The Disengagement Nexus: A Comprehensive Analysis of ODL Diploma Student Interaction with Self-Instructional Materials and a Framework for Mitigation

Executive Summary

The transition to Open and Distance Learning (ODL) has been a defining feature of modern higher education, offering unprecedented flexibility to diverse student populations. However, for diploma-level programs, this modality presents a critical challenge: a pervasive and costly disengagement of students from their core learning resources—the Self-Instructional Materials (SIM) hosted on Learning Management Systems (LMS) such as Moodle. This report presents a comprehensive analysis of this issue, arguing that student disengagement is not a singular failure of student motivation but a systemic problem arising from a complex "disengagement nexus" of interconnected pedagogical, learner-centric, and technological factors.

The analysis reveals that the foundational promise of SIM—to be self-explanatory, self-motivating, and self-contained—is frequently unmet. Pedagogical deficiencies, including poor instructional design, a palpable lack of instructor presence, an absence of timely and meaningful feedback, and a misalignment between learning activities and formal assessment, create an environment where students perceive SIM as difficult, irrelevant, and unrewarding. These pedagogical failings are compounded by the inherent challenges faced by the typical ODL diploma student. These learners, often balancing work, family, and study, operate with finite reserves of time, motivation, and cognitive capacity. Their success is predicated on a fragile assumption of independent learning, an attribute that is easily eroded by academic isolation, learning burnout, and a significant, often unaddressed, digital literacy gap.

Furthermore, the technological environment itself frequently acts as a barrier. The usability challenges of the LMS, coupled with inconsistent mobile access and underlying infrastructure

issues, introduce a constant stream of "micro-frustrations" that cumulatively deplete student patience and resolve. This technological friction disproportionately affects the most vulnerable students, amplifying existing inequities.

In response to this multi-factorial diagnosis, this report proposes a strategic, multi-pronged mitigation framework designed to systematically dismantle the disengagement nexus. The framework is built on three pillars:

- 1. **Re-Engineering Self-Instructional Materials:** A shift from passive content delivery to active learning through the application of modern instructional design principles, including problem-based learning, gamification, and embedded interactivity.
- 2. **Cultivating Presence and Community:** A deliberate focus on humanizing the online experience by enhancing instructor presence through consistent communication and feedback, building robust peer support networks, and implementing proactive, holistic student support services.
- 3. **Optimizing the Technological Environment:** A commitment to improving the LMS user experience, ensuring mobile-readiness, and, crucially, creating a direct and meaningful link between engagement with SIM and formal course assessment.

The report concludes with an integrated implementation roadmap, providing institutions with a phased, actionable plan for fostering a culture of engagement. By addressing the issue systemically, institutions can move beyond merely delivering content to creating a supportive, interactive, and motivating ODL ecosystem that empowers diploma students to succeed.

Part I: The ODL Ecosystem for the Diploma-Level Learner

To comprehend the complexities of student disengagement, it is first necessary to establish the foundational context of the Open and Distance Learning (ODL) environment. This ecosystem is composed of three primary elements: the pedagogical philosophy that underpins it, the learning materials designed to execute this philosophy, and the technological platform that delivers the experience. Crucially, this ecosystem is populated by a specific type of learner—the ODL diploma student—whose unique characteristics and circumstances profoundly shape their interaction with the learning process.

1. The Architecture of Self-Directed Learning in ODL

The contemporary ODL model represents a significant pedagogical evolution from early forms of correspondence education. It is a sophisticated system designed to provide flexible and accessible learning opportunities by leveraging technology to bridge the physical distance between instructor and student.

1.1 Defining the Modern ODL Paradigm

Modern ODL is a learning approach where teaching is delivered remotely, typically through online platforms, allowing learners to access educational content at their own pace and location. This modality fundamentally shifts the educational dynamic from a traditional, teacher-centered model to a student-centered one. In this paradigm, the student assumes a high degree of control over their learning journey. However, this autonomy comes with a significant responsibility for self-direction. In the absence of a physically present teacher to guide, clarify, and motivate in real-time, the instructional materials and the surrounding support structure must be meticulously designed to fulfill these essential functions. The success of the entire ODL enterprise, therefore, hinges on the quality of these materials and the environment in which they are presented.

1.2 The Central Role of Self-Instructional Materials (SIM)

At the heart of the ODL model lies the Self-Instructional Material (SIM). These are not merely digital textbooks but are the primary vehicle for instruction, specifically engineered for independent study.¹

Core Mandate

The principal mandate of SIM is to guide learners toward achieving specified course outcomes without the need for continuous, direct instruction from a teacher. Often described as a "tutorial-in-print" or a digital equivalent, SIM are designed to simulate the role of an instructor by anticipating student questions, providing clear explanations, and structuring the learning path. They are the core asynchronous component of the ODL experience, supporting activities such as independent study, revision, and preparation for assignments and assessments.

The "Five-Self" Framework

A robust body of literature converges on a set of five essential characteristics that define effective SIM. These materials must be:

- **Self-Explanatory:** The content must be presented with such clarity that the learner can comprehend it without external support. This requires the use of simple language, minimal jargon, and logical content analysis prior to development.³
- **Self-Contained:** The materials should include everything a learner needs to understand the topic, including definitions, examples, explanations, and practice exercises, minimizing the need to consult external resources.³
- **Self-Directed:** Like a teacher, the SIM must guide the learner at every stage, providing clear instructions, sequential development of concepts, and navigational aids to control the pace of learning.³
- **Self-Motivating:** The materials must be designed to arouse curiosity, maintain interest, and make the learning process meaningful. This is achieved through relevant examples, a conversational tone, varied activities, and progress indicators.³
- **Self-Evaluating:** SIM must incorporate mechanisms for self-assessment, such as quizzes, reflective questions, and exercises with feedback, allowing learners to check their progress, reinforce learning, and identify areas needing further review.³

The very definition of SIM according to this "Five-Self" framework establishes a high standard for their design and effectiveness. The fact that widespread student disengagement is a problem indicates a significant disconnect between the intended function of these materials and the actual experience of the learners who are meant to use them. The issue is not merely that students lack motivation; it is that the materials themselves are often failing to be "self-motivating" or sufficiently "self-explanatory," thereby failing to fulfill their core pedagogical purpose.

Distinction from Traditional Textbooks

This framework highlights a critical distinction between SIM and traditional textbooks. A textbook is typically designed for a broad market and is intended to be used as a resource within a teacher-led classroom setting. In contrast, SIM are customized for a specific learner group within a particular program. They must be structured according to the needs of the learner, not the convenience of the specialist. Key differences include the explicit statement of learning objectives, a heavy emphasis on embedded self-assessment, a layout designed for

clarity rather than density, and a fundamental aim of successful teaching rather than just scholarly presentation.⁷ SIM are designed to elicit an active response from the learner, a stark contrast to the often passive reading associated with textbooks.

1.3 The Learning Management System (LMS) as the Digital Campus

The environment where SIM and all associated learning activities are housed, managed, and accessed is the Learning Management System (LMS), such as Moodle or Canvas. The LMS serves as the digital campus, providing the essential infrastructure for the ODL program.

Primary Function

An LMS is a comprehensive software platform that provides a framework for creating, managing, delivering, and tracking online learning content and user progress. ¹⁰ It centralizes all course materials, communication tools (forums, messaging), assessment tools (quizzes, assignment submissions), and administrative functions into a single, accessible online space. ¹⁰

Potential Benefits

When effectively implemented, an LMS offers significant benefits that support the ODL model. It makes learning accessible from any location with an internet connection, allows for the scalable delivery of education to large and geographically dispersed student cohorts, and provides powerful analytics for tracking student engagement and performance. Furthermore, modern LMS platforms can integrate a wide array of third-party tools, such as the interactive content authoring tool H5P or plagiarism detection software, to enhance the learning experience.

