A BIBLIOMETRIC ANALYSIS OF VIDEO-BASED FEEDBACK IN HIGHER EDUCATION (2003-2022): TRENDS, GAPS AND FUTURE DIRECTIONS

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ABSTRACT

Purpose – Video-based feedback presents a unique approach characterised by a conversational narrative and instructor screen captures, enriching students' learning experiences and fostering stronger instructor-student connections. While this innovative methodology has the potential to revolutionise feedback practices in higher education, its full benefits and practical implications for improving learning outcomes remain unexplored.

Methodology – This study employs a bibliographic analysis to examine the emerging landscape of video-based feedback research in higher education from 2003 to 2022. Data was systematically curated from the Dimensions database. Out of an initial 25,747 publications, 1,532 publications were selected for final analysis after refining the keyword search to ensure relevance to the subject. VOSviewer was used for bibliographic coupling, keyword co-occurrence, clustering, and co-citation analysis of countries.

Findings – The bibliometric analysis reveals a significant increase in publications on video-based feedback in higher education, peaking at 286 publications in 2022. The United States, Germany, and the United Kingdom are identified as leading contributors, with China emerging as a prominent player in Asia. Keyword analysis uncovers potential research gaps, including the need to extend studies beyond

medical education, address the specific requirements of adult learners, and investigate the socio-emotional dimensions of video-based feedback.

Significance – This study provides a significant contribution to understanding video-based feedback in higher education, positioning it as a dynamic and rapidly evolving field driven by the proliferation of online learning. The insights from this analysis offer valuable guidance for future research directions and practical applications, such as developing evidence-based best practices for creating effective video feedback and exploring its impact on student engagement, motivation, and academic achievement.

**Keywords*:* Video-based feedback, higher education, bibliometric analysis, VOSviewer.

INTRODUCTION

The importance of effective feedback in higher education, particularly in academic writing, is well established. Feedback is widely regarded as a cornerstone of meaningful learning (Brown, 2019; Henderson et al., 2019; Maslova et al., 2022). Traditionally, it has been delivered in text-based formats, such as written comments on assignments or discussions during class sessions (Hyland & Hyland, 2019). Effective feedback plays a vital role in enhancing student learning, facilitating skill development, and fostering academic growth (Hattie & Timperley, 2007; Nicol & Macfarlane-Dick, 2006). Despite its recognised significance, however, feedback mechanisms in higher education often fail to meet their intended objectives, leading to student dissatisfaction and suboptimal learning outcomes.

Challenges with Text-Based Feedback

One of the primary issues with text-based feedback in higher education is its perceived lack of personalization. Students often feel that such feedback lacks a personal touch and fails to address their specific needs and concerns (Crook et al., 2012). This impersonal approach can lead to disengagement and a lack of motivation among students (Pitt & Norton, 2017). Moreover, generic or vague feedback that does not provide clear guidance on how to improve, tends to exacerbate frustration and demotivation (Douglas et al., 2016).

Another significant issue is the lack detailed and specific insights in text-based feedback. Hyland and Hyland (2019) argue that feedback often falls short in highlighting the strengths and weaknesses of student work comprehensively. Without this granularity, students may struggle to understand how to refine their academic writing skills or improve their performance in future assignments (Winstone & Carless, 2019). Ambiguity in feedback further compounds the issue, as students may struggle to interpret and effectively apply the suggestions provided (Jonsson, 2013).

The shortcomings of feedback mechanisms in higher education are consistently reflected in student experience surveys. For example, the National Student Survey (2022) in the United Kingdom has repeatedly highlighted widespread student dissatisfaction regarding the feedback process. These findings underscore the urgent need for higher education institutions to address these shortcomings and develop more effective and engaging feedback approaches to support student learning outcomes.

The Impact of Video-Based Feedback

To address the challenges associated with traditional feedback practices, several strategies have been proposed. These include providing timely and detailed feedback (Nicol & Macfarlane-Dick, 2006), fostering dialogue and interaction between students and educators (Carless & Boud, 2018), and incorporating peer feedback and self-assessment methods (Nicol et al., 2014). Among these, technology-enhanced approaches, particularly video-based feedback have emerged as a promising solution to enhance student engagement and comprehension (Bissell, 2017; Henderson & Phillips, 2014; Kim, 2018; Mahoney et al., 2019).

The adoption of video-based feedback in higher education has gained significant traction, as evidenced by a growing body of empirical research examining its effectiveness and impact on student perceptions (Ari & Arslan-Ari, 2022; Harper et al., 2018; Istenič, 2021; Lowenthal et al., 2022; Marshall et al., 2020; Wilkie & Liefeith, 2022; Yiğit & Seferoğlu, 2023). These studies consistently highlight positive outcomes, including enhanced student satisfaction and improved learning experiences, showcasing its potential to address the shortcomings of traditional text-based feedback practices.

Video-based feedback entails conveying a conversational narrative, often accompanied by screen captures to visually emphasize key points. The personalised and conversational tone adopted by instructors helps establish an emotional connection with students, thereby enriching their multimedia learning experiences (Mayer, 2014). This innovative methodology has the potential to transform feedback mechanisms in higher education and significantly enhance the learning process by addressing the limitations of traditional text-based feedback, such as impersonality, lack of detail, and ambiguity (Crook et al., 2012; Douglas et al., 2016; Hyland & Hyland, 2019; Winstone & Carless, 2019).

Research on Video-Based Feedback

As technology continues to transform education, understanding the impact of video-based feedback has become increasingly important. While numerous empirical studies have explored its effectiveness and student perceptions, there remains a notable gap in research employing bibliographic mapping techniques. Such analyses are essential to investigate the growth and trends of video feedback research, evaluate publication productivity across countries, identify collaboration patterns, and pinpoint research gaps.

Conducting a bibliometric analysis of video feedback research in higher education offers valuable insights into the field's evolution and current state. By examining publication trends, top contributors, and prominent keywords, this study aims to identify research gaps and pave the way for future research endeavours. The findings will not only inform educators, researchers, and policymakers about the potential of video feedback in enhancing student learning experiences but also guide the development of best practices for its effective implementation.

