EXPLORING INFORMATION BEHAVIOUR: AN INTERNATIONAL ANALYSIS OF EDUCATIONAL VIDEO CONSUMPTION AMONG LIS STUDENTS IN THREE COUNTRIES

ISTRAŽIVANJE INFORMACIJSKOG PONAŠANJA: MEĐUNARODNA ANALIZA KORIŠTENJA OBRAZOVNOG VIDEA MEĐU STUDENTIMA LIS-A U TRI ZEMLJE

Juan-José Boté-Vericad (corresponding author)
0000–0001–9815–6190
Facultat d'Informació i Mitjans Audiovisuals &
Centre de Recerca en Informació, Comunicació i Cultura.
Universitat de Barcelona, Spain
juanjo.botev@ub.edu

Julià Minguillón
0000–0002–0080–846X
Universitat Oberta de Catalunya, Spain
jminguillona@uoc.edu

Emina Adilović
0000–0003–2741–4652
Institut za društvena istraživanja. Fakultet političkih nauka.
Univerzitet u Sarajevu, Bosna i Hercegovina
emina.adilovic@fpn.unsa.ba

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Abstract

Purpose. The use of educational videos in higher education is increasingly widespread among professors and students. Numerous digital platforms worldwide provide publicly available educational videos. This study investigates the perceptions of LIS students in three countries: Bosnia and Herzegovina, Croatia, and Spain, specifically focusing on their searches for educational videos on YouTube. Additionally, it examines their habits, motivations, and reasons for searching for educational videos in relation to their studies.

Methodology. The authors employed the focus group technique. Two focus groups were conducted in Bosnia and Herzegovina, one in Croatia, and two in Spain. The sample consisted of LIS students selected through convenience sampling. The age range of the students was approximately 19 to 25 years old.

Limitations. One of the limitations is that some students had to communicate in English, which is not their native language. While they were quite fluent, it is possible that some nuances in the interaction may have been missed.

Results. The results show that LIS students have similar motivations for searching for educational videos, such as improving their knowledge and having new or additional information beyond what is provided in class. However, there are differences in the way they consume educational videos. The number of videos available in their native language is limited. They need to search for educational videos in a non-native language they know. This also suggests that they use different methods for finding educational videos.

Originality/value. The paper presents the original results of the research on students from three different countries in the field of Library and Information Science regarding the use of educational videos in their studies.

Keywords: Bosnia and Herzegovina; Croatia; educational videos; information science studies; library use of educational videos; Spain

Sažetak

Svrha. Korištenje obrazovnih videa u visokom obrazovanju sve je raširenije među profesorima i studentima. Brojne digitalne platforme diljem svijeta nude javno dostupne obrazovne video zapise. Ovo istraživanje istražuje percepcije studenata KIZ-a u tri zemlje: Bosni i Hercegovini, Hrvatskoj i Španjolskoj, posebno se usmjeravajući na njihova pretraživanja obrazovnih videa na YouTubeu. Osim toga ispituje njihove navike, motivaciju i razloge za traženje obrazovnih videa povezanih s njihovim studijem.

Metodologija. Autori su koristili tehniku fokus grupe. Dvije fokus grupe održane su u Bosni i Hercegovini, jedna u Hrvatskoj i dvije u Španjolskoj. Uzorak se sastojao od

studenata KIZ-a odabranih putem praktičnog uzorkovanja. Dob učenika bila je od 19 do 25 godina.

Ograničenja. Jedno je od ograničenja to što su neki ispitanici morali komunicirati na engleskom jeziku, koji nije njihov materinji jezik. Iako su bili prilično tečni, moguće je da su neke nijanse u interakciji propuštene.

Rezultati. Rezultati pokazuju da studenti KIZ-a imaju slične motivacije za traženje obrazovnih videa, poput poboljšanja znanja i dobivanja novih ili dodatnih informacija od onih koje se pružaju u nastavi. Međutim postoje razlike u načinu na koji gledaju obrazovne videozapise. Broj videozapisa dostupnih na njihovom materinjem jeziku ograničen je. Moraju tražiti obrazovne videozapise na jeziku koji im nije materinji. To također sugerira korištenje različitih metoda za pronalaženje obrazovnih videa.

Originalnost/vrijednost. U radu su prikazani izvorni rezultati istraživanja u kojemu su sudjelovali studenti knjižničarstva i informacijskih znanosti iz triju različitih zemalja i njihovu korištenju obrazovnih videa na studijima.

Ključne riječi: Hrvatska; Bosna i Hercegovina; korištenje obrazovnih video zapisa; obrazovni video zapisi; studiji knjižničarstva i informacijske znanosti; Španjolska

1. INTRODUCTION

The integration of digital technologies in higher education institutions has revolutionised the way students access, process, and interact with information. As traditional modes of information dissemination give way to digital platforms, understanding the information behaviour of students in this context becomes crucial. One prominent aspect of this transformation is the extensive use of educational videos, which have emerged as a popular instructional tool in contemporary academic practices. These videos provide a dynamic and engaging medium for delivering complex concepts and fostering student engagement. Exploring the information behaviour of LIS students in relation to educational videos in higher education institutions can shed light on their effectiveness, impact, and potential for improving learning outcomes. It is common to use the term "consume videos" to refer to the act of viewing or watching a video and reading comments (Khan, 2017; Shoufan, 2019; Boté-Vericad, 2022). The term "consume" denotes "information consumption" or the idea that information is being consumed (Bazeley and Kemp, 2012; Cooke, 2017; Poirier and Robinson, 2014). It is also metaphorically used in scientific literature. Therefore, in this study, we will use the terms "consume" or "watch" interchangeably when referring to the behaviour of LIS student participants.

