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Reflective Video Diaries as an Inclusive Digital Pedagogical Practice: A Cyclical Action-Research Study with Multilingual Undergraduate Students

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Abstract

In the post-pandemic higher education context, multilingual students, particularly those from widening participation backgrounds, continue to face academic, linguistic, and socio-emotional challenges that can limit their participation and sense of belonging. This study examines the use of Reflective Video Diaries (RVDs) facilitated through Microsoft Flipgrid as an inclusive pedagogical approach to support reflective engagement, communication, and socio-emotional development among multilingual undergraduate students. Adopting a qualitative iterative action research approach, the study was conducted within a UK university module and involved three cycles of implementation, reflection, and pedagogical refinement, capturing students' lived experiences rather than measuring causal effects. Multiple methods, including RVDs, end-of-module reflective reports, an anonymous survey, and lecturers' field notes, were deliberately combined to provide complementary perspectives on students' experiences, allowing triangulation of data and enhancing the validity and richness of findings. Thematic analysis of this longitudinal dataset collected across the three action-research cycles explored how students experienced RVDs as a space for reflection, peer support, and engagement with learning. Findings indicate that Flipgrid-mediated RVDs functioned as a low-anxiety, flexible, and dialogic learning environment that enabled students to articulate challenges, share progress, and develop reflective awareness, confidence, and a sense of connection with peers and lecturers. Improvements in participation and reflective depth were more evident in later cycles, suggesting that benefits emerged through iterative pedagogical adjustment rather than by video technology alone. Both positive experiences and challenges are reported, providing a balanced account of engagement with the RVDs. The study underscores the potential of inclusive digital pedagogies to inform curriculum planning and policy implementation, supporting equitable learning opportunities and socio-emotional development. By conceptualizing RVDs as relational and inclusive pedagogical practices rather than technological interventions, and by demonstrating how reflective engagement developed across successive action-research cycles, this research contributes to understanding how reflective digital practices can support multilingual learners' academic and socio-emotional development within socially just higher education contexts. Practical implications for designing inclusive reflective learning environments are discussed.

Keywords: Reflective Video Diaries; Flipgrid; multilingual students; inclusive pedagogy; action research; higher education

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1. Introduction

1.1. Post-Pandemic Digital Learning Context

The COVID-19 pandemic compelled higher education institutions (HEIs) worldwide to rapidly rethink how learning is organised, enacted, and supported. Emergency remote teaching accelerated the adoption of digital infrastructures and online pedagogies, often prioritising continuity over intentional pedagogy (Klimova, 2021). In the post-pandemic era, digital tools are no longer optional supplements but integral components of everyday teaching practice (Pham & Duong, 2024). Lecturers now have access to diverse educational technologies designed to enhance dialogue, student engagement, and interaction.

At the same time, the pandemic has left enduring academic, emotional, and social consequences, particularly for multilingual and international students navigating unfamiliar academic cultures (Yeh et al., 2022). Many students experienced prolonged isolation, heightened social anxiety, and diminished confidence in oral communication, which continue to affect participation and sense of belonging (Meletiadou, 2022). Consequently, post-pandemic pedagogy must address not only academic recovery but also the relational, emotional, and linguistic dimensions of learning (Copper, 2024).

These developments have increased interest in pedagogical approaches that support reflection, dialogue, and socio-emotional engagement, particularly for students who may feel less confident participating in traditional classroom discussions. In this context, digital technologies are increasingly evaluated not only for their technical affordances but for their capacity to foster inclusive and relational learning environments that respond to the needs of diverse student cohorts. Approaches that combine digital tools with structured opportunities for reflection and interaction may be especially valuable for multilingual and widening-participation students, whose engagement and confidence often develop gradually over time rather than immediately.

1.2. Research Questions

To investigate these challenges systematically and transparently, the study was designed as an iterative action-research intervention conducted across successive phases within one semester. The research questions were formulated at the outset to guide the design of each cycle, the selection of data sources, and the interpretation of changes observed over time. The study addresses the following questions:

1. How do students perceive the impact of Flipgrid RVDs on their academic development, reflective thinking, and professional skills?
2. How does participation in Flipgrid RVDs influence students' motivation, engagement, and socio-emotional well-being?
3. How do lecturers perceive and interpret variations in student engagement, peer interaction, and learning processes during Flipgrid-mediated RVD activities, particularly across diverse learner characteristics (e.g., EAL status, digital literacy, and age)?
4. How do student and lecturer perspectives converge or diverge in explaining the benefits and challenges of the RVD intervention?

Together, these questions framed the study as an exploratory, process-oriented investigation rather than an evaluation of a single teaching technique, allowing the researchers to examine how students' experiences evolved across successive action-research cycles and how pedagogical adjustments influenced engagement, reflection, and participation over time.

1.3. Reflective Video Diaries and Inclusive Digital Pedagogy

Digital pedagogical practices that support reflection, dialogue, and socio-emotional engagement are increasingly critical in this context (Weng et al., 2024). Microsoft Flipgrid (now

Flip) enables students to record and share short videos, respond to peers asynchronously, and engage in reflective dialogue (Yeh et al., 2022). Research suggests Flipgrid can foster cooperative learning, reflective practice, and stronger student–lecturer relationships (Innes, 2020; Miller et al., 2020). Crucially, its affordances, such as rehearsal, unlimited retakes, and optional use of avatars or emojis, reduce anxiety and support participation among students who may feel marginalised in traditional classroom interactions (Green et al., 2021; Pasatiempo et al., 2025).

However, existing studies often examine Flipgrid as a short-term activity or isolated intervention, with limited attention to how reflective video practices develop over time or how they function within iterative, scaffolded pedagogical designs. Understanding these longitudinal processes is particularly important when working with multilingual and widening-participation students, whose confidence and engagement may change gradually rather than immediately.

This is particularly relevant for multilingual students, who often demonstrate academic potential but lack confidence in oral communication or fear negative evaluation (Meletiadou, 2022). Flipgrid can provide extended speaking time, facilitate fluency development, and enable engagement with complex topics in less intimidating formats than face-to-face discussion (McLain, 2018; Esparrago-Kalidas et al., 2022). Rather than assuming Flipgrid directly improves skills, this study positions it as creating conditions that support confidence, reflection, and sustained engagement, while acknowledging variability in student experience (Kiles et al., 2020). By conceptualising RVDs as inclusive digital pedagogical practices, this study emphasises their potential to inform curriculum design and higher education policy, supporting equitable participation and socio-emotional development.

1.4. Theoretical Framework: Socio-Emotional Intelligence Development

This study is informed by Socio-Emotional Intelligence Development (SEID), integrating social intelligence (Gardner, 1983; Thorndike, 1920), emotional intelligence (Goleman, 1998; Salovey & Mayer, 1990), and competence development (Boyatzis, 1982; Spencer & Spencer, 1993). SEID conceptualises learning as encompassing emotional awareness, interpersonal understanding, and adaptive behaviour within social contexts. While personality traits may remain relatively stable, competencies can be developed through structured educational experiences (Kleimola & Leppisaari, 2022). Kolb's experiential learning theory (Kolb, 1984) further positions reflection as a mechanism through which experience is transformed into learning.

Within this framework, RVDs are understood as reflective practices that support iterative sense-making, emotional awareness, and communicative development, not merely as technological interventions (Lim & Querol-Julián, 2024). From this perspective, RVDs can be viewed as tools that support iterative learning cycles in which experience, reflection, feedback, and adaptation occur repeatedly. This aligns with the action-research design adopted in the present study, where pedagogical decisions were refined across cycles in response to student experiences and observed learning processes.

1.5. Research Gap and Rationale

Despite growing research on Flipgrid, few studies examine its use as a sustained reflective practice to support multilingual students in communication-intensive disciplines such as Business and Management, where unequal participation can exacerbate existing inequalities (Vuojärvi et al., 2019). Much of the literature focuses on perceived benefits or skill development without considering how RVDs function within broader inclusive and socially just pedagogical commitments (Keiper et al., 2021). In addition, limited research has explored how reflective video practices develop across iterative teaching cycles, or

how pedagogical adjustments influence student engagement over time. This study adopts a qualitative action research approach to explore students' experiences of RVDs in a UK university context, using multiple cycles of implementation, observation, and refinement to capture changes in participation, confidence, and reflective depth rather than treating the intervention as a single classroom activity.

Multiple methods, including RVDs, end-of-module reflective reports, an anonymous survey, and lecturers' reflective field notes, were deliberately combined. Each method contributes complementary insights: RVDs capture experiential reflection, reports document structured self-assessment, surveys provide perception-based data, and field notes offer lecturers' observational perspectives. This triangulation strengthens the validity and richness of the findings while foregrounding inclusivity and socio-emotional engagement (Meydan & Akkaş, 2024). Collecting data across the different phases of the intervention made it possible to compare early and later responses, providing a longitudinal perspective on how students' experiences changed as the reflective activities were refined. This design supports a process-oriented understanding of inclusive digital pedagogy, consistent with action-research principles.

2. Materials and Methods

2.1. Research Design and Rationale

This study adopted a qualitative action research design, employing multiple complementary methods to investigate how RVDs implemented via Microsoft Flipgrid support academic and socio-emotional development of multilingual undergraduate students in a post-COVID-19 higher education context. Action research was chosen because it enables educators to systematically introduce pedagogical innovations, observe their effects, reflect on outcomes, and iteratively refine teaching practices within authentic classroom environments, foregrounding practitioner reflexivity and student experience (Erro-Garcés & Alfaro-Tanco, 2020). Action research prioritises context-sensitive insights and real-time pedagogical adaptation, critical given the diversity of the student cohort and the socio-emotional focus of the intervention. This approach also allows researchers to examine how learning processes develop over time, rather than evaluating a single activity at one point in the semester.

The study followed a cyclical action research model based on the principles of planning, acting, observing, and reflecting, which allow educators to evaluate pedagogical interventions while they are being implemented and to make informed adjustments in response to emerging classroom needs. This approach is particularly appropriate in higher education contexts characterised by cultural diversity, multilingual communication, and varying levels of student confidence. Action research also supports practitioner-led inquiry, enabling lecturers to act simultaneously as teachers and researchers, systematically documenting changes in student engagement, participation, and emotional responses throughout the intervention. Because the intervention extended across the semester, data were collected longitudinally, making it possible to compare early and later stages of student engagement.