However, the LMS is not a passive or neutral container for SIM. Its design, usability, and technical performance actively shape the student's learning experience. A well-designed, intuitive, and reliable LMS can facilitate seamless access to learning materials and reduce extraneous cognitive load, allowing students to focus their mental energy on the academic content. Conversely, a clunky, poorly organized, or technically unstable platform can become a significant barrier in itself. It can introduce friction at every step of the learning process, from finding a document to submitting an assignment, thereby acting as a powerful

de-motivator that actively undermines even the most well-designed SIM. The platform is, therefore, an active agent in the engagement equation, capable of either enabling or obstructing the learning process.

2. Profile of the ODL Diploma Student

The ODL model is built upon the assumption of a learner who is independent, self-motivated, and capable of self-regulation. However, an analysis of the typical ODL diploma student reveals that these attributes are not inherent traits but are a fragile state, constantly under pressure from a confluence of situational, dispositional, and psychological factors. Understanding this learner profile is critical to diagnosing the root causes of disengagement.

2.1 Situational Realities: The Juggling Act

The most defining characteristic of the ODL diploma student population is the complex web of external commitments they must manage alongside their studies. These are predominantly adult learners with established personal and professional lives.

Competing Commitments

A vast majority of ODL students are engaged in full-time employment, have significant family and caregiving responsibilities, or are managing other major life commitments. ¹⁴ This "juggling act" results in a severe scarcity of one of their most critical resources: time. Research consistently identifies a lack of sufficient time for study as the most reported challenge for ODL students. ¹⁵ This is not simply a matter of poor scheduling; it is an objective reality of having only a limited number of hours in a day to allocate between work, family, and education. ¹⁴

Financial and Environmental Constraints

Financial pressures are another significant situational barrier. Many diploma students are

self-financing their education and may face difficulties balancing tuition fees with other essential expenses, leading some to postpone semesters or examinations. ¹⁵ Furthermore, their primary study environment is the home, which is often far from the quiet, dedicated space conducive to deep academic work. It is typically filled with distractions from family members, household chores, and the temptations of social media, making focused study a constant challenge. ¹⁴

The Double-Edged Sword of Flexibility

The flexibility of the ODL model is its primary attraction, but it is also a significant potential pitfall. The absence of a fixed classroom schedule and the freedom to study "anytime, anywhere" can easily lead to procrastination, especially when faced with more immediate life demands. Without strong self-discipline and effective time management skills, students can fall into a cycle of delaying their studies, only to be forced to rush through content just before deadlines, a practice that is antithetical to meaningful learning and a major source of stress. 14

2.2 Dispositional Factors: The Internal Toolkit

Success in an ODL environment demands a robust set of internal attributes, or dispositional factors, that enable a student to navigate the challenges of self-directed learning.

The Imperative of Self-Motivation

In the absence of the regular, face-to-face encouragement and accountability provided by instructors and peers in a traditional setting, the onus of motivation falls almost entirely on the student. ODL requires a high degree of internal motivation to initiate and sustain the effort required to complete tasks and persist through difficulties. Both intrinsic motivation (a genuine interest in the subject) and extrinsic motivation (the desire for a qualification or career advancement) play a vital role in keeping students engaged over the long term. When this internal drive wanes, engagement quickly follows.

Beyond motivation, successful ODL students must be highly effective self-regulators. This involves the metacognitive ability to plan and schedule their learning, actively seek out and utilize learning resources, monitor their own understanding, and evaluate their progress toward learning objectives.¹⁷ These are advanced learning skills that cannot be taken for granted; they must be actively developed and supported.

2.3 The Unique Psychological Landscape

The physical separation inherent in the ODL model creates a unique psychological environment that can pose significant challenges to student well-being and, by extension, their engagement.

Academic Isolation and Disconnectedness

One of the most widely cited challenges of online learning is the pervasive feeling of being disconnected from both instructors and fellow students.²² This lack of regular social interaction can lead to profound feelings of academic isolation, loneliness, and helplessness.²⁰ Students can feel like they are learning in a vacuum, with no one to turn to for quick clarification or shared experience. This sense of being alone in their struggles is a powerful demotivator and a primary contributor to learning burnout.²⁴

Stress, Anxiety, and Mental Exhaustion

The confluence of intense situational pressures and academic isolation can have a deleterious effect on students' mental health. Studies report that ODL students often experience significant mental exhaustion, stress, and anxiety. The pressure to manage competing demands, coupled with the fear of falling behind and the lack of a social support network within the learning environment, can become overwhelming. This is particularly acute for first-year diploma students, who face the dual stress of adapting to the demands of higher education for the first time while simultaneously navigating the complexities of the ODL modality without the social scaffolding of a traditional campus experience.

These factors do not exist in isolation; they create a negative feedback loop that can spiral into complete disengagement. For instance, a student with limited time due to work commitments feels stressed. This stress impairs their ability to concentrate and depletes their finite emotional and cognitive resources, making it harder to muster the self-motivation needed to study. This leads to procrastination, which further reduces the available study time, thereby intensifying the initial stress. This self-reinforcing cycle highlights that an institution cannot simply provide materials and expect success. The entire ODL system must be designed to actively interrupt this cycle by supporting and developing the very attributes of independence and resilience that it demands from its students.

Part II: A Multi-Factorial Analysis of Student Disengagement

The decision by an ODL diploma student to not engage with their Self-Instructional Materials is rarely a simple choice. It is the outcome of a complex interplay of factors spanning the design of the course, the student's personal circumstances, and the technology used to deliver the learning. This section provides a systematic diagnosis of the problem by deconstructing the key deficiencies and barriers that collectively contribute to student disengagement.

3. Pedagogical and Instructional Design Deficiencies

The quality of the pedagogy and the instructional design of the SIM are the most direct levers an institution has over student engagement. When these are deficient, they become primary drivers of disengagement, creating a learning experience that is confusing, unmotivating, and perceived as irrelevant.

3.1 When SIM Fails to Instruct: The Impact of Poor Design

Using the "Five-Self" framework as a diagnostic lens, it becomes clear how poorly designed SIM can fail in their primary mission to act as a surrogate teacher.

Failure to be "Self-Explanatory"

When learning materials are laden with technical jargon, use overly complex sentence structures, or fail to make explicit connections between concepts, they cease to be self-explanatory. A dense, text-heavy layout with poor visual hierarchy further exacerbates this problem, increasing the extraneous cognitive load on the student. Cognitive load theory posits that human working memory is limited; if too much mental effort is required simply to decode the material, fewer cognitive resources are available for actual learning and schema formation. The result is frustration and the feeling that the material is "too hard," leading to task abandonment.

Failure to be "Self-Motivating"

Motivation is not a static trait; it is heavily influenced by the learning environment. SIM that consist primarily of passive content, such as text-based readings or static PowerPoint slides to be read in isolation, offer very limited incentives for engagement.²⁷ To be motivating, materials must actively arouse student curiosity and demonstrate the real-world value of the knowledge.³ This can be achieved through the use of relevant examples, case studies, and a conversational tone that creates a sense of dialogue.⁵ When materials are monotonous and lack practical application, students struggle to see the point of the exercise and their motivation wanes.⁵

Failure to be "Self-Contained" and "Self-Directed"

Students often disengage because they are simply confused about what they are supposed to do. A lack of clear structure, poor navigational aids, and ambiguously stated learning objectives can leave a student feeling lost and directionless.⁵ Without a clear path forward, it is easier to do nothing at all. Furthermore, a failure to embed frequent activities and self-assessment tools within the material denies students the opportunity to actively process information and test their understanding.¹ This lack of interactivity turns learning into a passive act of consumption rather than an active process of construction, which is far less effective and engaging.⁷

3.2 The "Ghost in the Machine": Consequences of Low Instructor Presence

In an online environment, instructor presence must be deliberate and visible. When it is lacking, students feel isolated and unsupported, which has a devastating impact on their engagement.