In relation to the context of this study, it is necessary to consider that this research was conducted in various departments and faculties in different countries. Specifically, the study was carried out at the Department of Information Sciences

at the Faculty of Philosophy in Sarajevo[1] (Bosnia-Herzegovina), the Department of Information Sciences at the Faculty of Humanities and Social Sciences in Osijek[2] (Croatia), and in the department of Library and Information Science and Media Studies in the Faculty of Information and Media Studies at the University of Barcelona in Spain[3] (Villarroya and Boté-Vericad, 2023). The reason for mentioning all these departments and faculties is because Library and Information Science (LIS) studies in Europe vary significantly between countries, and in most cases, the LIS department is integrated among other departments. On the other hand, in countries like the United States, LIS studies are typically pursued at the postgraduate level (Yoon and McCook, 2021).

1.1. The increasing popularity of educational videos

The use of educational videos offers numerous advantages for education. In line with its mission to promote and enhance access to quality education worldwide, UNESCO supports the development and dissemination of open educational resources (OER). Recognizing the potential of educational videos, UNESCO has been mainly focused on integrating them into open educational platforms. One notable field where educational videos find widespread use is Massive Open Online Courses (MOOCs). Incorporating open-source educational video materials into MOOCs aims to improve digital literacy and provide diverse and engaging learning experiences (UNESCO, 2011; UNESCO, 2021). Moreover, IFLA (2015) emphasises the role of libraries in facilitating access to MOOCs and open educational resources, helping learners navigate the vast array of available educational video materials, and creating open educational videos. Aligned with the librarians' role in promoting educational video materials, Kuhlthau, Maniotes, and Caspari (2015) propose collaboration between librarians, teachers, and students in producing multimedia materials in their guided inquiry learning model.

Nevertheless, it is essential to provide a more explicit explanation. To achieve the full benefit from the creation of educational videos, individuals must possess

[1] The Department of Information Sciences is part of the Faculty of Philosophy, University of Sarajevo, established in 1972. Originally focusing on traditional library science, it has evolved to include modern disciplines like digital librarianship and information sciences. Students now study digital collections, web design, and internet culture.

[2] The Department of Information Sciences at the Faculty of Philosophy, University of Osijek, began as the Department of Librarianship in 1998. It later transformed into the Department of Information Sciences under the Bologna education system. The department now focuses on interdisciplinary research related to the information society, promoting literacy, critical thinking, and access to relevant information (Faletar-Tanacković and Petr-Balog, 2021).

[3] The Faculty of Information and Audiovisual Media of the University of Barcelona is a centre with a tradition that dates back to 1915 when the Commonwealth of Catalonia founded the School of Librarians, the precursor of the centre. The department now focuses on interdisciplinary research related to the information society, open science, libraries, internet industry and communication.

the necessary skills for video production, especially when maintaining high standards of academic excellence, as elucidated by UNESCO, (2009a; 2013). These skills include having digital competencies to create appropriate educational content (Boté-Vericad et al., 2023). According to a report published by DataReportal, We Are Social, and Meltwater, internet adoption in Western Europe stands at approximately 93.5%, while in Southern Europe, it is around 88.5%. This indicates that a significant portion of the population is connected to the internet (DataReportal, 2023). The rate of device connectivity among individuals aged 16 to 34 stands at approximately 96%, and this distribution remains fairly consistent between both genders. However, there is a variation in this percentage when we specifically examine computer usage. Among those aged 16 to 24, the rate is 58%, whereas among individuals aged 25 to 34, it slightly increases to 63%. The primary purposes of internet usage include finding information (53.9%), watching videos (50.6%), and education/study-related activities (38.1%). YouTube, as a video platform, boasts 94.8 billion visits and 7.5 billion unique visitors, with an average visit duration of approximately 36 minutes and 29 seconds. Globally, around 40.7% of individuals watch educational videos online. Within the 16-24 age range, the percentage is 46.9% for females and 44.5% for males. In the 25-34 age range, both females and males have an equal distribution in terms of watching educational videos.

1.2. The use of educational videos in higher education by students

Educational videos play an important role in all levels of education, especially in higher education where fields such as medicine have intensive use of educational videos (Boté, 2019). Regardless of the platform on which students are viewing educational videos, there are two distinct aspects to consider in their usage. On the one hand, professors create educational videos for their students to improve the teaching quality (Triay et al., 2016) or to impact student performance (Zhu et al., 2022). For example, in fields such as medicine video-based education effectively motivates and encourages first-year medical students (Sharifi et al., 2022). In the field of chemistry, instructional tutorial videos are effective in supporting university students to build mechanistic explanations in organic chemistry. Creating additional videos can cater to individual needs and enhance inclusivity and accessibility (Eckhard et al., 2022).

