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Envisioning the process: Lessons from developing institutional OER repositories in Vietnam

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Abstract

Introduction. This study investigates the development of institutional open educational resources repositories (IOERs) in Vietnamese higher education. While OER adoption has been widely examined at the level of students and lecturers, little is known about institutional processes for developing repositories, particularly in resource-constrained contexts.

Method. A qualitative approach was adopted, using semi-structured interviews with 20 participants, including IOER leaders, OER champions, university administrators, faculty members, and library administrators and staff from four major Vietnamese cities. Participants were identified through purposive and snowball sampling to ensure they had direct involvement in OER initiatives.

Analysis. Interview transcripts were analysed using inductive content analysis supported by NVivo. Coding was data-driven, with emerging categories interpreted through Fullan's educational change framework, focusing on the phases of initiation and implementation

Results. The study identifies four campus stakeholder groups: project implementers, content producers and users, facilitators, and university leaders. Two phases are highlighted: initiation, centred on leadership approval, and implementation, involving management, awareness-raising, use, and content creation.

Conclusions. IOER development in Vietnam should be understood as an educational change process rather than a technical initiative. Libraries play a central role, but success depends on cross-unit collaboration, visionary leadership, and strategies to build awareness and engagement.

Introduction

Education has consistently been a priority for government investment worldwide, often accounting for 10 to 20 percent of total public spending (Patrinos & Tanaka, 2024). Yet inequalities in access remain persistent, with financially disadvantaged students facing significant barriers due to the high costs of tuition and learning materials. These barriers can contribute to poor academic performance, psychological stress, and high dropout rates, particularly in developing countries (Ahmad et al., 2024; Jenkins et al., 2020; Nurmalitasari & Faizuddin, 2023). In Vietnam, socioeconomic disparities are compounded by systemic challenges that continue to hinder the quality and accessibility of higher education. These include a shortage of high-quality universities, underqualified academic staff, outdated and teacher-centred pedagogical approaches, and continuing problems with plagiarism and copyright infringement (Duong et al., 2019; Pham & Dinh, 2021; Tran, 2013; Trines, 2017). Higher education institutions are under pressure to improve both access and quality while also meeting growing demands for financial autonomy (Do & Mai, 2022). This creates a complex environment in which institutions must balance financial sustainability, educational equity, and academic excellence.

One potential response to these challenges has been the promotion of Open Educational Resources (OER), which provide cost-effective, equitable, and collaborative approaches to teaching and learning (Clinton-Lisell et al., 2021; Hodgkinson-Williams & Arinto, 2017). According to UNESCO, OER are

teaching, learning and research materials in any medium, digital, or otherwise, that reside in the public domain or have been released under an open licence that permits no-cost access, use, adaptation, and redistribution by others with no or limited restrictions' (UNESCO, n.d.)

This definition highlights their potential to lower barriers to education, enhance affordability, and promote equity at both local and global levels. OER also encourage collaboration among educators and foster pedagogical innovation, as resources can be adapted and improved by communities of practice (Hegarty, 2015; McGreal, 2019). Over time, OER have been linked to the development of lifelong learning skills such as independence, creativity, and critical thinking (Daryono & Belawati, 2013).

Within the broader OER movement, Institutional OER Repositories (IOERs) have emerged as an important mechanism for ensuring the sustainable adoption and use of OER. IOERs are digital platforms, usually maintained by universities or higher education institutions (HEIs), that collect, curate, preserve, and disseminate open learning materials (Truong et al., 2021). Their functions extend beyond simple storage: they play a vital role in quality assurance, metadata management, and ensuring that OER remain accessible and usable over the long term. IOERs also provide visibility for locally created knowledge, enabling institutions in the Global South to participate more actively in global knowledge exchange. Successful examples such as MIT OpenCourseWare and the Open University's OpenLearn platform illustrate how institutional repositories can democratise access to high-quality education worldwide. However, while scholarship has examined OER adoption at the level of individual users such as students and lecturers, there is still limited research into how repositories themselves are developed and sustained. In particular, the institutional processes of coordinating stakeholders, mobilising resources, and embedding repositories into practice remain underexplored, especially in emerging contexts.

Vietnam has embraced digital innovation in its higher education system, particularly under the pressures of the Fourth Industrial Revolution (Truong et al., 2021; Uoc, 2023). OER adoption has been framed as a means of reducing financial pressures, widening access, and fostering pedagogical renewal. Since their introduction in 2005, several Vietnamese universities have attempted to experiment with OER and IOERs (Truong et al., 2021). The government has also

acknowledged open access as part of broader strategies for educational reform and digital transformation (Nguyen et al., 2022). However, despite these initiatives, progress has been slow. Studies indicate that awareness and utilisation of OER among faculty and students remain limited, while institutions have not provided clear guidelines, training, or incentives to support adoption (Doan & Dao, 2020; Nguyen & Tam, 2023; Tra My, 2023).

