

Article

Advanced Technologies from and Through a Prototype Radio Lesson with Budding Journalists: The Views and Attitudes of Xers, Millennials, and Zoomers

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Abstract: In this research article, budding journalists' views and attitudes toward a prototype radio lesson that was designed and implemented utilizing advanced technologies are explored. These budding journalists hail from Greece, were studying in higher education or adult education at the time of the survey, and belong to one of the three youngest generational cohorts within adults (i.e., 18 years old and older); Generation X where their members are now known as Xers, Generation Y where their members are already known as Millennials, and Generation Z where their members are also known as Zoomers—XYZ Generations. The survey's research data were collected after six interactive teachings from and through advanced technologies, via a specially designed written questionnaire, as case study experiments that applied qualitative action research with quasi-experiments. Analysis, descriptive, and inductive statistics were then applied to them from and through Internet applications and services. This is essentially empirical qualitative research that incorporates the approach of the quantitative analysis process. The resulting survey findings and results mainly contribute to the quality of higher education and adult education, especially in the field of media studies. Likewise, they align with or confirm previous contemporary empirical studies and research papers on the genealogical characteristics, habits, and ethos of the XYZ Generations, and particularly regarding the similarities among Xers and Zoomers, as well as that Generation Z can also be characterized as a "Sound Generation". An important conclusion of this research article is that the success of a lesson or even a lecture seems to depend (a) on the good design and/or development of the lesson plan itself, as well as (b) on the communication classroom where the educational praxis takes place. Finally, these survey findings and results are also considered encouraging and could be utilized (a) for any audiovisual-supported teaching–learning procedure for adult learners; (b) across various educational levels and disciplines; or even (c) for members other generational cohorts.

Keywords: media studies; advanced technologies; radio journalism; lesson plan; Xers; Millennials; Zoomers; higher education; adult education; radio studies



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1. Introduction

Radio journalism, nowadays, seems to be reviving through a plethora of technological and digital changes, as well as global events, timeless events, and phenomena [1–4], driven by advanced technologies [5–8] that affect the practice, product, and profession of the radio journalist [9–14], and, more particularly, during and especially after the COVID-19 pandemic [15–19]. Based on the literature [7,20–22], advanced technologies are defined as a

fusion of digital technologies and core-enabling technologies, and their latent purpose is admittedly to improve the quality of life of people with or without acquired skills in a wide range of daily activities such as communication, information consumption, entertainment, and interaction between them [23–25]. However, recent and contemporary empirical studies and research papers have shown that today’s people, especially the younger ones who belong to Generation Z, tend to use them empirically and theoretically, as well as without critical understanding, resulting in them being considered *digitally illiterate* [4,6,26–29].

Admittedly, nowadays, advanced technologies are primarily referred to as cutting-edge tools and fall under the umbrella term Information and Communications Technologies (ICTs) (i.e., ICT tools) [25,30], which are considered to be those developed in the new, improved digital era. Specifically, the landscape of ICT tools encompasses a wide variety and plethora of online platforms, applications, and services, as well as Internet-based devices [21–23,25,31–37] classified into four main categories: (a) Internet applications and services; (b) social media; (c) new media; and (d) mobile technologies [25] (p. 259). To better decipher these modern ICT tools that have now created “*digital technological socio-cultural, pop-cultural, and cross-cultural apocalyptic mandalas*” [23] (p. 76), and to make them better understood by the potential readers and researchers, a brief summary of them is provided in Table 1.

Table 1. Detailed breakdown of ICT tools, showing the variety and count of examples within four main categories.

ICT Tools Overview	
Main Categories	Main Sub-Categories with and/or Paradigms
1. Internet Applications and Services	a. Electronic mail (or e-mailing, e-mail, email, or mail) (email/s from here on) (such as, for example, Microsoft Outlook, Gmail by Google, etc.) and electronic mailing lists (such as, for example, Google Groups, Yahoo! Groups, etc.);
	b. Web browsers (such as, for example, Google Chrome, Microsoft Edge, Mozilla Firefox, etc.);
	c. Web search engines (such as, for example, Google, Microsoft Bing, Yahoo!, etc.) or specialized web search engines (also known as Internet-based academic engines such as Google Scholar by Google and Microsoft Academic by Microsoft Research, which was shut down on 31 December 2021);
	d. Internet Relay Chats (IRCs) (such as, for example, mIRC, XChat, etc.);
	e. File hosting services (such as, for example, Google Drive, Microsoft OneDrive, Dropbox, Mega, 4shared, etc.);
	f. Online bibliographic databases (such as, for example, ERIC, Scopus, Web of Science, PubMed, etc.);
	g. Online learning management systems (OLMSs) (such as, for example, Blackboard, Moodle, WebCT, as well as Wikis or even blogs, etc.);
	h. Online presentation software tools (such as, for example, Prezi, PowerPoint Online, Google Slides, LinkedIn SlideShare, Keynote, etc.);
	i. Online survey administration software tools (such as, for example, Google Forms, Microsoft Forms, SurveyMonkey, Survs.com, etc.);
	j. Business communication platforms (such as, for example, Microsoft Teams, Zoom Video Communications; Zoom, Webex by Cisco; WebEx, Skype for Business, etc.);
	k. Online game-based learning platforms (such as, for example, Kahoot!, GoSkills, Gametize, Edufiq, etc.), and so on;

Table 1. Cont.

ICT Tools Overview	
Main Categories	Main Sub-Categories with and/or Paradigms
2. Social Media	a. Social networking sites (SNSs) and online social networks (OSNs) (such as, for example, Facebook, LinkedIn, Twitter—now $\mathbb{X}$), etc.);
	b. Photo- or even video-sharing social networking services (such as, for example, Instagram, TikTok, Pinterest, Flickr, etc.);
	c. Audiovisual platforms (such as, for example, YouTube, Vimeo, DailyMotion, Netflix, etc.);
	d. Audiovisual platforms with interactivity (such as, for example, YouTube, Twitch, Netflix, etc.) as content hosting or even video-sharing sites that can be moved to the software-as-a-service (SaaS) model (such as, for example, a video posted on YouTube to take you to Netflix);
	e. Sound platforms (such as, for example, Mixcloud, Spotify, SoundCloud, etc.) as music or even other various audio and media content streaming services;
	f. Hypermedia authoring/storytelling platforms;
	g. Interactive websites or even weblogs/blogs or microblogs (such as, for example, interactive documentaries, etc.);
	h. Online communication applications and services (e.g., multimedia messaging apps/social messaging/social chat, such as Skype, Viber, Facebook Messenger, WhatsApp, Snapchat, etc.);
	i. Social networking websites for academics and scientists as databases for searching and extracting information and sources (such as, for example, Academia.edu, ResearchGate.net, etc.), and so on;
3. New Media	a. News portal;
	b. Internet radio/television (TV) or web radio/TV;
	c. Multimedia portals media-service providers as subscription video-on-demand over-the-top streaming (such as, for example, Netflix, Disney+, Max, Amazon Prime Video, Apple TV+, etc.); and finally
4. Mobile Technologies	a. Portable computers (such as, for example, personal computer; PC, laptop, tablet—e.g., tablet-PC and iPad—, netbook computer, etc.);
	b. Portable media players (PMP) or digital audio players (DAP) and multi-purpose mobile devices (such as, for example, Compact Disc (CD) players—e.g., CD Walkman, Digital Versatile Disc (DVD) players, Blu-ray Disc (BD) players, MP3 players—e.g., Sony's Walkman A810 and Apple's iPod Nano—, etc.);
	c. Personal digital assistants (PDAs);
	d. Cell phones, mobile phones, and smartphones;
	e. Foldable displays;
	f. Wearables (e.g., smartwatch, etc.);
	g. Global positioning system (GPS) devices;
	h. Wireless debit/credit card payment terminals;
	i. Smart home devices, and so on.

This research article explores and emphasizes the perspective of budding journalists towards advanced technologies implemented from and through them, in the form of an interactive radio-themed lesson. In particular, these budding journalists come from higher or adult education in Greece, specifically in the field of media studies (something which will be discussed below in Section 4.1). The interactive audiovisual-supported lesson, titled “*Radio Station Organization and Organization of News and Music Radio Production*” (something which will be discussed below in Section 3.1), was tailored so that anyone could follow it [38] (p. 162). Although the survey sample used for this survey is considered a convenience sample [39] (something which will be discussed below in Section 4.1), it was nevertheless not random because recent and contemporary empirical studies and the literature suggest that adult learners or students in the field of the media studies can more readily tailor to advanced technologies, due to journalism’s close ties with technological advancements [4,6,38,40–43]. Additionally, this particular survey sample explored comes from the three youngest generational cohorts with adults so far—Generation X (i.e., people

born from 1965 to 1979), Generation Y (i.e., people born from 1980 to 1994), and Generation Z (i.e., born from 1995 to 2012); XYZ Generations [44] (p. 200).

It is a fact that each generational cohort can be considered a historic neighborhood, shaped both by various and different global timeless events and by various technological or even media developments [3,44–50]. Likewise, in recent decades, there has been substantial debate about the analysis of generational cohorts and/or the identification of which generational cohort everyone may belong to [3,44,48,50]. Admittedly, analyzing each respective generational cohort and comparing it with the preceding or succeeding one is of great interest, specifically for the media ecosystem and audiovisual industry, the business world, and the public, which have popularized characteristic nicknames and/or colloquial names for these generational cohorts [3,44,48,50]. These nicknames and/or colloquial names are now widespread in research and academic literature as well [3,44,48,50]. Hence, the generational cohorts to be investigated in this research article, referred to above as XYZ Generations, are now popularly known as Xers, Millennials, and Zoomers, respectively [3,44,48,50].

In recapitulating, the scope of this research article is to make a significant contribution to the existing literature, seeking to bridge the current gap both through the resulting survey findings and results, as well as through the rich bibliographic literature and resources review utilized, since this specific topic has not yet been thoroughly explored. Admittedly, this is the research purpose (RP), and the endeavor is achieved through the implementation of two-fold research objectives (ROs) and research aims (RAs). More specifically, this research article is to provide information and data that will significantly add to the qualitative quality of higher education and adult education, and, more explicitly, to the utilization of advanced technologies within the framework of an audiovisual-supported teaching–learning procedure, which is the main research objective (RO1). Likewise, through discussion, the resulting perspectives of Xers, Millennials, and Zoomers regarding advanced technologies are comprehensively presented, thereby further contributing to the literature and the extent of internationalization of the mainstream archetypes in terms of the genealogical characteristics, habits, and ethos of XYZ Generations, which is a latent and second research objective (RO2) (i.e., as a sub-goal). On the other hand, it seeks to present, in-depth, the development of the interactive audiovisual-supported lesson plan (Section 3.1), which is used in this survey in order to contribute to the existing literature on radio-related program development and curricula, as the first research aim (RA1). Similarly, it also seeks to present the measuring instrument (Section 3.2), which is used in this survey in order to contribute again to this existing literature, as well filling any gap, as the second research aim (RA2).

In closing, it should be said that this research article is part of the research project “Audiovisual Media Communications in Media Studies of Radio Courses” (henceforth, AMC-MSRC), which was initiated in 2019, and which, in turn, is an integral part of a larger, ongoing original, innovative, multidisciplinary, and cross-cultural research project that incorporates media, audiovisual content, and education (henceforth, MACE). More precisely, the research project MACE investigates the employment of ICTs in higher education and adult education in Greece and the Republic of Cyprus (Cyprus from here on) in the light of media studies and broadcast journalism. Finally, the remainder of this research article is organized into four additional sections: (a) Section 2 briefly presents, through the application of the research technique of meta-synthesis [51], the international archetypal genealogical characteristics, habits, and ethos of adult members of today’s XYZ Generations (2024/25) under the prism of digital technological socio-cultural culture and media environment, based on relevant peer-reviewed literature reviews and systematic reviews from the research project MACE [3,44,48,50]; (b) Section 3 presents, in-depth, the framework of the applied research methodological approach; (c) Section 4 presents, justifies, and explains,

through discussion, the survey findings and results; and (d) Section 5 provides a sort of summary and conclusions.

2. Background Through Literature Review and/or Related Work

In recent decades, there has been significant debate around generational analysis and/or the identification of generational cohorts, particularly with XYZ Generations [3,44,48,50]. However, this is still at a very early stage in the academic field [3,44,48,50]. Undoubtedly, examining each generational cohort and comparing it to the previous or even subsequent one is an issue of considerable interest, particularly within the context of the media environment and industry, the business sector, and society, while in the last few years, also in the field of education [3,44,48,50]. Furthermore, in recent decades, the rapid evolution of ICTs and, especially, advanced technologies has contributed to a substantial increase in the production and global dissemination of multiple-multimodal content, alongside the widespread consumption of audiovisual material from and through the Internet [3,21,31–33,52–57]. Admittedly, this phenomenon is particularly evident among Zoomers and Millennials, as well as younger-age Xers, who increasingly integrate the use of the Internet and ICTs into all aspects of their daily lives, engaging in activities related to the production, processing, and management of multimodal media [3,44]. In this context, the international archetypal genealogical characteristics, habits, and ethos of XYZ Generations are briefly outlined, emphasizing their interaction with ICTs and advanced technologies, as well as with socio-cultural culture influences.

2.1. Xers

Xers seem to have experienced, or are continuing to experience, a unique blend of cultural and/or technological changes because they grew up reading books voraciously, listening to the radio fanatically, playing video games in arcades or at home, and dancing to disco music in clubs [44,48,58,59]. Likewise, during their adolescence, they appear to have first gained access to traditional TV and later to PCs, either at home or in educational institutions like secondary or high schools and universities [3,44,48,50]. Similarly, they also seem to have been profoundly influenced by globalization (e.g., through the development of the airline industry) and American mass culture, identifying with Hollywood blockbusters, emerging music genres (i.e., hip-hop, rap, and so on), and the growing popularity of televised music videos (i.e., video clips), which earned them the baptized name “MTV Generation” [3,50,58]. Admittedly, if one considers these, as well as the broader historical and global events that the Xers experienced (e.g., the threat of nuclear war, the onset of an economic crisis, the specter of unemployment, the socio-economic conditions, etc.) [48,50], there is logic that the literature also characterizes them as nontraditional [60,61], as well as the “Latchkey Generation” [62,63] and “Fear Generation” [64,65]. However, nowadays, Xers appear to have adapted remarkably well to modern technological advancements (e.g., forced to use the mobile phone while they are now using a smartphone and social media, such as, for example, OSNs, SNSs, etc.) [50] (p. 6).

It is also noteworthy that they grew up during the period of the hipster subculture, which encouraged exploration and self-awareness regarding sexual orientation and, to some extent, gender identity [59,66]. However, most Xers seem to have distanced themselves from these aspects, or forgotten or even renounced them as they transitioned into adulthood [50] (p. 6). On the other hand, culturally, Xers appear to have played a pivotal role in the proliferation of alternative rock movements with strong socio-racial identities from punk, post-punk, and heavy metal to grunge and grindcore [50] (p. 6). In short, the literature has highlighted that most Xers are often characterized by a strong belief in family values, with their lifestyles revolving around balancing relationships (i.e., friendships, family

relationships, etc.), enjoying life, and pursuing career success [48,50,60,61]. Similarly, they seem highly educated but exhibit skepticism, pessimism, and frustration, often challenging conventional norms [60,65,67,68]. Finally, they tend to show loyalty to specific brands and are known for significant spending, especially on housing, clothing, entertainment, and food [65].

In closing, it should be said that the Xers' communication approach in the current technological conditions is considered a challenge since they primarily favor traditional communication methods (e.g., traditional forms of radio and TV, word of mouth, social events, traditional correspondence, direct mail, telephone, and, occasionally, email) [60,61,69–71]. Overall, based on the literature, Xers appear to have played a crucial role in establishing the modern-day infrastructures that younger generational cohorts now rely on, which now hold a decisive role in the sustainability and success of every organization [60,61,65,67,68,72].

2.2. Millennials

Millennials seem to be characterized by a variety of identities (i.e., as digital nomads, digital natives, online active users, etc.), habits, attitudes, and behavioral traits, making them extremely diverse and unique [3,44,48,50]. Due to their idiosyncrasy, they have been central to many significant social phenomena (such as, for example, contemporary online socialization, the creation of Internet phenomena, media socio-phenomena, revival phenomena, etc.) on both national and international levels [3,50]. To summarize, they are widely regarded as one of the most innovative generational cohorts, since many of today's most prominent social media (such as Facebook and Instagram) were created by them [50] (p. 7), while they are also known for their enthusiasm for discovering and adopting the next big things [73].