On the other hand, students watch educational videos on Social Networking Sites (hereafter SNS) such as YouTube or TikTok. The motivations for university students to use this content may vary. For example, they may use videos as complementary learning to their courses (Boté-Vericad, 2022), to evaluate skills in medicine (Lee et al., 2021; Massieu Paulin and Díaz Barriga Arceo, 2021), to improve speaking skills and motivation and unconscious grammar learning in the

case of foreign languages (Riswandi, 2016), to improve media literacy skills (Ríos Hernández et al., 2022), to learn new topics such as Artificial Intelligence (Farhi, Jeljeli and Hamdi, 2022), or as a non-formal learning strategy, to promote autonomous learning (Roque Rodríguez, 2020).

1.3 Information seeking and educational videos

Watching or consuming educational videos is limited without adequate connectivity but it is also limited without good search skills. Indeed, students' engagement with educational videos involves two key phases: information seeking initially, followed by information behaviour. Search skills are necessary to combat misinformation on YouTube, for example with Covid-19 videos (Kessler and Humprecht, 2023; Boté-Vericad and Sola-Martínez, 2020). Nevertheless, it seems that the age of students influences the ranking algorithms on YouTube (Murthy et al., 2023; Rieder, Matamoros-Fernández and Coromina, 2018). Furthermore, while search skills are undoubtedly important, it is equally essential to acknowledge the influence of algorithms on the ranking of videos.

2. Literature review

Information behaviour, encompassing the activities and processes individuals engage in to seek, access, evaluate, and use information, is a fundamental aspect of effective learning and decision-making. In the context of higher education, the integration of digital technologies has revolutionised information behaviour patterns, providing students with new avenues for accessing and engaging with information resources. One significant development in this realm is the increasing use of educational videos as a teaching tool. Educational videos offer a multimedia-rich format that combines visuals, audio, and text, providing an immersive learning experience. This section of the literature review explores the relationship between information behaviour and the use of educational videos in higher education. By examining the existing research, this review aims to shed light on the impact of educational videos on students' information-seeking behaviour, cognitive processes, and learning outcomes. Additionally, it seeks to identify the factors influencing the effective integration of educational videos into instructional practices, as well as potential challenges and opportunities for further exploration. Understanding the interplay between information behaviour and the use of educational videos can inform educators, instructional designers, and policymakers in optimising the design and implementation of video-based resources in higher education.

2.1. Information behaviour and information seeking

Information behaviour plays a pivotal role in our increasingly digital and information-driven society. It encompasses the ways in which individuals seek, access, evaluate, use, and communicate information to meet their information needs and make informed decisions. Understanding and studying information behaviour have become crucial in various domains, including academia, business, healthcare, and everyday life. In the era of abundant information and rapidly evolving digital technologies, an individuals' ability to navigate, evaluate, and effectively utilise information has a profound impact on their personal, professional, and social well-being. By examining information behaviour, researchers and practitioners gain valuable insights into the complex processes and factors that shape how individuals interact with information, enabling the development of strategies, tools, and interventions to enhance information literacy, decision-making, and overall information-related outcomes.

The Wilson model of information behaviour (1999) has been extensively discussed and extended by various authors. Niedźwiedzka (2003) proposed adding personal search or search through intermediaries. Spink (2004) integrated multitasking into information behaviour, emphasising its cognitive nature. Godbold (2006) expanded the model by incorporating Dervin's sense-making theory. Pharo (2004) introduced a holistic perspective by combining information retrieval and seeking in a new model. The literature shows continuous efforts to refine and enrich the Wilson model, with authors exploring emotional experiences, collaborative search, serendipity, and other concepts relevant to information behaviour. Thus, the study of information behaviour holds immense importance in fostering an informed, empowered, and digitally competent society. Information behaviour as a part of the discipline in Information Science has three key authors, namely Carol Kuhlthau, Reijo Savolainen, and Thomas Wilson (Wilson, 2020). They have developed the major part of key theory in the last 50 years.

Thomas D. Wilson (2016) introduces a comprehensive framework that elucidates the concept of human information behaviour (HIB). The framework is based on four core assumptions: HIB is goal-directed, influenced by the social context, a cognitive process involving information-seeking strategies, and a dynamic activity evolving over time. The framework comprises five components: the information user, their characteristics shaping HIB; the information environment, encompassing physical and social contexts and available resources; the information-seeking process, involving steps like need identification, search, and evaluation; and the information outcome, representing the results of the information-seeking process. This versatile framework has been applied to various HIB phenomena, facilitating research, education, and practice. Additionally, it has led to the development of information-seeking interventions and support systems, improving the information-seeking process for users.

