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INTEGRATION OF OPEN EDUCATIONAL RESOURCES IN COURSE MATERIALS: A CONTENT ANALYSIS OF THE TEACHER EDUCATION PROGRAMME IN OPEN & DISTANCE EDUCATION

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ABSTRACT

Open Educational Resources (OER) are freely accessible, openly licensed educational materials that can be adapted and shared for teaching and learning. Although the Open University of Sri Lanka (OUSL) has implemented institutional OER policies and integrated open resources into programme materials, the extent to which these policies translate into actual course content remains unclear. This study examined OER integration in two Postgraduate Diploma in Education (PGDE) study guides, Educational Psychology and Educational Technology Foundations, using systematic content analysis to evaluate OER frequency, type, and pedagogical quality. The analysis revealed significant disciplinary variations: Educational Technology Foundations incorporated 40.23% OER content with an average integration score of 3.5, while Educational Psychology included only 21.75% OER content, scoring 3.18. Both guides relied heavily on supplementary rather than primary OER content, with technical issues, including broken links and outdated materials, undermining the effectiveness of implementation. The absence of interactive OER activities represented missed opportunities for modeling innovative teaching practices. Findings reveal a policy-practice implementation gap where faculty technological expertise and disciplinary context significantly influence OER adoption patterns. The study recommends targeted faculty development, systematic quality assurance mechanisms, and enhanced integration of interactive OER to realize the transformative potential of OERs in teacher preparation programmes.

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1. Introduction

Open Educational Resources (OER) have emerged as a transformative force in global education, fundamentally reshaping how knowledge is created, shared, and accessed. OER are defined as educational materials that can be freely used, adapted, and redistributed, encompassing textbooks, instructional videos, open-access articles, and online courses. They represent a paradigmatic shift toward democratizing educational access and fostering collaborative knowledge creation (Commonwealth of Learning, 2021). The movement's evolution from David Wiley's first open content license in 1998, through the establishment of Creative Commons licenses in 2002, to UNESCO's formal adoption of the term "Open Educational Resources" later that year reflects the growing recognition of education as a shared global resource (Caswell et al., 2008; UNESCO, 2002).

International policy frameworks have positioned OER as essential instruments for educational transformation. UNESCO's 2012 Paris Declaration on OER and its 2019 Recommendation provide member states with concrete strategies for implementing open educational policies, emphasizing open licensing, capacity building, and cost reduction while expanding equitable access (UNESCO, 2012, 2019). Research demonstrates that OER hold particular value in open and distance learning (ODL) environments, where geographical barriers and resource constraints create distinctive pedagogical challenges. Studies highlight OER's capacity to reduce educational costs and broaden access to high-quality materials (Bozkurt et al., 2023; Cronin et al., 2023), to support flexible, student-centred pedagogical approaches (Bol et al., 2021; Jaggars et al., 2019), and to encourage collaborative and innovative teaching practices (Horn et al., 2018; Fine & Read, 2020). However, implementation challenges persist, including concerns regarding resource quality, technological limitations, and faculty reluctance to adopt unfamiliar materials (Choi & Carpenter, 2017; Grewe & Davis, 2017).

Across Asian educational contexts, the adoption of OER demonstrates considerable diversity, shaped by national priorities and institutional infrastructure. In India, open resource initiatives have helped mitigate material shortages, though barriers remain, such as limited technical expertise and insufficient institutional support (Kumar & Singh, 2019; Patidar & Singh, 2018). Similarly, China's OER expansion is closely linked to the broader growth of digital education and online learning platforms (Zhang et al., 2020), underscoring both the transformative potential of OER and the contextual factors influencing their successful implementation.

Sri Lanka's engagement with OER is deeply connected to its long-standing commitment to distance education, exemplified by the Open University of Sri Lanka (OUSL). Building upon foundations established by the Sri Lanka Institute of Distance Education (SLIDE) in 1976 and the subsequent establishment of OUSL in 1980 (Gunasekera, 2007), the university introduced an institutional OER policy framework in 2013/2014, later revised and expanded in 2020. This policy has facilitated the systematic integration of OER across numerous programmes, including a comprehensive revision of Postgraduate Diploma in Education (PGDE) study materials from 2021 onwards (Karunanayaka, 2024; Naidu & Karunanayaka, 2024). Recent studies illustrate how design-based interventions promote faculty engagement with Open Educational Practices (Karunanayaka & Naidu, 2017) and how learning management systems (LMS) enhance OER integration within blended learning environments (Sandanayake et al., 2021).

Despite these policy advances and institutional commitments, a critical gap persists in understanding how OER integration policies are translated into actual course materials. While prior research has examined faculty perceptions, institutional strategies, and student outcomes, limited attention has been given to systematically analyzing how open resources are embedded within curriculum materials and whether such incorporation aligns with pedagogical objectives. This gap is particularly salient in teacher education, where the quality and extent of OER integration during professional preparation may shape how future educators perceive and use open resources in their own practice. When teacher education programmes retain traditional resource models despite strong OER policies, they risk perpetuating conventional teaching approaches that constrain educational accessibility and innovation. Research suggests that educators who experience meaningful OER integration during their professional training are significantly more likely to embrace open educational practices later in their careers (Karunanayaka & Naidu, 2017).