Looking back in time, it is observed that as Millennials grew up, they experienced an era marked by rapid social change (e.g., divorce as a norm, AIDS, drug use, homelessness, gang violence, etc.) [60,61], ongoing media technological advancements (such as, for example, cable TV channels, satellite radio, etc.) [3,74], and significant social-economic transformations (i.e., greater gender equality in the workforce, dual-income households becoming the norm, growing acceptance of diverse family structures, heightened respect for cultural and ethnic diversity, the advent of PCs in homes and schools, etc.) [50,60,61]. Likewise, they were exposed to a wide musical spectrum from Xer artists like the Spice Girls, Backstreet Boys, Jennifer Lopez, Shakira, Pink, and Eminem, as well as Millennial superstars like Britney Spears, Christina Aguilera, Beyoncé, Katy Perry, Taylor Swift, Avril Lavigne, Kelly Clarkson, Justin Timberlake, t.A.T.u., Evanescence, and One Direction [50] (pp. 7–8). Furthermore, they were also among the first to grow up together with the Internet and a plethora of advanced technologies (such as, for example, email; web browsers, e.g., Internet Explorer, which was renamed to Microsoft Edge on 15 June 2022; web search engines, e.g., Google—which is why, sometimes, this generational cohort is additionally referred to as the “pre-Google Generation”, etc.) [3,50,62,75–77] as an integral part of their lives. Similarly, they used a range of mobile technologies (such as, for example, laptops, BlackBerrys, PDAs, iPods, GPS devices, cell phones, mobile phones, smartphones, etc.) [3,48,50], earning nicknames like the “Net Generation”, “DotNet”, “Ne(x)t Generation”, “Nexters”, “First Globals”, “iPod Generation”, and “iYGeneration” [78–82]. On the other hand, during their studies, many of them encountered OLMs (such as, for example, Blackboard, WebCT, Moodle, Wikis, or even blogs) or even virtual learning environments (VLE) (e.g., instructional videos, video or audio lectures, podcasts, vodcasts, etc.) [3,48], thus making them pioneers of digital education as online student precursors [50] (p. 8).

Admittedly, it is a fact that both traditional TV content initially and web TV content later have played and continue to play a significant role in shaping Millennials' upbringing

while influencing their perceptions and behaviors (such as, for example, popular American TV series portraying the daily lives of Xers characters) [3,44,48,50]. Although research indicates that while traditional TV is gradually losing its dominance [3,4,26], Millennials still show a preference for watching live broadcasts, such as sports matches or events on TV [74], while as adults, they seem to increasingly adopt new forms of TV viewing, particularly from and through the Internet utilizing advanced technologies, which accelerated further during the first wave of the COVID-19 pandemic [3] (p. 6). Also, compared to previous generational cohorts, the literature and research have shown that Millennials appear to have (a) less loyalty to various brands, (b) greater adaptability to environmental, socio-economic changes (e.g., due to the global financial crisis, many Millennials now cohabit with other peers as roommates or have returned to their paternal home after having lived on their own or even still live with their parents), and technological changes (such as, for example, from MP3 players and CD players to online audio players—e.g., Mixcloud, Spotify, SoundCloud, etc.—from cell mobile phones to smartphones, from traditional mass media to new or digital modern media, etc.), and (c) a keen interest in modern fashion and/or conscious style (e.g., emo style) [3,44,50]. To summarize, they tend to be particularly drawn to cutting-edge technologies and are known for their fascination with innovation [73].

Overall, Millennials are often described, on the one hand, as self-reliant, independent, optimistic, and goal-oriented, and, on the other hand, as prioritizing results over process and actively seeking recognition and acceptance, especially from their peers [3,50,60,61]. In addition, they were the first to use YouTube extensively, and many became what we now call YouTubers [50] (p. 9). Lastly, Millennials appear to travel extensively and have developed strong multitasking skills, which enable them to navigate the complexities of modern life, while their innovative spirit and adaptability continue to shape their generational cohort's impact on society and technology [3,61,67,74,83].

2.3. Zoomers

Zoomers are considered digital natives and were born in the midst of the era of digital technological communication (i.e., the era of the Internet and social media), and they are currently one of the youngest generational cohorts with adult members [4,26,84–86]. Likewise, it is a generational cohort that has grown up in a world shaped by significant global and timeless events, challenges, and phenomena (such as, for example, global terrorism, the aftermath of 9/11, school violence that has been now baptized as school bullying, economic uncertainty, recession, the old and new global financial crises, the COVID-19 pandemic, the new forms of climate change, the energy crisis, and the ongoing threat of a new world war) [3,44,48,50]. Also, despite being born in the social media era, many Zoomers are increasingly aware of privacy concerns and tend to limit their activity to specific social media (e.g., Instagram, Snapchat, TikTok, Twitch, and Tinder) or avoid them altogether [44] (p. 206).

Regarding their genealogical characteristics, lifestyles, and behaviors, Zoomers are generally seen as open-minded and willing to explore diverse experiences like the Xers in the period of the hipster subculture [50] (p. 10). Additionally, they identify with various sexual orientations and gender identities, demonstrate self-control and responsibility, and possess advanced technological literacy [3,48,50,87–89]. Moreover, they appear to find satisfaction with the multimedia and hypermedia content they access from and through the Internet and social media (such as, for example, via YouTube, Twitch, and Netflix, or even through illegal downloads from torrent sources) [26,50,90,91]. Undoubtedly, this attitude results in their avoidance of traditional TV screens, which is common for members of the previous generational cohorts, and, consequently, Zoomers reportedly consume a large amount of non-default TV content [4,26,42,85], while they are among the first to adopt

binge-watching and multi-screening [4,92–94], resulting in a characterization as the “Visual Generation” [95–97]. Lastly, in various educational environments, Zoomers often require constant stimulation to stay engaged, as they are prone to boredom and distraction while appearing to have complete apathy for new knowledge and media information (i.e., they could be called the “Apathetic Generation”) [50,86,91,98,99], even though they have specific views and empathy on a range of socio-political issues [29,86,91,100–102].

In closing, Zoomers are characterized by confidence, optimism, and readiness to take on new challenges [50,60,61,103]. Likewise, they believe in their ability to influence and reshape the world through imaginative and lateral thinking [50,60,61,103]. Additionally, they are largely responsible for creating the most renowned brands, technological innovations, and modern trends that shape today’s society [3,48,50,104]. Recently, especially after the COVID-19 pandemic, Zoomers have embraced a resurgence of the year 2000 (Y2K), bringing back to the fore the Millennials’ stylistic trends (e.g., tramp stamps, low-rise jeans, bandanas, transparent tops, etc.) [44,50]. All of these shifts are strongly reflected in international TV productions that depict the lives of Zoomer teenagers, which are aligned with the aesthetic and cultural trends of the time [3,44,50].

3. Materials and Methods

This research article contains empirical research that applies qualitative research methodology (i.e., a qualitative empirical research study). Specifically, it presents the views and attitudes of adult budding journalists (i.e., 18 years and older) after completing an interactive radio-themed lesson from and through advanced technologies. These budding journalists attended different media courses and studied media programs at different educational institutions of higher or adult education in Greece during the academic years 2018–2019, 2019–2020, and 2022–2023, respectively (something which will be discussed further in Section 4.1). The analysis of their views and attitudes was implemented based on two variables: (a) the age group (i.e., generational cohort) and (b) the gender (i.e., male, female, and other) of the budding journalists. To successfully complete this undertaking, research data collected through an evaluated measuring instrument were analyzed using the quantitative analysis process.

Admittedly, this measuring instrument is a specially designed written questionnaire with a qualitative and quantitative form (hereinafter called the evaluation form), which has already been peer-reviewed because it was also used in other surveys and studies within the context of the research project AMC-MSRC that have been published in high-ranking journal [38] and international conference proceedings [84,86], thus ensuring its validity and reliability [105]. Notably, the evaluation form consists of 11 statements corresponding to 11 parameters (i.e., statement parameters) (something which will be discussed below in Section 3.2) and was adapted from a previous form, which was revised both for the research project AMC-MSRC’s surveys and studies of the, and for, other research project MACE’s surveys and studies. More concretely, the original form used in the framework of the research project “Non-Verbal Communication” (henceforth, NVC) was selected [106–109]. Historically, this original form is based on the well-established and peer-reviewed “feedback form” originally developed by the Cyprus Pedagogical Institute, which is widely used in various educational and research actions across the institute [38] (p. 166). Accordingly, it has also been extensively applied in numerous surveys and studies for research papers in both Greece and Cyprus [108,110–112].

Recapitulating, this particular survey is also considered a *case study experiments* that applied, on the one hand, qualitative action research [36,113–115] with quasi-experiments [116] (pp. 139–141), and, on the other hand, the non-widespread research method of the qualitative experiment method (previously named as comparative grouping

method) [117–119] that utilizes technology-enhanced research methods [36,120]. The total research data were collected after six face-to-face qualitative experiments via interactive teachings utilizing advanced technologies (hereinafter called the interactive audiovisual-supported teaching/s) from 2019 to 2022. For the record, this survey was initially expected to be completed in 2020. However, the outbreak of the COVID-19 pandemic delayed the survey process, and it was ultimately concluded in 2022, thus creating two unexpected survey phases. Specifically, the first survey phase was implemented before the COVID-19 pandemic and consists of the first four qualitative experiments carried out from May 2019 to October 2019. Likewise, the second survey phase with the remaining two qualitative experiments was implemented in October 2022, a few months before the pandemic officially and theoretically ended in May 2023 [121]. Undoubtedly, these two unexpected survey phases acted as a recheck and cross-check of the survey findings and results among them, thus implementing the verification research method [122]. Additionally, it should also be mentioned that the first three qualitative experiments of the first survey phase were conducted during the last lecture of each course, respectively, as a repetition lesson (i.e., the first survey part). On the other hand, the fourth qualitative experiment of the first survey phase and all the qualitative experiments of the second survey phase were conducted during the second lecture of each course, respectively, as compulsory course material (i.e., the second survey part). Due to this context, and for the purposes of this research article, it provides the possibility to develop two main research hypotheses (RHs) to test the statistical significance both among unexpected survey phases and among survey parts, which is investigated only in a specific statement parameter of the evaluation form in order to help better answer the RO1 (something which will be discussed below in Section 3.3).

All qualitative experiments were conducted in different places (i.e., venues—in this case, different communication classrooms), at different times (i.e., morning, midday, afternoon, and evening), and in different periods (i.e., season—winter, spring, summer, and autumn; or month). However, they were all performed by the same educator/lead researcher, used the same basic triptych of advanced technologies, educational communication tools, and classroom equipment (i.e., educational communication tools and services: PC, overhead projector—projected visual materials via presentation software, video projection—video, speakers—sound and audio media and presentation remote control, as well as board and markers) lasted the same duration (i.e., 90 min.) and used exactly the same presentation through an online presentation software package (i.e., audiovisual content). Also, at this point, it should be said for the flow of the story that this interactive audiovisual-supported teaching format was also based on a previous lesson plan of the same name mentioned above (i.e., “Radio Station Organization and Organization of News and Music Radio Production”), and the general topics addressed were sound and audio (Section 3.1). Specifically, it was used for the first time as a lecture in 2013 in the journalism program for adult learners at the Adult Education Centers of the then-Ministry of Education and Culture (1994–2019) (since 2022, it has been renamed the Ministry of Education, Sport, and Youth) of Cyprus during the academic year 2013–2014 in the city of Larnaca, Cyprus [38] (p. 162).

In summary, it should also be mentioned that this research article and, more explicitly, the research project MACE has received approval and clearance to be implemented from the School of Journalism and Mass Communications (SJMC from here on) of the Aristotle University of Thessaloniki (AUTH from here on) in April 2016 (158/13-4-2016). Additionally, after approval and clearance, and prior to conducting the first qualitative experiment, a survey pilot study was conducted to undergo relevant testing [123] (p. 204) as a method of checking the validity of the content of the interactive radio-themed lesson [38] (p. 162). In this case, five Greek PhD candidates of the AUTH’s SJMC were conscripted as experts in

the field [124] to participate in this survey pilot study in March 2019 [38] (p. 162). At the same time, another pilot study was conducted in order to establish the applicability and effectiveness of the evaluation form before its use, which started in March 2019 and ended in April 2019 [112] (pp. 13–14) (something which will be discussed below in Section 3.2). Also, all qualitative experiments were conducted in the respective educational institutions after relevant approval and permission, while the budding journalists who participated in them have signed the written informed consent protocol.

In closing, and to provide potential readers and researchers with a clearer understanding of the inquiry stages of this survey in chronological order, the research timeline is listed in the form of a chart, shown in Figure 1. Finally, the rest of the section is organized into three sub-sections. More concretely, (a) the first sub-section presents the research interactive audiovisual-supported lesson plan template (Section 3.1); (b) the next sub-section details the peer-reviewed evaluation form (Section 3.2); and, finally, (c) the last sub-section discusses the processing and analysis of research data, including the name and version of the software used (Section 3.3).

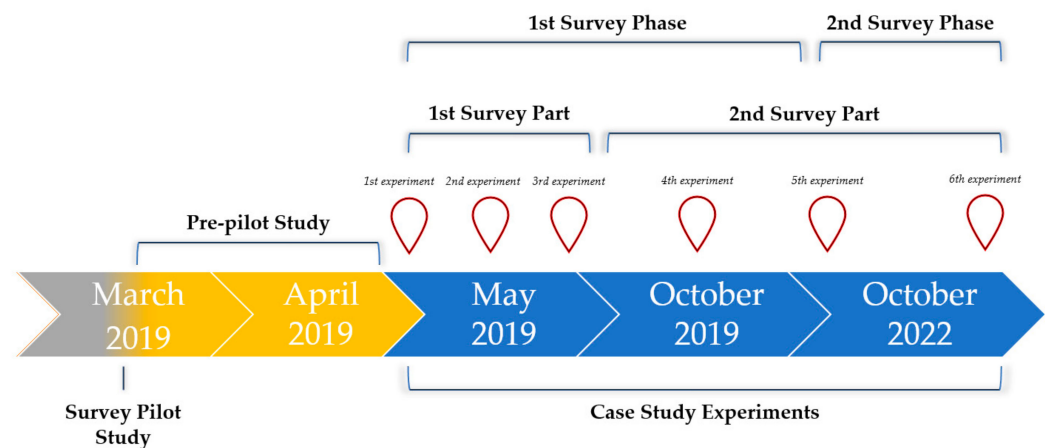


Figure 1. The framework of the embedded inquiry stages followed in this survey (March 2019 to October 2022).

3.1. Audiovisual-Supported Lesson Plan: The Teaching Methodological Approach and Strategy Behind the Interactive Radio-Themed Lesson—RA1

The audiovisual-supported lesson plan used in this case study experiments was based, as mentioned above, on a previous lesson plan (hereinafter called the initial lesson plan), which had been based on the Ioannidou–Koutselini’s curriculum development at the micro level [125] as a main educational theory. More precisely, the edification and differentiation of teaching practices in a mixed class had been applied as suggested by Koutselini–Ioannidou [126] as an educational methodological approach [38] (p. 163). Also, this had been combined with theoretical approaches to adult education, as proposed by Courau [127], as well as the teaching methodology employing means of communication (i.e., audiovisual media technologies), as suggested by Kanakis [128], as a new, more modern approach to adult education [129,130]. Additionally, the following resources were used: (a) audio samples and excerpts from works and audio spots (i.e., audio media files) created by undergraduate students in the courses “Audio Production”, “Radio Production”, and “Production and Presentation of Radio News” at the University of Nicosia (UNIC) (Nicosia, Cyprus) between 2007 and 2012; and (b) enriched sound and audio spots (i.e., a sample of work) created by the MediaZone (a UNIC’s service support center) until 2012 [38] (p. 163).