Three iterative action-research cycles were conducted within the same semester, allowing pedagogical decisions to be reviewed and adjusted in response to evidence gathered during earlier phases.

Cycle 1 (Weeks 1–3) involved planning and initial implementation of the RVD activity, including student training in Flipgrid, introduction to reflective practice, and observation of early participation, engagement, and peer interaction. During this cycle, lecturers recorded field notes focusing on students' confidence, willingness to speak, and response to reflective prompts. Participation during this phase was exploratory, and the smaller

amount of data collected was used primarily to identify initial challenges and inform subsequent adjustments.

Cycle 2 (Weeks 4–8) involved systematic observation and reflection on weekly RVD submissions and classroom behaviour. Lecturers reviewed student videos after each seminar, recorded individual field notes, and discussed emerging patterns informally after teaching sessions. Reflection focused on participation levels, language-related anxiety, peer support, and technical challenges. Based on these reflections, pedagogical adjustments were introduced, including clearer reflection prompts, modelling of reflective videos, and more structured peer-feedback activities. Although participation varied across weeks due to attendance and assessment workload, this phase generated a substantial volume of data that informed the refinement of the intervention.

Cycle 3 (Weeks 9–12) involved the revised implementation of the intervention after adjustments had been introduced. Additional support strategies were used, such as allowing avatar-based recordings, allocating time in seminars for discussion of reflections, and explicitly addressing socio-emotional challenges related to communication and group work. The final weeks of the semester focused on evaluating the effectiveness of the intervention through continued RVDs, end-of-semester reflective reports, surveys, and lecturer observations. Data from this phase provided the most stable basis for identifying patterns, as students were more familiar with the activity and expectations.

Reflection occurred at two levels: individual reflection, recorded in lecturers' field notes after each seminar, and collaborative reflection, conducted through informal weekly discussions among the three lecturers delivering the module. Decisions about changes to the intervention were made collaboratively, with the module leader coordinating implementation to ensure consistency across parallel seminar groups. This iterative process ensured that the intervention evolved in response to student needs, which is a defining characteristic of action research methodology, while also requiring ongoing reflexivity from the researchers regarding their dual role as teachers and investigators.

The study combined RVDs, end-of-semester reflective reports, post-intervention surveys, and lecturer field notes to capture multiple dimensions of student experience. Each method contributed complementary insights:

- RVDs documented real-time reflections on learning, socio-emotional experiences, and peer interaction.
- Reflective reports provided cumulative, self-evaluative insights over the semester.
- Surveys captured structured perceptions of engagement, confidence, and support alongside qualitative reflections.
- Lecturer field notes offered an independent observational perspective on participation, collaboration, and engagement patterns.

Triangulating these sources strengthened interpretive trustworthiness, reduced reliance on any single perspective, and allowed lecturers to address emergent issues while observing longitudinal patterns of engagement (Meydan & Akkaş, 2024; Elhami et al., 2024). In action research, such triangulation is essential for enhancing credibility, as it enables comparison between self-reported experiences, observed behaviours, and cumulative reflections across different stages of the intervention. Using multiple data sources across three cycles also made it possible to distinguish between initial reactions and later developments, increasing the robustness of the interpretation. This methodological synergy ensured that both immediate, context-specific experiences and cumulative perceptions were captured, providing a holistic understanding of students' interactions with RVDs.

By combining iterative cycles, practitioner reflection, and multiple qualitative data sources, the design allowed the study to examine not only whether the RVD intervention supported student development, but also how and why changes in engagement, confidence,

and socio-emotional awareness occurred over time, thereby aligning the methodology with the study's focus on process-oriented and inclusive digital pedagogy.

2.2. Participants

All students enrolled in the module (N = 78) participated in the study following informed consent and ethical approval. The cohort was multilingual, culturally diverse, and varied in age and experience (Table 1), reflecting the internationalisation typical of contemporary UK business schools. Because the study followed an action-research design conducted within a live teaching context, students participated in the intervention as part of normal module activities; however, the number of RVD submissions and reflections varied across weeks due to attendance patterns, assessment workload, and individual engagement. Consequently, the dataset is longitudinal but uneven, which is typical in classroom-based action research.

Table 1. Participants' characteristics.

Characteristic	Category	Frequency/Details
Total participants		78 multilingual undergraduate students
Gender	Male	32
	Female	46
Age	20–30	58
	31–50	20
Nationality	European	40
	Asian	28
	Other	10
First Language	English	20
	EAL	58
IT/Digital Skills	High Proficiency	25
	Moderate Proficiency	40
	Limited Proficiency	13
Prior Experience with video-based tools	Yes	40
	No	38
Length of study in the UK	<1 year	18
	1 year	16
	2–3 years	26
	UK home students	18

Students ranged in age from 20 to 50 years, with most students (n = 58) aged 20–30 and a smaller group of mature learners (n = 20) aged 31–50. Mature students often drew on professional or life experiences in their reflections, providing richer perspectives on leadership, teamwork, and socio-emotional challenges, whereas younger students frequently focused on immediate academic challenges and peer dynamics. Gender distribution was slightly skewed toward female students, with 46 female and 32 male participants. Gender-related differences in participation and confidence were observed, with female students often demonstrating greater self-awareness and depth in reflective reports, while male students sometimes emphasised performance outcomes or technical aspects of tasks.

Students represented a range of nationalities, including 40 European, 28 Asian, and 10 from other regions. This cultural diversity contributed to varied communication styles, approaches to collaboration, and socio-emotional norms, all of which influenced peer interaction and engagement with RVDs. Language background was a key factor shaping engagement with the intervention, as 58 students were English as an Additional Language (EAL) learners, while 20 reported English as their first language. EAL students often faced additional cognitive and emotional demands when preparing reflective videos or

written reports, including structuring reflections in academic English, expressing complex socio-emotional experiences, and managing anxiety about peer evaluation. The use of RVDs offered a medium where EAL students could rehearse and refine communication without the pressure of real-time classroom interactions. This supported the development of confidence, emotional awareness, and reflective capacity in line with the Socio-Emotional Intelligence Development (SEID) framework.

Students also differed in their length of study in the UK. Eighteen students had arrived in the UK within the previous year, sixteen were in their first year of study, twenty-six had studied in the UK for two to three years, and eighteen were UK home students. Length of study influenced familiarity with UK classroom participation norms, confidence in academic English, and willingness to engage in video reflection. Students with shorter experience in the UK more frequently reported anxiety about speaking in class, while those with longer experience demonstrated greater confidence in both written and video reflections.

Students' digital proficiency also varied across the cohort. Twenty-five students were classified as having high digital proficiency, forty as moderate, and thirteen as limited. Those with limited skills required additional scaffolding, demonstrations, and peer support, whereas highly proficient students often explored creative formats for reflections, such as incorporating images, slides, or voice-over commentary. Prior experience with video-based tools was roughly balanced, with forty students reporting prior exposure and thirty-eight reporting limited or no experience. This prior experience influenced initial engagement patterns, with experienced students participating confidently and sometimes supporting peers, while students new to video reflection gradually built confidence and comfort with the medium.

These participant characteristics were critical for interpreting patterns in socio-emotional engagement, peer interaction, and adaptation to RVDs. Mature students tended to produce more analytic reflections connecting learning to prior professional or life experiences, while EAL learners frequently highlighted linguistic challenges, social anxieties, and strategies to overcome communication barriers. Digital proficiency and prior experience shaped both the technical quality of submissions and students' comfort with Flipgrid. Because data were collected across three action-research cycles using multiple methods (RVDs, reflective reports, surveys, and lecturer field notes), not every student contributed equally to every data source; however, the diversity of the cohort allowed patterns to be examined across different learner characteristics rather than relying on a single group. Collectively, these diverse characteristics provided a rich lens for understanding individual learning trajectories, peer interaction, and broader patterns of engagement. By integrating demographic, linguistic, and digital information with RVD submissions, reflective reports, surveys, and lecturer field notes, the study captured how students from diverse backgrounds experienced, adapted to, and benefited from reflective video practices, offering nuanced insights into both academic and socio-emotional development in a multicultural higher education setting.

2.3. Context and Course Delivery

The research was conducted over a 12-week semester in a Leadership and Employee Development and Engagement module at a UK Business School. The module aimed to develop students' leadership knowledge, intercultural competence, professional communication, and reflective learning skills. The module was structured around weekly three-hour seminars, which combined interactive lectures, group activities, case studies, and individual tasks. Each seminar included preparatory readings drawn from both academic literature and applied management scenarios, providing students with the conceptual and practical

foundations necessary for class discussions and exercises. Students were required to actively participate in group problem-solving exercises, present findings on leadership and intercultural management topics, and collaborate on small-group consultancy-style reports, as well as prepare for a final digital presentation summarising their research and analysis.

Embedded throughout the module was reflective practice, including the use of RVDs, which were designed to support both academic and socio-emotional development. Students were introduced to RVDs during the first two weeks of the semester, including training on Flipgrid functionality, guidance on recording reflective videos, and discussions about respectful peer engagement. Lecturers emphasised psychological safety, normalising imperfection, and framing reflection as a tool for learning and growth rather than assessment, which was particularly important for multilingual students and those with limited prior experience with video-based tools. The RVD activity formed the core pedagogical intervention examined through the action-research cycles described in Section 2.1.

The module was delivered collaboratively by three lecturers across parallel seminar groups, with the author acting as module leader and coordinating the design and implementation of the RVD intervention. This structure ensured consistency in core learning objectives and intervention design while allowing lecturers to respond flexibly to group-specific dynamics, such as differences in language proficiency, prior digital experience, or confidence in oral communication. In-class support included digital literacy guidance, live demonstrations of Flipgrid use, and structured opportunities for students to discuss their reflections and questions in a safe and supportive environment. Because the study was conducted within a live teaching context, pedagogical adjustments were introduced during the semester in response to observations made during earlier action-research cycles.