This study seeks to address this research gap by conducting a systematic content analysis of OER integration within PGDE study guides at OUSL. It examines how open resources are incorporated into course materials and assesses their pedagogical relevance and effectiveness. Specifically, the study aims to: (1) analyze the extent and patterns of OER integration across selected PGDE study guides; (2) evaluate the pedagogical relevance, technical accessibility, and instructional alignment of the integrated OER; and (3) explore how integration patterns reflect the translation of institutional policy into course development practices. By examining two core PGDE study guides representing distinct disciplinary perspectives (Educational Psychology and Educational Technology), this research provides detailed insights into how OER policies materialize across diverse contexts within teacher education, contributing to both a theoretical understanding of policy implementation and practical knowledge for enhancing the effectiveness of integration.

2. Review of Literature

The scholarly discourse on OER has evolved from early advocacy to sophisticated empirical investigations of implementation effectiveness and pedagogical impact. This review examines current research through three critical lenses: the persistent gap between OER policy aspirations and classroom realities, the factors that determine successful integration across educational contexts, and the challenges of embedding open resources in teacher preparation programmes.

2.1 The Policy–Practice Implementation Gap

Contemporary OER research reveals a fundamental disconnect between institutional policy commitments and actual classroom implementation. International frameworks present compelling visions for open education transformation, yet empirical studies consistently reveal significant barriers to translating these aspirations into practice. Evidence from diverse contexts shows that OER adoption rarely follows a straightforward policy-to-practice pathway. Implementation is shaped by complex interactions among institutional support systems, faculty capabilities, and contextual factors that policy documents often overlook (Bozkurt et al., 2023; Cronin et al., 2023). Even institutions with comprehensive OER policies experience uneven adoption: some programmes integrate OER extensively, while others continue to use traditional resources despite having identical policy environments. This paradox suggests that policy formulation alone is insufficient without addressing the human and organizational factors that mediate implementation.

Faculty attitudes play a crucial role in determining the success of adoption. Perceptions of OER quality, reliability, and pedagogical value strongly influence integration decisions (Choi & Carpenter, 2017; Grewe & Davis, 2017). While both studies identify quality concerns as barriers, Choi and Carpenter (2017) emphasize challenges in evaluating resource appropriateness. In contrast, Grewe and Davis (2017) highlight the role of peer influence and social networks in shaping adoption decisions. Ultimately, policy outcomes depend on individual-level adoption decisions that institutional directives alone cannot guarantee.

Systematic reviews reveal that adoption often clusters in certain departments, course types, or faculty groups with particular technological orientations or disciplinary traditions (Kleymeer et al., 2010; Abramovich & McBride, 2018). This selective integration pattern contradicts assumptions underlying many institutional OER policies, which often treat adoption as a uniform organizational change rather than a differentiated, context-dependent process.

2.2 Factors Influencing Integration Success

Research identifies several interrelated factors that distinguish successful OER integration from superficial policy compliance. A robust technical infrastructure serves as a foundational requirement; institutions lacking reliable digital systems struggle to sustain adoption, regardless of faculty enthusiasm or administrative support (Zhang et al., 2020). However, infrastructure alone proves insufficient. Faculty development emerges as another critical

determinant, with systematic training programs helping to overcome resistance and build long-term institutional capacity.

Evidence from developing contexts reveals the complex interplay between awareness, technical barriers, and institutional support. Venkaiah's (2008) study of distance education teachers in India found remarkably high levels of engagement: 90.36% reported using educational content, and 62.65% were involved in OER production. Moreover, 94.29% expressed willingness to develop OER, demonstrating strong conceptual support for the movement. However, this enthusiasm confronted substantial practical obstacles. A significant majority (81.90%) experienced difficulty accessing OER web links, while 35.24% found the legal framework governing OER too complex to understand. Additionally, 49.52% felt that OER content coverage was inadequate, and 83.81% believed that materials required localization to meet specific contextual needs.

These findings illuminate a critical implementation paradox: high awareness and enthusiasm do not automatically translate into effective practice when technical infrastructure and support systems remain inadequate. The gap between conceptual acceptance and practical implementation suggests that successful OER adoption requires sustained attention to both human capacity building and technical system reliability. Kumar et al. (2021) reinforce this perspective, demonstrating that faculty resistance often stems from legitimate concerns about the reliability, currency, and pedagogical appropriateness of resources, rather than mere resistance to change. The convergence of these findings across different Indian institutional contexts suggests that quality assurance and technical support represent fundamental, rather than superficial, implementation challenges.

Equally important are systematic quality assurance mechanisms. Institutions that establish regular processes for evaluating, updating, and maintaining OER achieve higher adoption rates and greater faculty satisfaction (Patidar, 2018). The consistency of quality concerns across studies by Kumar et al. (2021), Venkaiah (2008), and Choi and Carpenter (2017) suggests this barrier persists across diverse institutional and geographic contexts.

Cultural and disciplinary differences add further complexity to the situation. Comparative studies show that technology-oriented fields adopt OER more readily than the humanities or social sciences (Zhang & Li, 2017). This disciplinary variation challenges one-size-fits-all policy approaches: strategies effective in technology contexts may not translate to traditional disciplines where pedagogical practices and resource expectations differ fundamentally. Similarly, national cultural attitudes toward knowledge sharing, intellectual property, and innovation significantly influence how educators and students engage with OER, complicating the direct transfer of successful models across international boundaries.