Defining Instructor Presence

Instructor presence is a multi-dimensional construct that encompasses three key areas: instructional design (a well-organized course), facilitation of discourse (engaging in discussions), and direct instruction (providing clarification and feedback).²⁸ It is the sum of all activities that make the instructor feel "real," caring, and actively involved in the students' learning journey.³⁰

Impact on Engagement and Motivation

Research consistently demonstrates a strong positive correlation between instructor presence and student satisfaction, motivation, and learning outcomes.²⁹ Students in courses with low instructor interaction are more likely to express frustration at having to "teach themselves" and can feel alienated.³¹ Conversely, a strong instructor presence helps to foster a sense of a learning community, making students feel valued and supported, which in turn increases their participation and willingness to persist through challenges.³⁰

Manifestations of Low Presence

Low presence is not merely about infrequent emails. It manifests as a lack of regular weekly announcements to orient students, an absence of module overviews that contextualize the learning material, the use of outdated or generic content, and minimal to no instructor participation in discussion forums.³⁰ This creates a vacuum at the center of the course, reinforcing the sense of isolation that ODL students are already prone to feeling.

3.3 The Feedback Void: Undermining Progress and Motivation

The absence of timely, high-quality feedback is one of the most significant pedagogical failures in ODL and a primary reason for student disengagement.

Prevalence of the Problem

Delayed, ineffective, or non-existent feedback is a major challenge frequently reported by ODL students.¹⁵ This lack of response from instructors leads to confusion about expectations, anxiety about performance, and deep frustration, all of which exacerbate the inherent isolation of distance learning.¹⁶

The Role of Effective Feedback

Effective feedback is the critical link between assessment and learning.³³ It is not merely a grade; it is a dialogue that helps students understand their current performance in relation to the desired learning goals.³³ To be effective, feedback must be:

- **Timely:** It is most powerful when delivered immediately, or as close to the performance of the task as possible, allowing students to act upon it while the material is still fresh in their minds.³⁵
- Specific and Goal-Oriented: Vague comments like "good work" are useless. Feedback must be specific, linked to assessment criteria (e.g., a rubric), and provide clear, actionable advice on how to improve.³⁴
- **Supportive:** The tone of the feedback matters. It should be delivered in a warm, encouraging manner that motivates the student to try again, rather than a critical one that reduces their confidence.³⁰

Consequences of the Void

In the absence of this feedback loop, the learning process breaks down. Students are unable

to gauge their progress, correct their misunderstandings, or learn from their mistakes. More damagingly, they begin to feel that their effort is invisible and unvalued. This perception is profoundly demotivating and directly leads to disengagement, as there is little incentive to complete work that receives no acknowledgment or constructive response.³¹

3.4 Misalignment of Learning and Assessment

Students are rational actors who allocate their limited time and energy to the tasks they perceive as most important for achieving their ultimate goal: passing the course.

The Core Issue

A fundamental driver of disengagement with SIM is a lack of a clear, explicit connection between the activities within the SIM and the formal, graded assessments that determine the student's final mark.²⁷

Perceived "Busy Work"

When instructors set online tasks, readings, or self-assessments within the SIM but then fail to follow up on them or integrate them into summative assessments, students quickly learn that this work is peripheral.²⁷ It is perceived as "busy work"—tasks that are assigned but have no real consequence. In the time-pressured world of an ODL diploma student, completing such tasks is an inefficient use of a scarce resource. This rational calculation justifies their decision to disengage from non-graded SIM activities and focus solely on what "counts" for their grade.²⁶

These pedagogical issues are deeply interconnected. A poorly designed SIM that is not self-explanatory places a heavy burden on the instructor, who becomes inundated with basic clarification questions. This administrative overload consumes the time and energy that could otherwise be devoted to providing substantive feedback or maintaining a visible presence in the course, creating a vicious cycle. Furthermore, the combination of low instructor presence, a lack of feedback, and misaligned assessment forms a toxic triad. The absent instructor fails to articulate the value of the SIM activities, the misaligned assessment confirms their perceived irrelevance, and the feedback void removes any formative incentive for completion.

This triad effectively trains students to ignore the very materials designed to be their primary source of learning.

4. Learner-Centric Barriers to Engagement

While pedagogical failures create an environment ripe for disengagement, certain barriers rooted in the learner's own circumstances, skills, and psychological state can prevent them from engaging even with well-designed materials.

4.1 The Time Management Conundrum

For the ODL diploma student, time is the most precious and contested commodity. The effective management of this resource is a critical determinant of success.

The Procrastination Trap

The inherent flexibility of the ODL model, while a key benefit, also removes the external pacing mechanisms of a traditional course. This freedom can make it easy for students to postpone their studies in favor of more urgent work or family demands, leading to a pattern of procrastination. This often results in students attempting to "cram" large amounts of material immediately before an assessment deadline, a strategy that leads to high stress, surface-level learning, and poor retention. 14

Overestimation of Capacity

Many students, particularly those new to ODL, fail to accurately estimate the significant time commitment required to succeed. ¹⁵ They may underestimate the time needed for reading, completing activities, and preparing assignments, leading them to become overwhelmed when the reality of the workload sets in. Poor time management has been identified as a leading factor contributing to student withdrawal and non-completion of ODL programs. ¹⁷

This issue points to a fundamental misinterpretation of a key ODL concept. Institutions market "flexibility," which students may hear as "low-intensity" or "easily postponable." Without clear structure, pacing guides, and intermediate deadlines built into the SIM and course design, this "flexibility" becomes a liability. The course design must provide the scaffolding necessary for students to manage their own learning effectively, rather than assuming they already possess these advanced self-regulation skills.

4.2 The Motivation Crisis and Learning Burnout

Sustaining motivation over the duration of a diploma program in a remote setting is a formidable challenge.

Declining Engagement

It is a common phenomenon for ODL students to begin a course with high levels of enthusiasm that gradually decline over time.¹⁹ The initial excitement can be eroded by the repetitive nature of asynchronous work, the lack of immediate social reinforcement, and the slow, incremental nature of academic progress.

The Role of Isolation

The lack of physical and social contact is a primary catalyst for this motivational decline. Without the informal support and camaraderie of a peer group or the regular encouragement of a present instructor, students can feel profoundly alienated.²⁰ This sense of isolation can damage self-confidence and increase the tendency to procrastinate on tasks, further fueling the cycle of disengagement.²⁰

Learning Burnout

When the stress of academic demands, competing life responsibilities, and social isolation becomes chronic, it can lead to a state of learning burnout.²⁴ This is characterized by three

key symptoms: emotional exhaustion (feeling drained and overextended by one's studies), cynicism (a negative or detached attitude toward learning), and a sense of ineffectiveness (feeling incompetent and lacking accomplishment). Burnout is a serious condition that severely depletes a student's capacity and desire to engage with their learning materials.²⁴

4.3 The Digital Divide: Skills, Access, and Confidence

Effective participation in ODL is predicated on a certain level of technological proficiency and access, which cannot be universally assumed.

Digital Literacy is Not a Given

There is a common misconception that all students, especially younger "digital natives," are inherently tech-savvy. However, digital literacy is a complex set of competencies that extends beyond social media use. ³⁸ It includes the ability to effectively navigate a complex LMS, manage digital files, evaluate online information critically, and use specific software applications required for a course. ²⁷ A lack of these foundational skills acts as a significant hidden barrier. A student who struggles with the basic mechanics of the online environment will expend more time and cognitive energy on technical tasks, leaving less for academic ones. This can lead to intense frustration, a feeling of incompetence, and an inability to participate fully in online community activities like forums, thereby amplifying all other barriers to engagement.

Access to Technology

The digital divide also manifests in terms of physical access to technology. A substantial barrier, particularly for students from lower socioeconomic backgrounds or in developing regions, is the lack of consistent access to a suitable device (e.g., relying on a smartphone for tasks that require a laptop) and affordable, reliable high-speed internet. ¹⁵ Unreliable connectivity can prevent students from downloading materials, viewing videos, or participating in synchronous sessions, effectively shutting them out of the learning experience.

Mobile Learning Challenges

While mobile devices offer convenience, they are not always optimal for deep learning. Small screens can make reading dense academic texts difficult, limited battery life can interrupt study sessions, and the high cost of mobile data can be a prohibitive factor for some students.⁴² Furthermore, the mobile environment is rife with distractions from notifications and other applications, making sustained focus a challenge.