The research questions addressed in this study are as follows:

RQ1: How has the publication trend for video feedback in higher education evolved from 2003 to 2022?
RQ2: Which countries are the top contributors to research on video feedback in higher education?
RQ3: Do the keywords in relevant studies highlight specific research gaps in the field?

LITERATURE REVIEW

A comprehensive examination of the scholarly landscape reveals a notable lack of bibliometric analyses on video-based feedback within higher education research. While research exploring the effects of video feedback in higher learning has grown steadily (Ali, 2016; Anson et al., 2016; Bahula & Kay, 2021; Bakla, 2020; Borup et al., 2015; Borup et al., 2014; Bush, 2021; Cavaleri et al., 2019; Cavanaugh & Song, 2014; Cheng & Li, 2020; Cranny, 2016; Cunningham, 2018, 2019; Denton, 2014; Edwards et al., 2012; Ghosn-Chelala & Al-Chibani, 2018; Harper et al., 2018; Henderson & Phillips, 2015; Inan-Karagul & Seker, 2021; Kaplan-Rakowski, 2021; Kruger & Sage, 2020; Lowenthal, 2021; Lowenthal et al., 2022; Mahoney et al., 2019; Mathieson, 2012; Mathisen, 2012; Orlando, 2016; Penn & Brown, 2022; Rybakova, 2020; West & Turner, 2016; Yiğit & Seferoğlu, 2023), the lack of bibliometric studies limits our understanding of the publication trends and the geographical distribution of research contributions in this field.

Furthermore, a critical evaluation of the literature reveals significant limitations and gaps, justifying the need for a comprehensive bibliometric analysis. First, most studies rely heavily on student perceptions and self-reported data (Ali, 2016; Bahula & Kay, 2021; Bakla, 2020; Moore & Filling, 2012; Winstone & Carless, 2019), which may not accurately reflect actual learning outcomes. Second, the effectiveness of video feedback may vary depending on factors such as subject matter, student demographics, and the specific implementation of the feedback (Cavaleri et al., 2019; Cavanaugh & Song, 2014; Denton, 2014; Mahoney et al., 2019). These factors raise concerns about the generalisability and validity of existing findings. A bibliometric analysis of the keywords used in relevant studies can provide a clearer picture of these research gaps and limitations in the field.

Furthermore, the theoretical foundations underpinning the effectiveness of video feedback remain largely unexplored, limiting our understanding of the mechanisms driving its success. While some studies have drawn upon theories, such as Mayer (2014) Cognitive Theory of Multimedia Learning, to explain the role of multimedia in education, their application to the specific context of video feedback in higher education is limited. The lack of a robust theoretical framework that accounts for the unique characteristics of video feedback and its impact on student learning represents a significant gap in the literature. These theoretical deficiencies may also be reflected in the keywords used in relevant studies.

Another critical gap is the lack of longitudinal studies investigating the long-term impact of video feedback on student learning and academic success. Most existing research focus on short-term outcomes, such as improvements in writing skills and student engagement (Anson et al., 2016; Cunningham, 2019), while neglecting the sustainability and transferability of these gains (Mahoney et al., 2019). A bibliometric analysis spanning 2003 to 2022 can help identify trends and patterns in the research landscape, shedding light on the extent to which these limitations have been addressed over time.

By conducting a bibliometric analysis of video-based feedback research in higher education, this study can assess the integration of theoretical frameworks into existing research and highlight gaps that require further exploration. Although the current study aims to provide a comprehensive overview of video feedback research from 2003 to 2022, it may not fully address the question of long-term impact due to limitations in the existing literature. However, by identifying trends and gaps, this bibliometric approach can reveal the extent to which longitudinal studies have been conducted and underscore the need for further research in this area.

METHODOLOGY

Materials and Methods

This study employed a comprehensive bibliometric analysis approach to quantitatively examine publications on video-based feedback in higher education. Bibliometric analysis is a robust statistical method encompassing a wide range of techniques, from basic descriptive statistics such as publication counts, types, and temporal distribution to advanced techniques, including document co-citation analysis, collaboration patterns, and research constituents (Andrés, 2009; Donthu et al., 2021). This method excels in analysing well-established fields, tracing the evolution of scholarly knowledge, providing a panoramic view of a domain, pinpointing knowledge gaps, generating novel research ideas, and contextualising researchers' contributions (Andrés, 2009; Donthu et al., 2021; Zupic & Čater, 2015).

Database and Search Strategy

The Dimensions database was chosen as the primary repository for this bibliometric analysis due to its extensive collection of publications and contextual data. Dimensions provides open access to a wide array of scholarly resources, including over 134 million publications, 6 million grants, 12 million datasets, 933,000 policy documents, 759,000 clinical trials, 151 million patents, and more (Digital Science & Research Solutions Inc., 2024). Its comprehensive nature ensures a thorough and reliable exploration of the research domain (Hook et al., 2018; Thelwall, 2018).

A rigorous screening protocol was employed to determine the most relevant search terms for retrieving articles. The initial query in the Dimensions database included search terms such as "video feedback*", "audio-visual feedback*", "screencast feedback*", "screencast video feedback*", and "multimodal feedback*", yielding 25,747 publications. Subsequently, the query was then refined to focus on terms such as "video feedback*", "audio-visual feedback*", "screencast feedback*" within the context of "higher education*", "higher learning*", "university*", or "college*". This iterative refinement process narrowed the results to 2,003 relevant publications as of August 25, 2023. This rigorous refinement of search terms ensured the retrieval of publications most relevant to the study's objectives (Booth, 2016; Gusenbauer & Haddaway, 2020).

Inclusion Criteria and Selection Process

This study focused on peer-reviewed research publications in scholarly journals from 2003 to 2022, aiming to comprehensively explore contemporary trends in video-based feedback within higher education. The inclusion criteria were as follows:
    a) Articles published in English,
    b) Articles published in peer-reviewed journals,
    c) Articles focusing on video-based feedback in higher education, and
    d) Articles published between 2003 and 2022.