2.3 Teacher Education: The Critical Modeling Context

Teacher education programmes represent a uniquely consequential context for OER research, as integration decisions influence not only immediate course outcomes but also the professional practices of future educators. Research demonstrates that teacher preparation experiences significantly influence graduates' willingness to adopt innovative teaching approaches, creating a modelling effect that extends throughout their careers (Horn et al., 2018; Fine & Read, 2020).

This modeling dynamic makes OER integration in teacher education especially significant. Programs that effectively demonstrate open practices increase the likelihood that future educators will adopt similar approaches in their own classrooms. Conversely, programmes that continue to rely on traditional resources may unintentionally reinforce conventional practices that limit accessibility and innovation. Horn et al. (2018) describe this as a "cascade effect," where teacher preparation decisions influence educational practices across entire school systems.

Research on OER implementation reveals divergent approaches to evaluating effectiveness and satisfaction. Some studies focus on student outcome measures, examining whether the adoption of OER influences academic performance. Bol et al.'s (2021) experimental study of community college students found that those using OER demonstrated significantly higher retention and persistence rates compared to students using publisher content.

However, final exam scores and completion rates showed no significant differences. This suggests OER may influence student engagement and commitment without necessarily affecting content mastery.

In contrast, other research emphasizes user perception and satisfaction as key indicators of OER success. Jaggars et al. (2019) developed and validated instruments measuring students' assessments of OER quality, integration, and experience. Their findings revealed generally positive student perceptions, with most rating OER materials comparable to or better than traditional textbooks. However, the study also identified specific areas for improvement, particularly regarding "digital dissatisfiers" such as difficulty taking notes, shutting out distractions, and physical discomfort while using digital materials. Notably, students' perceptions of material quality proved the strongest predictor of whether they would choose digital resources in future courses.

These divergent research approaches outcome-focused versus perception-focused, reflect different theoretical assumptions about what constitutes successful OER integration. While outcome studies, such as Bol et al., prioritise measurable academic performance, satisfaction studies, like Jaggars et al., emphasise user experience as a critical factor in implementation. The tension between these approaches suggests that comprehensive OER evaluation requires attention to both effectiveness metrics and user satisfaction indicators.

At the same time, evidence shows considerable benefits when OER are effectively integrated. Exposure to high-quality open practices during professional preparation enhances future teachers' confidence in evaluating and adapting resources, while encouraging more flexible and student-centred pedagogies (Karunanayaka & Naidu, 2017). Karunanayaka and Naidu's findings from Sri Lanka provide an important counterpoint to predominantly Western literature, demonstrating that successful OER integration in teacher education is achievable even in resource-constrained contexts when supported by systematic design-based approaches. Thus, teacher education emerges as both a challenging and high-impact arena for OER integration, where stakes extend beyond individual courses to encompass the preparation of educators who will shape future generations of learners.

3. Methodology

This study employed systematic content analysis to examine the integration of OER within PGDE course materials at OUSL. The research design combines quantitative assessment of OER frequency and distribution with qualitative evaluation of pedagogical alignment and usability. As a document-based investigation, this study examines how institutional OER policies are reflected in actual course content, without assessing faculty perceptions or student outcomes. Two core PGDE study guides were purposively selected: Educational Psychology and Fundamentals of Educational Technology. These courses represent distinct disciplinary perspectives within the field of teacher education. Educational Psychology emphasizes traditional pedagogical foundations, while Fundamentals of Educational Technology focuses on technology-enhanced learning. Both have recently undergone OER-aligned revisions, making them well-suited for examining current integration practices. Although these courses do not encompass the full range of PGDE offerings, they provide valuable insights into how disciplinary context shapes OER adoption and implementation.

An evaluation checklist was developed through expert consultation with four specialists in educational technology and instructional design. The framework assesses OER utilization across five key domains: frequency of appearance, types of content covered, alignment with teaching goals, technical accessibility, and overall integration depth. Content types assessed include primary content, supplementary materials, multimedia resources, embedded activities, and references. Each study guide was evaluated by a trained assessor using a structured checklist derived from the framework. One evaluator analyzed the Educational Psychology study guide, while another assessed the Fundamentals of Educational Technology study guide. Both evaluators were thoroughly briefed on the framework's five domains and participated in calibration discussions to ensure a consistent interpretation of the scoring criteria before commencing their independent analysis. Each evaluator systematically reviewed all sessions within their assigned study guide, identified OER instances, categorized content types, and assigned integration scores using a standardized five-point scale (0–4), where 0 indicates no integration and 4 represents comprehensive, well-aligned OER use across multiple content types. Although this approach did not allow for the calculation of inter-rater

reliability across the same materials, the structured checklist and standardized scoring rubric ensured the consistent application of evaluation criteria. Data analysis employed descriptive statistics to identify quantitative patterns in the distribution and frequency of OER. Thematic analysis examined qualitative observations regarding pedagogical effectiveness and technical usability issues of integrated OER.