Savolainen (2022) explores the concept of everyday life as a context for information behaviour, focusing on the characterization of work-related and non-work aspects. It conducts an evolutionary concept analysis by comparing early and contemporary approaches. Initially, the understanding was based on Savolainen's model for everyday life information seeking. However, later studies advocate a more holistic view due to the blurring boundaries between work and personal life, influenced by technology and telecommuting. The paper emphasises the importance of studying domain-specific information behaviour while acknowledging information seeking in overlapping contexts. It provides practical implications for researchers, practitioners, and information system designers, facilitating a better understanding of how people seek and use information in their daily lives.

Information seeking is a multifaceted process influenced by user interactions with digital platforms, as explored by several authors. Hyldegård (2006) investigated information seeking using Kuhlthau's model, which examines cognitive, physical, and emotional experiences during six steps: initiation, selection, exploration, formulation, collection, and presentation. This model provides a framework for understanding the factors underlying the information seeking process. Martínez-Silveira and Oddone (2007) built on this foundation through a literature review, identifying various factors impacting information searching, including information sources, knowledge, people, emotions, education, and economic status. They highlighted the significance of these variables in shaping the search process. Hyldegård's work laid the foundation by incorporating Kuhlthau's model into the study, and Martínez-Silveira and Oddone expanded on it by investigating additional factors influencing the search process.

Rowlands et al. (2008) took a longitudinal approach to studying information seeking among the "Google generation". Their research revealed that young people engaged in horizontal information seeking, jumping between pieces of information without thorough evaluation, leading to a lack of understanding of their information needs. Wilson and Maceviciute (2013) explored the concept of "information seeking" in the news, analysing news articles over two years. They found that the terms "information behaviour" and "information seeking" were widely accepted and understood by the general population, underscoring the relevance of these terms in society. Rowlands et al. built upon the knowledge by studying the behaviour of the "Google generation", while Wilson and Maceviciute focused on the societal acceptance and understanding of information seeking terms. Agarwal (2015) introduced the concept of serendipity and its relationship with information seeking and searching, further enriching the overall understanding of the field. He focused on serendipity within information behaviour models, an aspect often overlooked. He discovered that serendipity could occur in both passive and active information seeking and searching, and identified five core definitions of serendipity in the literature.

Students' information behaviour habits, practices, and interests regarding educational videos vary depending on the context. In one study, graduate students engaged in an online course did not consistently perceive instructional videos as distinct components, and their viewing habits fluctuated across various times and contexts (Arroyo-Barrigüete et al., 2019). Additionally, the research has discerned diverse student behaviour patterns when engaging in video-based learning, including browsing, social interaction, information seeking, and environment configuration. Active learners, characterized by their frequent involvement in social interaction, information seeking, and environment configuration, achieved superior learning compared to passive learners, primarily involved in browsing (Tirzo and Cerdana, 2023).

In a study by Hibbert (2016), the focus was on comprehending students' perspectives regarding videos in distance education and to understand their viewpoints about videos for self-paced and asynchronous learning. Hibbert's research also emphasized that the efficacious incorporation of video into education requires instructors to contemplate cognitive load management, maximization of student engagement, and the cultivation of active learning strategies. A study indicated that the effective utilization of video as an educational tool is heightened when instructors factor in strategies to manage cognitive load, enhance student engagement, and foster active learning during video consumption (Weiler, 2005). Educational videos have gained paramount importance in higher education, particularly within flipped, blended, and online learning environments (Savolainen, 2007).

Research pertaining to students' engagement with video-recorded lectures suggests that reading comprehension strategies may not be universally applicable to video comprehension, with the medium itself impacting students' cognitive and affective outcomes (Caspi, Gorsky and Privman, 2005). Some students exhibit browsing behaviour, characterized by frequent content scanning without active engagement (Yoon, Lee and Jo, 2021), while others exhibit active learning behaviour, employing social interaction, information seeking, and environment configuration features during video consumption, resulting in higher learning achievements (Tobarra et al., 2017).

The interplay between students and videos is intricate, with factors such as video duration and quantity exhibiting no significant influence on student outcomes (Brame, 2016). Students' experiences with instructional videos in online learning environments are contingent upon factors such as video integration within course design, the context of video consumption, and video design elements themselves (Qin et al., 2015).

2.2. Educational videos

This section of the literature review aims to explore the existing body of knowledge on the use of educational videos in higher education, examining their effectiveness, benefits, and challenges, as well as the factors influencing their integration into instructional practices. By critically examining the literature, this review seeks to provide a comprehensive understanding of the current state of research and identify gaps and opportunities for further investigation in this field. Educational videos have emerged as a prominent tool in modern pedagogical practices, transforming the landscape of teaching (Boté-Vericad, 2020; Boté-Vericad, 2021a) and learning in various educational settings. With the advent of digital technologies, educational videos offer a dynamic and engaging medium for delivering complex concepts, enhancing student engagement, and fostering active learning experiences. The utilisation of these digital learning tools has gained significant attention across different disciplines, including higher education institutions. The advent of Massive Open Online Courses (MOOCs) has ushered in a remarkable surge in the utilisation of educational videos across diverse academic domains (Dreisiebner et al., 2020). Researchers have recognized their potential to facilitate knowledge acquisition, improve information retention, and stimulate critical thinking skills among learners.