After applying these criteria, a total of 1,532 articles were selected for final analysis. These articles were subjected to various bibliometric analyses, including publication trends, country-wise distribution, keyword analysis, and co-citation analysis. The inclusion of articles from diverse journals ensured a comprehensive representation of the research domain (Donthu et al., 2021; Zupic & Čater, 2015). Despite the potential limitations inherent in configuring variables for bibliometric analysis, the study employed rigorous scientific procedures to enhance the credibility and robustness of its outcomes. Detailed documentation of the initial search results and the types of journals included in the analysis enhances the transparency and replicability of the study (Gusenbauer & Haddaway, 2020; Zupic & Čater, 2015). This comprehensive methodology facilitates nuanced insights, contributing significantly to academic discourse and advancing our understanding of video-based feedback in higher education.

DATA ANALYSIS

The analysis was conducted using VOSviewer software version 1.6.19, a robust tool for scrutinising and constructing bibliometric network maps, encompassing co-authorship, citation, and co-occurrence networks. VOSviewer offers a significant advantage over the Multidimensional Scaling (MDS) approach, by employing a more fitting technique for normalising co-occurrence frequencies. Within VOSviewer, items are positioned on a map based on their interrelatedness and similarity, facilitated by a distance-based mapping method. This technique, elucidated by Van Eck and Waltman (2010) eliminates subjective biases prevalent in literature analysis and provides a deeper understanding of the research landscape by leveraging keywords and illustrating variables through visual maps (Van Eck & Waltman, 2014).

The visualisation techniques of VOSviewer rely on mathematical underpinnings to construct patterns, enabling analyses such as keyword co-occurrence, citation, and co-citation analyses. These methods reveal the nature and strength of relationships between different fields (Ardito et al. (2019). Citation analysis is used to identify influential researchers, while co-citation analysis highlights closely related authors and journals. VOSviewer specialises in generating distance-based visualisations of bibliometric networks. Its visualisations typically emphasises the nodes (e.g., authors, keywords, or journals) without explicitly displaying the edges between them within the bibliometric network. The proximity of nodes in VOSviewer's visualisations reflect their degree of interconnectedness, making it particularly effective for representing more expansive networks (Arruda et al., 2022; Van Eck & Waltman, 2010). Figure 1 provides a graphical representation of the comprehensive procedure, outlining the steps from identifying the study's focal topic to generating a visual map through bibliometric analysis.

Figure 1

Overall Procedures in Generating Bibliometric Analysis
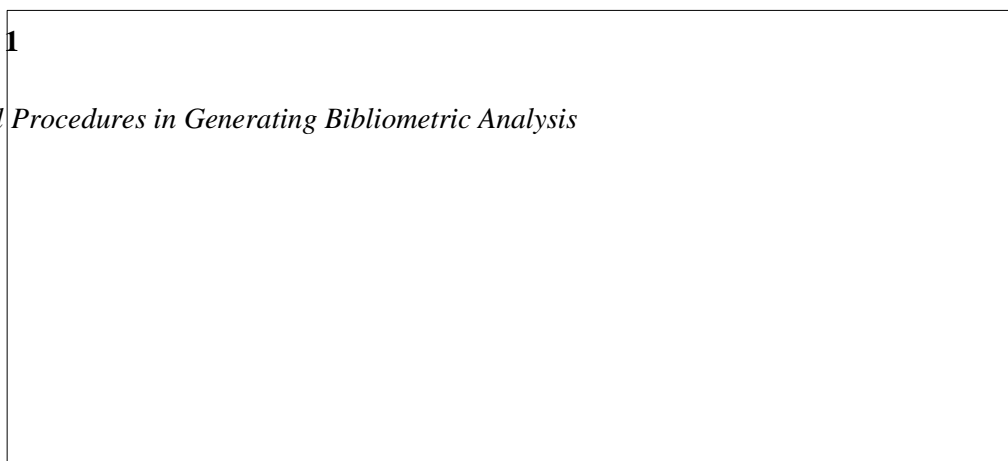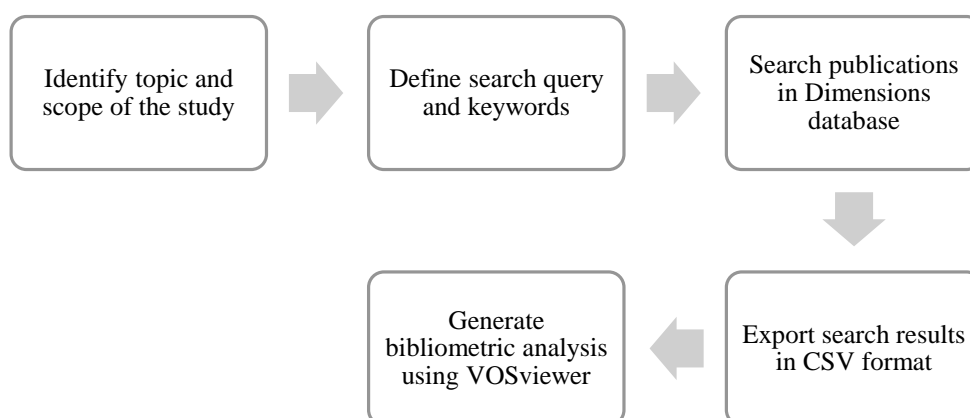
RESULTS AND DISCUSSION

This section presents the findings of the descriptive and bibliometric analyses addressing the research questions of this study.
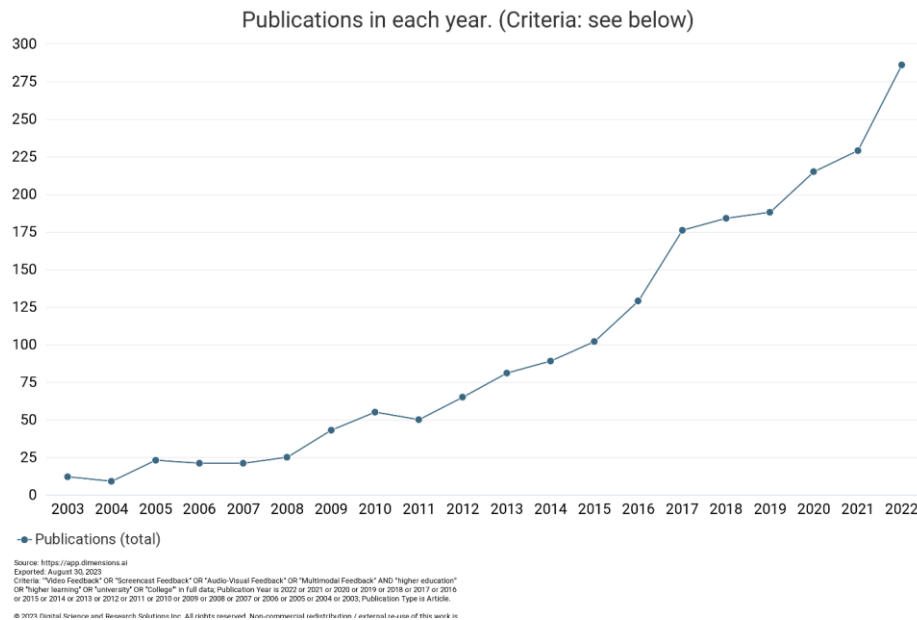
Publications related to video-based feedback in higher education