The new audiovisual-supported lesson plan extended the above educational methodological approach by tailoring to the demands of the contemporary profession of radio journalism and/or producer and emphasizing legal issues in technology-related ar-

eas [6,11,22,131–133]. More concretely, the theory of audiovisual media in education [40], as emerged in the context of the research project MACE, was accurately implemented [38] (p. 163) through the digital storytelling methodology [134] using the differentiated teaching methodology [40] (p. 7), while webcasting skills were adopted as core journalists' ICT skill [135] (p. 65). Similarly, the five sequential stages of group development in Caple's theoretical model (i.e., orientation, conflict, integration, achievement, and order stages) [136] were applied, while the 3P (i.e., preage, process, and product) model learning [137] (p. 397) in the communication classroom was also applied, drawing primarily on von Glasersfeld's constructivist theory [138], which posits that learners (including the students of any educational levels and disciplines) of any age can learn anything [139,140]. Additionally, the main educational activities of the interactive audiovisual-supported lesson plan were like those in the initial lesson plan, which were based on the same educational activities from another evaluated and tested lesson plan [38] (p. 164). More specially, these activities are (a) exercises of representation; (b) exercises of memory activation; (c) brainstorming; (d) guided didactic discussion and learning discussions with experiential education; (e) awakening and plenary debate; and, finally (f) meta-cognitive knowledge and evaluating meta-cognitive skill [38] (p. 164). To summarize, both the initial and new audiovisual-supported lesson plans had the same duration (i.e., 90 min.) and the same basic educational communication tools and services (i.e., PC, overhead projector—projected visual materials via presentation software, video projection—video, speakers—sound and audio media, and presentation remote control, as well as board and markers) [38] (p. 163).

In the context of the implementation of the six qualitative experiments, it was also necessary to tailor the initial presentation of the initial lesson plan. Specifically, the new presentation of the interactive audiovisual-supported lesson plan was tailored to modern trends in interactive radio, as suggested by the literature [6,11,14,124,133], thus incorporating contemporary elements, which are used as distribution tools or promotional tools and/or creative tools for new audiovisual content for a radio show and/or radio music show, such as, for example, (a) SNSs or OSNs (e.g., LinkedIn, Facebook, etc.); (b) sound platforms (e.g., Mixcloud, SoundCloud, Spotify, etc.); (c) audiovisual platforms or even audiovisual platforms with interactivity (e.g., YouTube, Twitch, etc.); and (d) photo- or even video-sharing social networking services (e.g., Instagram, TikTok, Pinterest, etc.) [33,48,54,56,141]. In addition, this new presentation was enriched with additional multimodal content and materials, including (a) several selected audio spots (e.g., radio jingle, news clips, podcasts, top five, etc.) from local music and news radio stations in Thessaloniki; (b) audio spots that had been created by adult learners in the radio-TV media module from the "Kostis Palamas" program at the school in Thessaloniki, under the supervision of AUTH's SJMC from October to November 2015; and (c) case studies from the Greek-Cypriot Radio Station of the University of Cyprus, UCY Voice (a student radio station with local reach in Nicosia on 95.2 FM and pancyprian reach in Cyprus via Internet streaming and an Android app) such as (i) various UCY Voice's audio spots that had been created by university students up to 2015, and (ii) audio clips from UCY Voice's weekly 1-hour radio music show "*Music is Emotion*" ("*Η μουσική είναι συναίσθημα*" in Greek language), from 2013 to 2015; and, finally, (d) video created as part of the research project MACE [38] (pp. 164–165). At this point, it should also be mentioned that the utilization of these multimodal content and materials was conducted after the relevant permission and approval of the creators, or even the aforementioned companies/organizations/structures/institutions [38] (pp. 162–163).

To summarize, the main educational communication tool used in this case study experiments involved visual media, and, more specifically, the projected visual materials through the presentation software package (i.e., the presentation) [38] (p. 162). This choice was not accidental, since the modern literature states that there is a plethora of advantages

and benefits of integrating educational communication tools and services into the teaching–learning procedure [1,23,25,34,35,40,142]. In this case, the presentation software package chosen to provide advanced and improved interactivity was the specialized online platform Prezi (i.e., an online presentation software tool). Admittedly, this platform is an Adobe Flash-based web presentation software to create interactive visuals for virtual presentations with slides that hold text, images, video, and animations to facilitate the delivery of information in an engaging, inspiring, and educational manner [143–148]. Unlike other presentation software, Prezi uses a canvas as the main window, navigating by zooming in and out of different points rather than using traditional slides [143]. Undeniably, Prezi is regarded as an innovative application and advanced technology, as well as a highly effective educational communication tool and service for enhancing knowledge acquisition and audiovisual skills (e.g., listening skills) [145–147].

Finally, in the new presentation, the existing multimodal content and materials (such as, for example, podcasts, sound and audio spots, videos, etc.) were also revised and enriched through applications and/or Internet applications and services [11,124,149,150], with the aim of better understanding theory in practice and considering the special and inherent characteristics of the audience that would watch it based on the parameters of quality of learning (QoL) related to sound and audio media (e.g., the physical characteristics of the initial material, the poor material that can lead to a negative emotional response, etc.) [11,151–155]. Notably, the initial multimodal content and materials of the initial lesson plan were upgraded or even updated with a rich set of audiovisual contents (such as, for example, music/songs, sound effects—also known as; a.k.a. SFX, music covers and investments, snapshots from TV content, etc.) after performing sound/music mixing and editing using Adobe Audition (version 3.0), Audacity (version 2.1.3), and WaveLab (version 7) music software suites, or even video editing and post-production using (a) software applications such as Movie Maker (version 10) and Freemake Video Convert (version 4.1.10); (b) Magisto by Vimeo (version 6.2.4.20511) mobile application; and (c) YouTube Studio online service [38] (pp. 164–165).

3.2. Evaluation Form: The Measuring Instrument—RA2

The evaluation form was based, as mentioned above, on a previous peer-reviewed form, and is divided into three sections that include quantitative questions, as well as an open-ended qualitative question, respectively [38] (p. 166):

1. The first section constituted 11 quantitative statement questions based on the ratio scale of the Likert [156] and, more explicitly, on a five-point Likert scale [123] (pp. 112–114). For better presentation purposes, these quantitative statement questions were coded, thus obtaining 11 corresponding parameters (i.e., statement parameters) (Table 2). The coding is based on the dynamic model of educational effectiveness, as suggested by Kyriakidis and his collaborators [157] (p. 13), while the five-point Likert scale is related to the degree of satisfaction with their quality (i.e., 1 = “very poor” to 5 = “excellent”) [38] (p. 166). More specifically, the final statement parameters (hereinafter referred to as parameter/s) correspond to (a) “expectations”, (b) “organization”, (c) “interesting suggestions”, (d) “discussion time”, (e) “development issues” (i.e., if they were interesting), (f) “questions/answers” at the end of the interactive audiovisual-supported teaching, (g) “knowledge” acquired (i.e., theoretical background investigation), (h) “time” (i.e., time conducted), (i) “venue”, the “period” (i.e., when it took place), and (j) “educational tools and services” (i.e., advanced technologies, educational communication tools, and classroom equipment), which were used in the interactive audiovisual-supported teaching [38] (p. 166);

2. The second section constituted one open-ended question (i.e., qualitative format) concerning the budding journalists' opinions, the provision of feedback, the identification of problems, and the evaluation of potential or possible solutions for the interactive radio-themed lesson utilizing advanced technologies (i.e., comments or even suggestions) [38] (p. 166). It is now widely recognized in the research literature that an open-ended question allows participants to provide as much detailed information as they wish [116] (pp. 184–185); and, finally,
3. The third section constituted questions about the profile and demographics (i.e., gender—male, female, and other; and age groups based on generational cohorts—Zoomers born from 1995 to 2012, Millennials born from 1980 to 1994, and Xers born from 1965 to 1979) of the budding journalists who would participate in this survey.

Table 2. The original 11 quantitative statement questions of the evaluation form, freely translated from Greek to English, along with their corresponding coded parameter.

	Original Quantitative Statement Questions	Coded Parameters
1.	Overall, the lecture met your expectations.	Expectations
2.	The organization of the lecture satisfied you.	Organization
3.	The suggestions were interesting.	Interesting Suggestions
4.	The time allocated for the discussion was sufficient.	Discussion Time
5.	The topics were developed with interest.	Development Issues
6.	At the end of the lecture, questions and concerns were discussed.	Questions/ Answers
7.	Your theoretical background was expanded.	Knowledge
8.	To what extent were you satisfied with the time the lecture took place?	Time
9.	To what extent were you satisfied with the venue where the lecture was held?	Venue
10.	To what extent were you satisfied with the time period of the lecture?	Period
11.	To what extent were you satisfied with the advanced technologies/educational communication tools/classroom equipment used?	Educational Tools and Services

In closing, it should be noted that the evaluation form was also evaluated prior to its use within the context of the research project MACE from March to April 2019 as a kind of pilot study under the title pre-pilot study [112] (pp. 13–14) (Figure 1), with the aim of achieving cultural adaptation through the proposed procedures and strategies for rendering culture-specific concepts (henceforth, CSCs) [158,159]. The final sample who participated in the pre-pilot study was 22 Greek or Greek–Cypriot active adult educators (i.e., 18 years old and older) from different cities of Greece (i.e., Thessaloniki, Drama, Alexandroupoli, and Heraklion—Crete) and Cyprus (i.e., Nicosia and Limassol) (10 active adult educators from Greece and 12 active adult educators from Cyprus) [110] (p. 975), using the phenomenological methodological tool of the unstructured interview method [160] through conventional and modern media [36,120,161–164] and following the cognitive debriefing process (i.e., as a kind of testing [123]) [116] (p. 197). Arguably, this cross-cultural and geographical diversity of the sample further ensures and enhances the value of this pilot study [159]. Also, the conclusions that emerged were that (a) there were no ambiguities in the wording of the questions of all the questionnaires, as well as that (b) the questions had not caused any fatigue or irritation, and, finally, that (c) it did not take more than 5 min. (on average) for all questionnaires to be answered [110] (p. 975). Lastly, the most significant research finding that emerged from the above procedure is that the adult educators underlined the value of the evaluation form, which can also be considered as a self-evaluation tool [112] (p. 14).

3.3. Research Data Processing and Analysis

The descriptive and statistical analysis were implemented from and through Internet applications and services [36,120] and, more explicitly, via the specialized online platform

Survys.com and the IBM Statistical Package for Social Sciences (SPSS) (version 29). Also, for the purposes of this research article, only the research data from the evaluation form's first section (i.e., the parameters—quantitative research data) were studied, analyzed, and presented in relation to the research data from the evaluation form's third section (i.e., by gender and/or generational cohorts—quantitative research data) or based on the unexpected survey phases, survey parts, and/or each experiment separately.

In the context of both the better presentation of the research data and interpretation of the survey findings and results [165], the research data used were grouped into four main segments in order to answer the ROs, as well as the corresponding RHs. More precisely, the first segment is called “organization of acquired knowledge” and includes seven parameters in relation to (a) the “expectations”, (b) the “organization”, (c) the “interesting suggestions”, (d) the “discussion time”, (e) the “development issues”, the “questions/answers”, and (f) the “knowledge”. Then, the second segment is named “spatial technical/logistical infrastructure” and includes four parameters in relation to (a) the “time”, (b) the “venue”, (c) the “period”, and (d) the “educational tools and services”. Subsequently, the third segment is baptized “audiovisual-supported lesson plan” and also includes four parameters associated with this interactive radio-themed lesson, which are (a) the “organization”, (b) the “interesting suggestions”, (c) the “development issues”, and (d) the “educational tools and services”, while the last and fourth segment is titled “educational tools and services” since it includes only the homonymous parameter, “educational tools and services”. To summarize, all the segments help to answer the RO1, the second and third segments help to answer the RO2, and only the fourth section specifically helps answer the RHs.

Overall, the first two segments (i.e., Sections 4.2.1 and 4.2.2, respectively) are examined separately by gender, generational cohort, and each experiment, while the third segment (in Section 4.2.4) is examined as a whole based on the diptych of generational cohort and gender. Likewise, regarding the last and fourth segment (in Section 4.2.4), it is examined as a whole based on (a) the triptych of survey phases, survey parts, and each experiment, as well as (b) the diptych of survey phases and survey parts as independent samples via *t*-test from SPSS in order to test their statistical significance and answer the two aforementioned RHs that were developed:

RH1: *It is expected that there will be a significant statistical difference in perspective of budding journalists among the two unexpected survey phases in relation to educational tools and services, since the first survey phase was implemented before the COVID-19 pandemic, while the second survey phase took place a few months before the pandemic officially and theoretically ended, during which the lessons and/or courses were necessarily held online utilizing advanced technologies; and finally.*

RH2: *It is also expected that there will be a significant statistical difference in perspective of budding journalists among the two survey parts in relation to educational tools and services, since the experiments' first survey part were conducted during the last lecture of each course, respectively, as a repetition lesson, while the experiments' second survey part was conducted during the second lecture of each course, respectively, as compulsory course material.*

Overall, the grouping of the research data, admittedly, was considered highly necessary for the purposes of this research article because each qualitative experiment as mentioned was conducted in different places (i.e., venue), at different times, and in different periods. Similarly, each communication classroom was structured differently and held its own different classroom equipment (e.g., one communication classroom was equipped with an interactive whiteboard, another with an audio system and a working console, etc.), which, in a sense, is considered part of advanced technologies [166,167].

Regarding the internal reliability of quantitative questions, it was checked using the “Cronbach’s alpha” index through SPSS. More concretely, the overall internal reliability of the 11 parameters from the evaluation form’s survey was found to be $\alpha = 0.738$, while the corresponding internal reliability for each segment separately with the corresponding individual parameters was found to be (a) $\alpha = 0.664$ for the first segment; (b) $\alpha = 0.600$ for the second segment; and (c) $\alpha = 0.615$ for the third segment. At this point, it should be said that the fourth segment was not checked for internal reliability because it consists, as mentioned above, of only one parameter, the parameter of the “educational tools and services”. However, the *t*-test for independent samples through SPSS was applied in this case with respect to the two unexpected survey phases and the two survey parts for the purpose of its validation or refutability. Furthermore, the corresponding internal reliability for each overall qualitative experiment separately was found to be (a) $\alpha = 0.702$ for the first experiment; (b) $\alpha = 0.766$ for the second experiment; (c) $\alpha = 0.695$ for the third experiment; (d) $\alpha = 0.768$ for the fourth experiment; (e) $\alpha = 0.763$ for the fifth experiment; and, finally, (f) $\alpha = 0.823$ for the sixth experiment. In addition, in the two unexpected survey phases were found to be (a) $\alpha = 0.720$ for the first survey phase and (b) $\alpha = 0.782$ for the second survey phase, while the two survey parts were found to be (a) $\alpha = 0.773$ for the first survey part and (b) $\alpha = 0.708$ for the second survey part. To summarize, all of these percentages provide assurance of the internal reliability of the research data and are, therefore, characterized as acceptable and satisfactory, since the α is between 0.600 and 0.900 [168] and, thus, reliable and creditable.

In closing, it should also be mentioned that the collected quantitative research data from the 11 parameters of the evaluation form’s survey were additionally analyzed by applying the Pearson’s *r* correlation analysis method through SPSS in order to further contribute to the achievement of the RO1 (Section 4.3). Also, the software used to visualize the research data and generate them as interactive color infographics and graph or diagram form through various types of charts (i.e., as figures) were (a) Microsoft PowerPoint 365[®] (version 2403); (b) Microsoft Paint (version 22H2); and (c) the specialized online platform Piktochart. Based on the relevant literature, it is defined that the visualization of the research data helps the better assimilation and interpretation by the potential readers and researchers [165,169–172]. Lastly, all survey findings and results are presented in the next section (Section 4) as figures, and/or tables—either overall or individually, also in single tables, in double entry tables with frequencies and/or relative frequencies (i.e., percentages), average values (or mean values; MEAN), and standard deviations (SD) based in part on the most recent American Psychological Association (APA) style guide [173] (at the time of writing this article) after analysis through Survs.com and SPSS, and following the relevant literature, which is based on the guidelines from the APA [116,123], while the ROs and the RHs are presented based on the flow of the discussion.