Educational videos in higher education offer several benefits. They have become an integral part of higher education, providing advantages such as enhanced learning, the flexibility to consume content at one's own pace, and repeated access to materials (Lu, 2023; Cano et al., 2022). These videos are effective in promoting intercultural competence by presenting various situational and real-life contexts, fostering critical reflection and experiential analysis (Shivajirao, 2021). Additionally, the use of audio-visual aids in digital education creates an interactive classroom environment and aids students in comprehending complex concepts (Fyfield et al., 2019).

However, there are challenges associated with educational videos, such as the necessity for proper video design, platforms that enhance student engagement, and pedagogical approaches that fully leverage the capabilities of video (Kim, 2021). Furthermore, integrating flipped learning courses, which heavily rely on educational videos, poses challenges related to instructional issues and learner autonomy. In summary, while educational videos offer numerous benefits, their design and implementation require careful consideration to address the associated challenges.

Educational videos can improve students' skills and prosocial behaviour, promote cognitive engagement by aiding students in understanding key concepts, and foster effective engagement by creating a sense of teacher presence (Beal and Hontvedt, 2023; Ramalia, 2023; Boté-Vericad, 2022). Effective videos should be

concise, uncluttered, and focused on a single learning objective, complemented by learning activities to enhance student engagement (French et al., 2023). However, there are also challenges in using educational videos. Student concerns about dedicating time to engage with video resources underscore the need for clear communication from educators regarding their role in the curriculum (Harrison, 2020).

Specifically concerning students' health, the use of educational videos to promote reproductive health among students has also proven to be particularly beneficial, as such videos might be able to complement and enhance the educational experiences that parents and teachers can offer (UNESCO, 2009b). As a result, this approach holds the potential to contribute significantly to the overall reproductive health of young people. Overall, these studies collectively demonstrate the potential of educational videos as a valuable tool for health promotion, disease prevention, and patient education across various cultural and medical contexts. However, the success of video interventions may depend on factors such as cultural appropriateness, targeted behaviours, and the specific health issues being addressed.

3. Methodology

The primary objective of this study is to investigate why students in higher education seek out educational videos, particularly for their academic studies. This entails gaining insights into their information-seeking habits with the YouTube platform for educational purposes. We address the goal with the following research questions:

- RQ1: What factors influence individuals' educational video consumption behaviour, including search strategies, authorship preferences, interaction patterns, and the impact of language diversity?
- RQ2: What factors drive students' motivations for watching educational YouTube videos, and how do their diverse definitions and expectations of 'educational videos' affect their information-seeking behaviours?

By addressing these research questions, this study aims to provide a comprehensive analysis of the information behaviour exhibited by students when utilising educational videos in higher education. The findings from this research will contribute to the growing body of knowledge on the integration of digital technologies in education, helping educators and institutions make informed decisions about the design, implementation, and evaluation of educational video-based resources. Additionally, this study will provide insights into students' learning experience, contributing to the enhancement of pedagogical practices and the overall quality of higher education.

This study employed a qualitative research approach to investigate the information behaviour of undergraduate and master's level students in the field of Li-

brary and Information Science (LIS) in three distinct locations: Sarajevo, Osijek, and Barcelona. The use of focus groups was chosen as the primary data collection method due to its ability to facilitate in-depth discussions and capture diverse perspectives. Focus group research is a qualitative technique that can be utilised with various approaches. Apart from the participants, two distinct roles are involved in focus groups: the researcher, who serves as the moderator, and an observer, whose responsibility is to assist the researcher in organising the focus group and documenting the participants' actions or comments. In most instances, the moderator also acts as the observer (Shoaf, 2003).

While focus groups can be self-moderated and provide valuable data, they can sometimes have challenges with consistency (Marcella, 2018). In order to safeguard confidentiality, the identities of participants are not disclosed; instead, they are assigned codes. The data collection process in focus groups can be achieved through various means, such as note-taking, voice recording, or video recording. To conduct a focus group or discussion group, it is necessary to recruit a group of people with a common topic or theme. For some studies, the number of participants within a focus group can vary from 4 to 12 participants (Edmunds, 1999; Merriam and Tisdell, 2016).

While we had a guide for the focus group, we employed the concept of information saturation in analysing the participants' responses. Saturation refers to obtaining repetitive answers from participants, and it is often used in the literature to justify small sample sizes, lack of time, or insufficient funds (Carlsen and Glenton, 2011).

The open-ended questions for the focus groups were as follows:

- Could you tell me the last educational video you watched?
- Could you tell me how often you watch videos related to your studies?
- On YouTube, could you comment on your preference for the length of a video?
- Could you explain if you need someone to appear in educational videos?
- Could you tell me what language you use to search for videos?
- Could you tell me about the language of the video?
- Could you explain under what conditions you use subtitles on videos?
- Can you tell me if you use the YouTube filter?
- Could you tell me if you use the advanced search phrase?
- Could you explain what influences your decision to watch a particular video?
- What do you consider to be a good educational video?
- Can you tell me how often you watch videos?
- Can you tell me if you interact with a video (end cards, comments)?
- What is most important to you from what we have discussed?