Students were asked to submit weekly RVDs of approximately two minutes reflecting on their progress, challenges, and areas where they required academic or emotional support. Each RVD responded to structured prompts asking students to reflect on (a) their academic understanding of weekly topics, (b) classroom participation and engagement in seminar activities, (c) interaction with peers and perceived peer support, (d) confidence in communicating in English, and (e) any academic or socio-emotional difficulties experienced during the week. In this study, the term "progress" referred to development in academic understanding, communication skills, classroom participation, and emotional confidence rather than only assessment performance. Peer commenting was encouraged, and lecturers engaged with all posts, integrating observations and feedback into seminar discussions to support an iterative cycle of reflection and pedagogical adjustment. Peer comments typically focused on encouragement, clarification of ideas, and sharing coping strategies, and were monitored by lecturers to ensure respectful and supportive interaction. Although weekly submission was encouraged, not all students contributed every week due to attendance patterns, workload, or individual confidence, resulting in a dataset that varied in volume across the semester, which is typical in classroom-based action research.

At the end of the semester, students submitted individual reflective reports, typically 500–700 words in length. These reports required students to summarise their learning journey, evaluate their engagement with the module, reflect on challenges and achievements, and specifically comment on the perceived usefulness of RVDs and peer interaction. The reports followed structured prompts aligned with the weekly RVDs, which allowed the research team to compare real-time reflections with cumulative self-assessment. Because these reports were completed at the end of the module, they provided a more stable and comprehensive data source that could be compared with earlier reflections from the action-research cycles.

Lecturers maintained systematic field notes throughout the semester, documenting student participation, engagement patterns, group dynamics, observed challenges, peer

support, and any notable behavioural or socio-emotional changes. Observations were recorded during seminars and small-group exercises, with attention to verbal contributions, responsiveness to reflective prompts, and participation in peer feedback activities. These field notes were later triangulated with RVDs, reflective reports, and survey responses to provide a holistic understanding of student experience. Field notes also supported researcher reflexivity by documenting pedagogical decisions, unexpected outcomes, and evolving interpretations during the action-research process.

An anonymous post-intervention survey was administered to capture students' perceptions of the RVD intervention, its usefulness, and its impact on their engagement, confidence, and socio-emotional development. The survey was adapted from Nguyen and Nguyen (2023) to fit the module context and included 15 items, combining eight Likert-scale items and seven open-ended qualitative prompts. Likert items explored students' affective, cognitive, and behavioural attitudes toward the intervention, including three negatively worded items to reduce response bias. The open-ended questions allowed students to elaborate on their experiences with reflective practice, the perceived benefits and challenges of Flipgrid, and suggestions for improvement. Survey responses were analysed descriptively to identify overall trends and integrated with qualitative thematic analysis of RVDs, reflective reports, and lecturer field notes to generate a rich, triangulated understanding of the intervention's impact. The use of multiple data sources across different stages of the semester strengthened interpretive credibility by allowing patterns to be confirmed across independent forms of evidence.

The overall structure and implementation of the RVD intervention can be summarised in the following timeline (Table 2), illustrating the iterative, process-focused approach that integrated student reflection, peer interaction, and lecturer observation throughout the semester:

Table 2. Flipgrid RVD Implementation Timeline.

Week	Activities	Details
1–2	Introduction & Training	Purpose of RVDs explained; Flipgrid demonstration; reflection and peer support emphasised
3–12	Weekly RVD Submission	2-min videos: progress, challenges, academic/emotional support; optional visual presence; peer commenting encouraged; lecturer feedback integrated
12	Reflection & Survey	Submission of end-of-semester reflective report; post-intervention survey; data triangulation with lecturer field notes

This timeline reflects the iterative and developmental nature of the intervention, highlighting how weekly reflection, peer feedback, and lecturer observation were integrated into a cohesive pedagogical strategy designed to support both academic skill development and socio-emotional growth. Across the three action-research cycles, the intervention evolved in response to student needs, allowing the research team to examine how engagement developed over time rather than assuming uniform participation or outcomes. The combination of structured reflection, observational data, and cumulative self-assessment enabled the research team to generate detailed, contextualised insights into student learning trajectories, challenges, and engagement patterns.

2.4. Data Sources

Data for this study were collected from four complementary qualitative sources, each providing a distinct lens on students' engagement, reflection, and socio-emotional development. Across the 12-week semester, the dataset consisted of RVDs, end-of-semester

reflective reports, post-intervention surveys, and lecturer observation notes. Because the study was conducted within a live classroom context, the number of contributions varied across weeks due to attendance patterns, workload, and individual engagement; therefore, the figures reported below represent approximate totals rather than uniform participation by all students. In total, the dataset included approximately 780 potential RVD entries (78 students × 10 weeks), 78 end-of-semester reflective reports, 76 completed post-intervention surveys, and 36 lecturer observation entries recorded across the semester (3 lecturers × 12 weeks). In addition, lecturers recorded weekly reflective notes following seminars, resulting in 12 documented lecturer reflection points corresponding to the iterative action-research cycles. These multiple data sources allowed the research team to examine both individual and group patterns of engagement as well as changes occurring across the three action-research cycles implemented during the semester.

The first and primary source was the RVDs. Across the semester, students submitted approximately 780 video recordings (78 students × 10 weeks), reflecting on weekly progress, academic challenges, and socio-emotional support needs. While a maximum of 780 recordings was possible, actual submissions varied across weeks, with higher participation in the later stages of the semester once students became familiar with the activity. Videos were recorded between Weeks 3 and 12 and responded to structured prompts asking students to reflect on classroom participation, engagement in seminar activities, peer interaction and support, understanding of weekly academic content, confidence in communicating in English, and any academic or emotional difficulties experienced during the week. In this study, the term "progress" referred to development in academic understanding, communication skills, classroom participation, and emotional confidence rather than only assessment performance.

The videos captured both verbal and non-verbal cues, such as tone, facial expressions, gestures, and pauses, offering nuanced insights into students' confidence, emotional awareness, and comfort with communication. RVDs also facilitated peer interaction, as students were encouraged to view and comment on one another's videos, fostering dialogue, collaborative reflection, and peer support. In this sense, RVDs functioned not only as a data source but also as a pedagogical tool, enabling lecturers to respond to emergent issues and adapt teaching strategies in real time, consistent with action research principles (Erro-Garcés & Alfaro-Tanco, 2020; Mueller, 2019). Because recordings were produced over multiple weeks, they provided longitudinal evidence of changes in confidence, participation, and reflective depth across the action-research cycles.

The second source consisted of end-of-semester reflective reports, submitted by all 78 students, ranging between 500 and 700 words. These reports offered summative reflections, allowing students to articulate broader patterns in learning, coping strategies, and peer interaction, as well as perceived benefits and challenges of RVDs. The reflective reports complemented the weekly RVDs by providing a longitudinal perspective, enabling comparison of immediate reflections with cumulative self-assessment, and highlighting growth in reflective capacity, socio-emotional awareness, and confidence. Structured prompts aligned with weekly RVDs ensured consistency while allowing students to contextualise their experiences over the semester. Because these reports were completed at the end of the module, they provided the most complete dataset for all participants and were used to confirm patterns identified in the weekly videos.

The third source was a post-intervention survey, which received 76 complete responses. The survey included 15 items adapted from Nguyen and Nguyen (2023), combining eight Likert-scale items and seven open-ended questions. Likert items assessed cognitive, affective, and behavioural dimensions of engagement, including three negatively worded items to reduce response bias. Open-ended questions allowed students to elaborate on their

experiences with reflective practice, the perceived benefits and challenges of Flipgrid, and suggestions for improvement. Survey responses provided both quantitative and qualitative insights, capturing patterns in perceived engagement, motivation, and socio-emotional support, which could be triangulated with the RVDs and reflective reports to enhance the credibility of findings.

Finally, lecturers' field notes were maintained systematically throughout the semester. These notes documented student participation, peer interaction, observed challenges, engagement patterns, and socio-emotional responses during seminars, group exercises, and interactions with Flipgrid. Field notes provided an independent observational perspective, highlighting behaviours and dynamics that were not explicitly articulated by students, such as hesitation among less confident or digitally inexperienced participants or differences in engagement linked to age, EAL status, or prior experience with video-based tools.

Field notes were written after each seminar by the three lecturers and focused on observable behaviours, including frequency of student participation, willingness to speak in English, collaboration in group tasks, responsiveness to reflective prompts, and evidence of peer support. In addition to individual notes, lecturers reviewed RVD submissions weekly and reflected on emerging patterns. These reflections were recorded informally after seminars and focused on participation levels, language-related anxiety, peer interaction, and technical difficulties with Flipgrid. These notes also supported researcher reflexivity by documenting how pedagogical decisions were influenced by ongoing observations during the action-research cycles.

Across the semester, pedagogical adjustments were made three times, corresponding to the three action-research cycles. Decisions about adjustments were made collaboratively by the three lecturers, with the module leader coordinating implementation across seminar groups. Adjustments included simplifying reflection prompts, modelling reflective videos in class, allowing avatar-based recording for students uncomfortable appearing on camera, allocating seminar time for peer feedback on RVDs, and explicitly discussing socio-emotional challenges related to communication and participation. These adjustments were introduced iteratively in response to patterns observed in RVDs, reflective reports, and classroom observations. Integrating these notes with RVDs, reflective reports, and survey responses enabled the research team to interpret student experiences holistically, considering both self-reported and observed behaviours.

Together, these four complementary data sources provided a rich, triangulated understanding of the intervention, capturing both immediate and cumulative reflections, individual and group patterns of engagement, and academic as well as socio-emotional dimensions of learning. This comprehensive approach allowed the study to document not only how RVDs were experienced by students but also how they functioned as an inclusive pedagogical practice supporting reflective engagement, communication, and socio-emotional development in a post-COVID-19 higher education context (Meydan & Akkaş, 2024; Elhami et al., 2024).