RQ1: How has the publication trend for video feedback in higher education evolved from 2003 to 2022?

Analysis of the Dimensions database reveals a remarkable upward trajectory in publications related to video feedback in higher education. The number of publications grew from a modest 12 publications in 2003 to an impressive peak of 286 publications in 2022, making it an area of increasing scholarly interest. The trend reflects distinct phases of growth. Between 2003 and 2007, the number of publications rose gradually, reaching 21 in 2007. This growth accelerated in the subsequent years, peaking at 55 publications in 2010. Although a slight dip occurred in 2011, the field has since demonstrated constant growth, culminating in the significant milestone of 286 publications in 2022, as in Figure 2. This escalating trend can be attributed to several factors. First, technological advancements have made video creation and sharing more accessible, democratizing the use of video-based feedback in educational settings. Second, the global shift towards remote and online learning necessitated by the COVID-19 pandemic has driven educators to innovate and adopt methods that foster meaningful student engagement in virtual domains, where conventional face-to-face interactions are constrained. Video-based feedback addresses the limitations of conventional text-based approaches by allowing real-time responses, screen recordings, voice narrations, and visual annotations. This multimodal approach enhances engagement, ensuring usability, and increasing the efficiency of feedback delivery, making it an attractive alternative for educators. The findings for Research Question 1 affirm a clear upward trend in publications, reflecting heightened academic and practical interest in video feedback as a tool for enhancing student learning.

Figure 2

Publications Related to Video Feedback in Higher Education

Publications in each year. (Criteria: see below)

Source: https://app.dimensions.ai
Exported: August 30, 2023
Criteria: "Video Feedback" OR "Screencast Feedback" OR "Audio-Visual Feedback" OR "Multimodal Feedback" AND "higher education" OR "higher learning" OR "university" OR "College" in full data; Publication Year is 2022 or 2021 or 2020 or 2019 or 2018 or 2017 or 2016 or 2015 or 2014 or 2013 or 2012 or 2011 or 2010 or 2009 or 2008 or 2007 or 2006 or 2005 or 2004 or 2003; Publication Type is Article.

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Bibliographic coupling on countries

RQ2: Which countries are the top contributors to research on video feedback in higher education?

In the context of bibliographic coupling, a "link" in VOSviewer signifies an association between two distinct items, such as publications or citations, attributed to specific countries. The strength of these connections (detailed in Table 1) escalates with higher numerical values, indicating greater interconnections. Bibliographic coupling is determined by the overlap in reference lists among publications; the greater the shared references between two publications, the stronger the bibliographic coupling link that binds them (Arruda et al., 2022; Van Eck & Waltman, 2010; Van Eck & Waltman, 2017). Table 1 presents the results of bibliographic coupling among countries, revealing key contributors to research on video feedback in higher education. The United States emerged as the dominant contributor, with a total of 495 publications on video-based feedback. These publications garnered 11,600 citations and achieved a cumulative link strength of 123,802, underscoring its significant influence in this research domain. Ranking second, Germany produced 200 publications, which collectively received 5,268 citations and exhibited a total link strength of 76,354 demonstrating its active participation in the field. The United Kingdom securing the third position, contributed 183 publications, that garnered 7,270 citations and a link strength of 59,600. Among Asian countries, China emerged as a prominent contributor, generating 134 publications, accumulating 2,443 citations and achieving a total link strength of 35,457. The detailed statistics are provided in Table 1.

Table 1 presents the comparative scholarly output, the citation counts and link strength across countries.

Table 1

Top Country Contributions to Research on Video-Based Feedback in Higher Education

| Country	Publications	Citations	Total Link Strength
United States	495	11600	123802
Germany	200	5268	76354

United Kingdom	183	7270	59600
Canada	131	3205	49810
Italy	122	3312	44862
France	102	4551	37404
China	134	2443	35457
Switzerland	70	3337	34655
Netherlands	77	3622	32366
Japan	99	1218	30961
Australia	75	2458	25173
Spain	71	3422	19036
Denmark	42	901	16574
South Korea	81	1600	15036
Israel	28	715	12602
Belgium	32	1114	12471
Sweden	47	1160	11663
Ireland	20	365	9616
Saudi Arabia	25	475	8323
Slovenia	15	341	7704

In the context of network visualisation using VOSviewer, items are represented by descriptive labels and encircling boundaries, both of which play a pivotal role in visual interpretation. The size of an item's label and its surrounding circle is directly influenced by the weight assigned to it. Items with greater weight are visually distinguished by larger labels and circles. In certain instances, the display of labels for specific items may be omitted to avoid overlap, thereby maintaining the clarity of the visual representation. The colour of an item corresponds to the cluster it belongs to, facilitating a clear visual stratification of groupings within the network.

Figure 3 of the visual analysis highlights the prominence of the United States, characterised by its larger label and encircling boundary. delineating its prominence. Germany and the United Kingdom follow in prominence, reflecting similar trends in label and circle dimensions.