4. Results

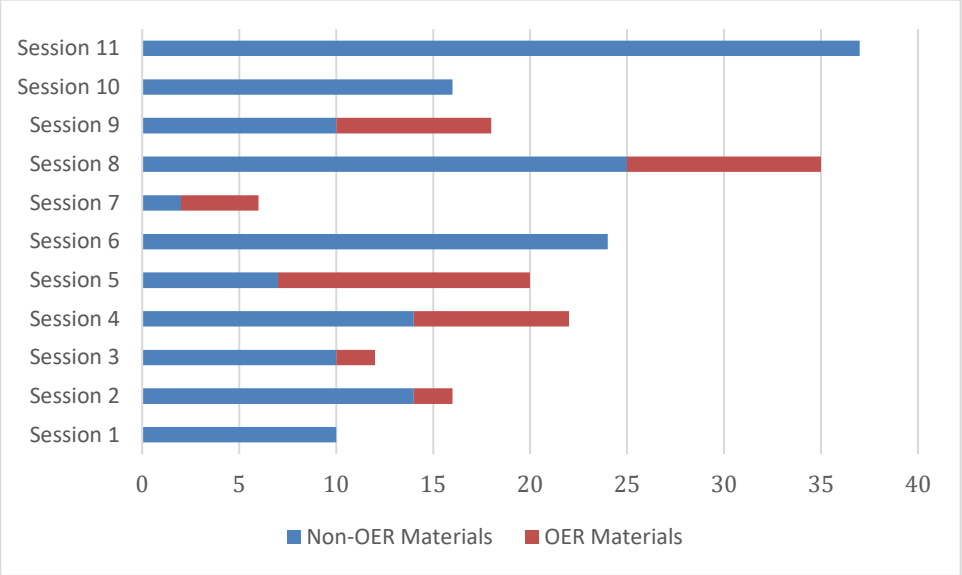
The content analysis revealed significant variation in OER integration patterns between the two PGDE study guides. There were notable differences in both the extent and quality of implementation. These findings provide insights into how institutional OER policies translated into actual course content across various disciplinary contexts within teacher education.

4.1 Findings for the Study Guide - Educational Psychology

The Educational Psychology study guide demonstrates a fragmented approach to OER integration, with resources comprising only 21.75% of total learning materials across 11 sessions. As shown in Figure 1, this integration follows a highly uneven distribution pattern, with nearly half of all sessions (45.45%) containing no OER content whatsoever. This clustering effect suggests that OER integration may depend more on individual developer preferences than systematic curriculum design principles.

Figure 1

Distribution of Non-OER and OER Learning Resources by Session in the Study Guides of Educational Psychology



The sessions with substantial OER presence, Sessions 4, 5, 8, and 9, account for the majority of open resources, indicating that certain educational psychology topics may be perceived as more suitable for OER enhancement. Session 5 demonstrates the highest individual integration, utilizing 13 OER resources, which represent 65% of that session's total content. However, this high integration contrasts sharply with Sessions 1, 6, 10, and 11, which contain no open resources despite covering foundational topics that could benefit from diverse perspectives and supplementary materials.

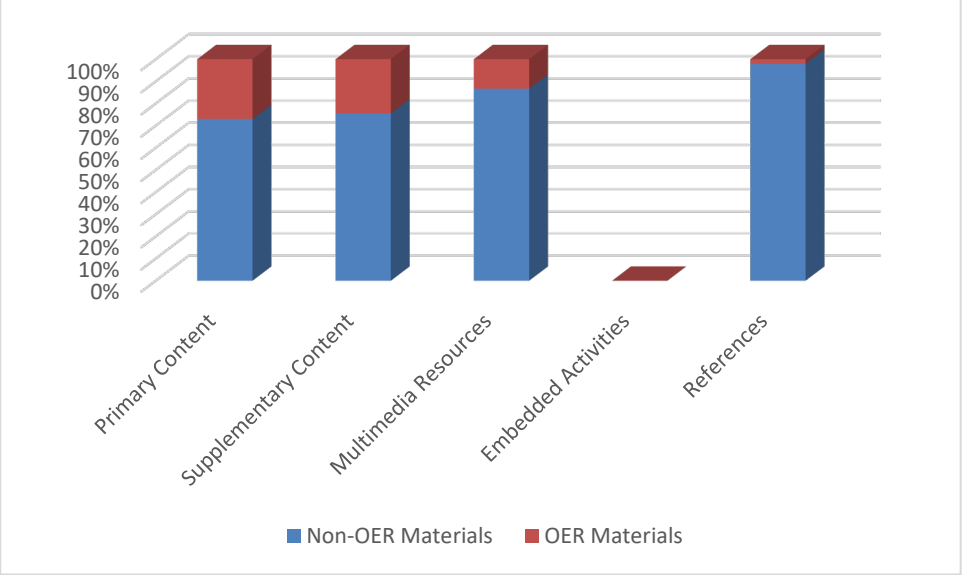
Figure 2 shows a clear hierarchy in OER usage by content type. Supplementary content dominates with 32 OER, making up 68.1% of all open resources. The primary content follows, comprising 10 OERs (21.3%). Multimedia

resources are minimal, with only 1 being a reference. Notably, no embedded activities use OER. This is a missed chance for hands-on engagement that could help student learning.