4. Survey Findings and Results from and Through Discussion

4.1. Survey Sample Characteristics and Descriptive Statistics

The final survey sample of this case study of six qualitative experiments consists of a convenience sample of 135 adults budding journalists (i.e., 18 years old and older) who were active media learners from higher and adult education in Greece at the time each experiment was conducted, respectively. Therefore, it can be characterized as a Catholic Greek case study. More precisely, (a) the first experiment includes 26 university students in the course “Radio Journalism”, who attended the undergraduate study program of AUTH’s SJMC in Thessaloniki during the academic year 2018–2019 (AUTH’s SJMC 1); (b) the second experiment includes 22 university students in the course “Web Radio”, who were studying in one of the then-offered postgraduate study programs of AUTH’s SJMC in Thessaloniki

during the academic year 2018–2019 (AUTH’s SJMC 2); (c) the third experiment includes 14 learner students in the course “Organization–Production–Presentation of Radio Shows”, who enrolled in the sports journalism program at the Public Vocational Training Institute (Δημόσιο Ινστιτούτο Επαγγελματικής Κατάρτισης/Δ.ΙΕΚ in Greek language) (D.IEK in the official abbreviation for English language) in Sindos (Thessaloniki, Greece) (IEK from here on) during the academic year 2018–2019; (d) the fourth experiment includes 31 university students in the course “Radio Journalism”, who attended the undergraduate study program of AUTH’s SJMC in Thessaloniki during the academic year 2019–2020 (AUTH’s SJMC 3); (e) the fifth experiment includes 10 university students in the course “Web Radio”, who were studying in one of the then-offered postgraduate study programs of AUTH’s SJMC in Thessaloniki during the academic year 2022–2023 (AUTH’s SJMC 4); and, finally, (f) the sixth experiment includes 32 university students in the course “Radio Journalism”, who attended the undergraduate study program of the Department of Communication and Digital Media (DCDM from here on) of the University of Western Macedonia (UWM from here on) in Kastoria (Greece) during the academic year 2022–2023 (Figure 2 and Table 3). Unquestionably, the final survey sample is considered sufficient to cover the needs of a survey or even study (i.e., ≥ 100 participants) [174], as well as the corresponding survey sample size of each qualitative experiment, respectively (i.e., ≥ 10 participants) [175,176], thereby ensuring the validity of both the case study and each qualitative experiment, respectively [116,177,178].

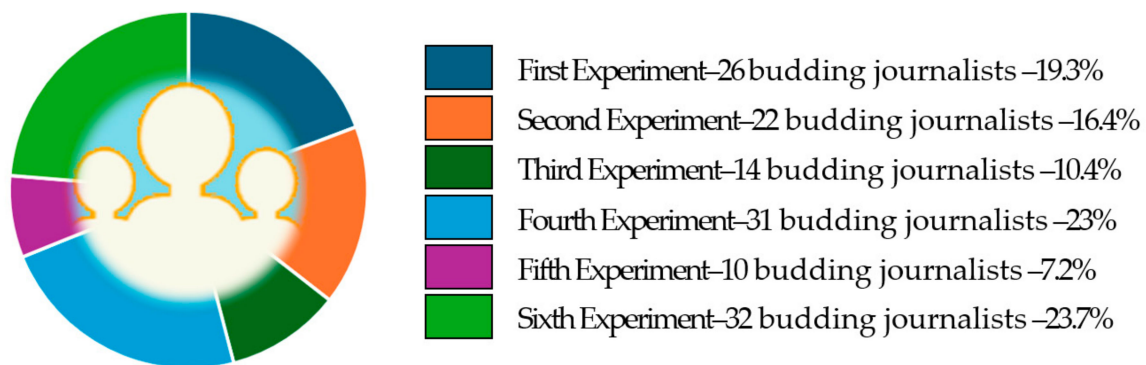


Figure 2. Budding journalists’ demographics per experiment.

Table 3. The statistical distribution of the variable of gender per experiment.

	First Experiment ¹			Second Experiment ²			Third Experiment ³			Fourth Experiment ⁴			Fifth Experiment ⁵			Sixth Experiment ⁶		
	f	%		f	%		f	%		f	%		f	%		f	%	
Male	8	30.8%	6%	12	54.5%	9%	10	71.4%	7.4%	9	29%	6.7%	3	30%	2.2%	17	53.1%	12.6%
Female	18	69.2%	13.3%	10	45.5%	7.4%	4	28.6%	3%	22	71%	16.3%	7	70%	5.2%	15	46.9%	11.1%
Subtotal	26	100%	19.3%	22	100%	16.4%	14	100%	10.4%	31	100%	23%	10	100%	7.2%	32	100%	23.7%

¹ Undergraduates students, AUTH’s SJMC 1. ² Postgraduate students, AUTH’s SJMC 2. ³ Learners, IEK. ⁴ Undergraduates students, AUTH’s SJMC 3. ⁵ Postgraduate students, AUTH’s SJMC 4. ⁶ Undergraduates students, UWM’s DCDM.

Following the budding journalists’ responses from the evaluation form, the final statistical distribution of the gender’s variable included only men and women, even though an “other” option was provided (see Section 3.2). Specifically, (a) 59 males with a percentage of 43.7%; and (b) 76 females with a percentage of 56.3% (Figure 3). Arguably, this survey finding is unexpected considering the genealogical characteristics, lifestyles, habits, behaviors, and ethos of the literature-based generational cohorts (Section 2), and particularly those of Generation Z (Section 2.3), whose members are generally considered to be open-minded [44,50,86] and constitute the majority of this survey sample (i.e., 118 Zoomer budding journalists with a percentage of 87.3%) (Table 4). Admittedly, it could be safely

said that Greek Zoomers are not as open-minded as their international peers. Nevertheless, this may be an isolated survey result that requires further investigation, as a later and more recent different study conducted with the same survey sample does not appear to confirm it [179]. Furthermore, this survey finding can also be characterized as replicable, as it appears to be a common occurrence for adult woman media learners studying media studies to dominate as an overall survey sample in empirical studies, particularly in various empirical studies and surveys conducted in Greece [4,6,180]; however, this does not seem to hold true at each experiment of this survey (Table 3). In short, more details can be found in Tables 3–5 in order to have a comprehensive view of the demographics of the budding journalists who participated in this survey.

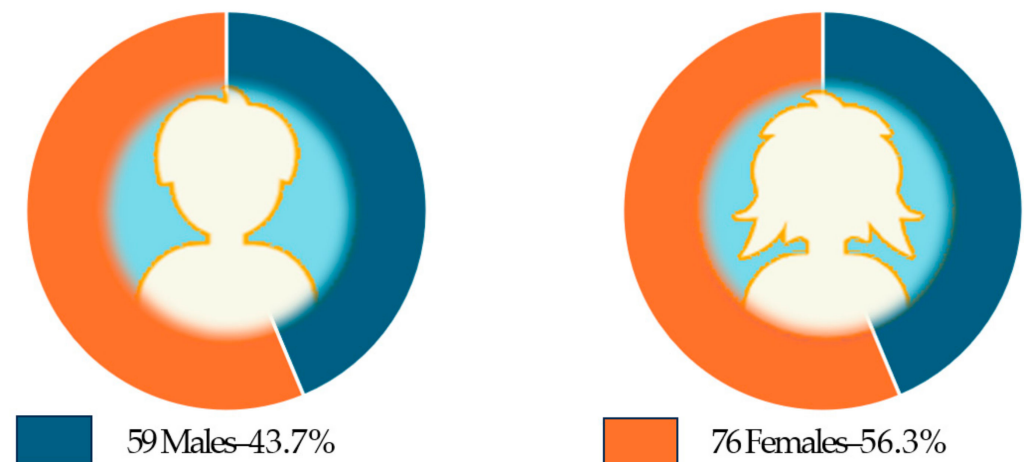


Figure 3. Budding journalists' demographics per gender.

Table 4. The statistical distribution of the variable of gender per generational cohort.

	Xers			Millenials			Zoomers		
	f	%		f	%		f	%	
Male	4	50%	3%	4	44.4%	3%	51	43.2%	37.7%
Female	4	50%	3%	5	55.6%	3.7%	67	56.8%	49.6%
Subtotal	8	100%	6%	9	100%	6.7%	118	100%	87.3%

Table 5. The statistical distribution of the variable of generational cohort per experiment.

	First Experiment ¹			Second Experiment ²			Third Experiment ³			Fourth Experiment ⁴			Fifth Experiment ⁵			Sixth Experiment ⁶		
	f	%		f	%		f	%		f	%		f	%		f	%	
Xers	4	15.4%	3%	4	18.2%	3%	-	-	-	-	-	-	-	-	-	-	-	-
Millenials	5	19.2%	3.7%	4	18.2%	3%	-	-	-	-	-	-	-	-	-	-	-	-
Zoomers	17	65.4%	12.6%	14	63.6%	10.4%	14	100%	10.4%	31	100%	23%	10	100%	7.2%	32	100%	23.7%
Subtotal	26	100%	19.3%	22	100%	16.4%	14	100%	10.4%	31	100%	23%	10	100%	7.2%	32	100%	23.7%

¹ Undergraduates students, AUTH's SJMC 1. ² Postgraduate students, AUTH's SJMC 2. ³ Learners, IEK. ⁴ Undergraduates students, AUTH's SJMC 3. ⁵ Postgraduate students, AUTH's SJMC 4. ⁶ Undergraduates students, UWM's DCDM.

4.2. Interactive Radio-Themed Lesson—ROI

4.2.1. First Segment: Organization of Acquired Knowledge

Based on the overall grouped responses of this survey regarding the degree of satisfaction from the first main segment of the evaluation form, related to the “organization of acquired knowledge”, they predominantly range from Options 3 to 5 (i.e., “fair” to “excellent”) on the five-point Likert scale (Table 6). Arguably, the highest overall percentage appears to be Option 5 (i.e., “excellent”) in this segment and is observed in the parameter assessing the effectiveness of the “questions/answers” at the end of the interactive

radio-themed lesson (i.e., 106 budding journalists with a percentage of 78.5%) (MEAN: 4.75 and SD: 0.529) (Table 6). Similarly, it should be noted that this parameter also has the highest overall average value compared to the other parameters (i.e., MEAN: 4.75) (Table 6). To summarize, these survey findings and results clearly indicate that facilitating a healthy dialogue through communication between the educators and learners plays a critical role in a teaching–learning procedure, which mainly depends on the educators themselves, who must have this ability to encourage this interaction and skill as well [3,6,23,25,40,112,181–183]. As a final conclusion, it could be mentioned that direct communication with educators seem to allow for real-time problem solving, which also facilitates the consolidation of knowledge [25].

Table 6. Fully grouped subtotal responses from the evaluation form based on “acquired knowledge organization”.

Degree of Satisfaction	Very Poor	Poor	Fair	Good	Excellent	N	Mean	SD	α
Expectations	-	-	9–6.7%	75–55.6%	51–37.8%	135	4.31	0.592	0.664
Organization	-	-	11–8.1%	60–44.4%	64–47.4%		4.39	0.636	
Interesting	-	-	15–11.1%	52–38.5%	68–50.4%		4.39	0.681	
Suggestions	-	-	19–14.1%	31–23%	85–63%		4.49	0.732	
Discussion Time	-	-	9–6.7%	57–42.2%	69–51.1%		4.44	0.619	
Development Issues	-	-	3–2.2%	25–18.5%	106–78.5%		4.75	0.529	
Questions/Answers	-	1–0.7%	18–13.3%	60–44.4%	56–41.5%		4.27	0.714	
Knowledge	-	1–0.7%							

Furthermore, following the statistical analysis in relation to gender (Table 7) and generational cohort (Table 8), as well as for each respective experiment (Table 9), the same survey finding based on the overall is observed. It is noteworthy that during the statistical analysis, it is also observed that the parameter of the “questions/answers” has the same corresponding same average value and SD with the parameter of the “expectations” in relation to Xers (MEAN: 4.63 and SD: 0.518) (Table 8), as well as with the parameter of the “discussion time” in relation to the third experiment (MEAN: 4.71 and SD: 0.611) (Table 9). On the other hand, it should be noted that the parameter with the lowest overall average value is the parameter of the “knowledge” that budding journalists felt they had acquired (theoretical background investigation) on the subject (MEAN: 4.27 and SD: 0.714) (Table 6), something which is often described in the literature as highly subjective and varies for each individual [184]. In this context, it should also be mentioned that the statistical analysis in relation to gender (Table 7) and generational cohort (Table 8), as well as for each respective experiment (Table 9), showed some variables to have the lowest average value in a different parameter. Specifically, in the statistical analysis regarding gender (Table 7), it showed the parameter of the “expectations” in relation to females (i.e., MEAN: 4.38 and SD: 0.610) (Table 7). Likewise, in the statistical analysis regarding generational cohorts (Table 8), it showed (a) together the parameters of the “development issues” and the “knowledge” in relation to Xers (i.e., MEAN: 4.25 and SD: 0.707) (Table 8) and (b) the parameter of the “development issues” in relation to Millennials (i.e., MEAN: 4.22 and SD: 0.833) (Table 8). In addition, in the statistical analysis regarding each experiment (Table 9), it showed the parameter of the “discussion time” in relation to the second experiment (MEAN: 4.32 and SD: 0.894) (Table 9) and fifth experiment (MEAN: 4.40 and SD: 0.966) (Table 9); (b) together, the parameters of the “organization” and the “knowledge” in relation to third experiment (i.e., MEAN: 4.21 and SD: 0.802) (Table 9); and (c) the parameter of the “expectations” in relation to fourth experiment (MEAN: 3.97 and SD: 0.482) (Table 9).

Table 7. Statistics and frequencies from the evaluation form in relation to gender based on “acquired knowledge organization”.

		Parameter Questions							α
		Expectations	Organization	Interesting Suggestions	Discussion Time	Development Issues	Questions/Answers	Knowledge	
Males	N	59	59	59	59	59	59	59	0.664
	Mean	4.22	4.25	4.27	4.36	4.39	4.69	4.08	
	SD	0.559	0.604	0.665	0.760	0.588	0.623	0.794	
Females	N	76	76	76	76	76	76	76	0.664
	Mean	4.38	4.50	4.49	4.59	4.49	4.79	4.41	
	SD	0.610	0.643	0.683	0.696	0.643	0.442	0.615	

Table 8. Statistics and frequencies from the evaluation form in relation to generational cohort based on “acquired knowledge organization”.

		Parameter Questions							α
		Expectations	Organization	Interesting Suggestions	Discussion Time	Development Issues	Questions/Answers	Knowledge	
Xers	N	8	8	8	8	8	8	8	0.664
	Mean	4.63	4.50	4.38	4.50	4.25	4.63	4.25	
	SD	0.518	0.535	0.518	0.926	0.707	0.518	0.707	
Millennials	N	9	9	9	9	9	9	9	0.664
	Mean	4.44	4.56	4.56	4.33	4.22	4.89	4.56	
	SD	0.726	0.527	0.726	0.866	0.833	0.333	0.726	
Zoomers	N	118	118	118	118	118	118	118	0.664
	Mean	4.28	4.37	4.38	4.50	4.47	4.75	4.25	
	SD	0.583	0.651	0.691	0.713	0.595	0.542	0.715	

In short, these survey findings and results are indeed very interesting and should be further investigated. However, the most interesting survey finding that definitely needs to be further investigated is what emerged from the statistical analysis based on generational cohorts, in which it is observed that the average values between Xers and Zoomers are closer than among Millennials (Table 8), while there are some that are the same (e.g., the parameters of the “interesting suggestions” with MEAN: 4.38, the parameters of the “discussion time” with MEAN: 4.50, and the parameters of the “knowledge” with MEAN: 4.25) (Table 8). All of this thus confirms the literature that states that Zoomers have common behaviors, views, and attitudes with Xers [50,59,185,186]. Similarly, it could be safely said that Greek Zoomers are probably like their international peers, who tend to be Xers [50,59,185,186], thus rejecting the famous Prensky theory about the gap across the generational cohorts [187,188]. Furthermore, these survey findings and results now align with survey findings and results from empirical studies and research papers and, more explicitly, with the survey findings and results of another related cross-cultural study from the research project MACE with Greek and Greek–Cypriot participants [110,112], suggesting the need to further investigate this particular issue.

Table 9. Statistics and frequencies from the evaluation form per experiment based on “acquired knowledge organization”.