Figure 3

Bibliographic Coupling by Countries
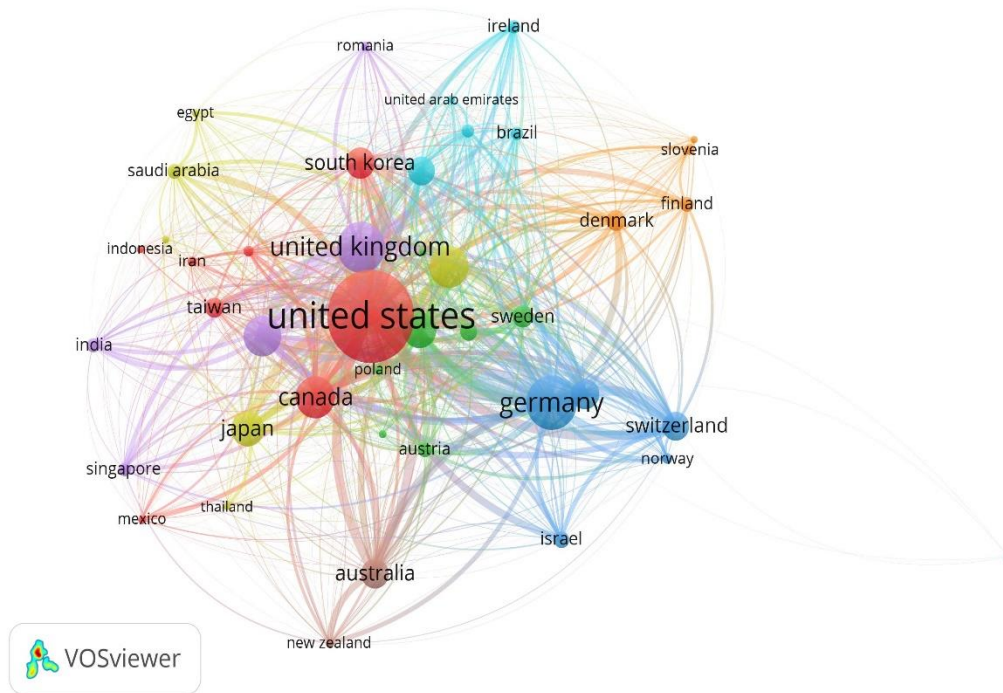
The prominence of video-based feedback in higher education is highlighted by the notable contributions from the United Kingdom and Germany, which closely align with those of the United States in terms of publications and citations on this subject. Visual analysis reveals that the United Kingdom and Germany are situated nearest to the United States in the network map, indicating a strong relatedness in their research output. These countries have emerged as key contributors, showcasing a substantial volume of research to the field. According to the United Nations (2020), the United Kingdom, Germany, and the United States are classified as developed nations with advanced technological infrastructures and robust national economies.

Their leadership in video-based feedback research is driven by their advanced technological capacities, which fosters innovation and provide a conducive environment for developing and implementing video-based feedback systems. Research indicates that the United States, the United Kingdom, and Germany maintain advanced technological ecosystems that facilitate the integration of multimedia tools into educational practices (Alexander et al., 2019; Gyambrah, 2007). Furthermore, their educational frameworks are characterised by adaptability and receptivity to pedagogical innovation, with higher education institutions encouraging experimentation with emerging teaching and learning methods (European Commission, 2021). The international prominence of these countries positions them as thought leaders whose collaborative efforts influence the discourse and implementation of video-based feedback, enhancing pedagogy in higher education on a global scale.

In Asia, China has achieved significant strides in recent years, leading the region with 134 publications on video-based feedback in higher education. Compared to the United States, Germany, and the United Kingdom, China's advancements in this area are particularly noteworthy. Regarding national income, the United States ranks as the world's wealthiest country, with a GDP of over $26.9 trillion in 2023, followed by China ($19.4 trillion), Germany ($4 trillion), and the United Kingdom ($3 trillion) (World Economic Outlook, 2023). However, China's economy is projected to grow by 7.1% in 2023, surpassing the United States' anticipated growth of 5.5% (World Economic Outlook, 2023).

The development of effective video-based feedback methodologies in higher education highlights the importance of comprehensive professional training for teaching faculty. Countries with robust economies, such as the United States, Germany, the United Kingdom, and China, are well-positioned to make substantial investments in research and development for advancing video-based feedback in higher education. This emphasis on investment reflects the central role that education and technology systems play in these countries.

Addressing Research Question 2, the investigation identifies the United States, Germany, and the United Kingdom as principal contributors to research on video-based feedback in higher education, with China leading in the Asian region. This aligns with the upward trend in research output noted in Research Question 1, which shows a consistent upward trajectory in publications since 2011. This growth can be attributed to technological advancements, particularly the proliferation of online learning platforms and digital courses (Belt & Lowenthal, 2021; Stracke et al., 2023; Sun & Chen, 2016).

The rapid expansion of the research landscape surrounding video-based feedback in higher education signifies a promising future with further exploration in this domain. Developing regions, such as Malaysia, present substantial potential for the growth of video-based feedback, supported by governmental initiatives such as the Malaysia Education Blueprint (2013–2025), which emphasises fostering lifelong learning. Despite these prospects, research on video-based feedback, particularly in the Malaysian context remains in the early stages and is relatively limited. This limitation could stem from concerns about its deployment, with institutions hesitant to adopt such practices due to a lack of understanding of their impact on learning outcomes. Resource constraints, including limited financial support, further exacerbate these challenges, particularly in developing countries like Malaysia.