2.5. Data Analysis

All qualitative data were analysed using reflexive thematic analysis (Braun & Clarke, 2023), a method well-suited to exploring context-sensitive, evolving patterns in students' engagement, reflection, and socio-emotional development. Reflexive thematic analysis allowed the research team to examine both semantic content (what students explicitly said) and latent meanings (underlying emotions, intentions, or behavioural patterns), providing a nuanced understanding of how RVDs supported academic and socio-emotional growth. This approach is consistent with action-research methodology, as it allows themes to emerge from classroom practice rather than testing predetermined hypotheses.

Analysis proceeded in several iterative stages. First, the researcher and a research assistant engaged in familiarisation with the data, reviewing all RVDs, reflective reports, survey responses, and lecturer field notes. Because participation varied throughout the weeks, familiarisation focused on identifying patterns across the whole semester rather than assuming equal contribution from all participants. This stage involved repeated viewing and reading to gain a holistic understanding of the dataset, noting recurring issues, emotional cues, and emergent patterns related to reflection, peer interaction, and confidence.

Second, initial coding was conducted independently by both the researcher and the research assistant. Meaningful units of text or video content were identified, focusing on indicators of academic engagement, reflective capacity, socio-emotional awareness, confidence, peer interaction, and challenges experienced. Coding was sensitive to participant characteristics such as EAL status, digital proficiency, age, and prior experience with video-based tools, recognising that these factors shaped students' reflections and behaviours. Both semantic and latent content were coded to capture explicit statements as well as subtler emotional or relational cues, consistent with the SEID framework (Goleman, 1998; Salovey & Mayer, 1990; Boyatzis, 1982). Differences in coding were discussed and resolved through reflexive dialogue rather than statistical agreement measures, in line with reflexive thematic analysis principles (Braun & Clarke, 2023).

Third, theme development and refinement involved clustering codes into candidate themes, followed by iterative discussion between the researcher and assistant to ensure transparency, consistency, and minimisation of individual bias. Themes were refined with careful attention to triangulation across data sources. For example, a student's RVD comment about time-management challenges could be cross-verified with lecturers' field notes documenting late submissions and survey responses highlighting similar experiences, reinforcing interpretive trustworthiness (Meydan & Akkaş, 2024). Themes were not treated as fixed outcomes but as emergent patterns reflecting the complexity of reflective and socio-emotional learning in context. Because the study followed three action-research cycles, theme development was also considered when patterns appeared during the semester, allowing early reactions to be distinguished from later developments.

Fourth, integration of lecturer field notes enabled cross-verification of student-reported experiences and identification of patterns not captured through RVDs or reflective reports alone. This stage helped the research team discern differences in engagement linked to participant characteristics such as language background, age, or digital skills, and to examine how peer interaction, lecturer feedback, and classroom dynamics influenced students' reflective practices. Field notes also supported researcher reflexivity by documenting how interpretations evolved as the intervention was modified across cycles.

Finally, the research team interpreted themes in relation to the SEID framework and the iterative principles of action research. Themes were understood as evolving, context-dependent patterns, rather than direct measures of skill acquisition. The analysis emphasised process over outcomes, highlighting how students developed emotional awareness, interpersonal understanding, and adaptive behaviours over time. Patterns of confidence, peer support, and reflective depth were examined considering students' demographic, linguistic, and digital profiles, enabling a holistic interpretation of academic and socio-emotional development. Interpretation was conducted with awareness of the researchers' dual role as lecturers and investigators, and conclusions were based on convergence across multiple data sources rather than single observations.

By adopting this rigorous, reflexive, and triangulated approach, the study captured both individual learning trajectories and broader classroom dynamics, providing insights into how RVDs functioned as an inclusive pedagogical practice. The combination of multiple qualitative sources and iterative analysis ensured that findings were contextually

grounded, credible, and sensitive to the complex interactions between pedagogy, technology, and student characteristics (Elhami et al., 2024).

2.6. Researcher Positionality and Reflexivity

The researchers were also the module leaders responsible for designing and implementing the intervention. This dual role provided close access to student experiences but also required careful reflexivity during data interpretation. Because the study was conducted within the researchers' own teaching context, awareness of potential power relationships and prior expectations was necessary throughout the research process.

To minimise bias, multiple data sources were triangulated, including student reflections, lecturer field notes, and survey responses, allowing patterns to be confirmed across different forms of evidence. Triangulation across weekly RVDs, end-of-semester reports, survey responses, and observation notes helped ensure that interpretations were not based on isolated comments but on recurring patterns observed across the semester.

Throughout the action-research cycles, reflective notes were kept to document pedagogical decisions, unexpected outcomes, and potential assumptions influencing interpretation. These notes were recorded after seminars and during weekly discussions among the lecturers, enabling the research team to review how changes introduced during each cycle influenced student engagement and reflection. This reflexive process helped ensure that conclusions were grounded in the data rather than in prior expectations about the effectiveness of the intervention.

In line with reflexive thematic analysis and action-research principles, the researchers treated interpretation as an evolving process rather than a fixed evaluation of outcomes. Attention was given to how the researchers' roles as lecturers, designers of the intervention, and analysts of the data could shape both classroom dynamics and interpretation of findings. By explicitly acknowledging this positionality and by relying on multiple sources of evidence collected over time, the study aimed to enhance the credibility, transparency, and trustworthiness of the analysis.

2.7. Ethical Considerations

Ethical approval for this study was obtained before data collection, and participation was entirely voluntary. All students were informed that withdrawal at any stage would not affect their academic assessment, and written informed consent was obtained from all participants. Students were reminded throughout the semester of their right to opt out at any time without penalty, ensuring that engagement with the study was both autonomous and ethically sound. Because the study was conducted within a module taught by the researchers, particular care was taken to distinguish between normal learning activities and participation in the research, and students were reassured that their decision to participate or withdraw would have no impact on grades or lecturer evaluation.

Given the personal and socio-emotional nature of the reflections, particular attention was paid to psychological safety and confidentiality. RVDs and reflective reports were anonymised and securely stored, accessible only to the research team. Video recordings were shared only within seminar groups for pedagogical purposes, and students were able to select their preferred visual presence, on-camera, avatar, or voice-only, to accommodate comfort levels and reduce anxiety. This approach recognised that some students, particularly EAL learners or those with limited prior experience with video tools, might experience vulnerability when sharing reflections publicly. Lecturers also emphasised that RVDs were developmental rather than assessed, framing participation as an opportunity for growth rather than evaluation. Students were also informed that weekly participation

could vary according to individual circumstances, and that incomplete submission of RVDs would not disadvantage them academically.

The study design incorporated inclusive participation strategies. Students with limited digital proficiency or lower confidence in oral communication were provided with scaffolding, live demonstrations, and structured peer support to ensure equitable engagement. Guidance included explicit instructions on Flipgrid functionality, recommendations for effective reflective practice, and reassurance regarding imperfections in recording. Lecturers monitored participation and intervened when necessary to support students in overcoming technical or emotional challenges, ensuring that all students could participate meaningfully and safely. These strategies were particularly important in an action-research context, where pedagogical adjustments were introduced during the semester in response to observed student needs.

In addition, the ethical approach accounted for data security and confidentiality in digital contexts. Video recordings and reflective reports were stored on secure institutional servers with restricted access. Personal identifiers were removed from all data before analysis, and any excerpts presented in publications were anonymised. Field notes recorded by lecturers were treated with the same level of confidentiality, ensuring that observations about individual students were documented and interpreted responsibly. During analysis, care was taken to report patterns at the group level rather than focusing on identifiable individuals.

Overall, the combination of careful ethical planning, voluntary participation, anonymisation, psychological safety, and inclusive facilitation ensured that students could engage in reflective practice in a secure, supportive environment. These measures not only protected participants but also enabled the study to capture authentic, rich, and contextually grounded insights into students' academic and socio-emotional development, aligning with the principles of action research and socially just pedagogy (Erro-Garcés & Alfaro-Tanco, 2020; Mueller, 2019; Meydan & Akkaş, 2024).

3. Results

While the previous sections outlined the pedagogical design and implementation of the 12-week Flipgrid RVD intervention, analysis of the qualitative dataset provides clearer insight into the cognitive, emotional, and social processes through which students experienced learning, confidence-building, and engagement. The intervention required students to submit weekly two-minute RVDs in response to structured reflective prompts, with optional peer commenting and lecturer feedback. These activities were complemented by end-of-semester reflective reports and embedded scaffolding for digital literacy, creating a multi-layered, supportive, and interactive learning environment.

Data were collected from three interrelated qualitative sources: students' written reflective reports (78 submissions, 500–700 words each), weekly Flipgrid RVD entries (~780 recordings, 78 students $\times$ 10 weeks), and lecturers' weekly reflective and observational notes. In addition, 76 post-intervention surveys captured students' cognitive, affective, and behavioural attitudes toward RVD participation. This triangulated dataset enabled a nuanced understanding of students' engagement across multiple dimensions of learning, encompassing both immediate experiences and cumulative reflections.

All qualitative data were analysed using reflexive thematic analysis (Braun & Clarke, 2023), and survey responses were examined to identify overall trends and item-level variation. Survey items, adapted from prior studies on technology-mediated reflection (Hayes & Coutts, 2020; Shin & Yunus, 2021), demonstrated acceptable internal consistency (Cronbach's alpha = 0.749), supporting the reliability of quantitative perceptions.

The findings presented here do not claim causal attribution to Flipgrid as a technological tool in isolation. Rather, they illuminate how structured, dialogic, and scaffolded reflective practice was experienced by students within a specific pedagogical and sociocultural context, considering participant characteristics such as EAL status, digital literacy, age, and prior experience with video tools.

Analysis of reflective reports and RVDs revealed several recurring and interrelated themes regarding academic development, reflective engagement, professional skill formation, motivation, socio-emotional well-being, and inclusion. These themes are summarised in Table 3 and illustrated with selected student excerpts, capturing the diversity and depth of participant experiences.

Table 3. Perceived Impact of Flipgrid RVDs on Students' Learning and Socio-Emotional Development (Student Data).