This pattern suggests course developers see OER mostly as enhancement tools. They do not consider them full replacements for traditional materials. The high use of supplementary OER shows a cautious approach. Here, open resources are used to enrich, not replace, core content. This may limit their impact on student learning experiences.

Figure 2

Distribution of Non-OER and OER Learning Resources by Type in the Study Guides of Educational Psychology



4.2 Integration Quality and Effectiveness

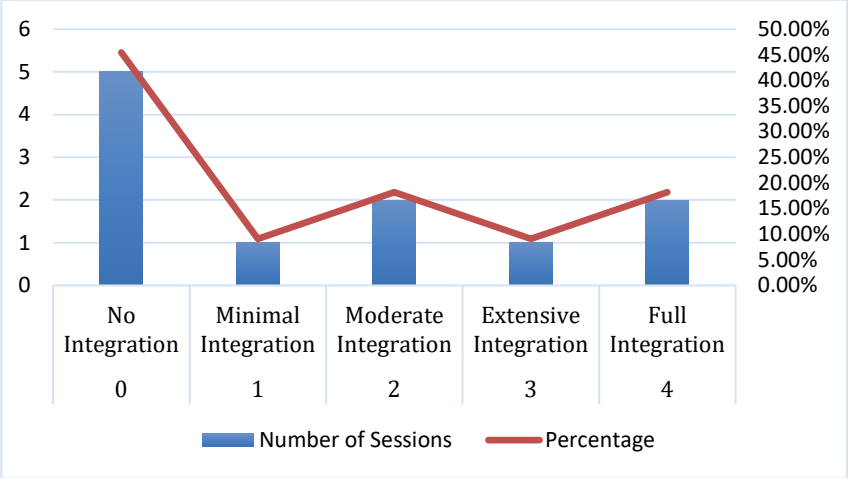
The analysis in Figure 3 reveals issues with the application in the study guide. The total score is 35 across 11 sessions, averaging 3.18. This means the study guide only connects with the material at a basic level. The scores also reveal a significant difference: five sessions have no use of OERs (45.45%), while only two sessions utilize them fully (18.18%).

Sessions achieving higher integration scores demonstrate more thoughtful resource curation and pedagogical alignment. Session 2 exemplifies effective integration through well-selected video resources that directly support learning objectives, while Session 3's inclusion of WikiEducator materials provides relevant and accessible content that enhances students' understanding of key concepts.

However, quality concerns emerge even within higher-integration sessions. Sessions 4 and 9, despite containing substantial OER content, suffer from technical accessibility issues, including broken links and inaccessible resources, which undermine their pedagogical value. Session 7 presents outdated video content that no longer aligns with current best practices, highlighting the ongoing maintenance challenges associated with implementing OER. These quality issues suggest that the quantity of OER integration does not necessarily correlate with educational effectiveness. The presence of non-functional or obsolete resources may actually diminish student learning experiences while creating additional workload for faculty attempting to navigate problematic materials.

Figure 3

Percentage of Integration of OER in the Study Guides of Educational Psychology

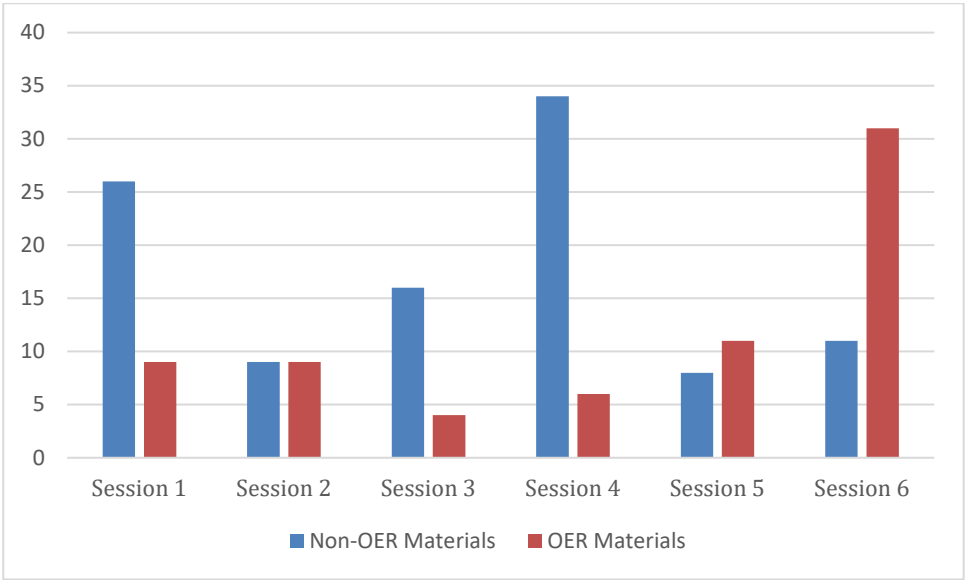


4.3 Findings for the Study Guide - Educational Technology Foundations

The *Educational Technology Foundations* study guide comprises six sessions, each incorporating a structured selection of learning resources, including both Open Educational Resources (OER) and non-OER materials. These resources are further categorized by type: primary content, supplementary content, multimedia resources, embedded activities, and references.