		Parameter Questions							α
		Expectations	Organization	Interesting Suggestions	Discussion Time	Development Issues	Questions/Answers	Knowledge	
First Experiment ¹	N	26	26	26	26	26	26	26	0.664
	Mean	4.50	4.42	4.35	4.58	4.31	4.88	4.23	
	SD	0.510	0.643	0.689	0.703	0.736	0.326	0.710	
Second Experiment ²	N	22	22	22	22	22	22	22	
	Mean	4.50	4.41	4.50	4.32	4.36	4.68	4.36	
	SD	0.673	0.503	0.673	0.894	0.727	0.477	0.848	
Third Experiment ³	N	14	14	14	14	14	14	14	
	Mean	4.36	4.21	4.36	4.71	4.36	4.71	4.21	
	SD	0.745	0.802	0.745	0.611	0.633	0.611	0.802	
Fourth Experiment ⁴	N	31	31	31	31	31	31	31	
	Mean	3.97	4.26	4.39	4.68	4.39	4.77	4.23	
	SD	0.482	0.682	0.667	0.541	0.558	0.497	0.617	
Fifth Experiment ⁵	N	10	10	10	10	10	10	10	
	Mean	4.50	4.60	4.60	4.40	4.80	4.90	4.60	
	SD	0.527	0.516	0.516	0.966	0.422	0.316	0.699	
Sixth Experiment ⁶	N	32	32	32	32	32	32	32	
	Mean	4.28	4.50	4.31	4.28	4.59	4.63	4.19	
	SD	0.523	0.622	0.738	0.729	0.499	0.707	0.693	

¹ Undergraduates students, AUTH's SJMC 1. ² Postgraduate students, AUTH's SJMC 2. ³ Learners, IEK. ⁴ Undergraduates students, AUTH's SJMC 3. ⁵ Postgraduate students, AUTH's SJMC 4. ⁶ Undergraduates students, UWM's DCDM.

To recap, the above survey findings and results based on the overall average values in the “acquired knowledge organization” are considered encouraging for the success of this interactive radio-themed lesson, since the average values of its parameters have scores above 4.00 (Table 6), while they also help to achieve RO1. Further details on the fully grouped subtotal responses of budding journalists from “acquired knowledge organization” can be found in Table 6, as well as in the individual tables, from Tables 7–9.

4.2.2. Second Segment: Spatial Technical/Logistical Infrastructure

The overall grouped responses regarding the degree of satisfaction from the second main segment of the evaluation form, related to the “spatial technical/logistical infrastructure”, range mainly from Options 2 to 5 (i.e., “poor” to “excellent”) on the five-point Likert scale (Table 10). Unquestionably, the highest overall percentage appears to be Option 4 (i.e., “good”) in this segment and is observed in the parameter assessing the effectiveness of the “period” (i.e., 72 budding journalists with a percentage of 53.3%) (MEAN: 4.24 and SD: 0.660) (Table 10). Nevertheless, the parameter with the highest overall average value is the parameter of the “educational tools and services” (i.e., MEAN: 4.37 and SD: 0.780) (Table 10), highlighting the key role it plays in the implementation of a lesson or even a lecture [3,23,40,110,112]. Conversely, the parameter with the lowest overall average value in this segment is the parameter of the “venue” (MEAN: 3.68 and SD: 0.729) (Table 10). Admittedly, these are very interesting survey findings and results because they simultaneously confirm, again, corresponding survey findings and results of another related cross-cultural study of the research project MACE with Greek and Greek–Cypriot participants [110,112].

In addition, after statistical analysis with respect to gender (Table 11) and generational cohort (Table 12), as well as for each respective experiment (Table 13), the same survey result is observed regarding the parameter of the “educational tools and services” (Tables 11–13), except with respect to the third experiment in which the highest average value is in the parameters of the “time” and “period” (Table 13). Furthermore, the parameter of the “educational tools and services” in relation to gender have the same highest average value

(Table 11) with the highest overall average value (Table 10) (i.e., MEAN: 4.37). Moreover, it is noteworthy that during the statistical analysis, it is also observed that the parameter of the “educational tools and services” has the same corresponding same and highest average value with the parameter of the “period” in relation to fourth experiment (i.e., MEAN: 4.26) (Table 13).

Table 10. Fully grouped subtotal responses from the evaluation form based on “spatial technical/logistical infrastructure”.

Degree of Satisfaction	Very Poor	Poor	Fair	Good	Excellent	N	Mean	SD	α
Time	-	4–3%	22–16.3%	60–44.4%	49–36.3%		4.14	0.793	
Venue	1–0.7%	3–2.2%	49–36.3%	67–49.6%	15–11.1%		3.68	0.729	
Period	-	1–0.7%	14–10.4%	72–53.3%	48–35.6%	135	4.24	0.660	0.600
Educational Tools and Services	1–0.7%	2–1.5%	13–9.6%	49–36.3%	70–51.9%		4.37	0.780	

Table 11. Statistics and frequencies from the evaluation form in relation to gender based on “spatial technical/logistical infrastructure”.

		Parameter Questions				α
		Time	Venue	Period	Educational Tools and Services	
Males	N	59	59	59	59	0.600
	Mean	4.08	3.80	4.24	4.37	
	SD	0.794	0.714	0.597	0.786	
Females	N	76	76	76	76	
	Mean	4.18	3.59	4.24	4.37	
	SD	0.795	0.734	0.709	0.780	

Table 12. Statistics and frequencies from the evaluation form in relation to generational cohort based on “spatial technical/logistical infrastructure”.

		Parameter Questions				α
		Time	Venue	Period	Educational Tools and Services	
Xers	N	8	8	8	8	
	Mean	3.88	3.75	3.75	4.63	
	SD	0.991	0.463	1.035	0.518	
Millennials	N	9	9	9	9	0.600
	Mean	3.89	3.89	4.33	4.78	
	SD	1.054	0.782	0.866	0.441	
Zoomers	N	118	118	118	118	
	Mean	4.18	3.66	4.26	4.32	
	SD	0.758	0.742	0.605	0.805	

Regarding the lowest average value, it is noticed that during the statistical analysis, it is not the same in relation to the overall one, which highlighted the parameter of the “venue” (MEAN: 3.68 and SD: 0.729) (Table 10). In particular, it is observed in the statistical analysis for the genealogical cohort that the parameter of the “venue” in relation to Xers (i.e., MEAN: 3.75 and SD: 0.463) (Table 12) has the same lowest average value but different SD as the parameter of the “period” (i.e., MEAN: 3.75 and SD: 1.035) (Table 12). Similarly, the parameter of the “venue” in relation to Millennials (i.e., MEAN: 3.89 and SD: 0.782) (Table 12) has the same lowest average value but different SD as the parameter of the “time” (i.e., MEAN: 3.89 and SD: 1.054) (Table 12). Additionally, the lowest average value in the second experiment is also observed to be the parameter of the “time” (i.e., MEAN: 3.77 and SD: 0.973) (Table 13) instead of the overall parameter of the “venue” in the statistical analysis

for the experiments (i.e., MEAN: 3.68 and SD: 0.729) (Table 10). At this point it should be said that both the first experiment and the fourth experiment were conducted in the same communication classroom but in a different time and period. Based on the statistical analysis, it is observed that, in both these cases, the parameter of the “venue” emerged with the same and lowest average value (i.e., MEAN: 3.58) compared to the others but with a different SD (Table 13), thus leading to the safe conclusion that the communication classroom where an educational praxis takes place does, indeed, play a decisive role.

Table 13. Statistics and frequencies from the evaluation form per experiment based on “spatial technical/logistical infrastructure”.

		Parameter Questions				α
		Time	Venue	Period	Educational Tools and Services	
First Experiment ¹	N	26	26	26	26	0.600
	Mean	4.15	3.58	4.12	4.31	
	SD	0.732	0.643	0.766	0.736	
Second Experiment ²	N	22	22	22	22	
	Mean	3.77	3.86	4.23	4.59	
	SD	0.973	0.774	0.813	0.503	
Third Experiment ³	N	14	14	14	14	
	Mean	4.29	3.21	4.29	3.29	
	SD	0.825	1.051	0.611	1.069	
Fourth Experiment ⁴	N	31	31	31	31	
	Mean	4.19	3.58	4.26	4.26	
	SD	0.654	0.672	0.575	0.729	
Fifth Experiment ⁵	N	10	10	10	10	
	Mean	4.20	3.80	4.40	4.80	
	SD	0.632	0.632	0.699	0.422	
Sixth Experiment ⁶	N	32	32	32	32	
	Mean	4.25	3.91	4.25	4.72	
	SD	0.842	0.588	0.568	0.457	

¹ Undergraduates students, AUTH’s SJMC 1. ² Postgraduate students, AUTH’s SJMC 2. ³ Learners, IEK. ⁴ Undergraduates students, AUTH’s SJMC 3. ⁵ Postgraduate students, AUTH’s SJMC 4. ⁶ Undergraduates students, UWM’s DCDM.

In summary, following the above survey findings and results, a two-fold conclusion is drawn. In particular, the educational tools and services that had been used in the framework of the interactive radio-themed lesson can be considered useful for acquiring knowledge due to the highest overall average value of the corresponding parameter (MEAN: 4.37 and SD: 0.780) in Table 10. Additionally, the parameter of the “venue”, after the survey findings and results both in the aggregate and in the statistical analysis in relation to gender, generational cohort, and each experiment separately, is now considered a critical and determining factor in the delivery of a lesson or even a lecture, and this should be explored further. In short, these survey findings and results should be taken very seriously by educators in higher education and adult education in order to utilize mainly to facilitate the internal quality assurance process of education [23,25,183]. Accordingly, they help, on the one hand, RO1, and, on the other hand, RO2 in relation to the perspective of XYZ Generations regarding advanced technologies. More details on the fully grouped subtotal responses of budding journalists from “spatial technical/logistical infrastructure” can be found in Table 10, as well as in the individual tables from Tables 11–13.

4.2.3. Third Segment: Audiovisual-Supported Lesson Plan

According to the survey findings and results from the statistical analysis, it can be confidently stated that the interactive audiovisual-supported lesson plan (Section 3.1) is

considered successful, since all 24 average values obtained in relation to the corresponding parameters are above 4.00 (Table 14). In particular, 15 out of 24 are between 4.00 and 4.49 (i.e., with a percentage of 62.5%) (Table 14), 3 of 24 with 4.50 (i.e., with a percentage of 12.5%) (Table 14), and 6 over 4.51 (i.e., with a percentage of 25%) (Table 14). This leads one to conclude that the utilization of a proven and well-established lesson plan is crucial because both learners and educators can reap its benefits [3,112,134,189,190]. Likewise, time can be saved by using certain aspects of the lesson plan (e.g., educational activities, educational tools and services, etc.) [3,112,134,189,190]. Additionally, it is also observed that Millennials tend to have a more willful attitude compared to other generational cohorts, while the views of Xers and Zoomers again tend to be close, thus reaffirming the literature that states that Zoomers tend to have common behaviors, views, and attitudes with the Xers [50,59,185,186], while this situation seems to be encountered in another related cross-cultural study from the research project MACE with Greek and Greek–Cypriot participants [110,112]. Admittedly, this could be characterized as a replicable phenomenon and should definitely be further investigated. Similarly, it could safely be said again that Greek Zoomers are probably like their international peers who tend to be Xers [50,59,185,186], thus again rejecting the famous Prensky theory about the gap across the generational cohorts [187,188]. Conclusively, these specific survey findings and results (Table 14), on the one hand, contribute in part to the achievement of RO2 and, by extension, RO1, and, on the other hand, to the extent of the literature on the genealogical characteristics, habits, and ethos of XYZ Generations. Lastly, more details are provided in Table 14, which should definitely be further explored in the future.

Table 14. Statistics and frequencies from the evaluation form in relation to generational cohort and gender based on the “audiovisual-supported lesson plan”.

			Parameter Questions				α
			Organization	Interesting Suggestions	Development Issues	Educational Tools and Services	
Xers	Males	N	4	4	4	4	0.615
		Mean	4.25	4.25	4.00	4.50	
		SD	0.500	0.500	0.000	0.577	
	Females	N	4	4	4	4	
		Mean	4.75	4.50	4.50	4.75	
		SD	0.500	0.577	1.000	0.500	
Millennials	Males	N	4	4	4	4	
		Mean	4.25	4.25	4.00	4.75	
		SD	0.500	0.957	0.816	0.500	
	Females	N	5	5	5	5	
		Mean	4.80	4.80	4.40	4.80	
		SD	0.447	0.477	0.894	0.447	
Zoomers	Males	N	51	51	51	51	
		Mean	4.25	4.27	4.45	4.33	
		SD	0.627	0.666	0.577	0.816	
	Females	N	67	67	67	67	
		Mean	4.46	4.46	4.49	4.31	
		SD	0.659	0.703	0.612	0.802	

4.2.4. Fourth Segment: Educational Tools and Services

Based on the statistical analysis regarding the fourth segment, it is observed that the degree of satisfaction from the parameter of the “educational tools and services” predominantly ranges from Options 4 to 5 (i.e., “good” to “excellent”) on the five-point Likert scale (Table 15). Specifically, in five out of six experiments, the highest percentage is recorded in

Option 5 (i.e., “excellent”), while in one experiment, it is in Option 4 (i.e., “good”) (Table 15). This leads to the conclusion that budding journalists appear to clearly emphasize that they have a positive attitude towards the utilization of these educational tools and services used in this lesson plan, thus also contributing to the achievement of RO2 in general as well as the solvency of the lesson plan itself. Similarly, this situation also appears to align with the survey findings and results of other relevant peer-reviewed studies from research project MACE [3,110,112], thus providing validity and reliability to both this survey and the research project MACE itself. Furthermore, it is observed that the two experiments conducted after the COVID-19 pandemic had a higher average value, explicitly in the fifth experiment (MEAN: 4.80 and SD: 0.422) (Table 15) and the sixth experiment (MEAN: 4.72 and SD: 0.457) (Table 15). Undeniably, this is surprising, considering that, less than a year ago, these budding journalists were taking their courses online utilizing advanced technologies, which was expected to make them more judgmental about these educational tools and services, thus necessitating further investigation.

Table 15. Fully grouped subtotal responses from the evaluation form based on “educational tools and services”.

			Educational Tools and Services					N	Mean	SD	
			Very Poor	Poor	Fair	Good	Excellent				
First Survey Phase	First Survey Part	First Experiment ¹	-	-	4–15.4%	10–38.65%	12–46.2%	26	4.31	0.736	
		Second Experiment ²	-	-	-	9–40.5%	13–59.1%	22	4.59	0.503	
		Third Experiment ³	1–7.1%	2–14.3%	4–28.6%	6–42.9%	1–7.1%	14	3.29	1.069	
	Second Survey Part	Fourth Experiment ⁴	-	-	5–16.1%	13–41.9%	13–41.9%	31	4.26	0.729	
Second Survey Phase		Fifth Experiment ⁵	-	-	-	2–20%	8–80%	10	4.80	0.422	
		Sixth Experiment ⁶	-	-	-	9–28.1%	23–71.9%	32	4.72	0.457	
			Degree of Satisfaction								
First Survey Phase				1–1.1%	2–2.2%	13–14%	38–40.9%	39–41.9%	93	4.20	0.841
Second Survey Phase				-	-	-	11–26.2%	31–73.8%	42	4.74	0.445
First Survey Part				1–1.6%	2–3.2%	8–12.9%	25–40.3%	26–41.9%	62	4.18	0.897
Second Survey Part			-	-	5–6.8%	24–32.9%	44–60.3%	73	4.53	0.625	

¹ Undergraduates students, AUTH’s SJMC 1. ² Postgraduate students, AUTH’s SJMC 2. ³ Learners, IEK. ⁴ Undergraduates students, AUTH’s SJMC 3. ⁵ Postgraduate students, AUTH’s SJMC 4. ⁶ Undergraduates students, UWM’s DCDM.

On the other hand, according to the survey findings and results of the *t*-test’s statistical analysis for independent samples through SPSS, with respect to the two unexpected survey phases and the two survey parts, there does not appear, however, to be a statistically significant difference in their average values (Table 16). Admittedly, this arose because they both had an average value above 4.00 (Tables 15 and 16), resulting in the rejection of RH1 and RH2. To be more precise, the analysis indicated (a) $t(133) = -3.869$, $p < 0.001$ for the two unexpected survey phases, with the second survey phase having a higher average value compared to the first survey phase (4.74 ± 0.445 and 4.20 ± 0.841 , respectively) (Table 16); and (b) $t(133) = -2.712$, $p < 0.001$ for the survey parts, with the second survey part having a higher average value compared to the first survey part (4.53 ± 0.625 and 4.18 ± 0.897 , respectively) (Table 16).

Table 16. Survey findings and results of the statistical analysis from independent samples *t*-test in relation to the two unexpected survey phases and the two survey parts based on “educational tools and services”.