Theme (Frequency)	Illustrative Student Excerpts
Perceived development of academic presentation skills (67)	"Using Flipgrid allowed me to develop my presentation skills as I could record my own voice and detect my mistakes. . . I could then practice correcting them." (Reflective report S5)
Development of reflective thinking and active listening (59)	"Listening to others made me realise what I was doing wrong and how I could improve. . . I learned to reflect more deeply." (Reflective report S6)
Professional and transferable skill development (70)	"We developed negotiation and problem-solving skills by supporting peers and resolving challenges together." (Reflective report S9)
Motivation and engagement (66)	"I looked forward to preparing my video every week. . . it made learning feel more interactive and enjoyable." (Reflective report S3)
Emotional and social well-being (59)	"Flipgrid created a safe space. . . I never felt alone or lonely." (Reflective report S11)
Accommodation of diverse learning needs/EDI (62)	"I am dyslexic and shy. . . Flipgrid allowed me to prepare at my own pace and ask for help." (Reflective report S13)
Growth, resilience, and adaptability (55)	"At first it was uncomfortable to watch myself, but over time it helped me improve and become more confident." (Reflective report S14)
Challenges: Ongoing anxiety/psychological safety (27)	"I felt nervous about what others would think. . . even though I could redo my video, I still worried about my presentation." (Reflective report S22).
Challenges: Difficulty interpreting reflective prompts (25)	"Some questions were hard to understand or know how to answer meaningfully." (Reflective report S14)
Challenges: Digital literacy and time pressures (32)	"My IT skills are limited. . . it took time, but support from peers and the lecturer helped." (Reflective report S16)

Themes were generated from the full dataset collected across the entire semester rather than from a single week of recordings. All RVDs, reflective reports, lecturer field notes, and survey comments were included in the reflexive thematic analysis, allowing identification of longitudinal patterns across the three action-research cycles. Although individual weekly reflections varied depending on seminar topics and assessment workload, the main themes remained consistent throughout the semester, with differences observed mainly in intensity rather than in type. Early weeks contained more references to anxiety, technical difficulties, and uncertainty about expectations, whereas later weeks showed more frequent references to confidence, peer support, and reflective depth. These temporal differences informed

the interpretation of how engagement developed over time rather than leading to separate theme categories for each week.

These themes are summarised in Table 3 and illustrated with selected student excerpts, capturing the diversity and depth of participant experiences.

The frequencies shown in Table 3 represent the number of students who referred to each theme at least once during the semester in either their RVDs or reflective reports. Because students submitted multiple videos over ten weeks, the counts do not represent weekly occurrences but the overall presence of a theme across the full intervention. Comparison of early, middle, and late weeks showed similar thematic categories, although the tone of reflections changed over time, with later recordings showing greater confidence, more detailed reflection, and increased peer learning references.

One of the most prominent themes concerned students' perceived improvement in presentation-related competencies. Students emphasised the importance of repetition, self-observation, and revision rather than attributing progress solely to the technology. The ability to re-record videos created a low-pressure environment, particularly supporting multilingual students and those with limited prior experience, enabling them to monitor pronunciation, structure, and clarity.

Closely related was the development of reflective thinking and active listening. Preparing weekly RVDs required students to articulate challenges and evaluate their progress, while viewing peers' videos encouraged attentiveness, empathy, and constructive feedback. These practices exemplify how reflection can be socially mediated and co-constructed (Braun & Clarke, 2023). From a SEID perspective, these findings illustrate the integration of emotional and cognitive engagement, highlighting how scaffolding and peer interaction enhance learning processes.

Students also reported gains in professional and transferable skills, including communication, collaboration, adaptability, and digital confidence. Flipgrid offered a low-stakes space for practising spoken English and experimenting with self-expression, benefiting students who were shy, linguistically insecure, or balancing multiple responsibilities, consistent with research linking digital tools to employability competencies (Isidori et al., 2021).

Survey responses corroborated these qualitative insights, showing consistent gains in cognitive and behavioural attitudes (overall means 3.80 and 3.77, respectively), reflecting perceived skill improvement and willingness to engage actively in online and face-to-face contexts. Motivation and engagement were reinforced through student narratives, with many noting that weekly RVDs introduced novelty, creativity, and anticipation into learning, particularly following pandemic-related isolation. Affective attitudes were more variable (mean = 2.73), indicating mixed emotional responses including fatigue, anxiety, or selective engagement, highlighting the importance of adaptive facilitation.

The theme of emotional and social well-being was particularly prominent for students who were shy, anxious, or linguistically insecure. Descriptions of Flipgrid as a "safe space" align with Taylor and Hinchman (2020) on digital belonging, showing how asynchronous video reflection could, in many cases, foster inclusion for students who sometimes felt marginalised in live classroom settings. Survey item-level analysis showed high confidence-building (Item 11, M = 4.10) but variable fatigue (Item 6, M = 2.40), with patterns linked to digital proficiency, prior experience, age, and workload. Students also highlighted practical aspects of equity, diversity, and inclusion, noting that flexible pacing, optional visual presence, and peer support facilitated participation for learners with dyslexia, mature students, and those with competing responsibilities, thus reflecting principles identified by Sablić et al. (2021), although not every student experienced these benefits equally.

Changes in student responses were also interpreted in relation to the three action-research cycles described in Section 2.1. During Cycle 1 (Weeks 1–3), student reflections

frequently referred to uncertainty about recording videos, anxiety about peer evaluation, and difficulty interpreting reflective prompts. Lecturer field notes from this phase also reported uneven participation, hesitation among multilingual students, and technical difficulties with Flipgrid. Based on these observations, adjustments were introduced in Cycle 2 (Weeks 4–8), including clearer reflection prompts, in-class modelling of reflective videos, additional time for questions, and more explicit encouragement of peer commenting. Following these adjustments, both student reflections and lecturer observations indicated increased participation, more detailed reflections, and greater willingness to comment on peers' videos. Some students, however, still seemed hesitant despite these changes, which is worth noting.

Further adjustments were made at the start of Cycle 3 (Weeks 9–12). These included allowing avatar-based recording for students uncomfortable appearing on camera, allocating seminar time for discussing RVD experiences, and explicitly addressing socio-emotional challenges related to communication, confidence, and workload. After these changes, lecturer notes recorded reduced visible anxiety, more consistent submission of videos, and stronger evidence of peer-to-peer support. Students' final reflective reports also referred more frequently to confidence, belonging, and skill development than to technical or emotional difficulties. These patterns suggest that the impact of the intervention was not static but gradually evolved over the semester, though not perfectly evenly across all students, as the pedagogical design was refined through iterative action-research cycles.

Despite largely positive experiences, students reported ongoing challenges, including initial discomfort with recording, time pressures, uneven digital skills, and difficulty interpreting reflective prompts. Complementing the student-centred findings, lecturers' reflective and observational notes provided an additional lens on how the Flipgrid RVD intervention influenced participation, engagement, and skill development across the cohort. As summarised in Table 4, several key patterns emerged, highlighting both positive developments and ongoing challenges in student learning processes, although not all patterns were uniform across seminar groups.

These observations were derived from the lecturers' field notes recorded across the full semester rather than from a single teaching session. Similar to the student data, the same categories of engagement, confidence, and participation appeared throughout the intervention. However, later weeks showed fewer reports of hesitation and more evidence of peer interaction and reflective depth, although a few students seemed to remain reluctant to participate fully.

From the lecturers' perspective, the most notable changes were related to patterns of participation. Students who were typically silent or hesitant in synchronous sessions often became more expressive and reflective through video submissions. However, some students continued to participate minimally or selectively, indicating that asynchronous video reflection primarily diversifies modes of engagement rather than universally increasing participation, though it is possible that a few students never fully adapted. These observations highlight the importance of considering individual learner characteristics, including digital literacy, confidence, and prior experience with video tools.

Lecturers also documented gradual improvements in presentation structure and delivery, consistent with students' self-reported reflections. These gains accumulated across the 12-week intervention, supporting the interpretation that learning was developed through ongoing, iterative reflective practice rather than a single exposure. From a SEID perspective, these findings illustrate the dynamic interplay of cognitive, emotional, and social dimensions over time, showing how scaffolded, socially mediated environments foster confidence-building and skill development.

Table 4. Lecturers' Observations of Student Engagement and Learning Processes (Lecturers' Reflective Notes).

Theme (Mentioned by All 3 Lecturers)	Illustrative Lecturers' Observations
Increased participation from quieter and multilingual students	Students who rarely spoke in live sessions contributed consistently and thoughtfully through RVDs, often engaging more deeply than in face-to-face discussions.
Progressive improvement in the structure and clarity of presentations	Over time, videos demonstrated clearer organisation, more confident delivery, and improved use of signposting language.
Peer-to-peer support and emerging learning community	Students increasingly referenced peers' videos in their own reflections, suggesting active listening and mutual learning.
Reduced visible anxiety in later stages	Several students who initially appeared hesitant became more relaxed and expressive in subsequent recordings.
Uneven digital confidence requiring scaffolding	Mature and digitally inexperienced students required early technical support, which was gradually reduced as confidence increased.
Time pressure and workload management issues	A small number of students struggled to maintain weekly submissions during peak assessment periods.
Emotional and psychological challenges	A few students continued to experience anxiety, self-doubt, or fear of negative evaluation despite support. These challenges suggest that psychological safety is mediated by prior experience, confidence, and comfort with video-based tasks.
Variable engagement with peer dialogue	While many students participated actively in peer reflection, some engaged superficially or inconsistently. Peer-mediated learning outcomes were therefore uneven and contingent on individual willingness, time, and confidence.
Uneven perceived benefit	Although many students reported gains in confidence, reflection, and belonging, lecturers observed that benefits were not universal, and some students derived minimal value from the RVDs.

Peer interaction emerged as a key mediating factor. Lecturers noted increasing instances of students referencing peers' ideas, providing constructive feedback, and building on shared challenges, which contributed to the formation of a collaborative learning culture. Nevertheless, engagement remained uneven, reflecting dependencies on student confidence, availability, and willingness to participate, so outcomes should not be assumed uniform across all learners. These patterns underscore the importance of pedagogical scaffolding, flexibility, and inclusive facilitation, particularly in multilingual and widening-participation cohorts.