Figure 4

Distribution of Non-OER and OER Learning Resources by Session



The Educational Technology Foundations study guide presents a markedly different integration approach, with OER comprising 40.23% of total learning resources across six sessions. This substantially higher proportion,

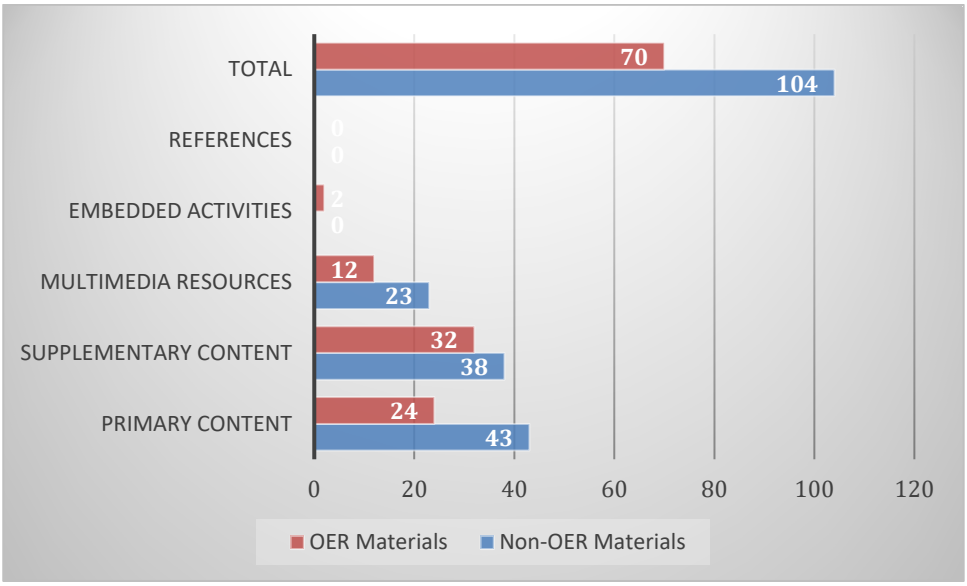
nearly double that of Educational Psychology, suggests that the disciplinary context has a significant influence on OER adoption patterns within teacher education programs.

Figure 4 demonstrates a more consistent integration across sessions, with all sessions containing some OER content, in contrast to Educational Psychology's all-or-nothing approach. Sessions 5 and 6 exhibit a particularly strong emphasis on OER, with Session 6 achieving the highest proportion of open resources in either study guide. This consistent distribution suggests a more systematic curriculum planning approach that considers OER integration throughout the course, rather than as an afterthought.

The content type distribution shown in Figure 5 reveals a more balanced approach to integration compared to Educational Psychology. While supplementary content still dominates (n = 32), the guide demonstrates greater diversity across content types, including substantial integration of primary content (n = 24) and multimedia resources (n = 12). Most notably, this guide includes two embedded activities utilizing OER, a feature completely absents from Educational Psychology, suggesting a more sophisticated understanding of how open resources can enhance student engagement through interactive learning experiences.

Figure 5

Distribution of Non-OER and OER Learning Resources by Type



4.4 Advanced Integration Practices

The integration depth analysis (Figures 6 and 7) reveals systematic implementation quality that surpasses Educational Psychology across multiple dimensions. With a total score of 21 across six sessions (average 3.5), the guide achieves moderately high integration levels with no sessions receiving zero scores. This consistent baseline indicates institutional support or faculty expertise that ensures minimum integration standards across all course components.

Session 6 achieves full integration (score 4), demonstrating comprehensive OER use across multiple content types with strong pedagogical alignment and functional accessibility. This session exemplifies best practices in OER integration, incorporating diverse resource types that support different learning styles while maintaining clear connections to stated learning objectives.

Sessions 4 and 5 demonstrate extensive integration (score 3), featuring well-curated collections of primary and supplementary OER that provide comprehensive coverage of educational technology concepts. The consistent

quality across these sessions suggests systematic approaches to resource evaluation and selection that could serve as models for other courses.

Even Session 1, which receives the lowest integration score (1), includes nine OER resources, indicating institutional commitment to open resource inclusion even when pedagogical alignment remains imperfect. This baseline integration level exceeds the complete absence of OER found in nearly half of Educational Psychology sessions.