Globally, research on OER adoption has grown, but it has tended to focus primarily on individual users, particularly students and lecturers, and the benefits or barriers they experience (McGreal, 2019; Weller et al., 2015). Far less attention has been paid to the institutional processes that enable repositories to be created and sustained, or to the dynamics among different stakeholder groups involved in these processes. This gap is especially relevant in contexts where higher education systems face resource constraints and competing priorities, making the development of IOERs particularly challenging.

In Vietnam, these challenges are compounded by limited policy support, uneven institutional readiness, and financial pressures within higher education institutions. As a result, only a small number of universities have attempted to develop IOERs, and even these remain at an early stage of implementation. This suggests that IOER initiatives in the Vietnamese context cannot be understood simply as technical projects; rather, they must be seen as processes of educational change that require cultural shifts, institutional buy-in, and new forms of leadership. This study is guided by two research questions:

RQ1: *What is the process of developing institutional OER repositories in Vietnamese higher education?*

RQ2: *Who are the key stakeholders involved in IOER development, and what roles do they play?*

To address these questions, Fullan's (2007) educational change process is adopted as the theoretical framework. This perspective is particularly suitable because it conceptualises change as a multi-phase, iterative process that involves shifts in materials, behaviours, and beliefs. By focusing on the initiation and implementation phases of IOER development, the study examines how institutions envision and begin to realise these initiatives, drawing on both the practical experiences of IOER leaders and the perspectives of other stakeholders. The contribution lies in presenting a process-oriented framework for IOER development in the Global South, offering lessons that can inform both practice and policy in contexts where open education is still at an emerging stage.

Theoretical framework

This study adopts the Educational Change Process proposed by Michael Fullan (2007) as its theoretical framework. Fullan first published *The Meaning of Educational Change* in 1982, and the framework has since been revised in several subsequent editions (1991, 2001, 2007, 2016). These iterations reflect the continuing refinement of his theory in response to evolving educational contexts. Originally designed to analyse school-level reforms, the model has been widely applied across diverse educational contexts because of its capacity to explain the complexities of systemic transformation (Noguera, 2006). Fullan emphasises that educational change is multi-dimensional, requiring shifts not only in materials but also in behaviours and beliefs (Fullan, 2007, 2016). The development of IOERs in Vietnam represents a substantial educational change, as it demands reforms across multiple dimensions of the higher education system. Vietnam's HEIs face persistent challenges, including shortages of high-quality learning materials (Hayden & Lam, 2007), reliance on teacher-centred pedagogies (Tran, 2013), and restrictions on institutional autonomy (World Bank, 2008). Implementing IOERs therefore requires more than expanding resource availability; it calls for a reconfiguration of teaching practices, institutional processes, and pedagogical

philosophies. Because OER promote openness, collaboration, and active student engagement (World Bank, 2020), their adoption directly challenges traditional hierarchical systems of learning and supports a shift towards student-centred, interactive, and problem-based approaches (Australian Government – Department for Foreign Affairs and Trade, 2015).

Fullan's framework comprises two components: (1) the change process and (2) the factors influencing change at each stage. Given the scope of this study, attention is placed on the first component. Fullan (2007) identifies three phases of change: Initiation, Implementation, and Institutionalisation. Because very few Vietnamese IOERs have progressed to the stage of institutionalisation, the analysis concentrates on the first two phases. Figure 1 illustrates these three phases of the change process.

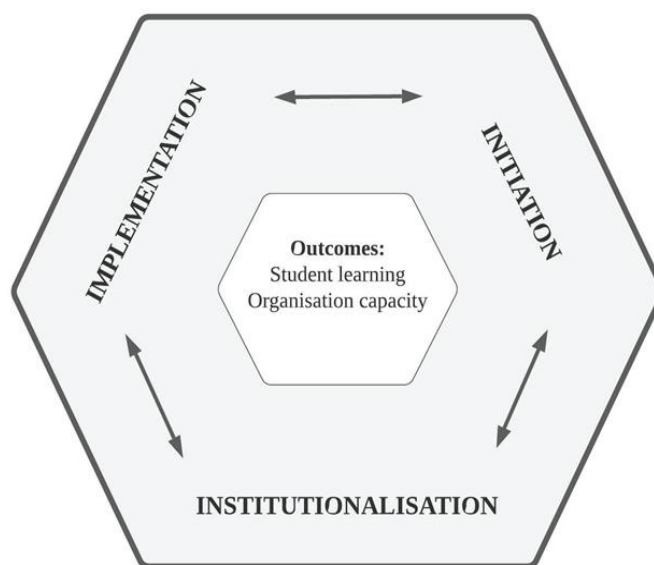


Figure 1. Three phases of the change process (adapted from Fullan, 2007)