4.4 The Isolation Effect: Lack of Social Presence and Community

Humans are social beings, and learning is often a social process. The ODL environment can strip away these crucial social elements if they are not intentionally rebuilt in the digital space.

The Need for Connection

Students consistently report that a sense of connection and positive relationships—with both instructors and peers—is vital to their success and willingness to engage.²⁷ Learning activities that are perceived as entirely solitary and unsupported are a major deterrent.

Social Presence Defined

In the context of online learning, social presence refers to the degree to which participants in a course feel affectively connected to one another. It is the ability to project one's personal characteristics into the community, thereby presenting oneself as a "real person". This is fostered through open communication, peer interaction, and collaborative activities.

Impact of Low Social Presence

When social presence is low, the learning environment feels sterile and impersonal. This leads

to the feelings of isolation and disconnectedness that are so detrimental to the ODL experience.²² For many students, the lack of a supportive peer community can impede their cognitive engagement, as they miss out on the opportunities for clarification, discussion, and co-construction of knowledge that occur in a more social learning environment.¹⁶

5. Technological and Usability Hurdles

The final set of barriers relates to the technology itself. Even with well-designed materials and a motivated student, a poorly implemented or difficult-to-use technological environment can be the final straw that leads to disengagement.

5.1 Platform as a Barrier: Moodle's Usability Challenges

The choice of LMS has a profound impact on the student experience. While powerful and flexible, platforms like Moodle are frequently criticized for their poor usability.

Common Complaints

User feedback often describes Moodle's default interface as outdated, cluttered, visually unappealing, and fundamentally unintuitive. Simple, common tasks like uploading a file or finding a specific resource can involve navigating through multiple, confusing menus and settings. This transforms the LMS from a tool that supports learning into an obstacle that must be overcome.

Specific Usability Problems

Empirical usability studies have identified a range of specific problems in Moodle, including inconsistent design elements, confusing navigation pathways, poor content organization, the overuse of pop-up windows, and difficulties with core functions like submitting assignments.⁴⁷ This poor user experience (UX) is a direct source of student frustration and a known

contributor to learner disengagement. 45

Cognitive Friction

A poorly designed user interface creates what is known as cognitive friction. It forces the student to expend valuable mental energy on figuring out *how* to use the platform, rather than on *what* they are supposed to be learning. Every moment spent searching for a button or deciphering a confusing layout is a moment not spent engaging with the academic content.

This issue is not about catastrophic system failures but rather the cumulative effect of countless "micro-frustrations." A page that loads slowly, a menu that is hard to find, a link that is broken, or a document that is poorly formatted on a mobile device—each is a minor annoyance on its own. However, for a time-poor, stressed ODL student, the cumulative weight of these small hurdles can be overwhelming. They act as a tax on the student's finite reserves of time, patience, and motivation, making it increasingly likely that they will simply abandon the task in frustration.

5.2 The Mobile Learning Gap

There is often a significant gap between students' preference for accessing content on mobile devices and the readiness of institutional platforms to provide a high-quality mobile experience.

Student Preference vs. Platform Readiness

A growing number of students use smartphones and tablets as their primary or secondary means of accessing course materials.⁴² However, the learning experience on these devices is frequently suboptimal.

Technical and Design Limitations

Many LMS platforms and the SIM content uploaded to them are not designed with a

"mobile-first" approach. This can result in pages that do not render correctly, text that is too small to read, complex navigation that is difficult to use on a touchscreen, and interactive elements that do not function properly. ⁴⁷ This creates a frustrating and inefficient experience that hinders effective learning.

5.3 Technical Infrastructure Challenges

Underlying the user experience are fundamental issues of technical infrastructure that can create significant barriers to access.

Connectivity as a Gatekeeper

For many students, especially those in rural areas or from lower-income backgrounds, access to stable, high-speed internet is not a given. Poor, intermittent, or expensive connectivity can prevent them from accessing the LMS, downloading large files, viewing videos, or participating in any synchronous activities, effectively barring them from full participation.¹⁵

Performance Bottlenecks

At the institutional level, technical issues such as unoptimized servers, insufficient bandwidth, or poorly configured caching can lead to slow platform performance, particularly during peak usage times. ⁴⁵ A slow, unresponsive LMS is a major source of frustration for all users and can significantly detract from the learning experience.

Crucially, these technological barriers do not impact all students equally. A student with low digital literacy, an older computer, a slow internet connection, or who is reliant on a limited mobile data plan faces a much higher wall of frustration than a more privileged peer. Therefore, technological and usability challenges are not merely issues of convenience; they are significant issues of equity, with the potential to amplify pre-existing social and economic disadvantages and push the most vulnerable students toward disengagement.

Part III: A Strategic Framework for Re-Engagement

Diagnosing the multifaceted causes of student disengagement is the necessary first step; however, the ultimate goal is to develop a robust and actionable framework of solutions. This section transitions from analysis to prescription, outlining a comprehensive, evidence-based strategy for re-engaging ODL diploma students. This framework is organized around three strategic pillars: re-engineering the instructional materials for active learning, cultivating a strong sense of presence and community, and optimizing the technological environment to be a facilitator of, rather than a barrier to, learning.

6. Re-Engineering Self-Instructional Materials for Active Engagement

The most fundamental intervention is to transform the SIM from passive repositories of information into dynamic, interactive, and motivating learning experiences. This requires a deliberate application of modern instructional design principles and pedagogical innovations.

6.1 Applying Modern Instructional Design Principles

Effective SIM design must be intentional and grounded in an understanding of how adult learners operate in an online environment.

Learner-Centered Focus

The design process must pivot from being content-driven to being learner-centered. This begins with a thorough analysis of the target audience—the ODL diploma student—considering their prior knowledge, competing commitments, potential anxieties, and career goals. Every design choice should be made with the goal of meeting their specific needs and reducing barriers to their learning.

Structure and Scaffolding

Clarity of structure is paramount. Content should be organized into a modular format, with

each module representing a digestible unit of learning.⁵⁰ Within and between modules, the content must follow a logical, scaffolded progression. Two key principles are essential: moving from the

known-to-unknown, which connects new information to students' existing knowledge, and progressing from the **simple-to-complex**, which builds knowledge and skills incrementally.²⁶ Every module must begin with clear, specific, and measurable learning objectives that tell the student exactly what they will be able to do upon completion, providing a clear purpose for their efforts.²

Clarity and Readability

To minimize extraneous cognitive load, the language and presentation of the SIM must be optimized for clarity. This involves adopting a direct, conversational tone that feels more like a dialogue than a formal textbook. Technical jargon should be avoided or clearly explained. The visual design should employ a "generous" layout with ample white space, clear headings, and a consistent visual hierarchy to help students navigate the content easily and understand the relationships between ideas.

6.2 Embedding Interactivity and Active Learning

Passive consumption of content leads to poor retention and low engagement. SIM must be re-engineered to require active participation from the learner.

Transforming Passive Content

The traditional "tell-test" sequence, where a block of text is followed by a simple recall quiz, is insufficient. ⁵² Instructional designers must incorporate a variety of activities that require students to engage in higher-order thinking skills such as application, analysis, synthesis, and evaluation. ²⁷ This can include short writing prompts, problem-solving exercises, and reflective questions that encourage students to connect the material to their own experiences. ⁹

Utilizing Technology

Modern LMS platforms offer powerful tools for creating interactive content. Tools like H5P can be used to embed interactive elements directly into the learning materials, transforming a standard video into an engaging lesson with embedded questions or turning a static presentation into an interactive branching scenario. The use of multimedia, including short videos, podcasts, and diagrams, is also crucial for presenting information in multiple formats to cater to diverse learning preferences and to break up the monotony of text.