Taken together, the qualitative evidence from both students and lecturers suggests that Flipgrid-mediated RVDs functioned as a structured reflective practice supporting learning, engagement, and participation. The perceived value lies not in the technology itself, but in how it was pedagogically embedded through repeated reflection, peer dialogue, and supportive facilitation. Students emphasised gains in confidence, metacognitive awareness, and belonging, while lecturers observed participation patterns, learning progression, and ongoing challenges. Digital literacy gaps, time constraints, and affective barriers were therefore better understood as design considerations rather than fundamental limitations. Overall, the evidence supports a cautious but meaningful conclusion: when thoughtfully implemented, RVDs can foster inclusive, dialogic learning environments, with recognition

that benefits and participation vary across students and that some students may benefit only partially or inconsistently.

Survey Insights

To complement the qualitative analysis, a post-intervention survey was administered following completion of the Flipgrid RVD activities (Table 5). The survey comprised 12 items, nine positively framed and three negatively worded, to reduce response bias, and was adapted from validated instruments on video-based reflective learning and student engagement. It demonstrated acceptable internal consistency (Cronbach's alpha = 0.749), consistent with guidelines for exploratory educational research (Hayes & Coutts, 2020).

Table 5. Findings from the Survey.

Learners' Attitudes Towards Using RVDs		
Attitude	**Mean**	**SD**
Cognitive attitude Items 2, 5, 7, 9, 11	3.80	0.87
Affective attitude Items 1, 6, 8, 10	2.73	0.88
Behavioral attitude Items 3, 4, 12	3.77	0.87
Questions	Mean	Std. Deviation
1. I find that the Flipgrid RVD project did not give me more pleasure in learning about leadership and employee development, and engagement.	2.05 *	0.887
2. I believe that my presentation skills have been enhanced thanks to the Flipgrid RVD project.	4.10	0.852
3. I wish I had been encouraged to do Flipgrid RVD before.	3.85	0.933
4. I start to feel like contributing more actively to presentations in class, both face-to-face and online.	4.15	0.745
5. I think the Flipgrid RVD project was suitable for me.	3.75	0.639
6. I feel tired from participating in the Flipgrid RVD project.	2.40 *	0.883
7. I think the Flipgrid RVD project helped me learn new content and improve my academic performance.	3.85	1.04
8. I find that the Flipgrid RVD project was interesting as it enhances my socio-emotional development.	4.25	0.851
9. I believe that the Flipgrid RVD project was useful in improving my fluency and accuracy in public speaking.	3.20	0.894
10. I do not like the Flipgrid RVD project.	2.20 *	1.005
11. I think the Flipgrid RVD helped me to feel confident when I present to the wider public.	4.10	0.912
12. I would like to continue Flipgrid RVD in the same way next year.	3.30	0.923

(*) Items with reversed score RVDs.

Cognitive attitudes received the highest overall mean score (M = 4.01, SD = 0.87), indicating that students generally perceived the RVD activities as supportive of their learning and academic development. Items focused on perceived improvements in presentation skills, fluency, accuracy in public speaking, and understanding of course content, closely mirroring qualitative findings in which students described enhanced metacognitive awareness, greater control over performance, and increased confidence in articulating ideas in English. The moderate standard deviation suggests that, while most students experienced cognitive benefits, a few students may not have felt much improvement, reflecting differences in prior experience with video tools, language proficiency, and individual

engagement levels. These findings align with the SEID framework, highlighting the integration of cognitive, emotional, and social processes in skill development through scaffolded, iterative reflection.

Behavioural attitudes were similarly positive (M = 3.77, SD = 0.87), with students reporting increased willingness to contribute to both online and face-to-face contexts and expressing interest in continuing RVD activities in future modules. However, selective participation was noted for some students, who engaged only with specific prompts or recording modalities, suggesting that not all students fully embraced the intervention. The SD reinforces that, although overall willingness to participate was high, individual differences in motivation, confidence, and time availability influenced behavioural engagement. Notably, Item 11 ("Flipgrid RVD helped me to feel confident when I present to the wider public") received one of the highest item-level scores (M = 4.10), reinforcing qualitative accounts of reduced anxiety and enhanced public-speaking confidence. These findings support prior research on Flipgrid's potential to foster learner autonomy, active participation, and lower speaking anxiety, particularly for multilingual students (Shin & Yunus, 2021; Tuyet & Khang, 2020).

In contrast, affective attitudes were more variable (M = 2.70, SD = 0.88), indicating that students' emotional responses to the RVD activities were less uniform. While many reported enjoyment, interest, and a sense of engagement, others expressed ambivalence, fatigue, or frustration, particularly regarding the frequency of reflective tasks. The relatively high SD highlights this heterogeneity, although it is possible that some students' responses were influenced by temporary workload or mood rather than the activity itself. These findings underscore the importance of adaptive facilitation, clear scaffolding, and sensitivity to individual circumstances when implementing RVDs. Interestingly, reported fatigue was lower than in comparable studies (Nguyen & Nguyen, 2023), possibly reflecting cohort composition, maturity, and professional responsibilities.

It is important to emphasise that these survey findings capture students' perceptions rather than objective measures of skill acquisition or performance. As such, they should be interpreted as complementary evidence, triangulating with qualitative narratives and lecturers' observations to provide a richer understanding of how students experienced reflection, engagement, and confidence-building.

Taken together, the convergence of students' reflective narratives, lecturers' observations, and survey findings supports the interpretation that structured use of RVDs was pedagogically meaningful and personally supportive for many participants. At the same time, the observed variability in cognitive, affective, and behavioural responses, reflected in both SDs and qualitative accounts, highlights the need to tailor interventions to individual and cohort-specific needs, and that some students may have benefited less than expected. These insights provide valuable guidance for the design, scaffolding, and implementation of future RVD interventions in diverse higher education contexts, reinforcing the principle that technology-mediated reflection is most effective when embedded within relational, scaffolded, and inclusive pedagogical practices.

4. Discussion

This discussion is organised around three interconnected themes emerging from the data: (1) the development of reflective engagement across cycles, (2) the relational and socio-emotional dimensions of RVD participation, and (3) the pedagogical conditions required for inclusive digital reflection. These themes provide a structure for interpreting the findings and linking them to existing research. This study explored how multilingual and multicultural undergraduate students experienced RVDs mediated through Microsoft Flipgrid within a structured, dialogic pedagogical framework in a post-COVID higher education

context. Rather than positioning Flipgrid as a technological solution in isolation or seeking causal claims about its effectiveness, the study examined the processes of learning, engagement, and socio-emotional development, focusing on how students interpreted, navigated, and benefited from reflective practices embedded within a scaffolded curriculum.

The study was conducted as an iterative action-research intervention implemented across three cycles within the same semester, allowing the teaching team to analyse a large longitudinal dataset consisting of weekly RVDs, reflective reports, lecturer observations, and survey responses, and to introduce pedagogical adjustments in response to emerging patterns. This design enabled the researchers to examine not only students' perceptions of the activity, but also how engagement, confidence, and reflective depth changed over time as the intervention was refined. By triangulating students' reflective reports, weekly RVD entries, lecturers' observations, and a post-intervention survey, this research provides a rich, multi-dimensional account of the cognitive, emotional, and social mechanisms underpinning learning in diverse student cohorts. The findings foreground the conditions under which digital reflection is pedagogically meaningful, highlighting both perceived benefits and ongoing challenges, with clear implications for inclusive curriculum planning, digital pedagogy, and institutional policy. It should be noted, however, that not all benefits were evenly distributed, and some students' reflections suggested limited gains.

Across data sources, students described RVDs as enabling deliberate reflection on learning challenges, sustained engagement with course content, and increased awareness of communication practices. These observations align with previous research emphasizing reflection as a vehicle for metacognitive awareness, learner agency, and active self-regulation (Gabrielova & Buchko, 2021; Zimmerman, 2023). Improvements were uneven, however, reflecting variations in anxiety, interpretative skills with reflective prompts, and participation levels (Yuan et al., 2022). Students framed their experiences as part of an evolving learning journey characterized by experimentation, iterative feedback, and gradual confidence building. The asynchronous nature of Flipgrid allowed learners to rehearse ideas, articulate uncertainty, and revisit their recorded reflections, supporting reflective sense-making rather than one-off performance (Yuan et al., 2022).

Because data were collected weekly across the semester, it was possible to observe differences between the three action-research cycles. During Cycle 1, student reflections frequently referred to uncertainty about expectations, discomfort with recording videos, and difficulty interpreting reflective prompts. Lecturer field notes from the same period also reported uneven participation, hesitation among multilingual students, and requests for additional guidance. In Cycle 2, after prompts were clarified and reflective videos were modelled in class, both student reports and lecturer observations indicated more detailed reflections, more consistent submissions, and increased peer interaction. In Cycle 3, after additional adjustments such as allowing avatar-based recordings, allocating seminar time for discussion, and explicitly addressing socio-emotional concerns, reflections more frequently referred to confidence, belonging, and skill development, while references to anxiety and technical difficulty decreased. It is possible that some improvements were also influenced by students' growing familiarity with the semester workload rather than the intervention alone. These changes support the interpretation that the intervention developed progressively rather than producing immediate effects, which is consistent with the cyclical logic of action research.

Importantly, the study highlights that RVDs functioned as relational reflective practices, rather than private or purely individual self-assessment tasks. Students frequently emphasized the value of peer engagement, reporting that listening to others' reflections facilitated comparison, reassurance, and collective problem-solving. This observation aligns with literature arguing that reflection is most pedagogically powerful when dialogic

and socially situated, rather than solitary (Taylor & Hinchman, 2020; Braun & Clarke, 2023). Engagement was not uniform, however, with some students offering limited or superficial feedback, reflecting differences in confidence, digital literacy, and time availability (Hasan et al., 2020; Wu et al., 2025). Lecturer reflections from Cycle 1 indicated that peer commenting was initially inconsistent, leading to the introduction of more structured peer-feedback guidance in Cycle 2. After this adjustment, students more frequently referred to learning from peers and to feeling supported by the group, suggesting that the relational dimension of reflection depended on pedagogical scaffolding rather than on the technology alone. In Cycle 3, when time was allocated in seminars to discuss RVD experiences, lecturers' notes recorded more frequent references to peers' ideas in both videos and written reflections, indicating the gradual emergence of a learning community. Although the evidence points to emerging peer support, it is important to acknowledge that not all students engaged equally or consistently. From this perspective, Flipgrid created micro-spaces for peer mentoring, particularly supporting multilingual students who might otherwise remain peripheral in live classroom discussions (Wass & Rogers, 2021). These findings underscore that inclusive digital pedagogy depends on careful scaffolding, facilitation, and attention to learners' diverse capabilities, rather than on technology alone.