- *Phase I: Initiation.* This phase, also referred to as mobilisation or adoption, involves the decision to proceed with a change and the establishment of commitment among stakeholders. Typical activities include assessing institutional readiness, appointing relevant actors, and making the formal decision to commence an IOER project.
- *Phase II: Implementation.* This phase encompasses the activities required to put plans into practice. For IOER development, it includes defining stakeholder roles, creating policies, and addressing issues of resources, infrastructure, and engagement. Success depends on effective collaboration and the ability to adjust to emerging challenges.
- *Phase III: Institutionalisation.* This phase represents the point at which change becomes embedded in institutional practice. Although essential for sustainability, it is not examined in this study due to the early stage of IOER development in Vietnam.

Fullan also stresses that change is non-linear and iterative, with feedback loops that allow for continuous adaptation. For instance, decisions made during Initiation, such as the project's scope or scale, may need to be revisited during Implementation in response to challenges (Fullan, 2007). This flexibility is critical to ensuring that IOER development remains responsive to institutional needs and stakeholder contributions.

Since its introduction, Fullan's framework has been widely applied across diverse educational contexts, reflecting its versatility as a model of systemic change. Some studies have used it to

analyse all three phases of change (e.g., De Boer & Collis, 2001; Ozembloski, 1993), while others have focused on specific stages such as Initiation or Implementation (Bahçekapili, 2018; Crary, 2019; Dolan, 2016; Mays et al., 1997; Orhun, 2004; Polyzoi & Černá, 2001; Shilling, 2013). Applications span Canada (Ozembloski, 1993), Ireland (Dolan, 2016), the Czech Republic (Mays et al., 1997; Polyzoi & Černá, 2001), the United States (Shilling, 2013), Turkey (Bahçekapili, 2018; Orhun, 2004), and Vietnam (Do, 2015). Several studies have also proposed adaptations, such as Ozembloski's (1993) additional sub-phases, Polyzoi and Černá's (2001) revision of the implementation phase, or Do's (2015) hybrid framework integrating Fullan's model with Nowlen's Performance Model (Nowlen, 1988) and Rogers's Diffusion of Innovations theory (Rogers, 1995). These examples show that while the model has often been refined to suit local contexts, no existing modification was better suited to this study. IOER development in Vietnam constitutes a distinctive form of educational change, but it aligns closely with Fullan's dimensions and phases. Accordingly, the present study employs the original framework, focusing on the initiation and implementation phases most relevant to the Vietnamese context.

Methodology

A qualitative approach was adopted to ascertain the development of IOERs in Vietnam. The research is situated within an interpretivist paradigm and guided by inductive reasoning, enabling participants' perspectives to shape the development of themes and concepts (Goldkuhl, 2012). Data were collected through semi-structured interviews with 20 participants, including OER champions (C), IOER leaders (OL), university administrators (UA), faculty administrators (FA) and members (F), library administrators (LA), and library staff (LS) from HEIs and education-related organisations in Vietnam. OER champions were identified as advocates promoting, supporting, and leading OER adoption to enhance access, equity, and teaching practices, while IOER leaders were responsible for guiding and overseeing repository development within their institutions (Truong, 2020). Participants were based in Hanoi, Hai Phong, Ho Chi Minh City, and Can Tho, representing the four largest urban centres in the country.

Purposive and snowball sampling techniques were employed to identify individuals with relevant knowledge and direct involvement in OER initiatives (Williamson, 2017). These methods were particularly valuable given the challenges of locating participants with specific expertise in the relatively nascent field of IOER development. Interviews were conducted face-to-face using open-ended questions, lasted an average of 60 minutes, and generated detailed accounts of participants' experiences and perspectives. Probing questions were also used to encourage clarification and deeper reflection, allowing participants to elaborate on their initial responses. All interviews were recorded and transcribed verbatim to preserve accuracy and nuance.

The data were analysed using a conventional content analysis approach (Hsieh & Shannon, 2005). While Fullan's educational change process informed the theoretical lens for interpreting the findings, the coding remained inductive. Codes and themes emerged directly from the data rather than being imposed a priori by the framework. NVivo software was employed to manage coding and categorisation. Initially generated codes were iteratively refined and then compared with the existing literature and Fullan's model to develop a comprehensive understanding of the IOER development process and to identify key themes based on their nature and relationships. The findings derived from this analysis are presented in the following section.