Figure 6

OER Integration Scores by Session

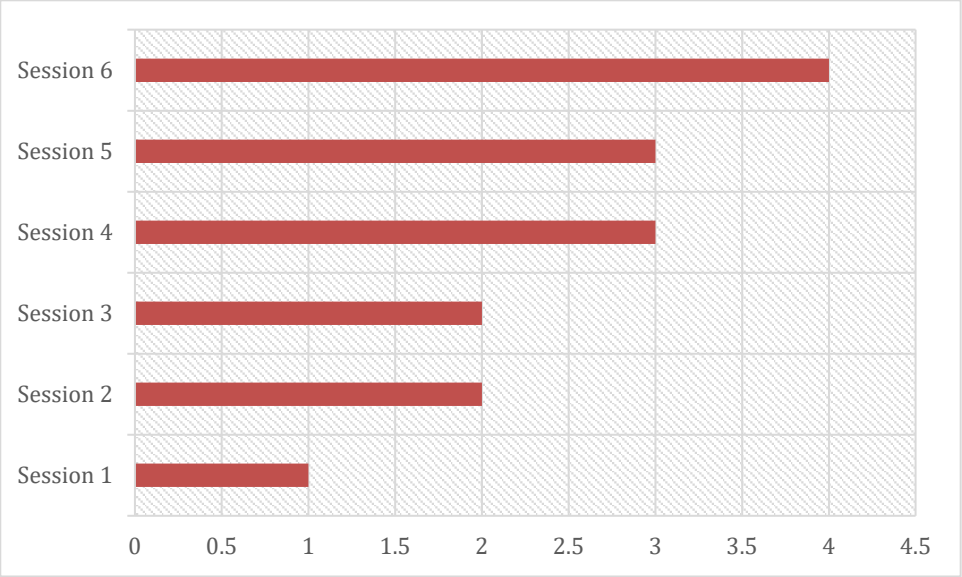
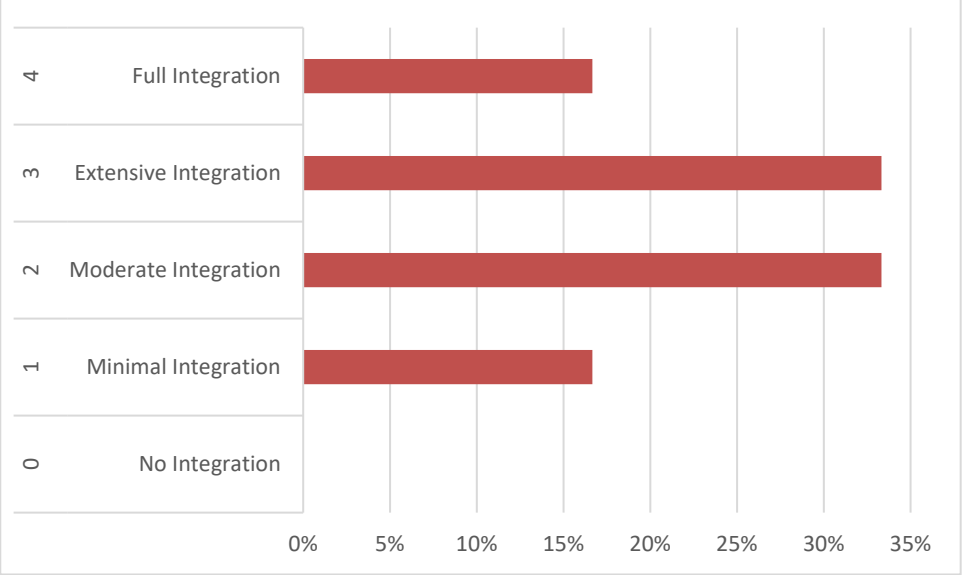


Figure 7

Distribution of Integration Levels Across Sessions



4.5 Comparative Analysis: Disciplinary and Implementation Factors

The substantial differences between study guides reveal important patterns in OER integration within teacher education contexts. The Educational Technology Foundations guide's superior integration—both quantitatively (40.23% vs. 21.75%) and qualitatively (3.5 vs. 3.18 average scores), suggests that faculty expertise in educational technology directly influences OER adoption effectiveness.

This disciplinary effect extends beyond simple resource availability to encompass more sophisticated understanding of how open resources can enhance pedagogical practice. The presence of embedded OER activities in Educational Technology Foundations, compared to their complete absence in Educational Psychology, indicates that technological familiarity enables more innovative integration approaches that transform rather than simply supplement traditional instructional methods.

Quality assurance also appears more robust in the Educational Technology context, with fewer broken links, more current content, and better alignment between resources and learning objectives. This finding suggests that successful OER integration requires not only institutional policies but also faculty capabilities in digital resource evaluation, maintenance, and pedagogical application.

However, both guides demonstrate room for improvement in systematic integration approaches. The clustering of OER in specific sessions, presence of technical accessibility issues, and missed opportunities for interactive engagement indicate that even relatively successful integration efforts require ongoing refinement and institutional support to achieve their full pedagogical potential.

5. Conclusion and Recommendations

This content analysis of OER integration within the PGDE program reveals significant disparities in implementation approaches across disciplinary contexts. The Educational Technology Foundations guide demonstrates substantially higher integration levels (40.23% OER content, average score 3.5) compared to Educational Psychology (21.75% OER content, average score 3.18), suggesting that faculty technological expertise significantly influences the successful adoption of open resources. However, both guides exhibit concerning patterns of uneven distribution, with integration often clustered in specific sessions rather than systematically embedded throughout the curriculum.

