcing, unrealistic initial planning, a necessary methodological revision or substantive scholarly difficulty. The evidence needed is therefore a reasoned record of progress, feedback, decisions and available support rather than a single elapsed-time statistic. Comparing doctoral completion across fields without controlling for entry route, enrolment intensity, project type and research infrastructure can obscure the causes an institution should address.

7.10 Learning analytics, early-warning systems, ethical monitoring, and responsible intervention

Learning analytics promises to make emerging educational difficulties more visible. Data from learning platforms, assessment systems and student records can identify non-submission, delayed progression or support-service bottlenecks that might otherwise go unnoticed. Reviews by Ifenthaler and Yau (2020) and work on the institutional strategy of analytics by Gasevic, Tsai and Drachsler (2022) indicate that value depends on how information is connected to teaching, governance and interventions, not merely on predictive sophistication. The fundamental distinction is between **a statistical signal**, **a defensible interpretation**, and **a justified educational action**. A student labelled at risk has not thereby been diagnosed with poor motivation or predicted to fail with certainty.

Prediction can reproduce the conditions it is intended to improve if it is treated as identity. A model trained on previous cohorts may detect that students from certain locations, admissions routes or financial circumstances have historically progressed more slowly. These patterns may reflect structural barriers rather than lower academic potential. Interventions that restrict opportunities for students assigned a high-risk score can institutionalise disadvantage. A responsible model is therefore designed to offer proportionate support, with transparent purposes, calibrated error, independent human review and the possibility for learners to correct inaccurate information or challenge a consequential decision (Slade & Prinsloo, 2013; Jones, 2019; Jisc, 2026).

The most useful initial early-warning arrangements may be operational rather than algorithmically complex. A missed mandatory assessment, a repeated failure to access required software, an unresolved appeal, or absence of supervisor feedback for an extended period can trigger a human inquiry under a published procedure. Such rules still require calibration and context. An asynchronous learner who downloads materials for offline use may generate fewer activity logs than a learner who repeatedly opens the same page. An LMS without meaningful offline synchronisation systematically undercounts some legitimate study activity. Programme teams should test what the data represent before presenting digital traces as direct measures of engagement or achievement.

Rwanda's Law No. 058/2021 relating to the protection of personal data and privacy makes data governance a domestic legal issue rather than only an international ethical preference (Republic of Rwanda, 2021). Institutions should identify the appropriate lawful basis and purpose for processing, apply relevant safeguards, limit access and retention, and understand obligations related to third-party processors and cross-border arrangements. An early-warning initiative should be assessed before implementation for data

minimisation, transparency, potential sensitive information, security, misuse and the risk of unjustified secondary purposes. This chapter does not provide a substitute for institutional legal advice or assert that a single consent form resolves every lawful-basis question. Consent, where relevant, should be meaningful; other lawful bases require equally careful justification under applicable law.

A proportionate intervention sequence begins with the least intrusive informative step. For example, an adviser might send an accessible private message noting a missed assessment and offering specific support, without revealing a model-generated risk label to peers or instructors who do not need it. If the learner explains that a power interruption prevented submission, the response may be an authorised alternative deadline and referral to connectivity assistance. If academic difficulty is identified, a tutor can propose focused feedback or study guidance. If immediate welfare risk emerges, the institution must follow its properly authorised safeguarding protocol. Automated categorisation should not bypass the competent human decision-maker or deprive students of clear reasons and review rights.

Ethical analytics must be evaluated for educational consequences, not only classifier accuracy. A model can predict historical withdrawals well while its interventions accomplish little, increase stigma or divert scarce advisers from students with equally urgent but less visible difficulties. Outcome evaluation should therefore ask whether the intervention reached affected students, was experienced as helpful, changed the identified barrier, protected confidentiality and improved appropriate progression without unfair consequences. Where statistical evaluation is feasible, error rates and intervention outcomes should be compared across legitimately and safely defined student groups, with attention to small-cell disclosure and incomplete data. Where cohorts are too small for stable inference, qualitative review, expert examination and cautious reporting are preferable to spurious percentages.

The case for human oversight is especially strong where AI is used to triage student cases or recommend restrictions. The Jisc code of practice, updated in 2026, emphasises transparency, proportionality, validation, human interpretation and avoiding the use of learning analytics for grading or profiling. Jisc is a professional UK reference, not an Rwandan regulator. Its principles illuminate why a data-driven educational system must remain answerable to the people affected by its decisions. Institutional success is better demonstrated by verified support and fair resolution than by the number of students an algorithm classifies each month (Jisc, 2026).

Learning-analytics governance should incorporate a validity review before and after deployment. Before use, the institution should record the target event, relevant cohort, available predictors, missingness, model or rule version, intended intervention and plausible alternatives. It should also identify false-positive and false-negative consequences. A false positive may subject a capable student to unnecessary scrutiny or unwanted disclosure; a false negative may mean that a learner with genuine difficulty receives no timely offer of help. Neither error is purely mathematical because its harm depends on institutional action. After deployment, reviewers should examine whether student circumstances or delivery methods have changed so far that historical patterns no longer apply, and whether staff actually have the capacity to respond to every alert.

A risk indicator should ordinarily open a conversation, not close an opportunity. Students must not be silently denied advanced modules, placements, scholarships or academic discretion because a model predicts possible withdrawal. If a consequential decision relies on processed data, the university must identify the applicable legal basis, the qualified human decision-maker, the evidentiary reasons and routes for review. Institutions should avoid inferring protected or sensitive characteristics from behaviour merely because software can generate such classifications. The most convincing analytic success is not increased predictive accuracy in isolation, but a demonstrable reduction in a remediable barrier while academic standards, privacy and student autonomy remain protected.