Findings

Campus stakeholders in IOER development

The study identified four key internal stakeholder groups involved in the development of IOERs in Vietnamese higher education: (1) project implementers, (2) OER content producers and users, (3) project facilitators, and (4) project leaders. Figure 2 illustrates these campus stakeholders and their roles in IOER development.

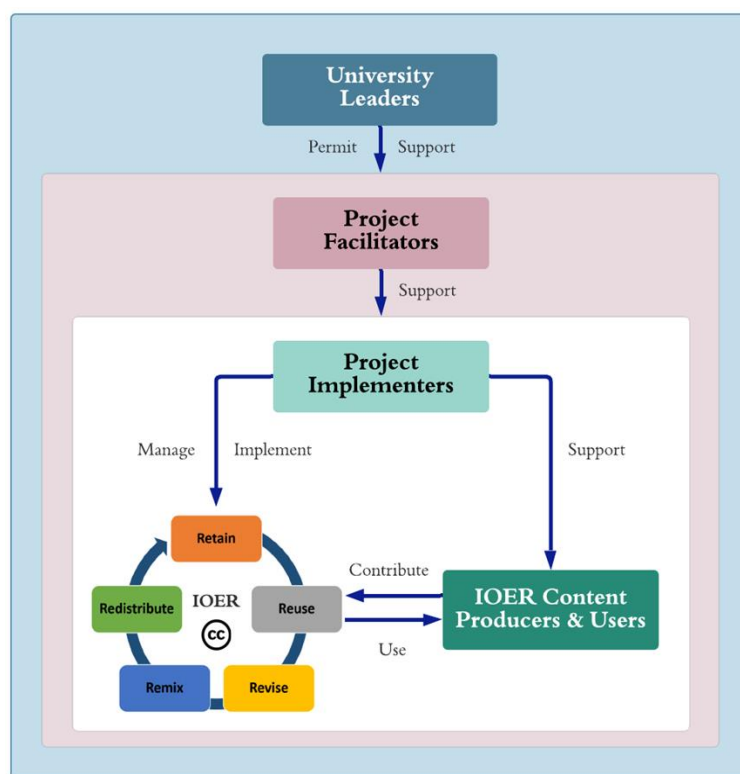


Figure 2. Campus stakeholders involved in IOER development

Project implementers

Across interviews, university libraries were consistently positioned as the central implementers of IOER projects. Participants linked this to libraries' formal mandate to manage educational resources, as well as their ability to coordinate work across the institution. As one library leader explained, *'If they are educational resources, then they should be managed by the library since the function of a library in a university is to manage educational resources'* (LA1).

Beyond mandate, participants described libraries as uniquely positioned because they combine three forms of capacity that IOER projects require: content stewardship, operational staffing, and ICT-related systems and workflows. Several participants also framed libraries as a *'bridge'* between information and users and, importantly, between units. In practical terms, this bridging role meant connecting leadership expectations with faculty needs, and coordinating input from academic departments, IT units, and student communities.

Participants also distinguished library responsibilities from those of IT departments. IT units were typically expected to provide technical support, especially for building or maintaining platforms, while libraries were viewed as responsible for repository operation and governance, including establishing workflows, managing content submission, and overseeing access. As a library director noted, *'the IT Department will help us create the platform, but the library will manage its use and operation'* (LA5).

Library staff were also described as bringing specialist expertise that is difficult to substitute elsewhere in the institution, particularly in cataloguing, classification, metadata management, curation, and publishing. Participants suggested that this expertise enables libraries to organise resources in line with recognised standards and to improve usability. In practice, libraries were described as developing subject guides and curated collections to enhance discoverability, as well

as delivering training and consultations on open licensing, copyright, academic integrity, and information literacy. Some participants further noted that librarians may contribute to OER creation and localisation, particularly through information literacy resources that can be reused across programmes.

OER content producers and users

Lecturers and researchers were consistently described as the primary producers of OER, given their ownership of teaching materials and research outputs that can be converted into open resources (for example, lectures, course notes, textbooks, and scholarly materials). Students and graduate researchers were described as the largest user group and, in some cases, potential contributors, particularly where IOER initiatives encourage student-created learning artefacts or graduate researcher outputs to be shared openly under appropriate supervision.