The minimal co-authorship between Malaysia and leading nations in video-based feedback research such as the United States, Germany, the United Kingdom, and China may hinder the advancement of technology-based feedback practices in the Malaysian higher education system. Co-authorship is vital for fostering knowledge exchange, resource sharing, and the dissemination of best practices. Collaborative research efforts could offer a more comprehensive understanding of the challenges and opportunities associated with implementing video-based feedback across diverse educational contexts (Figures 4-7).
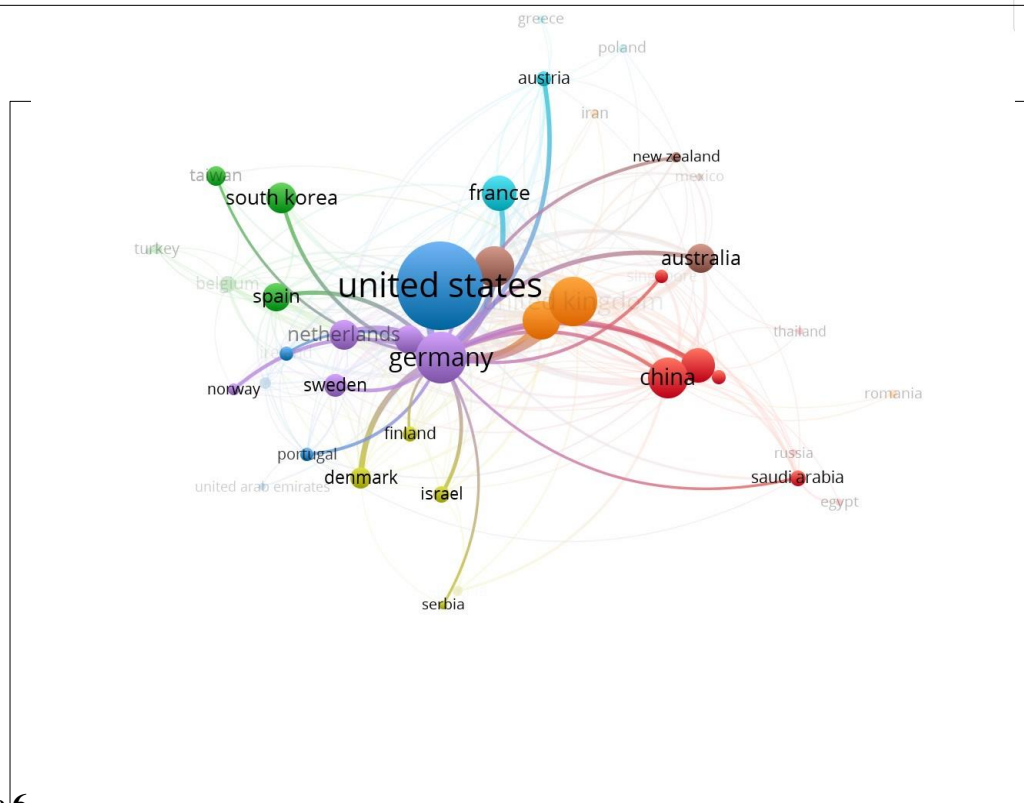
Figure 4

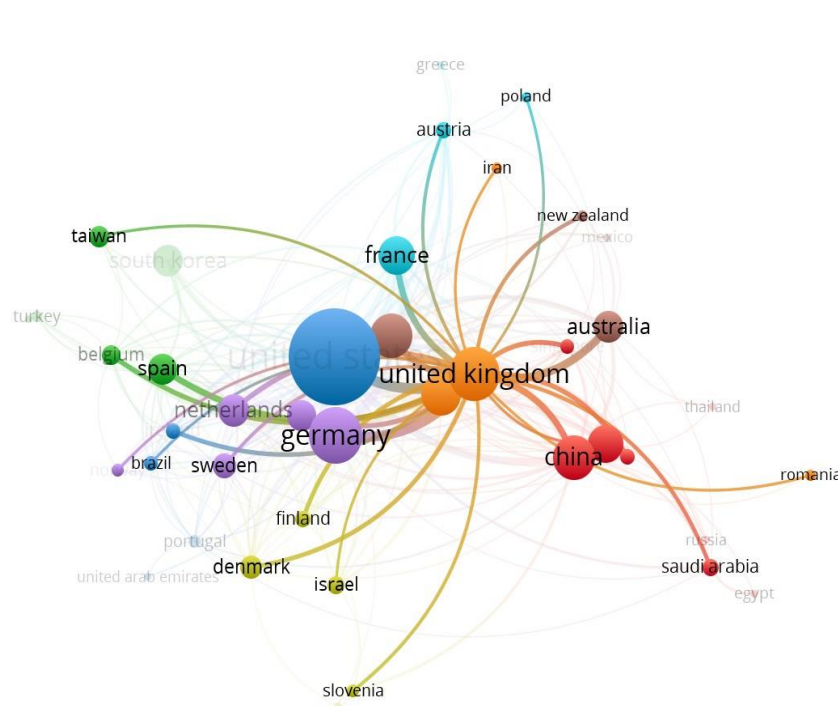*Co-authorship Between the United States and Other Countries*
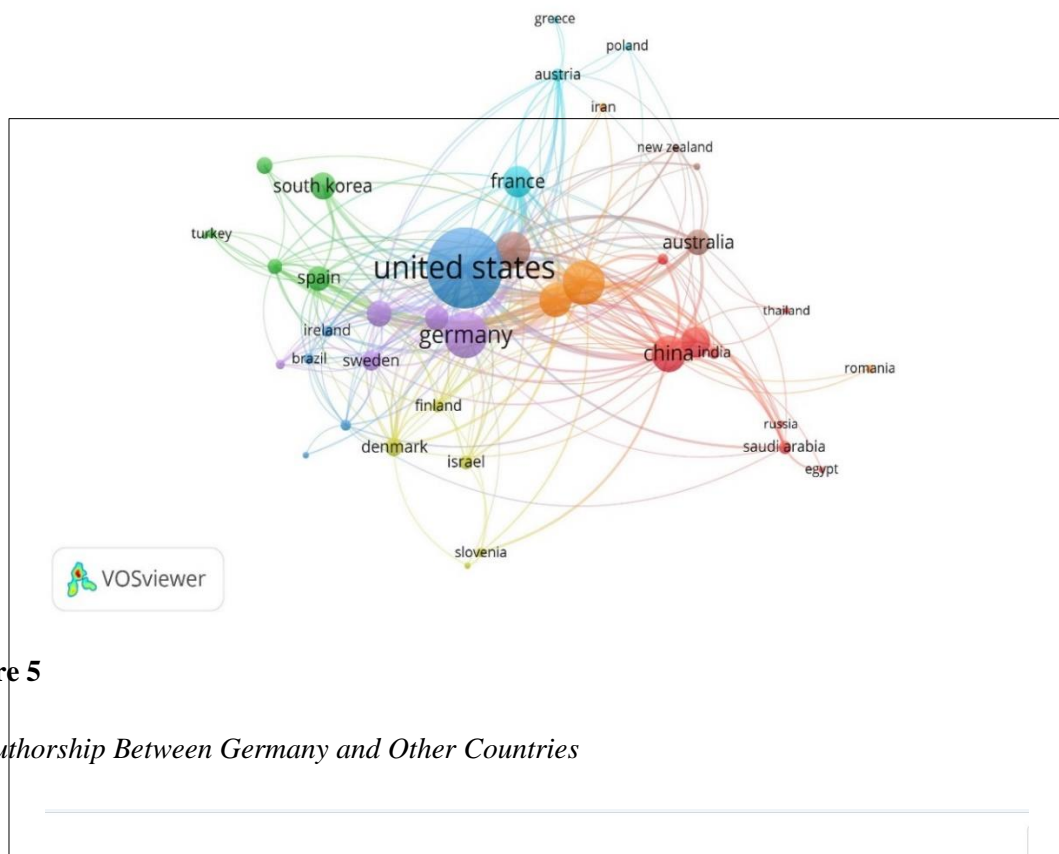
Figure 5