7.11 Student voice, complaints, feedback, institutional responsiveness, and learner protection

Student participation in quality governance is necessary because policy documentation and management reporting do not capture the full experience of a learning environment. Learners can identify barriers that administrators never encounter, including inaccessible examination instructions, hidden data costs, inconsistent feedback, discouraging interactions, unsafe placements or contradictory advice about progression. Yet student voice is not automatically representative. Learners with limited connectivity, fragile

enrolment, language barriers or distrust of institutional authorities may be least likely to complete a satisfaction survey. An institution should therefore employ multiple ethically appropriate routes for listening and avoid treating low response rates or absence of complaints as evidence that no problem exists (UNESCO, 2020; HAQAA Initiative, 2018).

Course evaluations and representative forums have different functions. A course evaluation can identify recurring problems with navigation or teaching but cannot by itself establish the validity of assessment or the achievement of outcomes. Student representatives can discuss systemic issues but should not be required to reveal confidential individual complaints. Focused accessibility testing may illuminate technical barriers, while complaints, appeals and safeguarding reports require protected due-process channels. Each evidence source answers a bounded question. Strong institutions triangulate student accounts with course artefacts, staff records, assessment evidence and operational data, recording disagreements rather than assuming that one favourable score resolves every concern.

Complaints and appeals must be intelligible, accessible and free from retaliation. Students should be told how to distinguish a service complaint, an academic appeal, an allegation of harassment or discrimination, a safeguarding concern and a request for disability adjustment, because different cases may require different responsible authorities and procedural safeguards. The university should provide confidential reporting where appropriate, fair notification, impartial consideration, reasons for material decisions, proportionate remedies and access to further review through applicable procedures. Digital students should not need to travel physically simply to submit an ordinary online-programme complaint unless a justified requirement exists.

The strongest evidence of responsiveness is the closure of a justified concern. An institution may report that it received fewer complaints in a subsequent year, yet that decline may mean that access to the complaint process became harder. Better indicators include whether complaints were acknowledged, investigated within a justified timeframe, resolved through authorised decisions, communicated clearly and followed by prevention of recurrent failures. Where student testimony and institutional records diverge, reviewers should examine the credibility and completeness of each. Confidentiality must be protected, particularly in small programmes where contextual details may identify complainants.

Student voice should also influence curriculum governance before harm occurs. Consultation on assessment load, preferred support hours, accessibility and work-integrated learning can identify implementation risks at modest cost. It cannot replace disciplinary peer review or external standards, and the most popular educational option is not automatically the best. Legitimate participation means that learners can provide evidence and receive a reasoned response; it does not mean that a vote can abolish an essential programme outcome. Incorporating such feedback into academic decision-making makes inclusion an institutional practice rather than a statement of values.

The effectiveness of student-voice arrangements depends on how disagreement is handled. A serious assessment appeal should not be decided merely by the lecturer whose conduct or grade is challenged; a systemic accessibility complaint should not be dismissed because other students encountered no difficulty; and an allegation of harassment should not be addressed exclusively through a general satisfaction survey. Appropriate independence, rights of response, evidence retention, possible conflicts of interest and the protection of affected parties are part of procedural credibility. Where issues cross institutional or external regulatory jurisdictions, the programme must correctly identify the available escalation route rather than promise review by a body without jurisdiction. Transparency requires students to understand what outcome an institutional procedure can lawfully deliver.

There is also a distinction between closing a case and repairing the underlying system. A complaint about inaccessible instructions may be resolved for one student through an authorised extension, while other students continue to face the same defect. The individual file may be closed only when its remedy is properly delivered, but the programme's corrective action should remain open until the resource or process is fixed and retested. QA teams should therefore report de-identified themes and prevention outcomes, not circulate private narratives or claim success from declining complaint counts. This is the connection between a credible complaint procedure and continuous programme enhancement.

7.12 Graduate competencies, career development, employer engagement, and lifelong learning pathways

Student success extends beyond the final examination, although universities must avoid claiming sole causal responsibility for employment outcomes. A defensible graduate profile encompasses disciplinary knowledge, professional or research competence, transferable reasoning, ethical judgement and the ability to continue learning as contexts change. Career support can help students identify and communicate those capacities, while employer engagement may provide internships, career insight, project briefs and feedback on professional expectations. The educational question is whether opportunities help learners develop and demonstrate relevant competencies, not whether the institution can advertise a high placement percentage with an unclear denominator (Biggs, 1996; Sangwa, 2026).

Career services should begin before the final year and be connected to curriculum progression. Students may need guidance in preparing a credible portfolio, locating lawful and safe placements, understanding professional licensing, reflecting on workplace ethics, and navigating job searches or postgraduate pathways. Digitally mediated programmes should offer comparable opportunities to dispersed students, including remote career advising, accessible vacancy information, professional networking and appropriately governed placement arrangements. In disciplines that require direct practice, simulated activities can prepare students but cannot automatically replace supervised experience prescribed by competent professional or academic standards.

Employer engagement should be critical rather than deferential. Employers can identify current skill gaps and provide evidence of workplace expectations, but their preferences may reflect particular technologies, firm sizes or short-term recruitment conditions. University curricula must retain theoretical depth and intellectual independence. Career-readiness should include the capacity to evaluate evidence, learn unfamiliar technologies, communicate across disciplines, respond to ethical conflict and recognise when an apparently efficient automated solution is unsafe. These capabilities remain relevant under rapid AI adoption precisely because tool familiarity becomes obsolete more quickly than sound disciplinary judgement.

Lifelong learning pathways are also part of inclusive success. Returning adults, displaced learners, workers changing occupations and graduates updating knowledge may benefit from appropriate short courses, micro-credentials, recognition of prior learning or part-time postgraduate routes. Such arrangements should have transparent entry criteria, learning outcomes, assessment, credit and recognition conditions; institutional advertisements must not imply that every micro-credential automatically converts into degree credit or professional registration. Equity is strengthened when pathways reduce unnecessary repetition without diluting the integrity of qualifications and when students receive clear information about what each award legally and academically signifies.