Participants also described content movement as a multi-step institutional workflow rather than a simple upload process. One IOER leader outlined a sequence in which academics create content, a translation unit supports language adaptation, and the library handles licensing and publication: *'Our OER are created by university lecturers. They compose the resources and then transfer them to the Translation Department for language translation. Those resources are then transferred to the library for open licensing and uploading to the Open Courseware' (OL1)*. This example highlights how IOER development depends on coordinated labour across academic and support units to move materials from creation to open dissemination.

Project facilitators

Project facilitators, including IT units, academic faculties, and departments of academic and research affairs, were seen as essential to coordinating IOER development. Participants described their role as keeping technical systems, academic content, and institutional processes aligned. One participant captured this layered collaboration: *'The first is the library. The second is the faculties - lecturers. The third is the IT department, and the fourth is the academic and research administration units' (LA5)*.

The Department of Academic Affairs was highlighted as particularly important because it works closely with lecturers and is directly involved in developing teaching materials. It was viewed as the unit most able to guide and support educators in preparing content for the repository. As one faculty member noted, *'the Department of Academic Affairs is important because they work directly with lecturers to develop teaching materials, they help build the [OER] content. When the content is completed, library will help disseminate and provide training for users' (F2)*. IT departments were recognised for providing the technical infrastructure that enables uploading, storage, and access, with participants emphasising that even strong content would have limited impact without reliable, user-friendly platforms. Faculties were also positioned as bridges between repository initiatives and teaching practice, encouraging contributions, validating content, and ensuring relevance to curriculum needs.

Overall, participants framed these facilitators as the connective support between content producers and libraries. While libraries were seen as leading IOER initiatives, that leadership depended on IT expertise, faculty engagement, and the organisational support of academic and research administration.

Project leaders

University leaders, particularly the rectorate board, were consistently recognised as essential decision-makers. Their approval and policy support determined whether IOER initiatives could move forward and whether lecturers and staff were incentivised to participate. As one champion observed, *'the university leaders have a critical role, especially the rector!' (C1)*. Visionary leadership was described as a driver of progress, with participants noting that leaders who embraced

openness could change institutional priorities. A faculty member explained this influence through their own experience:

When Mr Q [the vice-rector of this university] joins our university, he comes with a new ‘wind’ about the open movement. [...]. I find that when a university wants to change or develop, the university leaders must have a good vision. They must support and encourage the lecturers. (F1)

A library director also emphasised that *‘the roles of the [university] leaders are vital! They must foresee the real value of OER, the benefits to both the users and creators’* (LA2).

Overall, participants did not present IOER development as the responsibility of any single unit. Libraries may lead implementation, but IOER progress depends on coordinated roles: leaders authorise and legitimise, facilitators enable systems and processes, academics and students generate and use content, and libraries organise, govern, train, and sustain repository operations.

The IOER development process

Only three IOER leaders in this study had direct experience with repository development; the remaining participants contributed through their perceptions and expectations. Despite these differences, most agreed that a bottom-up approach is the most effective way to advance IOERs and the broader OER movement in Vietnam. Given the absence of strong government policy, participants suggested that initiatives should begin within universities or specific units rather than waiting for national directives. As one IOER leader explained, *‘waiting for government policy could delay progress, so creating a strong grassroots movement is essential to push for policy change’* (OL2). Among the three university libraries that initiated IOER projects, only one foreign-backed institution received formal policy support from top-level managers. The other two libraries were able to begin their projects with leadership approval, but without official policy frameworks. Participants acknowledged that this variation reflects differences in institutional resources, priorities, and challenges across universities.

To analyse these dynamics, the study applies Fullan’s (2007) educational change theory, focusing specifically on the phases of Initiation and Implementation. From the participants’ perspectives, the initiation phase centres on securing approval and support from university leaders, while the implementation phase depends on the active participation and advocacy of OER users and producers. Table 1 summarises the IOER development phases and the campus stakeholders involved at each stage.

IOER development phase	Objective	Campus stakeholders involved
Initiation	Achieve approval and support from university administrators	- Initiators - University leaders
Implementation	Achieve support and participation from lecturers, researchers, and students	- University leaders - Project implementers - Project facilitators - OER content producers and users

Table 1. The IOER development phases and campus stakeholders involved

Initiation phase

The initiation phase involves gaining approval and support from university leaders to begin an IOER development project. Participants described this phase as relatively straightforward, since it primarily depends on initiators, often library leaders or IT staff, presenting the idea to decision-makers and demonstrating its necessity. As one library director explained, *‘We approach and propose to the Rectorate Board... We can see its necessity and convince them to support it’* (LA5). However, participants also cautioned that approval was not guaranteed. If university leaders

lacked awareness of OER concepts or their potential benefits, they were unlikely to support development efforts. As the same director noted, *'If the university leaders have no idea about OER and their concepts and potential, they are less likely to see the need in developing an IOER'* (LA5). In such cases, raising leaders' awareness and demonstrating concrete advantages was seen as essential to securing commitment.