Participants were selected from recognized educational institutions offering LIS programs in the area, at the undergraduate level and master's level. A total of five focus groups were conducted. Among these, two groups were convened at the Faculty of Information and Audiovisual Media, University of Barcelona, comprising 9 students (6 females and 3 males) one with undergraduate LIS students and the other with master's LIS students. Additionally, two focus groups took place at the Faculty of Philosophy, University of Sarajevo, involving 9 students (5 females and 4 males) one with undergraduate LIS students and another with master's LIS students. Lastly, one focus group was convened at the Faculty of Humanities and Social Sciences, University of Osijek, comprising 8 students (7 females and 1 male). The decision to conduct only one focus group in Osijek was influenced by the availability and willingness of participants.

Focus groups were conducted separately for undergraduate and master's students in each location to account for variations in educational backgrounds and levels of expertise. The focus groups in these locations aimed to investigate the information behaviour of these students and examine their experiences and perspectives regarding the use of educational videos in higher education. The purpose of the focus group was to gather a diversity of opinions and discussions around the same topic, and obtain patterns in the consumption of educational videos. Overall, the inclusion of undergraduate and master's LIS students from multiple locations provided a diverse range of perspectives, enriching the findings of this study. The focus groups served as a valuable platform for exploring the information behaviour and experiences of students in different educational settings, contributing to a comprehensive understanding of the role and impact of educational videos in higher education institutions.

All focus groups were voice recorded, and a consent form was signed by participants. Focus groups were held in Catalan, English, and Spanish. The transcript was in the original language of the focus group and the final codification was in English. All conversations were transcribed, and names were anonymized. A total of 26 participants were in the focus groups, generating a total 150 pages of text. After completing the transcriptions, we analyzed the data using Mayring's methodology, which involves coding the transcript (Mayring, 2014). We employed an inductive approach to code all conversations, wherein we derived insights organically from the data, enabling patterns and themes to emerge naturally. This method emphasizes gaining a deep understanding of the context within each conversation. The unit of analysis in this case was the paragraph in order to ensure that context was not lost due to standalone sentences. In the absence of a paragraph, a sentence was chosen. From the first focus group, there were originally 28 codes created. Thereafter, only 6 new codes emerged from the rest of the focus groups analysis, creating a total of 34 codes.

4. Results

4.1. Information behaviour with educational videos

The focus group participants exhibit proactive information-seeking behaviour on YouTube by engaging with educational videos. They actively fulfil their information needs by employing a search strategy that considers parameters such as topic, language preference or the length of a video.

In the context of search strategy, it is noteworthy that participants in these focus groups tend to avoid complex video searches. Instead, they opt for a simpler and more straightforward approach, guided by clarity and simplicity.

> *"I always search for the specific term because I don't want to do a long-tail search. Moreover, I do not look for more videos than the ones that are shown. If I don't find them, I use the recommended videos." (undergraduate student, Barcelona, 22)*

Another important aspect of the search strategy is that participants often commence their searches on Google. This is because Google includes videos as part of its search results, providing a diverse array of content to explore and discover:

> *"In many cases I do not even search directly on YouTube. I search for a video on Google and many times you come to content through either a site where the video is embedded or a video appears in Google results (…) I do not always start from the YouTube search box, but many times I start from the search box of Google itself or even the browser that has the option to search directly or through Google using the browser." (undergraduate student, Osijek, 20)*

This approach to seeking videos explains why, despite their awareness of YouTube's existence, the participants do not exclusively commence their searches on this platform. They explore other search engines, such as Baidu, Bing, or Yandex. Although Google emerged as prominent in this focus group, it is not restricted solely to this search engine. Other search engines proffer comparable options and outcomes, opening the gateway to a vast realm of possibilities. None of the focus group participants mentioned other search engines originating from specific social networking sites such as Twitter, Facebook or Pinterest.

Besides the method of searching, participants considered authorship to hold significant importance in educational videos. Thus, they lean towards videos created by esteemed scholars and reputable universities.

> *"We need to find more videos from established scholars, published by scholars and universities." (undergraduate student, Sarajevo, 21)*

Nevertheless, content quality holds significant importance to them:

> *"I need quality of information, no matter the length." (master's student, Barcelona, 24)*

When it comes to authorship, students often ask a critical question: whether the creator of the educational video appears within it, as they consider this to be an important element in such videos:

> *"I prefer that the person comes out, that you have an image behind that voice. For me it is like communicating in other ways. For me it is more, more complete." (master's student, Sarajevo, 23)*

The creator talking to them makes them approachable, and also close to them:

> *"When the one who has created the video appears in any part of the video, it does give me a feeling of closeness." (undergraduate student, Osijek, 21)*

Another relevant topic during the search strategy is the YouTube elements that allow certain interaction with the videos. Elements that allow interaction are the resolution, the subtitles, the language of the subtitles, the cards, comments, the description, the social voting (likes) or the playlist. A student from Sarajevo stated the following:

> *"What catches my attention in the list of results, I am more interested in the title. In the case of subtitles, there are many reasons to activate them. For instance, watching a video on public transport, watching a video in another language, or when terminology is complex" (master's student, Sarajevo, 25)*