Educational Tools and Services		N	Mean	SD	t	df	Sig.
Survey Phases	First Survey Phase	93	4.20	0.841	−3.869	133	0.001
	Second Survey Phase	43	4.74	0.445			
Survey Parts	First Survey Part	62	4.18	0.897	−2.712	133	0.087
	Second Survey Part	73	4.53	0.625			

Overall, these survey findings and results (Tables 15 and 16) obviously contribute to achieving RO1, as well as their recheck and cross-check; however, the latter needs further research analysis and investigation in the future. Likewise, they also show that the utilization of these educational tools and services used in this lesson plan does not appear to be affected by whether it was a repetition lesson or a compulsory course material, something that should definitely also be investigated in the future. Finally, additional information and details regarding the grouped subtotal responses of budding journalists on the parameter of the “educational tools and services”, as well as the results of the statistical analysis from independent sample *t*-tests, are provided in Tables 15 and 16, respectively.

4.3. Statistical Criteria: Correlations

According to the performed correlation analysis, the survey findings and results showed that there is a statistically significant positive correlation with the essential parameters that essentially concern the interactive radio-themed lesson (i.e., the parameters of the “organization”, “interesting suggestions”, “development issues”, and “educational tools and services”), something that can be considered as the informal success of the interactive audiovisual-supported lesson plan (Section 3.1) by the budding journalists (Table 17). Notably, a statistically significant positive correlation is observed between (a) the parameter of the “organization” and the parameter of the “interesting suggestions” ($r = 0.365, p < 0.01$) (Table 17); and (b) the parameter of the “development issues” and the parameter of the “interesting suggestions” ($r = 0.362, p < 0.01$) (Table 17). Likewise, there is a low yet positive correlation between (a) the parameter of the “development issues” and the parameter of the “organization” ($r = 0.293, p < 0.01$) (Table 17); (b) the parameter of the “educational tools and services” and the parameter of the “interesting suggestions” ($r = 0.286, p < 0.01$) (Table 17); (c) the parameter of the “educational tools and services” and the parameter of the “development issues” ($r = 0.244, p < 0.01$) (Table 17); and (d) the parameter of the “educational tools and services” and the parameter of the “organization” ($r = 0.201, p < 0.05$) (Table 17). To summarize, it would be very interesting if all the above parameters had a statistically significant positive correlation to each other because it would allow advanced data analysis methods to be applied [191] that would present possible analytical modeling of the interactive audiovisual-supported lesson plan (Section 3.1), thus providing it a further validity than that which had already emerged in Section 4.2.3.

Table 17. Pearson's r correlation test for the 11 parameter questions of educational effectiveness.

		Expectations	Organization	Interesting Suggestions	Discussion Time	Development Issues	Questions/Answers	Knowledge	Time	Venue	Period	Educational Tools and Services
Expectations	Pearson Correlation	1	0.327 **	0.361 **	0.180 *	0.211 *	0.109	0.279 **	0.256 **	0.197 *	0.249 **	0.217 *
	Sig. (2-tailed)		0.000	0.000	0.036	0.014	0.207	0.001	0.003	0.022	0.004	0.011
Organization	Pearson Correlation	0.327 **	1	0.365 **	0.066	0.293 **	0.185 *	0.195 *	0.126	0.046	0.097	0.201 *
	Sig. (2-tailed)	0.000		0.000	0.450	0.001	0.031	0.023	0.144	0.593	0.265	0.019
Interesting Suggestions	Pearson Correlation	0.361 **	0.365 **	1	0.031	0.362 **	0.235 **	0.550 **	0.228 **	0.058	0.273 **	0.286 **
	Sig. (2-tailed)	0.000	0.000		0.719	0.000	0.006	0.000	0.008	0.502	0.001	0.001
Discussion Time	Pearson Correlation	0.180 *	0.066	0.031	1	0.093	0.224 **	0.020	0.472 **	−0.028	0.268 **	−0.084
	Sig. (2-tailed)	0.036	0.450	0.719		0.281	0.009	0.818	0.000	0.750	0.002	0.331
Development Issues	Pearson Correlation	0.211 *	0.293 **	0.362 **	0.093	1	0.048	0.270 **	0.312 **	0.134	0.343 **	0.244 **
	Sig. (2-tailed)	0.014	0.001	0.000	0.281		0.579	0.002	0.000	0.121	0.000	0.004
Questions/Answers	Pearson Correlation	0.109	0.185 *	2.35 **	0.224 **	0.048	1	0.278 **	0.263 **	0.100	0.130	0.083
	Sig. (2-tailed)	0.207	0.031	0.006	0.009	0.579		0.001	0.002	0.248	0.134	0.338
Knowledge	Pearson Correlation	0.279 **	0.195 *	0.550 **	0.020	0.270 **	0.278 **	1	0.144	0.093	0.150	0.170 *
	Sig. (2-tailed)	0.001	0.023	0.000	0.818	0.002	0.001		0.096	0.285	0.083	0.049
Time	Pearson Correlation	0.256 **	0.126	0.228 **	0.472 **	0.312 **	0.263 **	0.144	1	0.194 *	0.520 **	0.181 *
	Sig. (2-tailed)	0.003	0.144	0.008	0.000	0.000	0.002	0.096		0.024	0.000	0.036
Venue	Pearson Correlation	0.197 *	0.046	0.058	−0.028	0.134	0.100	0.093	0.194 *	1	0.282 **	0.353 **
	Sig. (2-tailed)	0.022	0.593	0.502	0.750	0.121	0.248	0.285	0.024		0.001	0.000
Period	Pearson Correlation	0.249 **	0.097	0.273 **	0.268 **	0.343 **	0.130	0.150	0.520 **	0.282 **	1	0.133
	Sig. (2-tailed)	0.004	0.265	0.001	0.002	0.000	0.134	0.083	0.000	0.001		0.125
Educational Tools and Services	Pearson Correlation	0.217 *	0.201 *	0.286 **	−0.084	0.244 **	0.083	0.170 *	0.181 *	0.353 **	0.133	1
	Sig. (2-tailed)	0.011	0.019	0.001	0.331	0.004	0.338	0.049	0.036	0.000	0.125	

* Correlation was significant at the 0.05 level (two-tailed). ** Correlation was significant at the 0.01 level (two-tailed).

Additionally, it should be noted that the strongest correlation from the performed correlation analysis is between the parameter of the “interesting suggestions” and the parameter of the “knowledge” ($r = 0.550$, $p < 0.01$) (Table 17). Undeniably, this survey finding is indeed very interesting, considering that the parameter of the “knowledge” had the lowest average score in the fully grouped subtotal responses from the evaluation form (i.e., MEAN: 4.27 and SD: 0.714) (Table 6). Also, this correlation confirms the literature that they are inextricably linked, especially in relation to technological pedagogical content knowledge [23,25,40,183,192–195], as the interactive radio-themed lesson was designed and implemented utilizing advanced technologies. Furthermore, two more statistically significant positive correlations are also observed between (a) the parameter of the “expectations” and the parameter of the “interesting suggestions” ($r = 0.361$, $p < 0.01$) (Table 17); and (b) the parameter of the “expectations” and the parameter of the “organization” ($r = 0.327$, $p < 0.01$) (Table 17). Moreover, this statistical analysis also showed that the most non-correlated factors among the parameters are the parameter of the “venue”, highlighting again the crucial importance of communication classroom, which also contributes to the overall learner experience [134]. In general, all these survey findings and results are characterized as particularly very interesting and should be investigated further. Finally, more details about these correlations are provided in Table 17.

5. Conclusions

This research article explored budding journalists’ views and attitudes from Greece on an interactive radio-themed lesson that was designed and implemented utilizing advanced technologies. Although the survey findings and results of this survey could be more easily applicable to specific generational cohorts (i.e., XYZ Generations) of adult learners attending radio journalism courses or studying media studies in higher education or adult education, they may also be beneficial for other educational levels and disciplines, or even other generational cohorts. Similarly, they could be used for the substantive and essential quality, on the one hand, of the journalistic profession’s education, and, on the other hand, of the general pedagogical knowledge provided from and through the use of advanced technologies because their utilization can enable both journalists and other people, in general, to actively participate in the ever-changing landscape of modern information distribution [48,86]. Moreover, leveraging information from a proven and well-established lesson plan is considered vital, as it allows both learners and educators to reap its benefits [3,112,134,189,190].

Unquestionably, the most important conclusions to emerge from the survey findings and results based on budding journalists’ responses from the evaluation form in Section 4 are three-fold. Specifically, the first highlights that the success of a lesson or even a lecture seems to depend largely on the clarity with which the knowledge offered is organized through a well-developed and well-structured lesson plan and, by extension, the utilization of the appropriate educational communication tools and services (see Section 3.1). In particular, in this case, it appears to enhance budding journalists’ understanding of the content and encourages active participation in the teaching–learning procedure due to the survey findings and results that emerged in Section 4.2.1, Section 4.2.3, Section 4.2.4, and Section 4.3, thus making the specific plan a prototype. Then, second conclusion underlines the similarities and/or differences among the generational cohorts that emerged after the analysis of the research data (see Sections 4.2.1 and 4.2.3), emphasizing the need for personalized teaching–learning approaches tailored to the generational cohort of the learners. Finally, the third and final conclusion also underscores the critical importance of the communication classroom as a space where educational praxis occurs (see Sections 4.2.2 and 4.3), which should be taken very seriously henceforth.

Additionally, all these survey findings and results also seem aligned with the survey findings and results of other related cross-cultural studies, such as the research project MACE with adult educators [3,38,110,112] or research project NVC with adult learners [106–109], both of them from Greece and Cyprus, thus providing validity and reliability to this survey and, by extension, to the research project AMC-MSRC. Likewise, they are further aligned with the genealogical characteristics, habits, and ethos of XYZ Generations as reported in the literature (see Section 2), and, more specifically, they confirm the modern literature about Generation Z, which is also characterized as a “Sound Generation” [38,43,84,86,179,186,196] since most of the survey sample of this survey consisted of Zoomers (i.e., 118 Zoomer budding journalists with a percentage of 87.3%) (Table 4 in Section 4.1) and the general topic of audiovisual-supported teaching was sound and audio (Section 3.1). In short, all of this contributes to media education and, more specifically, to radio journalism, and, by extension, to the pantheon of radio studies that were further revived during the COVID-19 pandemic due to the popularity of podcasts in the educational environment [38,43].

Overall, the triptych of using, implementing, and utilizing advanced technologies from and through a lesson plan and, more explicitly, in the field of media studies, in general, is admittedly considered a unique challenge for educators [110,112,183]. On the one hand, there are the new learners, particularly those belonging to Generation Z and studying in the field of media studies, who seem to tailor more easily to advanced technologies [4,6,38–43], and, on the other hand, there are the rapid technological advancements in the digital media landscape that overwhelm us [1–4]. Obviously, all this theoretically makes the educators’ job difficult, and, in particular, in the case of educators in media studies education [38,197,198]. However, with the implementation of the appropriate ICT skills and the correct utilization of advanced technologies [23,25,183], the success of any or each lesson plan can be taken for granted [6,38,110,112].

In summary, it should be mentioned that the survey findings and results from this survey, unfortunately, cannot allow their generalization to the population or a generational cohort against certain limitations imposed, such as, for example, the small number of the final survey sample due to the fact that this particular survey is qualitative research and not quantitative research (see Section 3), or the sampling method followed (i.e., convenience sampling [39]) and, by extension, unequal distribution of participants across generational cohorts (see Table 4 in Section 4.1). However, this research article can be considered a Greek case study and may benefit potential researchers for future research or be utilized by those especially studying Generation Z, since, as mentioned above, the largest sample of this survey is Greek Zoomers (i.e., 118 Zoomer budding journalists with a percentage of 87.3%) (Table 4). Also, it would be very interesting indeed if the survey findings and results from the Pearson’s *r* correlation test (Table 17), and, specifically, the statistically significant positive correlations (see Section 4.3), could be utilized in the future for analytical modeling through advanced data analysis methods (e.g., through linear regression analysis that allows for this if there are more than 10–20 participants [191], such as in this case) because it was neither the RP nor one of the ROs and the RAs of this research article.

In closing, I hope that all of the aforementioned information provided both through the survey findings and results that emerged (Section 4), as well as through the rich bibliographic literature and resources review utilized in this research article, will prove useful to educators and, more specifically, for those involved in the field of media studies [6,38,48,84,86]. Likewise, I trust that they will consider the context for developing an interactive audiovisual-supported lesson plan (see Section 3.1) within the teaching-learning procedure they will implement in the future to fully benefit from it [3,110,112]. Finally, it should be said that the utilization of advanced technologies now presupposes

a new way of approaching effective teaching [23,25,40,183], which should definitely be the focus of teaching–learning procedures from now on [23,25,40]. In parallel, the educators must finally become skilled users and keep up with new, more modern trends and changes [38,110,112,183].

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Informed Consent Statement: Informed consent was obtained from all participants involved in this survey.

Data Availability Statement: The research data presented in this research article are available upon request from the corresponding author. The research data are not publicly available due to the fact that they are part of a larger, ongoing original, innovative, multidisciplinary, and cross-cultural research project that incorporates MACE, which began in 2016. This project has not yet been completed at the time of writing this research article.

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Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
AMC-MSRC	Audiovisual Media Communications in Media Studies of Radio courses
APA	American Psychological Association
AUTH	Aristotle University of Thessaloniki
a.k.a.	Also known as
BD	Blu-ray Disc
CD	Compact Disc
COVID-19	Coronavirus disease 2019—official name for the disease caused by the SARS-CoV-2 (2019-nCoV) coronavirus
CSCs	Culture-Specific Concepts
DAP	Digital Audio Player
DCDM	Department of Communication and Digital Media
DVD	Digital Versatile Disc
ICTs	Information Communication Technologies
IRCs	Internet Relay Chats
GDPR	General Data Protection Regulation
GPS	Global Positioning System
MACE	Media, Audiovisual Content, and Education
MEAN	Average
MP3	MPEG-1 Audio Layer 3
MTV	Music Television
NVC	Non-Verbal Communication
OLMSs	Online Learning Management Systems
OSNs	Online Social Networks

PC	Personal Computer
PDA	Personal Digital Assistants
PhD	Doctor of Philosophy
PMP	Portable Media Players
QoL	Quality of Learning
RA	Research Aim
RH	Research Hypothesis
RO	Research Objective
RP	Research Purpose
SaaS	Software-as-a-Service
SD	Standard Deviations
SFX	Sound Effects
SJMC	School of Journalism and Mass Communications
SNSs	Social Networking Sites
SPSS	Statistical Package for Social Sciences
TV	Television
UCY	University of Cyprus
UNIC	University of Nicosia
UWM	University of Western Macedonia
VLE	Virtual Learning Environments
Y2K	Year 2000
3P	Preage, Process, and Product

References

1. Aguaded, I.; Civil, S.; Vizcaíno-Verdú, A. Paradigm Changes and New Challenges for Media Education: Review and Science Mapping (2000–2021). *Prof. Inf.* **2022**, *31*, e310606. [\[CrossRef\]](#)
2. Maijanen, P.; Nicoli, N.; Georgiades, S. In Search of New Openings and Actionable Knowledge: Coping with Emerging Phenomena in the Media Business. *J. Media Bus. Stud.* **2021**, *18*, 1–5. [\[CrossRef\]](#)
3. Nicolaou, C. Media Trends and Prospects in Educational Activities and Techniques for Online Learning and Teaching through Television Content: Technological and Digital Socio-Cultural Environment, Generations, and Audiovisual Media Communications in Education. *Educ. Sci.* **2021**, *11*, 685. [\[CrossRef\]](#)
4. Podara, A.N. Internet, Audiovisual Content and New Media: Television and Watching Habits of Generation Z. Ph.D. Thesis, Aristotle University of Thessaloniki, Thessaloniki, Greece, 2021. [\[CrossRef\]](#)
5. Casero-Ripollés, A.; Izquierdo-Castillo, J.; Doménech-Fabregat, H. The Journalists of the Future Meet Entrepreneurial Journalism: Perceptions in the Classroom. *J. Pract.* **2016**, *10*, 286–303. [\[CrossRef\]](#)
6. Matsiola, M.; Spiliopoulos, P.; Kotsakis, R.; Nicolaou, C.; Podara, A. Technology-Enhanced Learning in Audiovisual Education: The Case of Radio Journalism Course Design. *Educ. Sci.* **2019**, *9*, 62. [\[CrossRef\]](#)
7. Sompie, D.J.; Harliantara, H.; Sampurna, A.; Rusdiana, L. Application of New Website Technology and Social Media on Conventional Media Radio Stations Indonesia. *Rev. Gestão Soc. Ambient.* **2024**, *18*, e05160. [\[CrossRef\]](#)
8. Spyridou, L.P.; Matsiola, M.; Veglis, A.; Kalliris, G.; Dimoulas, C. Journalism in a State of Flux: Journalists as Agents of Technology Innovation and Emerging News Practices. *Int. Commun. Gaz.* **2013**, *75*, 76–98. [\[CrossRef\]](#)
9. Asy'ari, N.A.S. The Strategy of Radio Convergence for Facing New Media Era. In Proceedings of the 1st International Conference on Emerging Media, and Social Science, ICEMSS 2018, Banyuwangi, Indonesia, 7–8 December 2018; EAI: Banyuwangi, Indonesia, 2018. [\[CrossRef\]](#)
10. Goian, O.; Goian, V.; Biletska, T.; Bessarab, A.; Zykun, N. Communicative Strategies of Professional Development of a TV and Radio Journalist: Psychotypology and Social Model. *Acad. J. Interdiscip. Stud.* **2020**, *9*, 147–157. [\[CrossRef\]](#)
11. Kalliris, G.; Dimoulas, C.A.; Matsiola, M. Media Management, Sound Editing and Mixing. In *Foundations in Sound Design for Linear Media: A Multidisciplinary Approach*; Filimowicz, M., Ed.; Routledge: London, UK, 2019; pp. 82–112.
12. Nu'azzidane, B.R.; Sa'idah, Z. Good Morning Young People: Geronimo Fm Radio's Efforts to Maintain Existence in Generation Z. *Prof. J. Komun. Dan Adm. Publik* **2023**, *10*, 881–888. [\[CrossRef\]](#)
13. Pandusaputri, N.A.; Mokodompit, R.B.R.; Irwansyah, I. Peminat Radio dan Podcast Kalangan Generasi Z Saat Berkendara. *J. Ilmu Komun. Dan Media Sos. (JKOMDIS)* **2024**, *4*, 179–192. [\[CrossRef\]](#)
14. Pilitsidou, Z.; Tsigilis, N.; Kalliris, G. Radio Stations and Audience Communication: Social Media Utilization and Listeners Interaction. *Issues Soc. Sci.* **2019**, *7*, 23–32. [\[CrossRef\]](#)