Several participants highlighted the importance of visionary leadership during this phase. Leaders who understood and embraced the open movement were perceived as playing a decisive role, able to shift institutional culture and create momentum for adoption. One faculty member reflected that universities with such leaders had *'greater possibilities for successfully developing the IOER'* (F1). This view was reinforced by others who argued that leaders needed not only to grant approval but also to inspire lecturers and staff to participate actively.

Institutional context also influenced the initiation phase. Some participants noted that in universities with rigid hierarchies, even highly motivated initiators could not move forward without strong top-level endorsement. By contrast, foreign-backed or reform-oriented institutions were seen as more open to experimentation, with leaders more willing to consider innovative practices. In these settings, exposure to international models of open education helped shape leaders' vision and encouraged them to support IOER initiatives.

Overall, the initiation phase was described as a critical gatekeeping moment. While technically simple, its success hinged on whether university leaders recognised the value of openness and were willing to commit resources and authority to repository development.

Implementation phase

Once approval is secured, stakeholders move to the implementation phase. Participants consistently described this stage as more complex than initiation, because it required sustained collaboration across multiple units and the involvement of a wider range of stakeholders. Four key steps were identified (Figure 3).

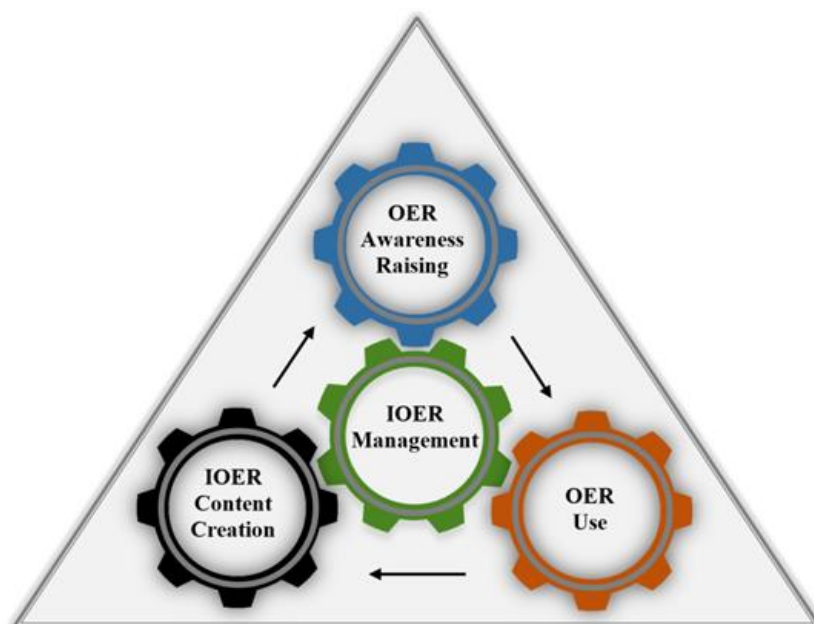


Figure 3. Major steps of IOER implementation

1. **IOER management.** Management tasks begin immediately after approval and continue throughout the implementation process. These activities include assessing available and required

resources, budgeting, strategic planning, and securing funding before introducing OER to users. Participants stressed that without careful planning and resource allocation, projects were likely to stall or remain symbolic. As one IOER leader explained:

After the decision to initiate the development project, the appointed implementers will need to carry out some management and governing activities such as evaluating the budget and other resources... planning, developing strategies, and calling for funding before starting to introduce OER to users. (OL2)

In this view, management is not a discrete step but an ongoing backbone of implementation, shaping how subsequent activities can unfold.

2. OER awareness raising. Since OER remains relatively new in Vietnam, raising awareness among potential users was seen as essential. Participants frequently reported a lack of understanding of OER concepts, licensing, and benefits. As one library administrator put it: *'The difficulty users face in the first step is a lack of awareness of OER. They need to understand what it is, how to use it, and what its offers'* (LA5). To address this, participants recommended targeted and incremental strategies. A champion advocated for a stepwise approach beginning with lecturers:

Library can start from minor things, a bottom-up approach. [The library can] organise workshops and training for lecturers and then help them understand about and integrate OER into their lectures. Once the lecturers know about OER, they will introduce it to their students, step by step. [...]. The library should be a very proactive stakeholder. (C2)

Awareness-raising was not only about technical knowledge but also about building trust and demonstrating relevance to teaching practices.