Graduate-tracking evidence should therefore be interpreted cautiously. Survey response bias, local labour conditions, economic shocks, informal work and graduates' pre-existing advantages complicate simple comparisons of employment rates. Professional accreditation may require particular outcomes, but these should be distinguished from broader developmental aspirations. Suitable evidence may include assessed capstone portfolios, verified placement performance, career-service use, graduate surveys with documented limitations, employer consultation and postgraduate progression. A university should report what its evidence supports and avoid turning incomplete employment data into a publicity claim about educational causation.

Graduate support should include the quality and equity of transition opportunities, not merely the number of advertised vacancies. Some professional opportunities depend upon unpaid placements, travel, unpaid examination preparation or networks that students have little means to access. An inclusive career programme should identify such hidden participation requirements, provide truthful information about professional licensing and qualification recognition, and negotiate practicable alternatives where academic and professional standards allow. Career counselling may be offered online, but students should not be promised the same placement opportunity regardless of geography or employer requirements when the institution has not established that such opportunities exist. Reliable graduate information differentiates resources controlled by the university from economic conditions and decisions made by external employers.

7.13 Monitoring equity, educational outcomes, and the quality of student experience

Equity monitoring should begin with a defensible definition of the population, educational opportunity and outcome under review. An admissions report describes who entered; a participation report describes elements of the learning experience; an attainment report describes achievement against standards; and a progression report describes movement through a specified programme or cohort. These are related but not interchangeable measures. Comparing institutions through one aggregate completion rate without considering programme mix, entrants, legitimate part-time trajectories, withdrawals and transfer arrangements can misrepresent their educational contribution. Accordingly, institutions should establish indicator definitions before collecting data and keep them stable or document changes across reporting periods (Tinto, 2012; Kahu & Nelson, 2018).

Disaggregation may reveal otherwise concealed differences, but it requires both ethical safeguards and analytical humility. Where lawful, relevant and adequately protected, institutions may examine participation and outcomes by delivery mode, programme, entry route, location, financial support, declared access requirements or other contextually justified variables. Each category must have a clear purpose and an acceptable data basis. Small cohorts can make percentages unstable and disclosure risks high; missing data may be systematically concentrated among those already facing barriers. A gap in outcomes is a prompt for investigation, not proof that one characteristic caused the difference. Alternative explanations, differences in assessment and changes in cohort composition require attention before evaluators assign responsibility.

Indicators should balance prospective access, quality of enacted provision, learning achievement and institutional response. Examples include successful orientation-task completion, availability of alternative formats, resolution of accessibility defects, time to a meaningful support response, assessment feedback timeliness, module-level attainment, progression after authorised interventions, examination adjustments delivered when agreed, and documented responses to complaints. Each indicator needs a defined numerator, denominator or qualitative evidence standard, data owner, reporting period, quality check, permitted use and known limitations. Without this discipline, dashboards turn student experience into attractive but unauditable colours.

Measurement must not reward the wrong behaviour. An adviser may shorten average case-resolution time by closing difficult cases prematurely; a lecturer may raise pass rates by making assessment easier; a programme may improve its apparent retention by excluding academically vulnerable applicants. To reduce such distortions, outcome measures need balancing evidence. Fast case closure should be checked against learner confirmation and re-opening rates; high pass rates should be reviewed against assessment standards and moderation; retention trends should be read alongside fair admissions, academic achievement and student wellbeing. Improvement is credible when the response strengthens real learning conditions without merely shifting the problem into an unmeasured area.

HEC's published 2021 internal quality-assurance guidelines provide an additional official reference for institutional responsibility, student participation and continuous review. Institutions should consult the current adopted provisions rather than treat the proposed instruments in this chapter as substitutes for HEC documents (HEC, 2021). The institutional review cycle should also distinguish assurance from enhancement. Assurance establishes whether minimum legal, academic and learner-protection commitments are satisfied; enhancement asks how credible provision can be improved beyond those minima. A persistent accessibility barrier in a compulsory assessment may demand immediate remediation and potentially restriction of the affected activity. A less critical concern about the clarity of optional course navigation may be prioritised for planned redesign. The evidence-traceable approach requires reviewers to identify normative authority, claim, source, verification, finding, uncertainty, owner, corrective action and subsequent check. This is consistent with IETQG and ETAJ as proposed scholarly architectures, without claiming their formal adoption by HEC or validated predictive value (Sangwa, 2026).

Importantly, equity monitoring should be participatory without becoming intrusive. Student representatives and professional support staff can help interpret recurring problems, while public reporting should protect confidentiality. Learners need to know when and why their data are being used; institutions should avoid speculative inferences about disability, mental health or motivation from behavioural traces. When an apparent disparity is discovered, the immediate professional duty is to investigate and protect learners, not to

publish a ranking of vulnerable groups. The combined evidence should support academic and resource decisions that can later be tested for actual educational consequences.

Equity-sensitive indicators need explicit denominators. An indicator such as 'students receiving timely feedback' is uninterpretable until the institution decides whether it covers all returned assessments, only on-time submissions, or only students who remained enrolled at reporting date. Excluding late or withdrawn students can create an artificially favourable performance picture. Conversely, counting every legitimate extension as a service failure misstates an authorised flexible pathway. The institution should maintain both a transparent primary denominator and an explanation of exclusions, deferments and missing outcomes. Cohort-level comparisons should specify programme, study intensity, modality and period before reviewers infer change.