Real-World Relevance

Adult learners are highly motivated by the practical application of knowledge. Therefore, SIM must consistently demonstrate the relevance of theoretical concepts by grounding them in concrete, real-world examples, case studies, and scenarios that reflect the professional contexts students will encounter.²

6.3 Pedagogical Innovations for Deeper Engagement

Beyond enhancing existing materials, institutions should explore more transformative pedagogical models that are inherently engaging and well-suited to the ODL context.

Problem-Based Learning (PBL)

PBL is a powerful student-centered pedagogy that uses complex, real-world problems as the context and stimulus for learning.⁵⁶ Instead of being presented with facts to memorize, student groups are given an ill-structured problem that requires them to identify their own learning needs, find and evaluate resources, and collaboratively develop a solution.⁵⁶ This approach is highly effective for developing critical thinking, problem-solving skills, and the capacity for self-directed lifelong learning—all essential attributes for ODL students.⁵² In an asynchronous online environment, PBL can be effectively facilitated using tools like discussion forums and asynchronous video to present problem triggers and support group collaboration.⁵⁹

Gamification

Gamification involves the application of game-design elements and principles in non-game contexts to increase engagement and motivation. This can range from simple mechanics like awarding points and badges for completing modules to more complex systems involving leaderboards, narrative-driven challenges, and progress bars. Case studies have shown that gamification can lead to significant increases in student motivation, task completion rates, and overall performance by tapping into intrinsic desires for mastery, competition, and achievement.

Scenario-Based Learning (SBL)

A close relative of PBL, SBL uses interactive narratives or branching scenarios to place learners in realistic situations where they must make decisions and then experience the consequences of those choices.⁶⁵ This "learning by doing" in a safe, simulated environment is particularly effective for vocational and diploma-level training, as it allows students to practice and refine technical processes, decision-making skills, and transferable professional competencies.⁵²

7. Cultivating Presence and Community in the Digital Space

Re-engineering the content is only half the battle. The learning experience must also be humanized by intentionally building a strong sense of instructor presence and fostering a supportive peer community.

7.1 Actionable Strategies for Enhancing Instructor Presence

Instructors must be visible, accessible, and engaged to combat the isolation inherent in ODL.

Consistent Communication

A proactive communication plan is essential. This should include regular weekly announcements that set the agenda for the week, clarify expectations, and provide encouragement.³⁰ Short, informal module overview videos are a highly effective way to contextualize new material and create a personal connection.³⁰

Humanize the Instructor

The course should begin with a personal video introduction where the instructor shares their background, their passion for the subject, and some personal details to establish themselves as a real person. Maintaining a warm, supportive, and empathetic tone in all communications—from forum posts to email responses—is crucial for building trust and making students feel comfortable seeking help. On the course of the course

Provide Timely and Substantive Feedback

This is arguably the single most powerful strategy for demonstrating presence and impacting student motivation. Institutions should establish clear service-level expectations for feedback turnaround times (e.g., within 24-48 hours for student queries and within one week for submitted assignments). ²⁹ All major assignments should be assessed using detailed rubrics that provide specific, actionable feedback. ³⁰ This feedback should not only identify errors but also affirm what the student has done well and provide clear guidance for improvement, transforming assessment from a judgment into a learning opportunity. ³⁶

7.2 Building Peer Support Networks

Fostering connections among students is critical for combating isolation, improving well-being, and enhancing learning.

Facilitate Online Study Groups

Institutions can play an active role in encouraging and facilitating the formation of virtual peer study groups. This can be done by creating dedicated spaces in the LMS for students to connect, providing guidance on how to run effective study sessions, and promoting the benefits of peer support.⁶⁷ These groups empower students to solve problems collaboratively, reduce study-related anxiety, and provide a vital source of mutual motivation.⁵²

Incorporate Collaborative Projects

Course design should move beyond purely individual work to include structured collaborative projects and group assignments. These activities not only foster a sense of community but also develop essential teamwork and interpersonal skills that are highly valued in the workplace.²⁷

Effectiveness of Peer Support

Research has demonstrated that well-structured online peer support programs can be just as effective as their face-to-face counterparts in improving student well-being, reducing stress and anxiety, and providing crucial emotional and academic support.⁵²

7.3 Implementing Proactive Student Support Services

Student support in ODL must be comprehensive, integrated, and, most importantly, proactive.

Holistic Support Model

Effective support extends beyond academic tutoring. It must be a holistic system that addresses the cognitive (academic skills), organizational (time management, study strategies), and emotional (counseling, stress management) needs of the student. ⁶⁹ This requires a coordinated effort between different institutional departments, including academic

advising, tutoring centers, career services, and mental health and wellness offices.⁷¹

Proactive vs. Reactive

The traditional, reactive model of student support, which places the onus on the student to seek help, is ineffective in an ODL context. Studies show that the students who are most in need of support are often the least likely to ask for it.⁷⁰ Therefore, institutions must adopt a proactive, data-driven approach. This involves using LMS analytics to identify students who are falling behind or showing signs of disengagement and then initiating outreach to offer support before they reach a crisis point.⁵²

Initial Onboarding and Assessment

A robust onboarding process is a critical proactive measure. Before the course begins, students should complete diagnostic assessments to identify their strengths and weaknesses in areas like academic literacy, digital skills, and readiness for self-directed learning.⁷³ This allows the institution to provide targeted, individualized support from day one, setting students up for success rather than waiting for them to fail.

8. Optimizing the Technological Environment

The technology platform must be an invisible and seamless enabler of learning, not a source of frustration. This requires a focus on user experience, strategic alignment of activities with assessment, and a commitment to accessibility.

8.1 Improving the LMS User Experience (UX)

The usability of the LMS is a critical, though often overlooked, factor in student engagement.

Adopt Modern and Intuitive Design

Institutions should move away from the default, often cluttered, interfaces of platforms like Moodle. Investing in modern, clean, and responsive themes can dramatically improve navigation, reduce visual noise, and create a more pleasant and professional user experience.⁴⁵

Standardize and Organize Course Layouts

Consistency is key to reducing cognitive friction. The institution should develop and enforce a standardized, logical template for all course pages. This ensures that students can easily find what they need, regardless of the course they are taking. Features like personalized dashboards that highlight upcoming deadlines and completion tracking checklists that visually represent progress can be powerful tools for helping students stay organized and motivated.²⁷

Plugin and Permission Management

The technical administration of the LMS should be strategic. This involves being selective about the installation of third-party plugins, ensuring they are well-maintained and add clear pedagogical value, and carefully planning user roles and permissions to avoid creating a confusing and overly complex environment.⁴⁵

8.2 Aligning SIM Activities with Assessment

To overcome the perception of SIM activities as "busy work," their completion must have a direct and meaningful consequence on the student's academic standing.

Make Engagement Count

The most direct way to signal the importance of SIM activities is to attach a grade to them. This does not mean every activity needs to be a high-stakes assessment. Low-stakes completion marks, short quizzes based on the interactive content, or making the completion of a SIM module a prerequisite for unlocking the next module or submitting a major assignment are all effective strategies. This directly links effort to reward and provides a clear extrinsic motivator for engagement.

Authentic Assessment

Summative assessments should be designed to be authentic, requiring students to apply the knowledge and skills they have practiced in the SIM activities to solve realistic problems or create meaningful products.⁷⁵ When students see a direct line between the practice they do in the SIM and their ability to succeed on a major exam or project, the perceived value of the SIM increases dramatically.

Use Formative Assessment

SIM should be rich with embedded, low-stakes formative assessments like self-check quizzes and reflective prompts. These tools provide immediate, automated feedback, allowing students to monitor their own learning, build confidence, and identify areas of weakness without the pressure of a formal grade. 50

8.3 Ensuring Accessibility and Mobile-Readiness

The technological environment must be accessible to all students, regardless of their device, location, or ability.