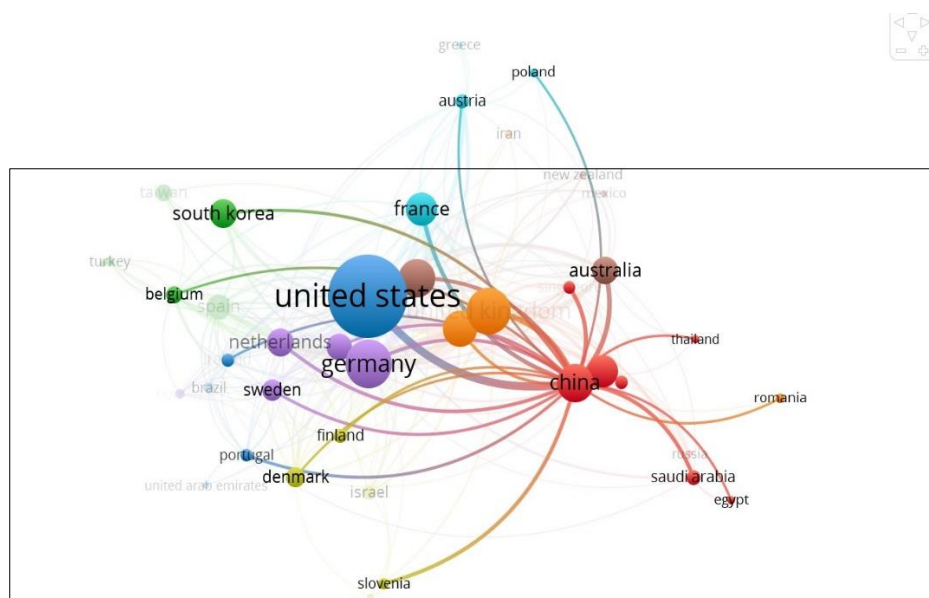*Co-authorship Between Germany and Other Countries*

Figure 6

Co-authorship Between The United Kingdom and Other Countries

Figure 7

Co-authorship Between China and Other Countries

Engaging in co-authorship with leading nations offers Malaysian researchers valuable opportunities to access the latest technological advancements, pedagogical strategies, and research methodologies. Such collaborations facilitate knowledge transfer, accelerating the adoption and effective utilisation of video-based feedback in Malaysian higher education institutions. Furthermore, these partnerships promote cross-cultural understanding, enabling the development of culturally sensitive approaches to video-based feedback that cater to the specific needs of Malaysian students and educators.

However, the limited co-authorship between Malaysia and leading nations in this field may limit Malaysian researchers' exposure to cutting-edge practices and hinders the development of a robust research community centred on video-based feedback. However, notable exceptions emerge in the cases of Thailand and India. Thailand, a Southeast Asian nation has cultivated collaborative research ties with the United States and China pertaining to research on video-based feedback. Similarly, India has cultivated research collaborations with the United States in this area. These examples underscore the potential for regional collaborations to advance research and scholarship on video-based feedback.

Bibliographic analysis of keywords

RQ3: Do the keywords in relevant studies highlight specific research gaps in the field?

An analysis of keywords in relevant studies reveals three distinct clusters that shed light on the current research focus and highlight potential gaps in the field of video-based feedback in higher education. The first cluster, comprising keywords such as "clinical competence," "constructive feedback," "medical education," and "curriculum," reflects a significant emphasis on the use of video feedback in medical education. This focus underscores the efficacy of video-based feedback in enhancing clinical skills and competencies. However, it also points to a potential research gap: the need to explore the applicability and effectiveness of video-based feedback in disciplines beyond medical education within higher education.

The second cluster features keywords such as "humans," "education," "psychology," "female," and "male," indicating a broader interest in the psychological and developmental impacts of video feedback across different genders. This cluster underscores the importance of understanding how video feedback influences learning and development from a psychological standpoint. Notably, studies like those conducted by Fukkink et al. (2011) have explored the impact of video feedback on the interaction skills of professionals in diverse settings, including education, health care, and counselling. However, the inclusion of keywords related to children and preschool children accentuates a potential research gap: the limited exploration of video-based feedback's unique challenges and opportunities for adult learners in higher education.

The third cluster, comprising keywords such as "video feedback," "assessment," "students," and "video e-learning," focuses on the methodological aspects of video for feedback and assessment in educational contexts (Mahoney et al., 2019). Nevertheless, the relative scarcity of keywords addressing student perceptions, experiences, and the socio-emotional aspects of video-based feedback points to a research gap. This gap pertains to understanding how video feedback influences students' motivation, self-efficacy, and overall well-being critical factors that shape their learning experiences.

To address these identified research gaps and effectively answer the research question, do the keywords in relevant studies highlight specific research gaps in the field, future studies should consider three pivotal paths. (i) Broadening disciplinary focus: Expand the scope of research to investigate video-based feedback across a wider range of disciplines beyond medical education. This would involve exploring the unique challenges and opportunities inherent in each field. (ii) Understanding adult learners: Examine the specific needs, preferences, and experiences of adult learners in higher education when engaging with video-based feedback. Factors such as prior knowledge, learning styles, and motivations. (iii) Exploring socio-emotional dimensions: Explore the socio-emotional aspects of video-based feedback, including its impact on students' motivation, self-efficacy, and overall well-being.

Additionally, research should explore how these factors influence students' engagement with and receptiveness to feedback.