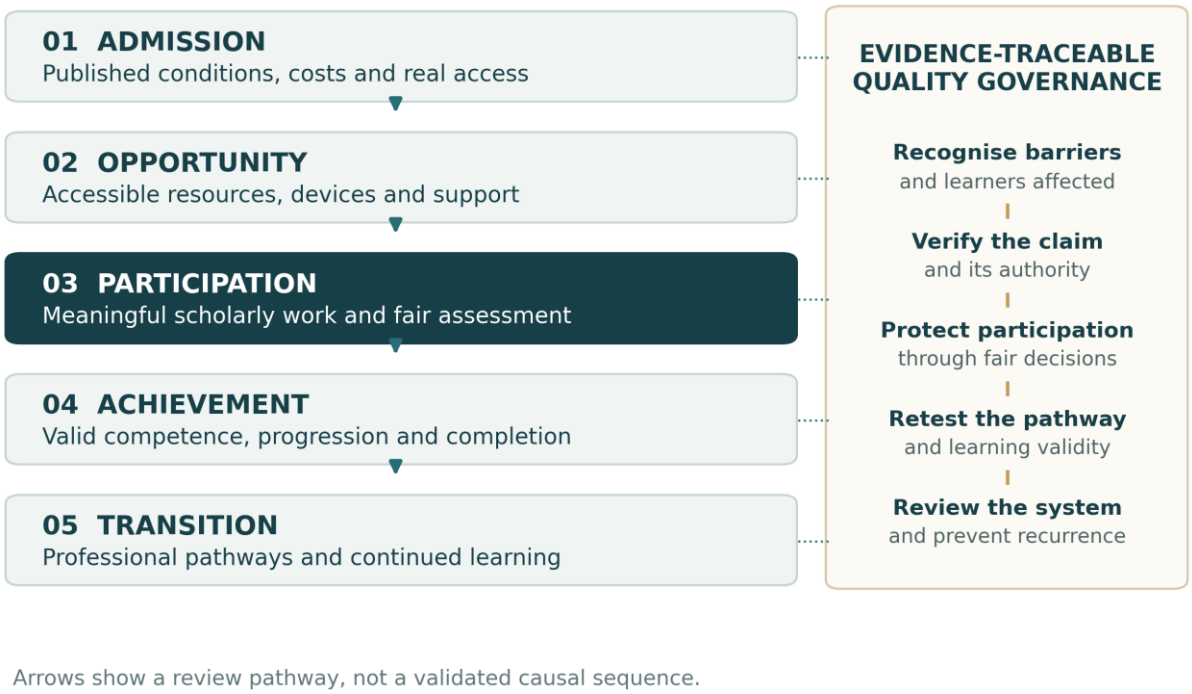
Interpretation also demands qualitative challenge. An improved accessibility pass rate can coexist with more students becoming unable to access a newly required third-party platform, and a greater volume of support tickets may reflect improved accessibility of a reporting channel rather than deteriorating teaching. Evaluators should therefore pair indicator trends with selected user-journey tests, moderated assessment samples, staff workload evidence and learner accounts gathered through voluntary, appropriately protected processes. A dashboard is useful when it makes the next question clear; it becomes misleading when it makes conflicting evidence disappear.

7.14 Practical instruments for inclusive curriculum and student-support assurance

The practical question is how an institution or external reviewer can examine inclusion without reducing complex educational experience to a ceremonial checklist. The instruments below translate the preceding analysis into explicit professional questions, possible evidence, verification procedures and plausible corrective actions. They are designed for institutional self-review, programme validation, annual monitoring and preparation for external evaluation. They are **author-developed professional proposals**, not an official HEC assessment form, a validated measurement scale, or evidence that a particular institution meets accreditation requirements. Their application must begin with current national law, programme-specific approval conditions, applicable professional standards and authorised institutional policy, followed by proportionate verification. Figure 7.1 introduces the chapter's proposed participation-to-success logic. Table 7.1 then supplies an integrated review matrix, Table 7.2 maps lifecycle responsibilities, Table 7.3 supports task-level accessibility testing, Table 7.4 structures evidence and corrective decisions, and Table 7.5 specifies equity-sensitive measures with their interpretive safeguards.

Figure 7.1

Proposed participation-to-success and evidence feedback architecture



Note. Original conceptual model proposed by the author. The connections represent review logic, not an empirically established universal causal pathway. Barriers and institutional interventions can affect any stage; feedback flows to curriculum, support and governance.

Figure 7.1 organises the chapter's central argument. Recruitment and admission create an entry opportunity; accessible curriculum and resources make participation feasible; engagement and support help learners undertake scholarly work; valid assessment tests attainment; and progression and graduate transition reveal further consequences. The sequence is not strictly linear. A student's disability adjustment may affect assessment directly, a financial disruption may interrupt participation late in the degree, and employment outcomes remain shaped by conditions beyond the university. Accordingly, each transition should be analysed as a hypothesis requiring evidence rather than assumed to follow automatically from the previous stage.

Table 7.1

Inclusive Curriculum and Student Support Review Matrix

Review domain	Principal review question	Examples of verifiable evidence	Typical failure requiring response
Programme promises	Are mode, workload, cost and participation requirements disclosed before enrolment?	Approved specification; prospectus; fee schedule; modality comparison	Advertising conflicts with actual compulsory conditions
Admissions equity	Are criteria lawful, relevant, accessible and consistently applied?	Entry policy; application journey test; decision samples; appeals	Unjustified or inaccessible admission barrier
Onboarding and digital literacy	Can new learners perform authentic academic and digital tasks?	Orientation trial; diagnostic tasks; participation and help records	Welcome content exists, but students cannot navigate or submit
Curriculum and UDL	Are unnecessary access barriers anticipated without reducing essential outcomes?	Outcome map; accessibility design review; assessment alternatives	Single inflexible route unrelated to outcome validity
Connectivity and affordability	Are device, data, software and location burdens feasible and disclosed?	Learner requirement analysis; costed routes; access-support arrangements	Hidden compulsory expense or unreliable access route