15. Nawangsari, N.S.; Mustadi, A.; Anggito, A.; Widyasari, A. Sape Radio and TV Programs as Supporting Media During COVID-19 Distance Learning. In Proceedings of the 5th International Conference on Current Issues in Education (ICCIE 2021), Yogyakarta, Indonesia, 12–13 November 2021; Atlantis Press: Dordrecht, The Netherlands, 2022; pp. 377–382. [\[CrossRef\]](#)
16. Obukoadata, P.R.; Hammler, K.; Yusuf, H.; Liman, A.; Olumoh, J.S. Transacting Knowledge When There are No Schools During the COVID-19 Lockdown in Nigeria: The SENSE-Transactional Radio Instruction Experience. *Humanit. Soc. Sci. Commun.* **2024**, *11*, 63. [\[CrossRef\]](#)
17. Okeke, A.O.; Nwosu, J.C.; Ono, G.N. Use of Radio as a Tool of Learning in Crisis Period. *Nnamdi Azikiwe Univ. J. Commun. Media Stud.* **2020**, *1*, 1–11. [\[CrossRef\]](#)
18. Raza, M. Interactive Radio Instruction—A Legacy of COVID-19 for Marginalized Adolescent Girls of Baluchistan. *J. Multicult. Educ.* **2022**, *16*, 55–63. [\[CrossRef\]](#)
19. Thazhekattil, S.; Chacko, A.T.; Jose, J. Media Education through Community Radio during Covid-19: A Qualitative Study on Tribal Populations. *Soc. Sci. J. Adv. Res.* **2024**, *4*, 112–117. [\[CrossRef\]](#)
20. Vrontis, D.; Christofi, M.; Pereira, V.; Tarba, S.; Makrides, A.; Trichina, E. Artificial Intelligence, Robotics, Advanced Technologies, and Human Resource Management: A Systematic Review. In *Artificial Intelligence and International HRM: Challenges, Opportunities and a Research Agenda*; Malik, A., Budhwar, P., Eds.; Routledge: London, UK, 2023; pp. 172–201. ISBN 9781003377085. [\[CrossRef\]](#)
21. Dimoulas, C.A.; Veglis, A.A.; Kalliris, G. Semantically Enhanced Authoring of Shared Media. In *Advanced Methodologies and Technologies in Media and Communications*; Khosrow-Pour, M., Ed.; IGI Global: Hershey, PA, USA, 2019; pp. 277–289. [\[CrossRef\]](#)
22. Matsiola, M.G. New Technological Tools in Contemporary Journalism: Study Concerning Their Utilization by the Greek Journalists Related to the Use of the Internet as a Mass Medium. Ph.D. Thesis, Aristotle University of Thessaloniki, Thessaloniki, Greece, 2008. [\[CrossRef\]](#)
23. Nicolaou, C. Information and Communications Technologies Through Technology-Enhanced Learning in Adult Education: The Re-Approach of the Adult Educator and the Adult Learners. In *Technology Training for Educators from Past to Present*; Krishnan, C., Al-Harthy, F., Singh, G., Eds.; IGI Global: Hershey, PA, USA, 2022; pp. 73–94. [\[CrossRef\]](#)
24. Livingstone, S.; Mascheroni, G.; Stoilova, M. The Outcomes of Gaining Digital Skills for Young People’s Lives and Wellbeing: A Systematic Evidence Review. *N. Media Soc.* **2023**, *25*, 1176–1202. [\[CrossRef\]](#)
25. Nicolaou, C. Multiple-Multimodal Skills Through Responsive and Responsible Learning: Audiovisual Media Communications Classifications. In *Cases on Responsive and Responsible Learning in Higher Education*; Alias, N., Syed-Aris, S., Hashim, H., Eds.; IGI Global: Hershey, PA, USA, 2023; pp. 256–279. [\[CrossRef\]](#)
26. Podara, A.; Matsiola, M.; Nicolaou, C.; Maniou, T.A.; Kalliris, G. Transformation of Television Viewing Practices in Greece: Generation Z and Audiovisual Content. *J. Digit. Media Policy* **2022**, *12*, 157–179. [\[CrossRef\]](#)
27. Schapsis, C.; Chiagouris, L.; Wingate, N. Decoding Generation Z’s Habits: The Augmented Reality Shift from Gimmick to Utility in Omni-Digital Shopping. *J. Prod. Brand Manag.* **2025**, *34*, 119–135. [\[CrossRef\]](#)
28. Smaliukiene, R.; Kocai, E.; Tamuleviciute, A. Generation Z and Consumption: How Communication Environment Shapes Youth Choices. *Media Stud.* **2020**, *11*, 24–45. [\[CrossRef\]](#)
29. Stareček, A.; Caganova, D.; Kubisova, E.; Babel’ová, G.; Fabian, F.; Chlpekov, A. The Importance of A. Generation Z Personality and Gender Diversity in the Development of Managerial Skills. In Proceedings of the 2020 18th International Conference on Emerging eLearning Technologies and Applications (ICETA), Košice, Slovenia, 12–13 November 2020; IEEE: Piscataway, NJ, USA, 2020; pp. 658–664. [\[CrossRef\]](#)
30. UNESCO Institute for Statistics. *Guide to Measuring Information and Communication Technologies (ICT) in Education*; Technical Paper 2; UNESCO Institute for Statistics: Montreal, QC, Canada, 2009; ISBN 9789291890781.
31. Dimoulas, C.; Veglis, A.; Kalliris, G. Application of Mobile Cloud-Based Technologies in News Reporting: Current Trends and Future Perspectives. In *Mobile Networks and Cloud Computing Convergence for Progressive Services and Applications*; Rodrigues, J., Lin, K., Lloret, J., Eds.; IGI Global: Hershey, PA, USA, 2014; pp. 320–343. [\[CrossRef\]](#)
32. İplikçi, H.G.; Batu, M. New Media Disorders: A Different Approach to New Generation on Media. In *Current Debates on Social Sciences 15*; Bulut, M., Ed.; Bidge Yayinevi: Ankara, Türkiye, 2023; pp. 121–133.
33. Matsiola, M.; Dimoulas, C.; Kalliris, G.; Veglis, A.A. Augmenting User Interaction Experience Through Embedded Multimodal Media Agents in Social Networks. In *Information Retrieval and Management: Concepts, Methodologies, Tools, and Applications*; IGI Global: Hershey, PA, USA, 2018; pp. 1972–1993. [\[CrossRef\]](#)
34. Martyushev, N.; Shutaleva, A.; Malushko, E.; Nikonova, Z.; Savchenko, I. Online Communication Tools in Teaching Foreign Languages for Education Sustainability. *Sustainability* **2021**, *13*, 11127. [\[CrossRef\]](#)
35. Zhanbayev, R.; Sagintayeva, S.; Ainur, A. Efficiency of Information Technologies in Education and Science Based on Foresight Technologies. *Int. J. Pedagog. Adv. Technol. Mediat. Educ.* **2021**, *2*, 54–65.
36. Nicolaou, C. Qualitative Methods Research through the Internet Applications and Services: The Contribution of Audiovisual Media Technology as Technology-Enhanced Research. *Int. Res. High. Educ.* **2021**, *6*, 1–14. [\[CrossRef\]](#)

37. Podara, A.; Giomelakis, D.; Nicolaou, C.; Matsiola, M.; Kotsakis, R. Digital Storytelling in Cultural Heritage: Audience Engagement in the Interactive Documentary New Life. *Sustainability* **2021**, *13*, 1193. [\[CrossRef\]](#)
38. Nicolaou, C.; Matsiola, M.; Karypidou, C.; Podara, A.; Kotsakis, R.; Kalliris, G. Media Studies, Audiovisual Media Communications, and Generations: The Case of Budding Journalists in Radio Courses in Greece. *J. Media* **2021**, *2*, 155–192. [\[CrossRef\]](#)
39. Kontogiannatou, G. Mixed-Methods Research. The Logic Behind Its Design and the Framework for Its Implementation. *Academia* **2018**, *12*, 83–108. [\[CrossRef\]](#)
40. Nicolaou, C.; Matsiola, M.; Kalliris, G. Technology-Enhanced Learning and Teaching Methodologies through Audiovisual Media. *Educ. Sci.* **2019**, *9*, 196. [\[CrossRef\]](#)
41. Paschalidis, G.; Milioni, D.L. Challenging the Journalistic Habitus? Journalism Students' Media Use and Attitudes Towards Mainstream and Alternative Media. In Proceedings of the 2nd World Journalism Education Congress, Grahamstown, South Africa, 5–7 July 2010.
42. Podara, A.; Kalliri, E. Defining TV Watching Experience: Psycho-Social Factors and Screen Culture of Generation Z. *Envision. Future Commun.* **2023**, *1*, 103–112.
43. Nicolaou, C.; Matsiola, M.; Dimoulas, C.A.; Kalliris, G. Discovering the Radio and Music Preferences of Generation Z: An Empirical Greek Case from and through the Internet. *J. Media* **2024**, *5*, 814–845. [\[CrossRef\]](#)
44. Nicolaou, C. Generational Identity from and through the Media and Entertainment Landscape: Socio-Cultural Environment of X, Y, and Z Generational Cohorts. In *Handbook of Research on Diversity and Gender Differences in Spiritual Experiences*; Essien, E.D., Ed.; IGI Global: Hershey, PA, USA, 2023; pp. 198–217. [\[CrossRef\]](#)
45. Howe, N.; Strauss, W. The New Generation Gap. *Atl. Mon.* **1992**, *270*, 69–89.
46. McPherson, J.D. Next-Generation Gap. *Nat. Methods* **2009**, *6*, S2–S5. [\[CrossRef\]](#)
47. Keren, R.; Pati, S.; Feudtner, C. The Generation Gap. *Pharmacoeconomics* **2004**, *22*, 71–81. [\[CrossRef\]](#) [\[PubMed\]](#)
48. Nicolaou, C.; Karypidou, C. Generations and Social Media: The Case of Cyprus and Greece. In Proceedings of the 7th International Scientific Conference, Heraklion—Crete, Greece, 9–11 July 2021.
49. Giancola, F. The Generation Gap: More Myth than Reality. *People Strategy* **2006**, *29*, 32.
50. Nicolaou, C. Generations and Branded Content from and through the Internet and Social Media: Modern Communication Strategic Techniques and Practices for Brand Sustainability—The Greek Case Study of LACTA Chocolate. *Sustainability* **2023**, *15*, 584. [\[CrossRef\]](#)
51. Atkins, S.; Lewin, S.; Smith, H.; Engel, M.; Fretheim, A.; Volmink, J. Conducting a Meta-Ethnography of Qualitative Literature: Lessons Learnt. *BMC Med. Res. Methodol.* **2008**, *8*, 21. [\[CrossRef\]](#) [\[PubMed\]](#)
52. Singha, S. Engaging Audiences: Leveraging Social Media for Sustainable Brand Narratives. In *Compelling Storytelling Narratives for Sustainable Branding*; Rodrigues, P., Borges, A., Vieira, E., Tavares, V., Eds.; IGI Global: Hershey, PA, USA, 2024; pp. 79–91. [\[CrossRef\]](#)
53. Jeljeli, R.; Farhi, F.; Hamdi, M.E.; Saidani, S. The Impact of Technology on Audiovisual Production in the Social Media Space. *Acad. J. Interdiscip. Stud.* **2022**, *11*, 48–58. [\[CrossRef\]](#)
54. Nicolaou, C. Development of Business Through the Internet and Social Media: The Professional Use of Audiovisual Media Technologies Through Strategic Tactics and Practices. In *Handbook of Research on IoT, Digital Transformation, and the Future of Global Marketing*; El-Gohary, H., Edwards, D., Ben Mimoun, M., Eds.; IGI Global: Hershey, PA, USA, 2021; pp. 193–211. [\[CrossRef\]](#)
55. Arora, A.; Tomer, N.; Berry, R.; Vats, P.; Upadhyay, G.M.; Singh, K.; Kaur, R. Safeguarding Digital Trust: An Examination of Knowledge, Social Influence, and Behaviour in Digital Advertising from an Information Security Perspective. In *Multidisciplinary Approaches for Sustainable Development*; Tripathi, A., Birla, S., Soni, M., Sahariya, J., Sharma, M., Eds.; CRC Press: London, UK, 2024; pp. 70–78. [\[CrossRef\]](#)
56. Sarriidis, I.; Nicolaou, C. Social Media: (Correct) Professional Use. In Proceedings of the 2nd Student Conference of the Department of Applied Informatics—University of Macedonia on Modern Entrepreneurship & Informatics Technologies, Thessaloniki, Greece, 2 December 2015.
57. Gryllakis, N.; Matsiola, M. Digital Audiovisual Content in Marketing and Distributing Cultural Products During the COVID-19 Pandemic in Greece. *Arts Mark.* **2023**, *13*, 4–19. [\[CrossRef\]](#)
58. Goyer, A. *The MetLife Study of Gen X: The MTV Generation Moves into Mid-Life*; MetLife Mature Market Institute: New York, NY, USA, 2013.
59. McCrindle, M. *The ABC of XYZ: Understanding the Global Generations*, 3rd ed.; McCrindle Publication: Bella Vista, Australia, 2014; ISBN 9780992483906.
60. Williams, K.C.; Page, R.A.; Petrosky, A.R.; Hernandez, E.H. Multi-Generational Marketing: Descriptions, Characteristics, Lifestyles, and Attitudes. *J. Appl. Bus. Econ.* **2010**, *11*, 21.
61. Williams, K.C.; Page, R.A. Marketing to the Generations. *J. Behav. Stud. Bus.* **2011**, *3*, 37–53.
62. Bower, B. Home Alone: Latchkey Kids on Good Behavior. *Sci. News* **1991**, *140*, 54. [\[CrossRef\]](#)