In conclusion, the keyword analysis of relevant studies has unveiled significant research gaps in the field of video-based feedback in higher education. The findings underscore three primary areas requiring further exploration the need for future research to extend beyond the confines of medical education, consider the specific needs of adult learners, and delve into the socio-emotional aspects of video-based feedback. By addressing these gaps, future research can contribute to a more nuanced understanding of the impact of video-based feedback on student learning and engagement. Such insights are essential for developing effective, student-centred feedback practices. Adopting a comprehensive and holistic approach to investigating video-based feedback in higher education is paramount for fostering innovation and enhancing teaching and learning outcomes.

Figure 8

High Occurrence of Keywords in Relation to Publications on Video-Based Feedback in Higher Education

CONCLUSION
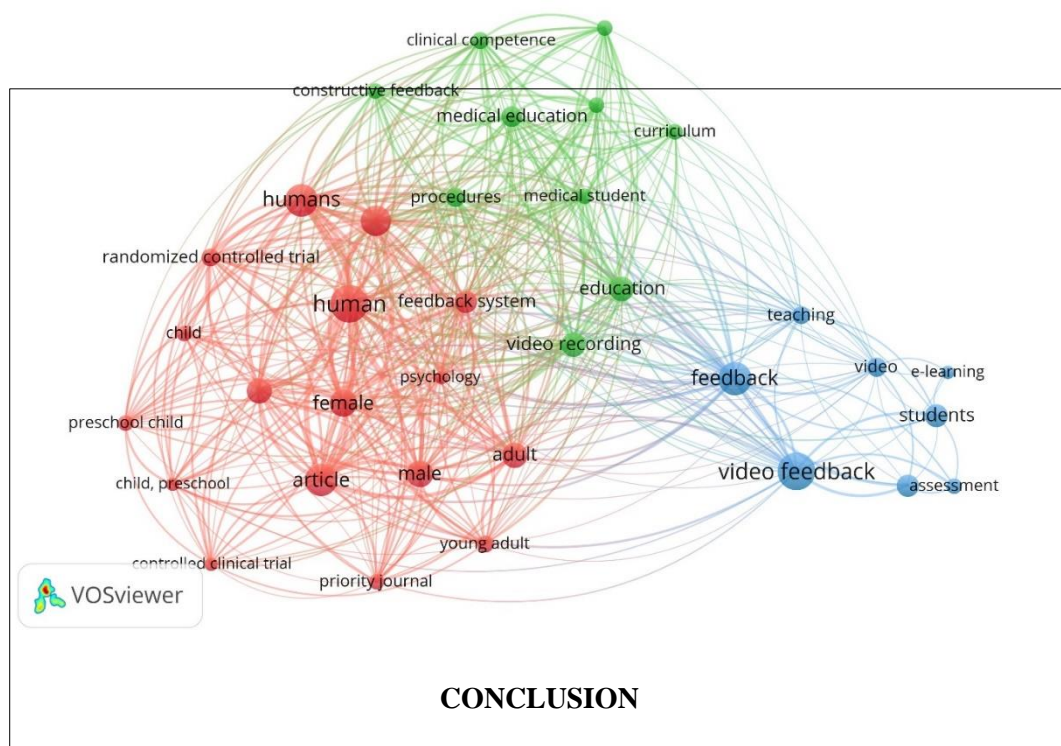
The integration of video-based feedback in higher education represents a significant shift in pedagogical approaches, addressing the demands of digital education and the evolving dynamics of student engagement. A bibliometric analysis spanning two decades, from 2003 to 2022 underscores the increasing scholarly focus on this innovative feedback mechanism, highlighting its crucial role in contemporary educational practices.

The marked growth in publications since 2011 is indicative of a paradigm shift in educational practices, by technological advancements that have enhanced accessibility, interactivity and engagement in video-based feedback. Its seamless integration into various learning management systems (LMS) and digital

platforms has revolutionised interactions between educators and students, transcending the limitations of traditional textual-based feedback. This evolution aligns with broader trends in higher education, including the shift to personalised, student-centred learning experiences, and the increasing emphasis on digital literacy as a core competency among both students and educators.

Furthermore, the effectiveness of video-based feedback in enhancing student learning outcomes is particularly pronounced in online and blended learning environments. Research consistently demonstrates the value of video feedback as a nuanced, engaging, and comprehensive tool for conveying complex information. This is especially crucial in disciplines requiring the demonstration of visual or practical skills. Its multimodal format integrating visual, auditory, and textual elements, video feedback caters to diverse learning styles, enhancing both the inclusivity and accessibility of educational content.

The global distribution of research contributions, particularly from the United States, Germany, the United Kingdom, and China, underscores the universal appeal and applicability of video-based feedback across diverse educational contexts. This geographic diversity also highlights the potential for cross-cultural studies to explore how cultural nuances influence the implementation and reception of video-based feedback in various educational settings.

Despite its growing significance, the field of video-based feedback in higher education remains in its early stages, this emerging domain is characterised by a dynamic and evolving research landscape, shaped by the rapid advancements in digital technologies and the ever-changing paradigms of online education. Therefore, to remain relevant, future research must continuously adapt and expand its focus to keep pace with these ongoing developments.

Expanding the bibliographic analysis to include more comprehensive databases, such as Web of Science and Scopus is a crucial step forward. Such an expansion would provide a broader spectrum of scholarly work, offering a more holistic understanding of the field. Additionally, experimenting with diverse combinations of keywords during literature searches could uncover new perspectives, potentially leading to insights into unexplored dimensions on video-based feedback.

A more granular bibliometric analysis focusing on authors, universities, and journals could shed light on the intellectual landscape of the field. Identifying influential contributors, leading institutions, and key publication venues in the domain would facilitate the mapping of collaborative networks and shed light on emerging trends. This approach could also inform future research priorities in video-based feedback.

In conclusion, video-based feedback in higher education represents a fertile ground for scholarly inquiry, offering vast potential for pedagogical innovation. By embracing a more comprehensive, multidimensional approach, future research can significantly contribute to the understanding of this evolving domain, ultimately enriching educational practices and aligning them with the demands of the digital age.

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CONFLICT OF INTEREST

The authors affirm that there is no conflict of interest related to the publication of this article.

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