Review domain	Principal review question	Examples of verifiable evidence	Typical failure requiring response
Accessible digital environment	Are core learning journeys independently tested with assistive technology?	WCAG-linked audit; manual test results; defects and closure	Supplier declaration is accepted without user testing
Assessment and adjustments	Are academic constructs preserved and adjustments timely and fair?	Rubrics; authorised adjustment records; moderation; appeal decisions	Barrier distorts the competency actually assessed
Engagement and progression	Are engagement signals interpreted against meaningful learning and circumstances?	Assessment samples; cohort review; course design; adviser records	Login counts treated as direct evidence of learning
Academic and psychosocial support	Can students obtain competent, confidential and timely assistance?	Service map; referral and case workflow; resolution review	Repeated hand-offs, lost cases or unsafe counselling substitution
Postgraduate research	Are supervision, methods support, milestones and contingency arrangements credible?	Supervision agreements; workload register; methods provision; progress records	Nominal supervision without practical availability
Analytics and privacy	Are monitoring purposes lawful, proportionate, fair and contestable?	Data inventory; model appraisal; access logs; intervention protocol	Automated risk label triggers adverse action without review
Student voice and protection	Can concerns be raised safely, adjudicated fairly and used for improvement?	Accessible complaints route; outcomes; recurrent-issue review	Silence is treated as proof of satisfaction
Graduate transitions	Do learners receive appropriate career and lifelong-learning guidance?	Assessed graduate profile; placement agreements; career support; alumni data notes	Promotional employment claims lack defensible evidence

Note. Original review instrument proposed by the author. Evidence listed is illustrative rather than a representation of mandatory HEC evidence for every programme. Any regulatory finding requires identification of the operative authority and requirement.

Use of Table 7.1 begins with a bounded and properly authorised review decision. The evaluator identifies the particular programme, qualification, approved delivery mode, affected cohort and applicable requirements before selecting representative evidence from design and actual delivery. Each consequential institutional claim must then be followed to a dated source and, where risk warrants, tested independently through a live user journey or review of relevant practice. The resulting finding should distinguish confirmed non-compliance with an applicable requirement, inadequate or contradictory evidence, a verified implementation deficiency and a developmental opportunity. Protective measures should not wait for an entire report where learners face immediate and substantial risk. A named authority must approve proportionate corrective action, and closure must depend upon retesting the affected pathway or other appropriate evidence that the barrier has actually been addressed. Strength in one domain must not compensate mechanically for a failed essential assessment, an unsafe placement or a defective safeguarding function.

Table 7.2

Student Lifecycle Responsibility and Learner-Protection Map

Lifecycle stage	Primary learner protection	Accountable institutional function	Evidence and trigger for escalation
Public information and inquiry	Truthful, comprehensible programme and cost disclosure	Admissions and programme leadership	Published requirements; mismatch complaint
Application and selection	Accessible, fair and authorised decisions	Admissions/registrar and academic authority	Decision record; access or appeal difficulty
Entry and induction	Tested readiness for study and clear support access	Programme and student-support teams	Real-task trial; unresolved enrolment barrier

Lifecycle stage	Primary learner protection	Accountable institutional function	Evidence and trigger for escalation
Learning and assessment	Accessible instruction, fair feedback and valid evaluation	Module teams and academic leadership	Samples, adjustment delivery, late feedback
Difficulty, interruption and return	Confidential, timely support and authorised options	Adviser, student services and registrar	Case management; missed milestone; re-entry plan
Research or practice-based progression	Competent supervision and safe placement arrangements	Supervisor/programme director and placement partner	Progress review; supervision or placement concern
Completion and transition	Authentic award decisions and appropriate career guidance	Examination authority and careers/alumni services	Moderation; award record; transition evidence

Note. Original student-lifecycle map proposed by the author. Organ names and legal competences must be adapted to each institution's governing documents and applicable Rwandan requirements.

The lifecycle map prevents the common error of assuming that support matters only during the first weeks of study. A student can become vulnerable after a changed timetable, failed placement, family interruption, dissertation delay, accessibility problem or administrative misclassification. The responsible service should be discoverable at each stage; the student should not need to understand the institution's organisational chart before receiving assistance. A programme review should follow at least one realistic case through each major transition using a de-identified or hypothetical test scenario and confirm that responsibility, escalation and record handling are workable.

Table 7.3

Learner Accessibility, Assessment and Accommodation Verification Checklist

Test area	Practical verification procedure	Pass condition or follow-up requirement
Navigation and structure	Use keyboard-only navigation and inspect semantic heading order	Essential actions reachable and sequence understandable
Screen-reader use	Examine representative pages, forms, tables and feedback	Labels, relationships and errors conveyed meaningfully
Text and contrast	Enlarge text, reflow view and test relevant colour contrast	No essential loss of content or function
Video and audio	Check captions, transcripts and meaningful visual alternatives	Accurate access to required educational information
Mathematical and visual material	Test equations, maps, charts and specialised diagrams	Equivalent access to the intended disciplinary content
Documents and files	Inspect source files, tagged exports and reading order	Logical structure, text alternatives and usable downloads
Authentication and examinations	Test login, identity check, timing and submission journey	Essential tasks workable, with authorised alternatives
Low-bandwidth route	Trial representative tasks using mobile and constrained connection	Viable participation route or documented mitigation
Adjustment decisions	Audit timeliness, confidentiality and academic validity	Reasoned decision and implementation before affected task
External suppliers	Test licensed and third-party teaching and support services	Procurement claims corroborated by actual user testing
Problem reporting	Submit a test accessibility report and trace its handling	Accessible human response and documented resolution

Note. Original audit checklist based conceptually on CAST (2024), W3C (2023, 2024) and the rights-based principles of the CRPD (United Nations, 2006). The checklist is not a substitute for a complete WCAG 2.2 conformance assessment or individual legal determination.

A reviewer should record the test date, system version, device, browser or assistive technology, task attempted, observed result, severity, accessibility specialist's interpretation and re-test outcome. Automated reports are useful for locating candidate defects, but human judgment and testing of representative journeys are required. For a compulsory learning task, the existence of an unresolved critical barrier should trigger immediate learner-protection measures even if a supplier's generic accessibility declaration remains favourable (W3C, 2024). Where a task cannot reasonably be made accessible in the same form, the programme must make a reasoned adjustment decision preserving essential outcomes and any legally required professional competence.