Mobile-First Design

Given the prevalence of mobile device usage for learning, a "mobile-first" design philosophy is no longer optional. Both the LMS theme and all instructional content must be fully responsive

and rigorously tested to ensure a seamless and functional experience on smartphones and tablets.¹⁰

Address the Digital Divide

Institutions have a responsibility to mitigate infrastructure barriers where possible. This can include strategies such as providing students with mobile data bundles, ensuring that core SIM content (like PDFs and audio files) is easily downloadable for offline access, and offering robust technical support. ⁴¹ Crucially, foundational training in digital literacy should be a core component of the student onboarding process to ensure all learners have the basic skills needed to participate effectively. ¹⁵

9. Integrated Recommendations and Implementation Roadmap

The transition from a state of student disengagement to a thriving culture of engagement requires a coordinated, institution-wide effort. The following section synthesizes the preceding recommendations into a practical matrix and a phased implementation roadmap designed to guide strategic action.

9.1 The ODL Engagement Matrix

The following matrix serves as a strategic tool for administrators, mapping the primary barriers to engagement to their direct impacts, concrete mitigation strategies, and the key stakeholders responsible for implementation. This structure transforms the report's analysis into an actionable plan, facilitating delegation, resource allocation, and progress monitoring.

Table 1: The ODL Engagement Matrix: Barriers, Impacts, and Mitigation Strategies

Barrier Category	Specific Barrier	Primary Impact on Engagement	Recommende d Mitigation Strategy	Key Stakeholder(s)
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Pedagogical	Poor SIM Design (High Cognitive Load, Passive Content)	Increases frustration; content is perceived as boring and difficult, leading to task abandonment.	Redesign SIM using modular, scaffolded structure; embed interactive H5P activities; apply PBL/gamificati on.	Instructional Designers, Faculty
Pedagogical	Low Instructor Presence	Fosters isolation and demotivation; students feel unsupported and that their work is invisible.	Mandate weekly video announcement s; create instructor introduction videos; facilitate one synchronous session per month.	Faculty, Program Heads
Pedagogical	Ineffective/Del ayed Feedback	Prevents learning from mistakes; undermines motivation; students disengage when effort is not acknowledged.	Institute a 48-hour response policy for queries; use detailed rubrics for all major assignments; leverage peer feedback activities.	Faculty, Tutors
Learner-Cent ric	Poor Time Management / Procrastination	Leads to last-minute cramming, surface learning, and	Provide mandatory time management workshops	Student Support Services, Instructional Designers

		high stress, increasing dropout risk.	during orientation; integrate progress trackers and checklists into SIM.	
Learner-Cent ric	Academic Isolation / Lack of Community	Causes learning burnout, mental exhaustion, and a decline in intrinsic motivation.	Facilitate virtual study groups; design collaborative assignments; establish a peer-mentorin g program.	Student Support Services, Faculty
Technological	Clunky Moodle UX / Poor Navigation	Creates cognitive friction and wastes valuable student time, leading to frustration and disengagemen t.	Adopt a modern, user-friendly Moodle theme; standardize course navigation across the institution.	IT/LMS Admin, Institutional Leadership
Technological	Misalignment of SIM and Assessment	Students perceive SIM activities as irrelevant "busy work" and rationally choose to ignore them.	Assign a portion of the final grade to the completion of key SIM activities; design final assessments that require skills practiced in SIM.	Faculty, Curriculum Committee

9.2 Phased Implementation Roadmap

A systemic overhaul cannot be accomplished overnight. A phased approach allows for the prioritization of high-impact initiatives while building momentum for long-term strategic change.

Phase 1 (Immediate Actions - 0-3 Months): Foundational Improvements

This phase focuses on high-impact, relatively low-cost changes that can be implemented quickly to address the most acute problems.

- Faculty Development: Launch mandatory professional development workshops for all ODL faculty focusing on two key areas: strategies for increasing instructor presence (e.g., creating effective weekly announcements) and best practices for providing timely and substantive feedback.
- LMS User Experience: Immediately switch the institutional Moodle instance to a modern, responsive, and user-friendly theme. Develop and disseminate a standardized course template to ensure navigational consistency.
- **Student Support:** Create and heavily promote a centralized online resource hub for students, containing guides on effective time management, study strategies for ODL, and navigating the LMS.

Phase 2 (Medium-Term Projects - 3-12 Months): Systematic Redesign and Piloting

This phase involves more resource-intensive projects aimed at fundamentally improving course quality and student support.

- Systematic SIM Review: Initiate a systematic review of all diploma-level courses, prioritizing those with high enrollment or historically high failure/dropout rates. Begin the instructional redesign process for these priority courses, focusing on embedding interactivity and aligning activities with assessments.
- Pilot Programs: Launch a pilot peer-mentoring program for a cohort of first-year diploma students to combat isolation. Pilot the use of a more advanced pedagogical model, such as PBL or gamification, in one or two redesigned courses to measure its impact on engagement and learning outcomes.

• **Proactive Support Rollout:** Develop and implement a protocol for using LMS analytics to identify at-risk students. Train academic advisors and support staff on proactive outreach strategies.

Phase 3 (Long-Term Strategy - 12+ Months): Institutional Transformation

This phase focuses on embedding the new engagement-focused approach into the institution's culture, policies, and infrastructure.

- Full-Scale Curriculum Overhaul: Based on the results of the pilot programs, begin a
 full-scale, multi-year project to overhaul the entire diploma curriculum, embedding
 principles of active learning, authentic assessment, and community-building into every
 course.
- Policy and Quality Assurance: Revise institutional policies on course design and faculty
 evaluation to explicitly include standards for instructor presence, feedback timeliness,
 and student engagement. Integrate these standards into the formal quality assurance
 process for all ODL programs.
- Infrastructure Investment: Develop a long-term strategic plan for technology infrastructure, ensuring continued investment in LMS optimization, mobile-readiness, and initiatives aimed at closing the digital divide for students (e.g., partnerships for subsidized internet access).

Conclusion: Fostering a Culture of Engagement in Open and Distance Learning

The challenge of student disengagement with Self-Instructional Materials is not an intractable problem but a complex, systemic issue that demands a systemic solution. The evidence presented in this report makes it clear that simplistic explanations focused solely on student motivation are inadequate. Instead, disengagement emerges from a nexus of interconnected failures in pedagogy, technology, and student support that collectively create a learning environment that is more frustrating than fulfilling.

Boosting engagement is therefore not a matter of finding a single technological fix or a new pedagogical trend. It requires a fundamental cultural shift within the institution—a move away from a content-delivery mindset, where success is measured by the volume of material made available, to a learner-support mindset, where success is measured by the quality of the student's engagement and the depth of their learning.

This requires a coordinated commitment from all stakeholders. Instructional designers must become architects of engaging experiences, not just content curators. Faculty must become present and active facilitators of learning, not distant graders. Student support services must become proactive partners in student success, not reactive crisis managers. And institutional leadership must provide the vision, resources, and policies necessary to support this transformation.

By systematically addressing the barriers identified in this report—by re-engineering materials for active learning, cultivating a humanized sense of presence and community, and optimizing the technology to be a seamless enabler—institutions can dismantle the disengagement nexus. In doing so, they can close the gap between the promise of flexible, independent learning and the scaffolded, supportive, and engaging reality that truly empowers ODL diploma students to persist, learn, and thrive.