3. OER use. Once awareness was established, the next step was to encourage and support the integration of OER into teaching and learning. Libraries took the lead by curating, organising, and promoting resources through web portals. An IOER leader explained, *'The library examines available OER relevant to the university's subjects, evaluates their quality, classifies them by discipline, and makes them accessible to users before promoting them widely'* (OL2). Participants also highlighted the role of training, particularly in academic integrity and proper citation, as crucial for effective use. As one IOER leader noted:

We [library] train and instruct them on how to use OER... open licensing, how to search for and evaluate the [OER] resources, information skills, academic integrity, as well as on how to cite and reference this type of resource. We support both faculty and students. (OL1)

In some cases, libraries went further by directly engaging faculty to publish their work as OER and then promoting these contributions as exemplary models. This proactive approach, particularly evident in a foreign-owned university, showed how libraries could both support and motivate OER adoption.

4. IOER content creation. The final step involved encouraging users to create and publish new OER, thereby fostering a culture of openness and sustainability. Libraries were described as central to this process by providing technical assistance, guidance on licensing, and help with dissemination. As one IOER leader explained, *'At this step, the library will support users in publishing, focusing on three aspects: licensing, technology, and promotion'* (OL2). Continuous evaluation was also regarded as critical to ensure that repositories remained active and relevant. A champion emphasised this point: *'Finally, the library should coordinate the use of the IOER and conduct regular assessments of the repository's utilisation'* (C2). By embedding both support and evaluation into content creation,

participants believed that IOERs could become more than static collections, evolving into living platforms for ongoing knowledge exchange.

While libraries were consistently identified as the central implementers, participants repeatedly emphasised that implementation required collaboration across all stakeholder groups. Policy support from university leaders, facilitation from IT and academic affairs, and active participation of lecturers and students were all described as indispensable. As one staff member summarised, *'The library is like a bridge, gathering stakeholders together to develop the IOER'* (LS1). In conclusion, a bottom-up approach to IOER development was regarded as the most effective strategy in the Vietnamese context, particularly given the absence of comprehensive government policy. Collaboration and active advocacy from internal stakeholders were seen as essential for both initiation and implementation.

Discussion

This study identifies the key phases and stakeholders in IOER development in Vietnam, highlighting university libraries as central implementers. The Initiation phase was described as relatively straightforward, while Implementation was seen as more complex, requiring collaboration among leaders, implementers, facilitators, and OER producers and users.

The finding that university libraries are well positioned to lead IOER development aligns with global scholarship that consistently recognises libraries as leaders in the open education movement. Studies emphasise that libraries possess the infrastructure, expertise in information organisation, and institutional networks needed to manage OER repositories (Essmiller et al., 2020; Salem Jr, 2017; Yano & Myers, 2019). In Vietnam, this leadership role is particularly significant given the limited national policy support and the relatively low awareness of OER among faculty and students. By positioning libraries at the centre of IOER initiatives, universities can leverage their capacity for resource curation, training, and institutional coordination.

At the same time, the findings underscore that libraries cannot operate in isolation. Successful IOER development requires the active involvement of stakeholders. This reinforces earlier research on OER adoption frameworks that emphasise the interplay between infrastructure, policy, and user engagement (Cox & Trotter, 2017). The Vietnamese case provides concrete evidence that the absence of one stakeholder group, for example disengaged leadership or inactive faculty, can stall or undermine implementation efforts.

Although participants primarily highlighted the roles of internal stakeholders, IOER development also operates within a wider ecosystem that involves external actors. Government agencies such as the Ministry of Education and Training (MOET) have the potential to provide legitimacy and sustainability through national policy frameworks, even though such support has often been described in the literature as partial or uneven in the Global South (Hodgkinson-Williams & Arinto, 2017). Professional associations, including the Association of Vietnam Universities and Colleges (AVU&C) and the Open Education Development Advisory Board, can foster shared practices across institutions by organising workshops and promoting awareness. International organisations such as UNESCO and donor-funded initiatives like the Vietnam Education Foundation (VEF) contribute resources, training, and exposure to global models, while technology companies and open-source providers extend this ecosystem by supplying infrastructure and technical expertise. These perspectives suggest that IOER initiatives cannot be understood solely as institutional endeavours but should be situated within multi-level networks of policy, advocacy, and international cooperation. Aligning institutional strategies with such external systems will be critical for long-term sustainability.