Table 7.4

Student Support Evidence and Responsible Intervention Register

Required field	Entry rule	Purpose of the record
Claim and requirement	State the precise institutional promise and applicable authority	Avoid ambiguity between law, guidance and proposal
Context and affected pathway	Identify programme, stage, mode and barrier, without unnecessary personal identifiers	Bound the evaluative question
Evidence and provenance	Record source, date, version, access rights and limitations	Enable independent verification
Finding and uncertainty	Distinguish observed barrier, inferred explanation and unresolved facts	Prevent unjustified causal labels
Risk and immediate safeguard	Identify severity, learner consequence and necessary protective step	Protect students while inquiry proceeds
Action and authorised owner	Specify remedy, decision-maker, resources and due date	Establish accountable intervention
Verification and student response	Record re-test, learning effect where supportable, learner feedback and closure decision	Show whether the actual barrier was addressed

Note. Original evidence-register design by the author, consistent with the proposed IETQG and ETAJ reasoning architecture (Sangwa, 2026). Retention, access and disclosure must comply with applicable data-protection requirements; individual case registers are not public accreditation annexes.

Table 7.5

Equity-sensitive educational indicators: operational definitions, interpretive limits and complementary evidence

Indicator and legitimate question	Suggested calculation or bounded record	Critical interpretive limitation	Corroborating review evidence
Functional induction: can entrants complete necessary tasks?	Entrants completing an authentic orientation task / all entrants required to complete it; record non-response	A completed quiz does not demonstrate lasting digital or academic capability	User-journey observation; first assessment submission problems
Timely agreed adjustments: are essential arrangements implemented?	Adjustments delivered before the affected activity / adjustments authorised for that activity	Unreported needs and late decisions may be invisible	Confidential case sampling; affected learner feedback
Feedback access: does substantive academic response arrive as promised?	Assessments returned with usable feedback within the stated window / assessments due for return; record extensions	A fast response is not necessarily accurate or educationally useful	Moderation of comments; learner revision evidence
Support resolution: is the underlying barrier removed?	Cases with documented confirmed resolution / cases eligible for closure; track reopened matters separately	Closure codes can be manipulated or fail to capture recurrence	De-identified case review; re-test of service pathway

Indicator and legitimate question	Suggested calculation or bounded record	Critical interpretive limitation	Corroborating review evidence
Progression and legitimate interruption: can learners continue?	Cohort outcomes with explicit continuation, transfer, approved interruption and withdrawal categories	Programme mix, enrolment intensity and selection can distort comparisons	Academic-board decisions; workload and cost review
Assessed learning: are standards maintained across routes?	Moderated achievement against common intended outcomes, reported by approved route where safe	An overall pass rate does not establish comparable standards or causal benefit	Assessment blueprint; samples and external examination
Graduate transition: are pathways accurately represented?	Response-rate-qualified alumni and placement evidence with time period and destination type	Employment depends on external markets and response bias	Assessed portfolios; placement review; career-service access

Note. Original proposed indicator architecture by the author. These are definitional examples rather than HEC-prescribed formulae or statistical indicators with validated thresholds. Small-cell suppression, data minimisation and lawful processing are required where relevant; missing values, inclusions and exclusions must be disclosed before interpretation.

Table 7.5 should be treated as a data-definition register rather than a scoreboard. Each indicator requires a named data owner, relevant academic period, reliable source, method for checking completeness, lawful permitted use and explicit decision right. A programme may legitimately report that a figure cannot be calculated because necessary records were not collected. It should not replace missing evidence with an invented estimate or interpret a small and selective sample as a population finding. External reviewers should seek independent corroboration where the indicator is used to justify a significant institutional or regulatory decision.

A simple ordinal rubric may support internal prioritisation if users understand its limits: **0** indicates absent or unverified provision; **1** indicates a documented arrangement without sufficient evidence of operation; **2** indicates evidence of functioning implementation with unresolved limitations; and **3** indicates independently checked, routinely reviewed implementation with evidence of corrective learning. These descriptors are proposed organisational aids, not psychometrically calibrated scores, HEC thresholds or proof of learner outcomes. A programme with a level-3 service in one domain and a level-0 critical safeguarding function should not be pronounced acceptable through averaging. Severity, legality, essential academic validity and affected students' immediate interests must be examined first.

The ordinal descriptors are principally a way of organising questions about evidence maturity. In a pre-enrolment review, an institution might demonstrate that a specific examination adjustment route is designed, resourced and successfully tested, although no cohort has yet used it. That observation should be reported as prospective readiness, not as demonstrated continuing effectiveness. Once a programme operates, the required claim changes: reviewers need evidence of actual implementation, timeliness, appeal arrangements, learner experience and correction of documented faults. The same numeric label cannot validly be interpreted as proof of both future feasibility and past achievement.

Institutional and regulatory roles must remain distinct. The university is responsible for identifying barriers, conducting its self-review, taking protective action and reporting verifiable improvements. An external evaluator tests institutional claims against the applicable criteria and may recommend conditions or additional scrutiny, but must not present the author's rubric as an official HEC scoring scheme. Where evidence conflicts, the reviewer should record competing explanations and the specific additional verification that could resolve the uncertainty. Where the facts establish an immediate threat to learners, proportionate protection takes priority over completing a composite maturity calculation.

An explicitly hypothetical example illustrates the difference. Consider a Rwandan university proposing an online master's programme whose materials are academically coherent and whose LMS runs reliably. An admission document says lectures may be studied asynchronously, while four compulsory real-time seminars are scheduled at times inaccessible to an identifiable proportion of employed students. An assessment requires a timed third-party examination interface for which the university has obtained only a supplier accessibility statement; no keyboard-only or screen-reader test has been performed. Advisers can receive

student messages, but there is no rule assigning responsibility for unresolved accommodation requests. This is a constructed scenario, not evidence about a named institution.