Works cited

- 1. ODL SIM Development Manual v2.pdf ASPD, accessed August 22, 2025, https://aspd.um.edu.my/doc/ODL%20SIM/ODL%20SIM%20Development%20Manual%20v2.pdf
- 2. Effectiveness of Self Instructional Material of Distance Education ERIC, accessed August 22, 2025, https://files.eric.ed.gov/fulltext/EJ1267124.pdf
- 3. Self-Learning Materials: Meaning and Characteristics of Self-Learning Materials online note bank, accessed August 22, 2025, https://onlinenotebank.wordpress.com/2022/01/15/meaning-and-characteristics-of-self-learning-materials/
- 4. Self-Instructional Materials (SIM) | CENTRE FOR ACADEMIC DEVELOPMENT AND LEADERSHIP EXCELLENCE, accessed August 22, 2025, https://cadelead.upm.edu.my/e_pembelajaran_upm/self_instructional_materials_sim-14530
- 5. Creating Effective Self-Learning Materials for Distance Education Teachers Institute, accessed August 22, 2025, https://teachers.institute/communication-and-information-technology/effective-self-learning-materials-distance-education/
- 6. What is Self-instructional materials or SIM? Hadijah binti Jaffri People@UTM, accessed August 22, 2025, https://people.utm.my/hadijahjaffri/what-is-self-instructional-materials-or-sim/
- 7. (PDF) Instructional Materials Development in ODL: Achievements, Prospects and Challenges ResearchGate, accessed August 22, 2025,

 https://www.researchgate.net/publication/311987266 Instructional Materials Development in ODL Achievements Prospects and Challenges
- 8. What Makes Self-Learning Materials Effective? Distance Learning Institute, accessed August 22, 2025, https://distancelearning.institute/staff-training-development/self-learning-materials-effective/
- 9. What is instructional design? Exploring the core principles Learning Sciences,

- accessed August 22, 2025, https://learningsciences.smu.edu/blog/what-is-instructional-design
- 10. What is an LMS? A Guide to Learning Management Systems Edly, accessed August 22, 2025,
 - https://edly.io/guides/a-guide-to-learning-management-systems/
- 11. Why is the learning management system important for organizations? Quora, accessed August 22, 2025,

 https://www.guora.com/Why-is-the-learning-management-system-important
 - https://www.quora.com/Why-is-the-learning-management-system-important-for-organizations
- 12. Integrating Self-Instructional Materials (SIM) into Courses in LMS UNIMAS CFlex, accessed August 22, 2025,
 - https://www.cflex.unimas.my/integrating-self-instructional-materials-sim-into-courses-in-lms
- 13. How Learning Management Systems Help Teachers Enhance Digital Andragogy and Drive Innovation Open LMS, accessed August 22, 2025, https://www.openlms.net/blog/education/learning-management-systems-enhance-digital-andragogy-drive-innovation/
- 14. Time Management Tips For ODL Learning Students Edukyu, accessed August 22, 2025,
 - https://edukyu.com/blog/nmims-time-management-tips-for-online-learning-students
- 15. Challenges for Open and Distance learning (ODL) Students ERIC, accessed August 22, 2025, https://files.eric.ed.gov/fulltext/EJ1079750.pdf
- 16. Challenges of Distance Learning for Students | National University, accessed August 22, 2025,
 - https://www.nu.edu/blog/challenges-of-distance-learning-for-students/
- 17. (PDF) Implementation of a Study Schedule to Help ODL Students Learn ResearchGate, accessed August 22, 2025,
 <a href="https://www.researchgate.net/publication/306106898_Implementation_of_a_Study-variable-students-net/publication/306106898_Implementation_of_a_Study-variable-students-net/publication/306106898_Implementation_of_a_Study-variable-students-net/publication/306106898_Implementation_of_a_Study-variable-students-net/publication/306106898_Implementation_of_a_Study-variable-students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication/sof-a_students-net/publication-net/publicat
- 18. Time Management and Written Assignments in Distance Education: A Set of Communicating Vessels. A Case Study in Hellenic Open University Scientific Research Publishing, accessed August 22, 2025, https://www.scirp.org/journal/paperinformation?paperid=130112
- 19. (PDF) Students' Motivation and Engagement during Distance Learning -ResearchGate, accessed August 22, 2025, https://www.researchgate.net/publication/348944515_Students'_Motivation_and_Engagement during Distance Learning
- 20. the impact of open distance learning (odl) on students' performance in universiti teknologi mara UiTM Institutional Repository, accessed August 22, 2025, https://ir.uitm.edu.my/44977/1/44977.pdf
- 21. (PDF) Students' Engagement and Learning Motivation in Synchronous and Asynchronous Open Distance Learning (ODL) Activities ResearchGate, accessed August 22, 2025,
 - https://www.researchgate.net/publication/389895854 Students' Engagement an

- <u>d_Learning_Motivation_in_Synchronous_and_Asynchronous_Open_Distance_Learning_ODL_Activities</u>
- 22. Research on student engagement in distance learning in sustainability science to design an online intelligent assessment system Frontiers, accessed August 22, 2025,
 - https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2023.1282386/full
- 23. The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments ERIC, accessed August 22, 2025, https://files.eric.ed.gov/fulltext/EJ1103654.pdf
- 24. Managing online learning burnout via investigating the role of loneliness during COVID-19, accessed August 22, 2025, https://pmc.ncbi.nlm.nih.gov/articles/PMC11846307/
- 25. The research on the impact of distance learning on students' mental ..., accessed August 22, 2025, https://pmc.ncbi.nlm.nih.gov/articles/PMC10007642/
- 26. (PDF) Developing an Indicator for the Standard of Self-instructional Materials (SIM) in Open and Distance Learning (ODL) Environments: An Exploratory Study on the Relationship between Cognitive Load Types and Task Sets ResearchGate, accessed August 22, 2025, <a href="https://www.researchgate.net/publication/372273010_Developing_an_Indicator_fgor_the_Standard_of_Self-instructional_Materials_SIM_in_Open_and_Distance_Learning_ODL_Environments_An_Exploratory_Study_on_the_Relationship_between_Cognitive_Load_Types_and_Ta
- 27. Overcoming barriers to student engagement with Active Blended ..., accessed August 22, 2025, https://research.manchester.ac.uk/files/55968517/ABL Interim Report.pdf
- 28. The Role of Learning Management Systems in Educational Environments: An Exploratory Case Study DiVA portal, accessed August 22, 2025, https://www.diva-portal.org/smash/get/diva2:435519/FULLTEXT01.pdf
- 29. Teaching Presence in Online Courses SJSU School of Information, accessed August 22, 2025, https://ischool.sisu.edu/ciri-blog/teaching-presence-online-courses
- 30. Online Instructor Presence | Teaching and Learning Resource Center, accessed August 22, 2025,
 - https://teaching.resources.osu.edu/teaching-topics/online-instructor-presence
- 31. The Power of Instructor Presence | Center for Teaching and Assessment of Learning University of Delaware, accessed August 22, 2025, https://ctal.udel.edu/resources-2/instructor-presence/
- 32. Building Instructor Presence in an Online Setting ASC Office of Distance Education, accessed August 22, 2025, https://ascode.osu.edu/building-instructor-presence-online-setting
- 33. Reframing feedback to improve teaching and learning aitsl, accessed August 22, 2025,
 - https://www.aitsl.edu.au/docs/default-source/research-evidence/spotlight/feedback.pdf?sfvrsn=cb2eec3c_14

- 34. Student engagement and the role of feedback in learning University of Bedfordshire, accessed August 22, 2025, https://www.beds.ac.uk/jpd/volume-2-issue-1/student-engagement-and-the-role-of-feedback-in-learning/
- 35. Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19 PMC, accessed August 22, 2025, https://pmc.ncbi.nlm.nih.gov/articles/PMC8059127/
- 36. Meaningful Feedback for Students: 5 Research-Based Tips | Edutopia, accessed August 22, 2025, https://www.edutopia.org/blog/tips-providing-students-meaningful-feedback-marianne-stenger
- 37. Teacher Feedback Practices, Student Feedback Motivation, and Feedback Behavior: How Are They Associated With Learning Outcomes? - Frontiers, accessed August 22, 2025, https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.6970 45/full
- 38. Exploring Digital Literacy Skills in Social Sciences and Humanities Students MDPI, accessed August 22, 2025, https://www.mdpi.com/2071-1050/14/5/2483
- 39. Digital literacy and academic performance: the mediating roles of digital informal learning, self-efficacy, and students' digital competence Frontiers, accessed August 22, 2025, https://www.frontiersin.org/journals/education/articles/10.3389/feduc.2025.159027
- 40. DIGITAL LITERACY: A MUST FOR OPEN DISTANCE AND E-LEARNING (ODEL) STUDENTS | Maphosa | European Journal of Education Studies oapub.org, accessed August 22, 2025, https://oapub.org/edu/index.php/ejes/article/view/2274
- 41. Barriers and solutions to online learning in medical education an integrative review PMC, accessed August 22, 2025, https://pmc.ncbi.nlm.nih.gov/articles/PMC5992716/
- 42. Usability of Mobile Learning Technologies in Open and Distance Learning ResearchGate, accessed August 22, 2025, https://www.researchgate.net/publication/390005438_Usability_of_Mobile_Learning_ Technologies in Open_and_Distance_Learning
- 43. Usability of Mobile Learning Technologies in Open and Distance Learning Journal–ISI, accessed August 22, 2025, https://journal-isi.org/index.php/isi/article/view/989
- 44. Disentangling the mechanism of student engagement in online language classrooms from the perspective of Community of Inquiry PMC, accessed August 22, 2025, https://pmc.ncbi.nlm.nih.gov/articles/PMC11154617/
- 45. What Are Common Challenges with Moodle and Their Mitigation, accessed August 22, 2025, https://mindfieldconsulting.com/what-are-common-challenges-with-moodle-an-d-their-mitigation/
- 46. Frustrating platform: r/moodle Reddit, accessed August 22, 2025, https://www.reddit.com/r/moodle/comments/11220cg/frustrating-platform/