In relation to language, the cultural context of these students varies slightly. Students from Barcelona have the advantage of being able to find educational videos in Catalan or Spanish that are related to their studies. However, the situation is different for students from Osijek and Sarajevo, as they feel that there is a lack of educational videos in their native languages. Consequently, they often resort to searching directly in English or even German. Therefore, subtitles in English are deemed necessary in some cases to aid their comprehension:

> *"I also have a preference for subtitles, especially when dealing with technical terminology, particularly if it is intricate. I find it beneficial to have videos accompanied by subtitles to ensure that I do not overlook any crucial information, especially when the videos are in English. However, I have noticed that numerous videos with subtitles lack proper editing. Edited subtitles compel me to replay the video if I require them." (undergraduate student, Osijek, 21)*

Participants interact with videos by performing actions when watching a video. This means that they not only play a video, but they may also pause it to take

notes, or they may share it with colleagues or classmates. Furthermore, viewers can engage with content in various ways, such as writing comments on videos or interacting with additional elements like YouTube video cards, which are positioned at the top right of the video screen. While pausing and rewind videos is the most common interaction, writing comments is rare among participants:

> *"If it is an educational video, I pause it and rewind it. I pause it and throw it back to listen to it again or I share it if it is interesting and can contribute something to my colleagues as well. But above all this, pause. I don't write comments in educational videos". (undergraduate student, Barcelona, 23)*

By using algorithms, YouTube provides users with recommended videos relating to the topic they are searching. Focus group participants have indicated that they use and interact with this recommendation system, not just for additional content but also to find new content. This is another sort of interaction:

> *"I do usually look at them, but I think it is a bit of a distortion to see other resources because there are many resources. I look at them, because to me they are another source of information." (master's student, Barcelona, 25)*

Another common pattern identified is that educational videos must be well-produced, with good editing and subtitles to ensure inclusivity for all students, including those who speak a foreign language or have any sort of disability:

> *"I think that also, especially the visual factor, that it is beautiful, that it is not super crappy, because I do not see it as it does not call you and you are not going to click to see it. And I guess also, if it's educational, it should have edited subtitles. Many times, there are subtitles that don't make sense. Subtitles are useful for people who have problems or are from another country or whatever. Then they can also follow the video." (undergraduate student, Osijek, 23)*

4.2. Definitions, examples and motivations to watch educational videos

The results show slight differences in the consumption of educational videos among students from these countries. During the focus groups, concepts and definitions related to educational videos emerged, along with participants' motivations for watching them on YouTube. One reason mentioned was the desire to access additional content beyond what is covered in class. It also involved seeking solutions for academic tasks and searching for videos that covered topics, questions, or issues they desired to learn more about. According to their statements, these

videos provided supplementary material that complemented the content presented by their professors during lectures:

> *"So I think, that it also means that it is another way of teaching, not just as a supplement, but also content that is more detailed" (master's student, Barcelona, 25)*

Another relevant topic that arose was the participants' understanding of the term "educational video". They offered their own definitions and examples, and although opinions were diverse, a common pattern emerged: educational videos must contain new information not presented in class.

> *"It's to learn something new." (undergraduate student, Sarajevo, 22)*

The term "educational" can have different meanings for them depending on the context. Also, the definition is broad among all students. For example, if a student is learning to play a musical instrument, an educational video shows them how to play the instrument or read music notes. One student from Sarajevo stated:

> *"I've been learning to play the guitar for three years now. Besides what I'm studying here, an educational video shows me how to play the guitar or read music. I also consider an educational video as one related to my studies, but these are not the most common educational videos I watch." (master's student, Sarajevo, 22)*

The majority of participants watch videos daily, but this does not necessarily relate to their studies. However, the most common answers were divided into three themes: watching additional information after a lecture, practicing with specialized software, or viewing videos as part of exam preparation.

In the case of a supplementary lecture, a student from Barcelona stated the following:

> *"Sometimes after a lecture, there are technical terms that I do not understand. When I am at home, it's easier to reach YouTube to look for additional information related to the lecture. I search for the terms or even the topic to try to find someone who can explain to me what I am looking at." (undergraduate student, Barcelona, 19)*

There are many examples, but it is likely that not only is the content important, but also how the content is transmitted:

> *"The courses about Google Analytics are quite interesting because that is, there is a person talking to you, but he introduces you to the concepts, then explains everything very well and at no time do you feel lost in the video. I think it is a very ideal situation and a lot of work by the person producing the video." (master's student, Barcelona, 25)*

In addition, the participants have their own habits in using YouTube as an educational platform. For instance, if they need to find a video they have seen before, they use the browser history to retrieve the video:

> *"I will not retrieve the one I had previously looked for, because I have the browser history. I'll take the history, I'll watch the video again and if necessary, watch it a couple of times". (undergraduate student, Barcelona, 21)*

The frequency of their video-watching habits was also significant. Despite minor variations among all students in terms of how often they watched videos, all of them viewed videos daily.