A weak review might praise the comprehensive course site and recommend generic further support. An evidence-traceable review would separate claims and actions. It would establish the approved programme's actual delivery classification and the requirement governing any compulsory synchronous teaching; examine whether prospective information was accurate; test accessibility of the high-stakes examination; identify the authority responsible for individual adjustments; and require a viable route for affected students before the relevant activity. It could distinguish a confirmed misleading promise, an accessibility risk still requiring verification, and a structural support deficiency. The appropriate academic or regulatory decision depends on the established normative basis, severity, evidentiary completeness and competent decision-maker, not on the numerical elegance of a maturity score (HEC, 2026a; Republic of Rwanda, 2026; W3C, 2023).

A second, explicitly hypothetical case shows why equity analysis must not become an excuse to alter standards invisibly. Consider a blended undergraduate quantitative-methods course whose compulsory assessment requires students to analyse a large dataset using a named desktop application. Most learners have mobile phones, but a subgroup cannot run the software, and the department has not budgeted sufficient laboratory hours. The issue is not solved by offering a mobile-accessible multiple-choice test if the intended outcome is competent data analysis. The department could instead reserve suitable workstations, provide a usable remote-desktop route where stable connectivity permits, offer approved offline datasets and schedule equivalent supervised opportunities. An evaluator should inspect the module learning outcomes, software licence conditions, access capacity, assessment rubric, student instructions and samples of actual work before concluding that the remedy preserves academic validity. The case illustrates a claim-evidence-remedy chain; it is not an observation about a real Rwandan institution.

A credible sign-off record for either hypothetical case would identify the affected qualification and cohort, operative HEC or other binding requirement where relevant, each verified barrier and its severity, the available temporary protection, the academic and administrative decision-makers, resource responsibility, evidence of implementation and a scheduled retest. It would also record unresolved uncertainty and protect individual records from unnecessary circulation. This allows the reviewer to explain not merely whether an institution has an accessibility statement, but whether the actual education it promises can be delivered to the learners it admits.

A realistic improvement plan should protect students now while building lasting capability. During initial triage, the institution should identify compulsory activities posing immediate accessibility, assessment or safety risks; make authorised temporary arrangements; and establish named case ownership. During the following academic review cycle, it should reconcile prospectuses and specifications, test representative digital journeys, train staff in accessible authoring and referral, and revise assessment calendars and support protocols. Thereafter, it should evaluate whether the problems recur, whether affected students can participate and whether educational standards remain secure. No universal thirty-, sixty- or ninety-day timetable is imposed here, because a serious defect may require immediate action while more complex curricular modification must follow lawful approval procedures. The practical objective is documented, risk-proportionate, verified improvement.

7.15 Critical synthesis and conclusion: Inclusion as an academic quality obligation

The argument of this chapter is that inclusion cannot be separated from the academic validity and public credibility of a higher-education qualification. An institution does not fulfil its commitment by making a resource nominally available if learners cannot reasonably use it, nor by increasing completion if assessment no longer verifies the promised knowledge and capability. Educational equity concerns the credible conditions under which diverse learners can enter, participate, receive support, meet demanding standards and progress. Those conditions are shaped jointly by curriculum design, academic judgement, institutional capability, student circumstances and governance choices. They must therefore be examined in relation to one another rather than assigned to an isolated office for exceptional cases.

The theoretical contribution is an integrated account of **substantive participation**. Capability reasoning asks whether students can convert nominal provision into real opportunity; rights-based inclusion identifies

unjustified exclusion and the importance of accommodation; UDL guides preventive design; engagement and self-regulation scholarship illuminate participation and persistence; socio-technical analysis explains barriers generated by institutional systems; and evidence-traceable evaluation tests the relationship between policy, enacted practice and outcomes. Each perspective has limits. No theory authorises universal assumptions about learner needs, no platform score establishes educational engagement, and no single favourable outcome statistic proves equity or causation. This qualification is integral to the argument, not a concession made after it.

For Rwanda and comparable African contexts, the chapter's practical implication is that programme readiness and continuing quality assurance should include accessible academic pathways, transparent participation costs, appropriate support capacity, ethical learner data, fair assessment, postgraduate supervision and verifiable mechanisms for addressing complaints. The proposed review matrix, lifecycle map, accessibility checklist and evidence register convert these concerns into disciplined questions. They require adaptation to current HEC instruments, programme authorisations, domestic law, professional standards and institutional responsibilities; they are not endorsed regulatory requirements or empirically validated tools. Their strongest contribution is to make claims about learner protection inspectable while leaving room for contextual and academic judgement.

This analysis completes the book's account of curriculum, delivery and learner participation. The next task is institutional: to govern quality-assurance cycles through which programmes repeatedly test whether these promises hold, interpret imperfect evidence, act on deficiencies and verify that improvement occurred. Inclusive educational quality is not achieved when a policy is approved or a platform is launched. It is sustained when the university is capable of recognising whose learning opportunities remain constrained, giving defensible reasons for its decisions and changing conditions that unnecessarily prevent students from demonstrating what they can know and do.