- 47. Usability problems in Moodle, and the Likert scores ResearchGate, accessed August 22, 2025,
 - https://www.researchgate.net/figure/Usability-problems-in-Moodle-and-the-Likert-scores_tbl1_337888425
- 48. Student projects/Usability issues/T1 MoodleDocs, accessed August 22, 2025, https://docs.moodle.org/20/en/Student_projects/Usability_issues/T1
- 49. Usability Problems in Moodle, and the Percentages of Students who... ResearchGate, accessed August 22, 2025,
 https://www.researchgate.net/figure/Usability-Problems-in-Moodle-and-the-Percentages-of-Students-who-Identified-them tbl3 333293178
- 50. Designing Effective Course Materials for Distance Learners, accessed August 22, 2025, https://distancelearning.institute/learner-support-systems-services/designing-effective-course-materials-for-distance-learners/
- 51. Playbook for the Development of Self- Instructional Material for Home-based learning during school closures in Afghanistan, accessed August 22, 2025, https://inee.org/sites/default/files/resources/Self%20Instructional%20Material%20 Playbook.pdf
- 52. ODL Handbook of SIM UTM, accessed August 22, 2025, https://cdex-apps.utm.my/files/handbook/ODL-Handbook-of-SIM-UTM-CDex.pdf
- 53. Facilitating and assessing student engagement in the classroom | Center for Teaching & Learning | University of Colorado Boulder, accessed August 22, 2025, https://www.colorado.edu/center/teaching-learning/2023/01/23/facilitating-and-assessing-student-engagement-classroom
- 54. Pedagogical Strategies for Enhancing Student Engagement and Learning Outcomes Research and Reviews, accessed August 22, 2025, https://www.rroij.com/open-access/pedagogical-strategies-for-enhancing-stude https://www.rroij.com/open-access/pedagogical-strategies-for-enhancing-stude https://www.rroij.com/open-access/pedagogical-strategies-for-enhancing-stude
- 55. 7 ways to improve student engagement Watermark Insights, accessed August 22, 2025, https://www.watermarkinsights.com/resources/blog/4-ways-to-improve-student-engagement/
- 56. Problem-based learning Wikipedia, accessed August 22, 2025, https://en.wikipedia.org/wiki/Problem-based learning
- 57. Problem-based Learning in an Online Course: A case study ResearchGate, accessed August 22, 2025, https://www.researchgate.net/publication/26411626_Problem-based_Learning_in_ an Online Course A case study
- 58. Problem-Based Learning: Developing 21st Century Skills in Online Environments Saskatchewan Open Education Resources, accessed August 22, 2025, https://www.saskoer.ca/aguideforbusyeducators/chapter/problem-based-learning-developing-21st-century-skills-in-online-environments/
- 59. Improving Problem-Based Learning with Asynchronous Video EDUCAUSE Review, accessed August 22, 2025, https://er.educause.edu/blogs/2021/2/improving-problem-based-learning-with-as

vnchronous-video

- 60. Gamification Challenges and a Case Study in Online Learning, accessed August 22, 2025,
 - https://jolrap.scholasticahq.com/api/v1/articles/26910-gamification-challenges-and-a-case-study-in-online-learning.pdf
- 61. Gamification approach to enhance students' engagement in Online Distance Learning (ODL) Classes, accessed August 22, 2025, https://ir.uitm.edu.my/65999/1/65999.pdf
- 62. How Effective is Gamification in Education? 10 Case Studies and Examples Axon Park, accessed August 22, 2025, https://axonpark.com/how-effective-is-gamification-in-education-10-case-studies-and-examples/
- 63. Gamification in Education: Top 10 Gamification Case Studies that will Change our Future12, accessed August 22, 2025, https://ec.europa.eu/programmes/erasmus-plus/project-result-content/e22ddbda-dd23-42cc-89a2-786e921b2d80/Gamification%20in%20Education_20170418_020301.pdf
- 64. Gamification approach to enhance students' engagement in Online Distance Learning (ODL) classes | Request PDF ResearchGate, accessed August 22, 2025, https://www.researchgate.net/publication/372615728_Gamification_approach_to_enhance_students' engagement in Online Distance Learning ODL classes
- 65. Scenario Based Learning's Potential for Online, Asynchronous Learning and Beyond | ASC Office of Distance Education The Ohio State University, accessed August 22, 2025, https://ascode.osu.edu/scenario-based-learnings-potential-online-asynchronous-learning-and-beyond
- 66. Instructor Presence in the Online Classroom DSI | University of North Texas, accessed August 22, 2025, https://digitalstrategy.unt.edu/clear/teaching-resources/theory-practice/instructor-presence-online-classroom.html
- 67. Effective peer support: online study groups UHI, accessed August 22, 2025, https://www.uhi.ac.uk/en/t4-media/one-web/university/students/support/mentoring/documents/Effective-peer-support---online-study-groups.pdf
- 68. The feasibility and impact of online peer support on the well-being of higher education students ResearchGate, accessed August 22, 2025, https://www.researchgate.net/publication/355233472 The feasibility and impact of online peer support on the well-being of higher education students
- 69. View of Guest Editorial Reflections on Student Support in Open and Distance Learning, accessed August 22, 2025, https://www.irrodl.org/index.php/irrodl/article/view/134/214
- 70. Student Support Services for Success in Open and Distance Learning empower, accessed August 22, 2025, https://empower.eadtu.eu/images/fields-of-expertise/StudentSupport/Student_Support Services for Success in OED SIMPSON.pdf
- 71. The Conceptualisation of Student Support by University Support Staff in an Open

- Distance E-Learning Environment ERIC, accessed August 22, 2025, https://files.eric.ed.gov/fulltext/EJ1453746.pdf
- 72. Identifying dimensions and components of student support system in virtual learning: A scoping review, accessed August 22, 2025, https://pmc.ncbi.nlm.nih.gov/articles/PMC10671018/
- 73. Learner Support Services for Online Students: Scaffolding for success ResearchGate, accessed August 22, 2025,
 https://www.researchgate.net/publication/26468303_Learner_Support_Services_for Online Students Scaffolding for success
- 74. Integration of simulation technology with assessment in initial teacher education, accessed August 22, 2025, https://aiet.org.au/index.php/AJET/article/download/9450/2138/32783
- 75. Simulation-based Experiential Learning Faculty Toolkit Queen's University, accessed August 22, 2025, https://www.queensu.ca/experientiallearninghub/sites/qelhwww/files/uploaded_files/Simulation%20Toolkit/Simulation%20EL%20Faculty%20Toolkit%20%20Final%20Final%20April%208.pdf
- 76. Simulated Electronic Health Record (Sim-EHR) Curriculum: Teaching EHR Skills and Use of the EHR for Disease Management and Prevention PMC, accessed August 22, 2025, https://pmc.ncbi.nlm.nih.gov/articles/PMC4035239/