The socio-emotional dimension of RVD participation was central to students' reflections. Participants described reduced anxiety, increased willingness to engage, and a stronger sense of belonging within their cohort. These experiences echo research highlighting the mediating effect of emotionally supportive learning environments on engagement and persistence, particularly for students navigating linguistic and cultural transitions (Dalgaard et al., 2022). Not all students experienced these benefits equally, however. Persistent concerns about self-presentation, initial discomfort with recording, and uncertainty regarding peer evaluation suggest that psychological safety is contingent on prior experience, confidence, and relational support (Booi et al., 2025). Some students reported only minimal relief from anxiety despite the scaffolded intervention, indicating that affective outcomes may be partially independent of pedagogical design. Structured opportunities to be heard, acknowledged, and responded to were central to positive experiences (Green et al., 2021). Flipgrid's affordances, such as asynchronous recording, replay, and peer commenting, facilitated these interactions but did not independently generate them. This distinction emphasizes that inclusive digital pedagogies require both technology and relational facilitation to achieve meaningful engagement.

Importantly, the frequency of socio-emotional concerns changed across the action-research cycles. In early recordings, students often described anxiety about being recorded, uncertainty about language accuracy, and fear of peer judgment. After additional reassurance, modelling, and the option to use avatars in later cycles, the lecturers' notes reported fewer visible signs of hesitation and more spontaneous expression. Final reflective reports contained more references to confidence and belonging than early RVDs, suggesting that psychological safety developed gradually as students became familiar with the reflective process. It should be noted, however, that a few students continued to report lingering anxiety, indicating that these benefits were not universal.

From a professional learning perspective, students reported developing transferable skills including reflective judgment, adaptability, and collaborative communication. These outcomes resonate with prior research linking reflective practices to employability-relevant competencies (Isidori et al., 2021). Crucially, students framed these gains as emergent rather than immediate, reinforcing Kolb's (1984) conception of learning as a cyclical process in which experience, reflection, and conceptualization mutually inform one another. This pattern was visible across the weekly dataset, where early recordings often focused on technical difficulties or uncertainty, while later recordings more frequently discussed

communication skills, self-awareness, and collaboration. The progression across the three cycles indicates that the perceived benefits of RVDs were not the result of a single activity, but of repeated practice combined with iterative pedagogical adjustments, which is consistent with the principles of action research and with Kolb's (1984) cyclical model of learning. The weekly rhythm of RVDs appeared to normalize reflection as part of academic work, embedding it within the learning process rather than treating it as an add-on task (Hurd & Singh, 2021). This iterative, scaffolded approach aligns with the Socially Embedded, Iterative Development (SEID) framework, which foregrounds the relational, contextual, and developmental nature of learning. In this study, SEID helps explain how students' confidence, metacognitive awareness, and professional skills emerged gradually through repeated engagement, social feedback, and supportive facilitation rather than through a single exposure. It is possible that some students' progress was also influenced by general adaptation to university routines rather than solely the RVD intervention.

The findings suggest that effective feedback within RVD-based activities should be dialogic, specific, and timely, focusing on students' reflective processes rather than only on performance accuracy. Students responded most positively when feedback acknowledged effort, addressed challenges raised in their reflections, and encouraged further elaboration, indicating that supportive and process-oriented feedback is central to the success of reflective video interventions. Although the IPFCG model was developed within a Business School context, its principles are not discipline-specific. The emphasis on iterative reflection, peer interaction, feedback, and guided scaffolding can be applied to other higher education settings where students are required to develop professional, collaborative, or reflective skills. Transferability, therefore, lies not in replicating the exact activities used in this study, but in adapting the model's core elements to different disciplinary, cultural, and institutional contexts. However, caution is needed, as institutional culture and student characteristics may moderate outcomes. Future research should test the model in other subject areas to examine its wider applicability.

Survey findings provided complementary insights. Cognitive attitudes were generally high ($M = 4.01$, $SD = 0.87$), indicating that students perceived RVDs as supportive of learning and academic development. Behavioural attitudes were also positive ($M = 3.77$, $SD = 0.87$), reflecting increased willingness to contribute to both online and face-to-face contexts. In contrast, affective attitudes were more variable ($M = 2.70$, $SD = 0.88$), suggesting that students' emotional responses differed according to age, prior experience with video tools, EAL status, and digital literacy. These patterns highlight that while most students valued RVDs cognitively and behaviourally, emotional experiences were more heterogeneous. The quantitative variability complements qualitative accounts of selective engagement, fatigue, and confidence variation, reinforcing SEID's emphasis on contextually and socially mediated learning processes. Yet it is worth noting that survey responses may have been influenced by social desirability, as students knew lecturers were involved in the study.

Several challenges warrant consideration. Students reported discomfort with recording, uneven digital skills, time pressures, fatigue, and repetitive task formats. Lecturers noted minimal participation and superficial peer feedback in some cases. These observations echo research cautioning that digital reflective practices may privilege students with greater technological confidence unless scaffolded support is provided (Kleftodimos & Triantafillidou, 2023). Students, however, framed these challenges as manageable through flexible pacing, peer support, and lecturers' responsiveness, highlighting the importance of pedagogical design, scaffolding, and relational facilitation rather than technology alone (Tafuri & Latino, 2024). It is possible that a minority of students still experienced persistent disengagement despite these measures.

Methodological limitations constrain the generalizability of the findings. Although the study generated a large longitudinal dataset across three action-research cycles, it was conducted within a single module in one Business School, which limits transferability to other institutional contexts. The design prioritised process-oriented understanding, meaning that the study should be interpreted as action research. However, the iterative nature of the intervention, the use of multiple data sources, and the analysis of changes across cycles strengthen the credibility of the findings by demonstrating how pedagogical adjustments influenced student engagement over time. While a comparison group existed initially, this study focuses on qualitative perceptions, limiting causal claims regarding Flipgrid's effectiveness relative to other reflective formats. The dual role of lecturers as module leaders and researchers introduces potential confirmation bias, although triangulation across multiple data sources mitigates this risk. Alternate explanations, such as maturation effects, ongoing practice, or broader pedagogical engagement, may also contribute to perceived benefits. Importantly, the findings indicate that technology alone is insufficient. Lecturers' feedback, scaffolding, and care were integral to observed outcomes, framing the RVD intervention as a reflective ecology combining prompts, peer dialogue, and pedagogical support. Participation levels varied across phases of the intervention. Phase 1 involved a smaller number of students, while engagement in Phase 2 was uneven due to assessment workload and attendance variation. As a result, patterns observed in early stages should be interpreted cautiously, and apparent changes across cycles may partly reflect differences in participation rather than only pedagogical effects. Nevertheless, the larger volume of data collected in later cycles provides a more stable basis for interpreting overall trends.

This study makes several novel contributions. First, it provides a longitudinal action-research account of how multilingual students experienced a reflective video intervention across three iterative cycles, demonstrating how engagement changed as the pedagogical design was refined. Second, it demonstrates that RVDs are most effective when implemented as relational, scaffolded practices, highlighting the conditions under which reflective technologies can meaningfully support learning, engagement, and socio-emotional development. Third, the study advances understanding of inclusive digital pedagogy, showing how structured, dialogic reflection can support participation for students with diverse linguistic, cultural, and digital profiles. By combining qualitative reflections, lecturer observations, and survey perceptions, the study foregrounds process-oriented insights, emphasizing the co-construction of learning rather than the deterministic effect of technology. A small flaw is that the study cannot definitively isolate which aspects of the intervention had the strongest impact.

The findings carry practical implications for curriculum planning and policy implementation. Embedding reflective digital practices requires recognition of equity, accessibility, and diversity within curriculum design, including flexibility in pacing, clarity of prompts, scaffolding for less digitally confident students, and facilitation of peer dialogue. Policies supporting technology-mediated reflection should account for contextual variables, such as multilingual student needs, cohort characteristics, and institutional resources, to ensure that benefits are broadly accessible rather than limited to technologically confident students. By attending to these factors, educational leaders can leverage RVDs and similar interventions as tools for inclusive, dialogic, and equitable learning environments.

The study also underscores the importance of process-oriented evaluation. Success in digital reflective practice is not measured solely by performance outcomes but by the quality of engagement, reflective depth, and socio-emotional growth. Iterative, scaffolded reflection fosters skills that emerge over time and are sensitive to context and learner characteristics. This perspective aligns with SEID, emphasizing that learning outcomes

are inseparable from the relational, cultural, and technological environment in which they occur.

In conclusion, this study contributes to the literature on digital reflective practices by offering a nuanced, process-focused account of how multilingual undergraduate students experience Flipgrid-mediated RVDs within a relational and scaffolded pedagogical framework. Its significance lies in demonstrating the conditions under which technology can support reflection, engagement, and socio-emotional development, while acknowledging variability in participation and perceived benefits. The findings highlight the centrality of inclusive digital pedagogy in curriculum design and policy, demonstrating that technology alone is insufficient without attention to scaffolding, relational support, and context-sensitive facilitation. Future research should employ larger, multi-site qualitative designs, explore comparative reflective formats, and examine mechanisms linking digital reflection to measurable learning outcomes, while continuing to foreground equity, inclusion, and process-focused understandings of student learning. Yet, caution is warranted when generalizing these findings beyond similar contexts and cohorts.