References

Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education, 32*, 347-364. https://doi.org/10.1007/BF00138871

Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies and academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education, 27*, 1-13. https://doi.org/10.1016/j.iheduc.2015.04.007

CAST. (2024). *CAST Universal Design for Learning Guidelines version 3.0*. https://udlguidelines.cast.org/

Cumming, T. M., & Rose, M. C. (2022). Exploring universal design for learning as an accessibility tool in higher education: A review of the current literature. *The Australian Educational Researcher, 49*, 1025-1043. https://doi.org/10.1007/s13384-021-00471-7

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105. https://doi.org/10.1016/S1096-7516(00)00016-6

Gašević, D., Tsai, Y.-S., & Drachsler, H. (2022). Learning analytics in higher education: Stakeholders, strategy and scale. *The Internet and Higher Education, 52*, Article 100833. https://doi.org/10.1016/j.iheduc.2021.100833

HAQAA Initiative. (2018). *African standards and guidelines for quality assurance in higher education (ASG-QA)*. https://haqaa.aau.org/wp-content/uploads/2018/12/ASG-QA_Manual_en_09.FINALE-with-License.pdf

Higher Education Council. (2021). *Guidelines for internal quality assurance (IQA) mechanisms for higher education* (Version 01). https://www.hec.gov.rw/publications/guidelines

Higher Education Council. (2026a). *Guidelines and assessment tools for distance learning in Rwanda's higher learning institutions*. https://www.hec.gov.rw/fileadmin/user_upload/HEC/Publications/Guidelines/GUIDELINES_AND_ASSESSMENT_TOOLS_FOR_DISTANCE_LEARNING.pdf

Higher Education Council. (2026b). *Postgraduate degree framework* (July 2026). https://www.hec.gov.rw/fileadmin/user_upload/HEC/Publications/Guidelines/POSTGRADUATE_DEGREE_FRAMEWORK.pdf

Ifenthaler, D., & Yau, J. Y.-K. (2020). Utilising learning analytics to support study success in higher education: A systematic review. *Educational Technology Research and Development, 68*, 1961-1990. https://doi.org/10.1007/s11423-020-09788-z

International Telecommunication Union. (2025). *Measuring digital development: Facts and figures 2025*. https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx

Jisc. (2026). *Code of practice for learning analytics* (Original work published 2015; updated September 9, 2026). https://www.jisc.ac.uk/guides/code-of-practice-for-learning-analytics

Jones, K. M. L. (2019). Learning analytics and higher education: A proposed model for establishing informed consent mechanisms to promote student privacy and autonomy. *International Journal of Educational Technology in Higher Education, 16*, Article 24. https://doi.org/10.1186/s41239-019-0155-0

Kahu, E. R., & Nelson, K. (2018). Student engagement in the educational interface: Understanding the mechanisms of student success. *Higher Education Research & Development, 37*(1), 58-71. https://doi.org/10.1080/07294360.2017.1344197

Miao, F., & Holmes, W. (2023). *Guidance for generative AI in education and research*. UNESCO. https://doi.org/10.54675/EWZM9535

Miao, F., Shiohira, K., & Lao, N. (2024). *AI competency framework for students*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000391105

Ministry of Education. (2018). *Revised special needs and inclusive education policy*. Republic of Rwanda. https://www.mineduc.gov.rw/fileadmin/user_upload/Mineduc/Publications/EDUCATION_POLICIES/Special_Needs_Strategic_Plan.pdf

Mireku, D. O., Bervell, B., Dzamesi, P. D., & Nimo, E. B. (2024). A systematic review of students' support services provision in higher education (SSSPiHE) in sub-Saharan Africa. *Cogent Education, 11*(1), Article 2351747. https://doi.org/10.1080/2331186X.2024.2351747

Republic of Rwanda. (2021). *Law No. 058/2021 of 13/10/2021 relating to the protection of personal data and privacy*. *Official Gazette*, special issue of 15 October 2021. https://rwandalii.org/akn/rw/act/law/2021/58/eng@2021-10-15

Republic of Rwanda. (2026). *Presidential Order No. 044/01 of 24/07/2026 governing the Higher Education Council*. *Official Gazette*, special issue of 30 July 2026. https://www.hec.gov.rw/fileadmin/user_upload/HEC/Publications/Laws/Presidential_Order_n__04401_of_24072026_governing_the_Higher_Education_Council.pdf

Sangwa, S. (2026). *Governing quality in digitally transforming African higher education: An integrated framework for institutional capability, programme quality assurance, and accreditation judgement* [Doctoral thesis, Open Christian University]. https://doi.org/10.65655/ocur.m28

Sen, A. (1999). *Development as freedom*. Oxford University Press.

Slade, S., & Prinsloo, P. (2013). Learning analytics: Ethical issues and dilemmas. *American Behavioral Scientist, 57*(10), 1510-1529. https://doi.org/10.1177/0002764213479366

Thomas, L. (2012). *Building student engagement and belonging in higher education at a time of change: Final report from the What Works? Student Retention & Success programme*. Paul Hamlyn Foundation. https://www.lizthomasassociates.co.uk/phase1.html

Tinto, V. (2012). *Completing college: Rethinking institutional action*. University of Chicago Press. https://press.uchicago.edu/ucp/books/book/chicago/C/bo5514387.html

UNESCO. (2020). *Global education monitoring report 2020: Inclusion and education: All means all*. https://www.unesco.org/gem-report/en/publication/2020-inclusion-and-education-all-means-all

UNESCO. (2023). *Global education monitoring report 2023: Technology in education: A tool on whose terms?* https://www.unesco.org/gem-report/en/publication/technology

United Nations. (2006). *Convention on the rights of persons with disabilities* (Article 24). https://www.un.org/development/desa/disabilities/convention-on%20the-rights-of-persons-with-disabilities/article-24-education.html

United Nations Treaty Collection. (2008). *Convention on the Rights of Persons with Disabilities: Rwanda, accession, 15 December 2008*. https://treaties.un.org/Pages/showActionDetails.aspx?clang=_en&objid=0800000280210dec

World Wide Web Consortium. (2023). *Web content accessibility guidelines (WCAG) 2.2* (W3C Recommendation, October 5, 2023). https://www.w3.org/TR/WCAG22/

World Wide Web Consortium. (2024). *Selecting web accessibility evaluation tools*. https://www.w3.org/WAI/test-evaluate/tools/selecting/

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice, 41*(2), 64-70. https://doi.org/10.1207/s15430421tip4102_2