The study identifies several critical implementation challenges that limit the transformative potential of OER in teacher education. Technical accessibility issues, including broken links and outdated content, undermine the reliability that faculty require for sustained adoption. More fundamentally, the predominant use of OER as supplementary rather than primary content suggests that open resources are viewed as enhancement tools rather than pedagogically equivalent alternatives to traditional materials. This cautious approach may limit the modeling effect that teacher education programs should provide for future educators. The absence of interactive OER activities in Educational Psychology and their minimal presence in Educational Technology Foundations represent a significant missed opportunity. Teacher preparation programs that fail to demonstrate innovative pedagogical applications of open resources may inadvertently prepare graduates who view OER as static content repositories rather than dynamic tools for educational transformation. These findings illuminate the complex relationship between institutional policy and educational practice. While OUSL has established comprehensive OER policies, successful implementation depends on factors beyond administrative mandates, including faculty capabilities, technical infrastructure, and ongoing support systems. The superior integration patterns observed in Educational Technology Foundations suggest that disciplinary expertise and technological familiarity create enabling conditions for more sophisticated OER adoption.

5.1 Practical Recommendations

Institutional Strategy Development: The university should establish differentiated support strategies that recognize the varying readiness levels of faculty across disciplines. Technology-focused programs can serve as models and mentoring resources for traditional education courses struggling with OER integration. Clear integration targets should be established for underperforming sessions while ensuring pedagogical quality remains the primary criterion for resource selection.

Quality Assurance Systems: Implement systematic procedures for OER maintenance and evaluation, including regular link verification, content currency reviews, and pedagogical alignment assessments. Assign specific responsibility for resource quality to prevent the technical issues that currently undermine faculty confidence in open resource reliability.

Faculty Development Initiatives: Design comprehensive training programs that address both technical skills and pedagogical understanding of OER integration. These programs should emphasize interactive and primary content applications rather than limiting OER to supplementary roles, helping faculty recognize the full potential of open educational practices.

Collaborative Development Structures: Establish formal mechanisms for faculty collaboration on OER integration, including peer mentorship programs pairing technologically proficient educators with those requiring additional support. Create institutional incentives that reward innovative OER applications and systematic integration approaches.

Student Engagement Enhancement: Prioritize development of embedded activities and interactive applications that demonstrate OER's potential for transforming rather than simply supplementing traditional instruction. Teacher education programs must model the innovative pedagogical practices they aim to promote in graduates' future classrooms.

5.2 Limitations

Several methodological limitations should be acknowledged. First, this study examined only two PGDE study guides, representing different disciplines but not the full teacher education program. Therefore, the results may be limited and may not be applicable to other PGDE courses or institutions. Second, since each guide was analyzed by a different evaluator, inter-rater reliability was not established, raising the possibility of inconsistent interpretations despite attempts at standardization through protocols and calibration sessions. Future studies should include multiple evaluators independently analyzing the same materials to improve reliability. Third, the analysis was limited to a review of course documents and did not examine actual faculty teaching practices, the level of student engagement, or measurable learning outcomes. As a result, the extent to which course design aligns with what occurs in practice remains unknown. Finally, since this study provides only a post-2021 revision snapshot, it does not reveal how OER integration evolves over time; therefore, longitudinal research is needed to assess sustainability and continuous improvement. Despite these limitations, the study offers valuable empirical insights into how institutional OER policies are implemented in teacher education. The findings not only provide a foundation for further inquiry but also equip institutions with actionable guidance for aligning policy objectives with instructional practices and ultimately advancing effective OER integration.

5.3 Implications for Future Research

This study highlights the value of content analysis as a methodological approach for examining policy implementation in educational contexts, moving beyond perception-based research to capture tangible outcomes of institutional initiatives. Future research should expand this analytical scope to encompass a broader range of study guides and programs, thereby facilitating a more comprehensive assessment of OER integration across diverse educational contexts. Further investigation into faculty decision-making processes would enhance understanding of the factors influencing resource selection, pedagogical alignment, and ongoing maintenance. Longitudinal studies

tracking OER use and adaptation over time could also reveal challenges to sustainability and identify conditions that facilitate long-term adoption. In addition, exploring student perspectives, particularly within teacher education, remains crucial. Understanding how future teachers engage with and perceive open educational resources (OER) during their professional preparation can offer insights into the modeling effects that justify the integration of OER in teacher training programs. Comparative research across institutions with diverse policy environments, technological infrastructures, and faculty development approaches could help identify transferable practices and effective strategies for enhancing OER integration. Collectively, such studies would contribute to a deeper understanding of how educational innovations transform policy intentions into classroom realities, with implications extending beyond OER to encompass broader technology-enhanced learning initiatives.

Declarations

Acknowledgements
None

Competing Interests
None.

Ethical Approval
This study did not require formal ethical approval, as it did not involve human participants or the collection of identifiable personal data. However, permission to access and analyze the study guides of the teacher education programme was obtained from the Head of the Department and the Course Team Leader. Accordingly, it was classified as low-risk and conducted in compliance with the ethical research guidelines of the Open University of Sri Lanka.

Author's Contribution
W.M.A.P.S. Fernando [1]: Primary researcher; Conceptualization; Review of literature; Data collection; Formal analysis; Writing – original draft.

F.M.Nawastheen[2]: Supervision; Guidance in conceptualization, instrument development, and drafting; Critical review and revision of the manuscript

Data availability
The datasets generated and analyzed during the current study consist of course study guides from the teacher education programme at the Open University of Sri Lanka. These materials are institutional documents and are not publicly available due to copyright and internal use restrictions. However, data supporting the findings of this study can be made available from the corresponding author upon reasonable request and with permission from the Department of Secondary and Tertiary Education.

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