5. Conclusions

This study examined how multilingual and multicultural undergraduate students experienced reflective RVDs mediated through Microsoft Flipgrid within a post-COVID-19 higher education context. Rather than evaluating Flipgrid as a discrete technological tool, the research focused on how structured, dialogic, and technology-supported reflection shaped students' learning engagement, reflective capacity, and socio-emotional development. The study was conducted as a three-cycle action-research intervention, allowing the teaching team to analyse a large longitudinal dataset consisting of weekly RVDs, reflective reports, lecturer observations, and survey responses, and to refine the pedagogical design in response to emerging patterns. This iterative design made it possible to examine how students' experiences evolved, rather than treating reflective video use as a single classroom activity. By foregrounding processes of reflection, dialogue, and relational support, the study provides a process-oriented account of digital reflective practice, moving beyond tool-centric or performance-focused evaluations commonly found in Flipgrid literature. A minor limitation is that some nuances of student engagement may have been missed if reflections were brief or superficial.

The study's primary contribution lies in reframing RVDs as relational, pedagogically embedded practices rather than technical interventions aimed solely at addressing skill deficits. Previous research highlights Flipgrid's potential to reduce speaking anxiety or increase participation (Hammett, 2021; Kaldarova et al., 2025), but this study demonstrates that educational value is realised primarily through intentional pedagogical integration. Students experienced RVDs as reflective spaces where they articulated challenges, negotiated aspects of their identity, sought support, and maintained continuity in learning. The intervention's impact was not derived from video recording alone, but from structured invitations to reflect, the visibility of peers' experiences, and responsive lecturer engagement, highlighting the centrality of pedagogical intentionality over technological novelty. Across the three action-research cycles, the intervention was progressively refined in response to student feedback and lecturer observations, including clarification of prompts, modelling of reflective responses, the introduction of avatar-based recordings, and the allocation of seminar time for discussion of RVD experiences. Improvements in participation, reflective depth, and confidence were most visible in later cycles, supporting the interpretation that the benefits of RVDs emerged through iterative pedagogical adjustment rather than through the use of video technology alone. However, some students remained hesitant despite these refinements, indicating that interventions may not fully eliminate affective barriers.

A further contribution lies in centering multilingual students' voices, which are often underrepresented in digital reflection literature (Koubek & Wasta, 2022; Mendoza, 2024). Qualitative accounts revealed the realities of navigating language barriers, confidence challenges, time pressures, and the desire for belonging. Reflection was frequently uncomfortable, requiring students to negotiate uncertainty and vulnerability (Matsunaga et al., 2021). By documenting both positive experiences and ongoing difficulties, the study avoids idealisation, presenting RVDs as demanding yet potentially transformative practices when appropriately scaffolded. Because reflections were collected weekly, the dataset captured how students' narratives changed across the semester. Early entries often focused on uncertainty, language anxiety, and technical concerns, whereas later reflections more frequently referred to confidence, familiarity with the task, and increased willingness to participate. This progression reinforces the action-research finding that reflective capacity develops gradually through repeated practice and responsive teaching rather than through one-off activities. Yet, it is possible that students' increasing comfort was also influenced by general acclimatization to academic routines.

The research also contributes to discussions of inclusion and widening participation at the micro-pedagogical level. While systemic social justice outcomes are beyond the scope of this study, findings indicate that RVDs can promote equitable engagement by making learning processes visible, amplifying quieter voices, and enabling early identification of challenges that might otherwise remain unobserved (Cook-Sather, 2022). Students with linguistic insecurities, dyslexia, or limited confidence in live classroom settings found that RVDs offered an alternative, supportive mode of participation (Kelly & Phillips, 2022). These benefits were contingent upon flexibility, peer support, and lecturer responsiveness, emphasizing that inclusive outcomes emerge through pedagogical relationships rather than technology alone (Finn, 2021). This insight reinforces the relevance of RVDs for inclusive digital pedagogy, demonstrating that technology-mediated reflective practices must be scaffolded and contextually adapted to ensure equitable access for all learners. Lecturer field notes from the first cycle recorded uneven participation and limited peer interaction, which led to the introduction of more explicit guidance on peer feedback and additional in-class discussion in subsequent cycles. In later weeks, both student reflections and lecturer observations indicated more frequent peer referencing and stronger expressions of belonging, suggesting that inclusive engagement was achieved progressively as the intervention was adapted. Nonetheless, a few students continued to participate minimally, reminding us that scaffolding may not address all barriers.

Methodological limitations temper the study's conclusions. Although the study generated a substantial longitudinal dataset across three action-research cycles, it was conducted within a single module in one disciplinary and institutional context, which constrains transferability. The design prioritised iterative pedagogical development and process-oriented understanding, meaning that the findings should be interpreted as action-research evidence rather than as a controlled evaluation of Flipgrid as a technological tool. However, the use of multiple data sources collected across the semester enabled the researchers to trace how pedagogical adjustments influenced student engagement, providing stronger evidence than single-point classroom studies. The small, context-specific sample, drawn from a single disciplinary and institutional setting, constrains transferability. The qualitative focus precludes causal claims regarding RVD effectiveness relative to other reflective formats. While the post-intervention survey provided complementary insights into student perceptions, it captured attitudes and satisfaction rather than validated measures of learning outcomes, self-efficacy, or socio-emotional development. Alternative explanations, including maturation, iterative practice, or supportive lecturer presence, cannot be fully ruled out. The dual role of lecturers as both module leaders and researchers introduces potential bias, although

triangulation across student reflections, lecturer notes, and survey responses mitigates this concern. Despite these constraints, the study offers rich, contextually grounded insights into how multilingual students navigate structured reflective practices, providing valuable guidance for inclusive teaching design. A minor flaw is that the dual role of lecturers may have influenced students' reflections in subtle ways.

Crucially, the study highlights that reflective video practices are not inherently inclusive and may introduce additional burdens. Students with limited digital literacy, particularly mature learners, initially experienced frustration and self-doubt, while others struggled to balance weekly RVD submissions with work or caring responsibilities. These observations indicate that RVDs may exacerbate inequities if implemented rigidly or without sufficient scaffolding (Archer et al., 2024). By presenting these tensions alongside the positive outcomes, the research positions RVDs as pedagogically powerful yet ethically demanding interventions that require sensitivity to students' diverse circumstances.

Survey findings indicated generally strong cognitive (M = 3.80, SD = 0.87) and behavioural (M = 3.77, SD = 0.87) responses, suggesting that students perceived the RVDs as supportive of learning and active participation. In contrast, affective responses were more variable (M = 2.73, SD = 0.88), reflecting differences in fatigue, enjoyment, and engagement across individuals. These quantitative insights, when triangulated with qualitative reflections and lecturer observations, underscore that outcomes are context- and learner-specific, highlighting the interplay between cognitive, behavioural, and socio-emotional dimensions in scaffolded, dialogic reflection. A minor note is that survey data may not fully capture the depth of students' emotional experiences.

From a practical perspective, several implications for higher education practitioners emerge. RVDs should be integrated within clear pedagogical rationales that emphasize reflection, dialogue, and learning processes rather than surveillance or performance monitoring. Flexibility in frequency, format, and modes of participation is essential, especially for multilingual, non-traditional, or digitally less confident students. Explicit scaffolding, both technical and reflective, should extend beyond initial orientation, and lecturer engagement remains central: positive student experiences were closely tied to timely feedback, visible care, and integration of reflections into teaching practice. These insights inform inclusive curriculum design and policy, demonstrating that equitable participation requires more than access to digital tools, but structured pedagogical support and relational responsiveness. Nevertheless, implementation in larger or less-resourced contexts may face practical challenges.

The study also advances the conceptual understanding of RVDs as emergent reflective ecologies rather than discrete interventions. Framing the findings through the SEID lens elucidates how students' cognitive, behavioural, and socio-emotional gains emerged gradually, shaped by social interaction, iterative reflection, and lecturer facilitation. The three-cycle action-research design provides empirical support for this interpretation, as improvements in confidence, participation, and reflective depth were most evident after pedagogical adjustments were introduced in later cycles, demonstrating the iterative and socially embedded nature of learning within the SEID framework. By connecting qualitative reflections, observational data, and survey perceptions, the study demonstrates that RVDs functioned as part of a dynamic, interconnected reflective ecosystem, supporting metacognition, confidence, and peer-mediated learning while highlighting persistent variability. This approach extends Flipgrid research beyond tool-centric claims, offering process-focused insights that foreground relational, social, and contextual dimensions of learning. A small flaw is that the broader institutional or cultural context may limit replicability.

Several avenues for future research are suggested. Larger, multi-institutional studies could explore the generalizability of these findings across disciplines and student cohorts.

Comparative studies examining different reflective modalities, such as audio diaries, written reflections, or synchronous video, would help identify the unique affordances of each approach. Investigations into long-term learning outcomes and professional skill development could strengthen evidence on the value of digital reflective practice. Future research should continue to foreground student voice, equity, and inclusion, evaluating technological interventions not only for efficiency or engagement but also for their ability to support diverse learners in meaningful, psychologically safe ways.

In conclusion, this study contributes a critically grounded, practice-informed perspective on the use of Flipgrid-mediated RVDs in multilingual higher education contexts. By analysing a large longitudinal dataset collected across three action-research cycles, the study demonstrates how reflective video practices evolved through iterative pedagogical refinement rather than functioning as a fixed instructional technique. Its significance lies not in demonstrating the superiority of any tool but in illustrating how structured, dialogic reflection, supported by technology, peers, and lecturers, can foster reflective capacity, engagement, and socio-emotional support. By documenting both positive outcomes and ongoing challenges, situating findings within broader discussions of inclusive digital pedagogy, and acknowledging methodological limitations, the study guides future research, curriculum development, and policy implementation.

The research reframes RVDs as relational, pedagogically embedded practices that enhance inclusion, metacognition, and learner agency, moving beyond traditional, performance-oriented conceptions of digital tools. Importantly, the findings show that meaningful benefits emerged gradually as the intervention was modified across cycles, highlighting the value of action-research approaches for developing inclusive digital pedagogy in complex, multilingual classrooms. By emphasizing processes over outcomes, the study underscores that inclusive, meaningful learning emerges through careful integration of technology, pedagogical scaffolding, and relational facilitation, providing a model for future digital reflective interventions in diverse higher education settings. While the study adopts a formal academic style, care has been taken to present the findings in a clear and accessible way, ensuring that interpretations remain closely grounded in the data and in the lived experiences reported by participants. A minor caution is that the findings may not fully capture the variability in student experiences outside the studied cohort.

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