> *"I use YouTube daily for both educational and entertainment purposes. When it comes to educational videos, I tend to watch specific segments that interest me, rather than watching the entire video". (undergraduate student, Sarajevo, 23)*

The results reveal the proactive information-seeking behaviour of students when engaging with educational videos on YouTube. The participants emphasised the importance of well-produced videos with inclusive features like subtitles. They predominantly started their searches on Google, exploring other search engines as well. The presence of the video creator and content quality were vital considerations for them. Interactions with videos involved pausing, sharing, and exploring recommended content. The students had varied interpretations of the term "educational video" but agreed on the expectation of obtaining new and valuable information. These insights can benefit educators and content creators in enhancing the educational video experience for students.

5. Discussion

The focus group results offer valuable insights into the participants' preferences for information behaviour when consuming educational videos. Concerning the first research question, the participants favour credible sources and high-quality content presented by effective communicators. To understand these preferences, exploring various aspects of information behaviour and factors influencing students' choices is essential. Credibility is crucial in students' engagement with educational videos. Students using YouTube for education are motivated intrinsically, driven by interest and enjoyment, and extrinsically, seeking outcomes beyond the activity itself (Canossa, Martinez and Togelius, 2013). Initially, they may see their instructors and academic institutions as credible sources (Herzberg, Mausner and Snyderman, 2017). However, as they explore diverse content, they look for credibility beyond academia. Credible sources hold more value than non-credible or unknown ones (Umeh, 2012). The presence of an on-screen presenter enhances

a video's credibility, fostering empathy and viewer connection, allowing them to adopt the presenter's perspective (Hourdequin, 2012).

One significant observation is that there is no single designated space for watching educational videos. Students consume these videos not only in traditional settings like classrooms or homes but also in diverse locations such as public transport and libraries. This variety in viewing spaces highlights the need for adaptability in content delivery to cater to the use of different devices, including smartphones, tablets, and laptops. Studies have indicated that content should be optimised for viewing on smartphones (Räbiger et al., 2020), while laptops offer the best learning experience overall (Albó, Hernández-Leo and Mateo-Oliver, 2019). As a result, a student may start watching an educational video on public transport using their smartphone but might switch to a laptop for a more comprehensive learning experience once they are back at home if the content is not well-adapted to their smartphone.

Interestingly, the process of searching for videos is not confined solely to the YouTube platform. Students often begin their searches on Google, and based on the search results, they transition to the YouTube platform, effectively transforming YouTube from a secondary platform to their primary information source. The selection of videos is significantly influenced by the results displayed on Google's search page, where YouTube's algorithm suggests the most relevant content based on various parameters such as the number of visualisations and time display. However, using multiple platforms or switching between them does not necessarily lead to better search results (Springstein et al., 2018). Moreover, students tend to employ simple search strategies rather than utilising advanced search features like filters on YouTube or advanced search options on Google. This preference for simplicity might limit their ability to discover richer and more valuable content (Wilson et al., 2016).

In relation to the second research question, participants in the study provided their own definitions of educational videos. While opinions varied, a common thread emerged: educational videos are seen as a means to acquire new information beyond what is covered in traditional classes. This aligns with the perception that educational videos should serve as a source for learning something new. Motivations for watching educational videos were multifaceted. Students sought these videos for supplementary learning, assistance with academic tasks, and to explore topics of personal interest. Educational videos were viewed as a complementary resource that offered more detailed explanations compared to traditional lectures.

The connection between content quality and the presenter's communication skills is noteworthy. Given the vast number of videos on YouTube, it is possible to find videos that lack one or both of these aspects. Effective communication skills are not only vital for producing educational videos but also for students' future success in the labour market (Douglas, Acharya and Allery, 2021; Gray

and Murray, 2011). Quality content in educational videos encompasses several factors, such as good production and editing (Friend and Militello, 2015) and accurate and reliable information (Smythe, Toohey and Dagenais, 2016; Winslett, 2014). Additionally, inclusivity is critical to ensure that hearing-impaired individuals can access the content with the help of appropriate subtitles. Subtitles not only assist the hearing-impaired but also benefit those who wish to watch videos in languages other than their native one (Valor Miró et al., 2018). The provision of subtitles in multiple languages enables viewing by a multicultural audience, effectively promoting inclusive learning and teaching during lectures (AlTaher, 2020; Boté-Vericad, 2021b) and enhancing students' learning outcomes and knowledge retention (Rodríguez-García et al., 2017). Despite variations in viewing frequency and preferences, all participants watched videos on a daily basis. They engaged actively with the content by pausing, sharing, and exploring recommended videos.

6. Conclusions

This research provides valuable insights for different education professionals to cater to students' preferences in the dynamic landscape of educational content consumption. Users prefer specific search terms and often start on platforms like Google for educational videos. Quality and authorship matter, with creators' presence enhancing engagement. Interactions include pausing, sharing, and using features like subtitles. YouTube's recommendations are influential, and subtitles aid comprehension in different languages. These insights inform content creators and platforms. By understanding students' information behaviour and preferences, educators, content creators, and librarians can collaboratively create more impactful educational videos that cater to the diverse needs of learners in the digital age. Moreover, they can work together to design and implement online platforms that optimise educational video usability, accessibility, and effectiveness.

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