The variability in strategies across institutions further illustrates the contextual nature of IOER development. At RMIT University Vietnam, the OER team within the library has been responsible

for leading IOER implementation and actively supporting stakeholders in raising awareness, locating, using, creating, publishing, and distributing OER (Do, 2019b). At Fulbright University Vietnam, the library staff have focused primarily on assisting OER creators to publish resources on the institutional FETP OCW platform (Truong, 2015). By contrast, at the People's Police Academy, educators themselves are responsible for uploading OER, with the library playing a more limited role in managing the repository and ensuring accessibility for end-users (Do, 2019a). These differences resonate with Fullan's (2007) theory of educational change, which highlights that change processes are iterative and must be adapted to local contexts. They also echo Hodgkinson-Williams and Arinto's (2017) work on OER in the Global South, which argues that OER adoption cannot be divorced from institutional capacity and cultural context.

A major implication is the need for visionary leadership. Leaders who understand the benefits of openness were consistently identified as decisive in whether IOER initiatives moved forward. This finding echoes Do's (2015) observation that reform in Vietnamese higher education often hinges on senior leadership vision and commitment. Without proactive leaders, OER remains peripheral. With them, OER can become embedded into institutional strategies. This suggests that leadership development and targeted advocacy at the executive level are crucial to advancing IOER initiatives.

The four implementation steps identified, management, awareness raising, use, and content creation, provide a practical process model that extends existing literature on OER adoption. While international studies highlight these elements individually, the Vietnamese evidence demonstrates how they combine into a sequenced, collaborative process. Awareness raising emerged as a particularly acute challenge, confirming Hegarty's (2015) observation that OER adoption requires cultural shifts as well as technical infrastructure.

Another implication relates to the evolving role of libraries. Traditionally perceived as passive resource centres, libraries in Vietnam are redefining themselves as active agents of educational change. By coordinating IOER projects, training faculty, and facilitating publishing, libraries demonstrate their capacity to influence pedagogy, research visibility, and institutional reputation. This shift challenges outdated perceptions of libraries as marginal to teaching and learning and instead positions them as strategic partners in higher education reform.

At the same time, the study must be understood within the broader context of Vietnamese higher education. IOER initiatives operate in an environment where funding is tight, copyright policies remain unclear, and awareness of OER is still developing. These conditions echo global discussions about the sustainability and legal uncertainty of OER adoption (McGreal, 2019; Weller et al., 2015). In Vietnam, the expectation that universities maintain financial autonomy further shapes this context (Do & Mai, 2022), creating tension between revenue generation and open initiatives. Without alignment between institutional strategies and supportive national frameworks, IOER initiatives risk remaining fragmented rather than becoming sustainable practices.

The findings suggest several implications for policy and practice. IOER development in Vietnam must be framed as a collaborative institutional change rather than a library led technical project. Investment in awareness campaigns and training is essential to cultivate faculty and student engagement, without which repositories remain underused. Leadership advocacy at the rectorate and vice rectorate level is a necessary condition for success, and leadership programs could target this gap directly. Sustained IOER development will require integration into broader strategies for digital transformation and open science, ensuring alignment with both national policy and global knowledge sharing movements.

This study underscores the critical role of libraries in initiating and coordinating IOER development but also demonstrates that their success is contingent on wider institutional collaboration. The Vietnamese case contributes to the growing literature on OER in the Global South by providing an empirically grounded process model of IOER development, highlighting the

roles of different stakeholders, and identifying both barriers and enablers specific to emerging higher education contexts. Future research could expand this inquiry by comparing experiences across institutions and countries, offering further insights into how IOER initiatives can be institutionalised and sustained in resource constrained environments.

Conclusion

This study examined the processes involved in developing IOERs in Vietnam, with a particular focus on the phases of initiation and implementation. The findings highlight the central role of university libraries as implementers but also demonstrate that their success depends on the collaboration of multiple stakeholders, including university leaders, project facilitators, and OER content producers and users. A key contribution of this study is the development of a process-oriented framework that maps the steps of IOER development, from leadership approval to awareness raising, use, and content creation. This framework confirms and extends earlier research on education change by showing how change unfolds as a collaborative, iterative, and context-sensitive process. It also emphasises the critical importance of leadership vision and faculty engagement, which can determine whether IOER initiatives remain isolated experiments or become institutionalised practices.

The Vietnamese experience illustrates how IOER development should be understood not simply as a technical undertaking, but as an educational change process that requires strategic leadership, active stakeholder engagement, and sustained institutional support. By recognising these dynamics, universities in Vietnam and similar contexts can take meaningful steps toward embedding openness into their educational systems and contributing to global knowledge sharing.

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