63. Belle, D. Varieties of Self-Care: A Qualitative Look at Children's Experiences in the After-School Hours. *Merrill-Palmer Q.* **1997**, *43*, 478–496.
64. Solomon, M.R. *Consumer Behavior: Buying, Having, and Being*, 13th ed.; Pearson: Upper Saddle River, NJ, USA, 2020.
65. Chaney, D.; Touzani, M.; Ben Slimane, K. Marketing to the (New) Generations: Summary and Perspectives. *J. Strateg. Mark.* **2017**, *25*, 179–189. [\[CrossRef\]](#)
66. Johnston, T.R. Two Steps Forward, One Step Back: The Story of LGBT Gen Xers. *Generations* **2017**, *41*, 93–98.
67. Moore, M.; Carpenter, J.M. Intergenerational Perceptions of Market Cues Among US Apparel Consumers. *J. Fash. Mark. Manag. Int. J.* **2008**, *12*, 323–337. [\[CrossRef\]](#)
68. O'Donohoe, S.; Tynan, C. Beyond Sophistication: Dimensions of Advertising Literacy. *Int. J. Advert.* **1998**, *17*, 467–482. [\[CrossRef\]](#)
69. Stone, M.; Stanton, H.; Kirkham, J.; Pyne, W. The Digerati: Generation Y Finds Its Voice. Why Cannot Brands Do the Same? *J. Target. Meas. Anal. Mark.* **2001**, *10*, 158–167. [\[CrossRef\]](#)
70. Posnock, S.T. Solutions for Evolving Consumer Needs. *Am. Demogr.* **2004**, *24*, 44.
71. Kumar, A.; Lim, H. Age Differences in Mobile Service Perceptions: Comparison of Generation Y and Baby Boomers. *J. Serv. Mark.* **2008**, *22*, 568–577. [\[CrossRef\]](#)
72. Kumar, A.; Dash, M.K. Sustainability and Future Generation Infrastructure on Digital Platform: A Study of Generation Y. In *Business Infrastructure for Sustainability in Developing Economies*; Ray, N., Ed.; IGI Global: Hershey, PA, USA, 2017; pp. 124–142. [\[CrossRef\]](#)
73. Kane, E. *New Innovations for Gen Y: Smart Homes, Smart Devices, Green Travel & More*; Independently: Chicago, IL, USA, 2021; ISBN 9798713774011.
74. Podara, A.; Matsiola, M.; Maniou, T.A.; Kalliris, G. Transformations of Television Consumption Practices: An Analysis on Documentary Viewing Among Post Millennials. *Particip. J. Audience Recept. Stud.* **2019**, *16*, 68–87.
75. Himmel, B. Different Strokes for Different Generations. *Rent. Prod. News* **2008**, *30*, 42–46.
76. Rowlands, I.; Nicholas, D.; Williams, P.; Huntington, P.; Fieldhouse, M.; Gunter, B.; Withey, R.; Jamali, H.R.; Dobrowolski, T.; Tenopir, C. The Google Generation: The Information Behaviour of the Researcher of the Future. *Aslib Proc. New Inf. Perspect.* **2008**, *60*, 290–310. [\[CrossRef\]](#)
77. Weber, J. Discovering the Millennials' Personal Values Orientation: A Comparison to Two Managerial Populations. *J. Bus. Ethics* **2017**, *143*, 517–529. [\[CrossRef\]](#)
78. Tapscott, D. *Grown Up Digital: The Rise of the Net Generation*; McGraw-Hill: New York, NY, USA, 1998; ISBN 9780071347983.
79. Oblinger, D.G.; Oblinger, J. Is It Age or IT: First Steps Toward Understanding the Net Generation. In *Educating the Net Generation*; Oblinger, D.G., Oblinger, J.L., Eds.; Educause: Louisville, CO, USA, 2005; pp. 12–31. ISBN 0967285321.
80. Tapscott, D. *Grown Up Digital: How the Net Generation Is Changing Your World*; McGraw-Hill: New York, NY, USA, 2009; ISBN 9780071508636.
81. Furstenberg, F. *The Use and Abuse of Millennials as an Analytic Category*; A Briefing Paper Prepared for the Council on Contemporary Families by Frank Furstenberg, Professor of Sociology; University of Pennsylvania: Philadelphia, PA, USA, 2017.
82. Podara, A.; Matsiola, M.; Maniou, T.H.; Kalliris, G. New Usage Patterns of Young Adults in the Era of Interactive Journalism. *Strategy Dev. Rev.* **2019**, *9*, 61–83. [\[CrossRef\]](#)
83. Little, J.P.; Little, E.; Cox, K.C. US Consumer Animosity Towards Vietnam: A Comparison of Generations. *J. Appl. Bus. Res.* **2009**, *25*, 13–22.
84. Nicolaou, C.; Podara, A.; Karypidou, C. Audiovisual Media in Education and Generation Z: Application of Audiovisual Media Theory in Education with an Emphasis on Radio. In Proceedings of the 6th International Scientific Conference of the Institute of Humanities and Social Sciences on Communication, Information, Awareness and Education in Late Modernity, Heraklion—Crete, Greece, 10–12 July 2020; Pantazis, S.C., Maraki, E.P., Striligas, G.E., Beladakis, E.D., Tzortzakis, I.A., Arvanitis, C.E., Psaltaki, E.E., Eds.; Institute of Humanities and Social Sciences: Heraklion—Crete, Greece, 2021; Volume A, pp. 294–302, ISBN 9786185506025.
85. Podara, A.; Matsiola, M.; Nicolaou, C.; Maniou, T.A.; Kalliris, G. Audiovisual Consumption Practices in Post-Crisis Greece: An Empirical Research Approach to Generation Z. In Proceedings of the International Conference on Filmic and Media Narratives of the Crisis: Contemporary Representations, Athens, Greece, 7–8 November 2019.
86. Nicolaou, C.; Matsiola, M. Getting to Know Generation Z Again through Audio-based Teaching. In Proceedings of the 9th International Scientific Conference of the Institute of Humanities and Social Sciences on Citizen, Education and Political Participation, Heraklion—Crete, Greece, 27 May 2023.
87. Courtice, E.L.; Shaughnessy, K.; Blom, K.; Asrat, Y.; Daneback, K.; Döring, N.; Grov, C.; Byers, E.S. Young Adults' Qualitative Self-Reports of Their Outcomes of Online Sexual Activities. *Eur. J. Investig. Health Psychol. Educ.* **2021**, *11*, 303–320. [\[CrossRef\]](#)
88. Gaidhani, S.; Arora, L.; Sharma, B.K. Understanding the Attitude of Generation Z Towards Workplace. *Int. J. Manag. Technol. Eng.* **2019**, *9*, 2804–2812.
89. Moskowitz, D.A.; Rendina, H.J.; Alvarado Avila, A.; Mustanski, B. Demographic and Social Factors Impacting Coming Out as a Sexual Minority Among Generation-Z Teenage Boys. *Psychol. Sex. Orientat. Gend. Divers.* **2022**, *9*, 179–189. [\[CrossRef\]](#)

90. Evens, T.; Henderickx, A.; De Marez, L. Generation Stream: The Audiovisual Repertoire of Teenagers. *J. Broadcast. Electron. Media* **2021**, *65*, 185–204. [\[CrossRef\]](#)
91. Veneti, A.; Poulakidakos, S.; Minotakis, A. *Research Report: Gen Z Voice on*; ETERON: Athens, Greece, 2022.
92. Dąbrowski, L.S.; Środa-Murawska, S. Globalised and Culturally Homogenised? How Generation Z in Poland Spends their Free Time. *Leis. Stud.* **2022**, *41*, 164–179. [\[CrossRef\]](#)
93. Kavran, A.K.; Herman, D. Generation Z's Media Use and Preferences as a Foundation for a Destination Media Planning Process. In *Handbook of Research on IoT, Digital Transformation, and the Future of Global Marketing*; El-Gohary, H., Edwards, D., Mimoun, M.B., Eds.; IGI Global: Hershey, PA, USA, 2021; pp. 272–301. [\[CrossRef\]](#)
94. Marinelli, A.; Ando, R. From Linearity to Circulation. How TV Flow is Changing in Networked Media Space. *Tecnoscienza Ital. J. Sci. Technol. Stud.* **2017**, *7*, 103–128. [\[CrossRef\]](#)
95. Epafra, L.; Kaunang, H.; Jemali, M.; Setyono, V. Transitional Religiosity: The Religion of Generation Z. In Proceedings of the 3rd International Symposium on Religious Life, ISRL 2020, Bogor, Indonesia, 2–5 November 2020; EAI: Thornleigh, Australia, 2020; pp. 247–257. [\[CrossRef\]](#)
96. Tarigan, A.S. The Effectiveness of the Role of Social Media in Premarital Education for Generation Z in Purwakarta Regency, Indonesia. *Arkus* **2024**, *10*, 508–511. [\[CrossRef\]](#)
97. Treviño Benavides, T.B.; Alcorta Castro, A.T.; Garza Marichalar, S.A.; Peña Cisneros, M.; Baker Suárez, E.C. Understanding Generation Z and Social Media Addiction. In *Social Media Addiction in Generation Z Consumers: Implications for Business and Marketing*; Teresa Berenice Treviño Benavides, T.B., Alcorta Castro, A.T., Garza Marichalar, S.A., Peña Cisneros, M., Baker Suárez, E.C., Eds.; Springer: Cham, Switzerland, 2023; pp. 39–44. [\[CrossRef\]](#)
98. Click, K.; Schwartz, N. Trending Now: News Habits of Generation Z. *SSRN Electron. J.* **2018**, 1–15. [\[CrossRef\]](#)
99. Gentilviso, C.; Aikat, D. Embracing the Visual, Verbal, and Viral Media: How Post-Millennial Consumption Habits are Reshaping the News. In *Mediated Millennials*; Schulz, J., Robinson, L., Khilnani, A., Baldwin, J., Pait, H., Williams, A.A., Davis, J., Ignatow, G., Eds.; Emerald: Leeds, UK, 2019; pp. 147–171. [\[CrossRef\]](#)
100. Shutaleva, A.; Martyshev, N.; Nikonova, Z.; Savchenko, I.; Abramova, S.; Lubimova, V.; Novgorodtseva, A. Environmental Behavior of Youth and Sustainable Development. *Sustainability* **2022**, *14*, 250. [\[CrossRef\]](#)
101. Piscitelli, A.; D'Uggento, A.M. Do Young People Really Engage in Sustainable Behaviors in their Lifestyles? *Soc. Indic. Res.* **2022**, *163*, 1467–1485. [\[CrossRef\]](#)
102. Töröcsik, M.; Szűcs, K.; Kehl, D. How Generations Think: Research on Generation z. *Acta Univ. Sapientiae Commun.* **2014**, *1*, 23–45.
103. Labi, S. Generation of change. *Sunday Tasman.* **2008**, *1*, 20.
104. Gazzola, P.; Pavione, E.; Pezzetti, R.; Grechi, D. Trends in the Fashion Industry. The Perception of Sustainability and Circular Economy: A Gender/Generation Quantitative Approach. *Sustainability* **2020**, *12*, 2809. [\[CrossRef\]](#)
105. Santini, A. The Peer Review Process: Underwriting Manuscript Quality & Validity. *J. Crit. Care Med.* **2018**, *4*, 111–113. [\[CrossRef\]](#)
106. Nicolaou, C.A. Life Skills: The Importance of Non-Verbal Communication. In Proceedings of the Panhellenic Conference with International Participation: Re-Reflections on Childhood, Thessaloniki, Greece, 31 October–1 November 2014; Tzekaki, M., Kanatsouli, M., Eds.; TEPAE, AUTH: Thessaloniki, Greece, 2014; pp. 1544–1546, ISBN 9789602436950.
107. Nicolaou, C. The (Non-Verbal) Communication (to the Solution) of Conflicts. In Proceedings of the 18th Pancyprrian Scientific Conference of the Educational Group of Cyprus on RE-View of the Public School of Cyprus in a World of Constant Changes and Challenges, Limassol, Cyprus, 15–16 March 2019.
108. Nicolaou, C. Communication Skills through Audiovisual Media and Audiovisual Content. *ΣΚΕΨΥ* **2020**, *7*, 166–174.
109. Nicolaou, C.; Kalliris, G. The (Non-Verbal) Communication and the use of Audiovisual Media. In Proceedings of the 6th International Scientific Conference on Communication, Information, Awareness and Education in Late Modernity, Heraklion—Crete, Greece, 10–12 July 2020; Pantazis, S.C., Maraki, E.P., Striligas, G.E., Beladakis, E.D., Tzortzakakis, I.A., Arvanitis, C.E., Psaltaki, E.E., Ntroupogiannis, C.S., Eds.; Institute of Humanities and Social Sciences: Heraklion—Crete, Greece, 2021; Volume A, pp. 303–311, ISBN 9786185506025.
110. Nicolaou, C.; Kalliris, G. Audiovisual Media Communications in Adult Education: The Case of Cyprus and Greece of Adults as Adult Learners. *Eur. J. Invest. Health Psychol. Educ.* **2020**, *10*, 967–994. [\[CrossRef\]](#)
111. Hadjilouca-Mavri, I.; Sofokleous, S. The Observation of Visualized Teaching, as “Invitation/Challenge” and as “Composition”: Data from the Primary Education Teacher Training Program for Language Teaching (2013–2014). In Proceedings of the 13th Pancyprrian Conference of the Pedagogical Society of Cyprus on in the Face of Educational Invitations/Challenges: From Position and Opposition to Composition, Nicosia, Greece, 11 November 2014; Kyriakidis, L., Tsagaridou, N., Symeonidou, S., Charalambous, C., Symeou, L., Ftiaka, E., Elias, I., Eds.; Pedagogical Society of Cyprus: Nicosia, Cyprus, 2013; pp. 497–511, ISBN 9789963982820.
112. Nicolaou, C.; Matsiola, M.; Kalliris, G. The Challenge of an Interactive Audiovisual-Supported Lesson Plan: Information and Communications Technologies (ICTs) in Adult Education. *Educ. Sci.* **2022**, *12*, 836. [\[CrossRef\]](#)
113. McNiff, J. *Action Research: All You Need to Know*; SAGE: London, UK, 2017; ISBN 9781473967472.

114. Katsarou, H.; Tsafos, V. *From Research to Teaching: The Educational Action Research*; Savallas: Athens, Greece, 2003; ISBN 9604608967.
115. Elliot, J. *Action Research for Educational Change*; Open University Press: Milton Keynes, UK, 1991; ISBN 9780335096893.
116. Siardos, G.K. *Methodology of Social Research*, 2nd ed.; Ziti: Thessaloniki, Greece, 2005; ISBN 9789604319558.
117. Robinson, S.; Mendelson, A.L. A Qualitative Experiment: Research on Mediated Meaning Construction Using a Hybrid Approach. *J. Mix. Methods Res.* **2012**, *6*, 332–347. [\[CrossRef\]](#)
118. Hibler, D.L.; Biswas, G. TEPS: Through Experiments and Qualitative Physics Problem Solving. In *Recent Advances in Qualitative Physics*; Faltings, B., Peter Struss, P., Eds.; The MIT Press: Cambridge, MA, USA, 1992; pp. 345–360. ISBN 9780262061421.
119. Hibler, D.L.; Biswas, G. The Thought Experiment Approach to Qualitative Physics. In Proceedings of the 11th International Joint Conference on Artificial Intelligence, Detroit, MI, USA, 20–25 August 1989; Volume 2, pp. 1279–1284.
120. Nicolaou, C. Methodological Approaches utilizing Information and Communication Technologies (ICTs): Trends and Perspectives of Research Methods from and through the Internet. *Open Educ. J. Open Distance Educ. Educ. Technol.* **2022**, *18*, 290–315. [\[CrossRef\]](#)
121. Sarker, R.; Roknuzzaman, A.S.M.; Nazmunahar, S.M.; Hossain, M.J.; Islam, M.R. The WHO has Declared the End of Pandemic Phase of COVID-19: Way to Come Back in the Normal Life. *Health Sci. Rep.* **2023**, *6*, e1544. [\[CrossRef\]](#)
122. Morse, J.M.; Barrett, M.; Mayan, M.; Olson, K.; Spiers, J. Verification Strategies for Establishing Reliability and Validity in Qualitative Research. *Int. J. Qual. Methods* **2002**, *1*, 13–22. [\[CrossRef\]](#)
123. Papanastasiou, C.; Papanastasiou, E.C. *Methodology of Educational Research*; Authors: Nicosia, Cyprus, 2005; ISBN 9963817629.
124. Dimoulas, C.A. *Multimedia Authoring and Management Technologies: Non-Linear Storytelling in the New Digital Media*; Kallipos—Open Academic Editions: Athens, Greece, 2015; ISBN 9789606032219.
125. Ioannidou–Koutselini, M. *Curricula and Teaching*; Pedio: Athens, Greece, 2013; ISBN 9789605461782.
126. Koutselini–Ioannidou, M. *Edification and Differentiation Teaching-Learning in Mixed Ability Classes*; Author: Nicosia, Cyprus, 2008; ISBN 9789963820016.
127. Courau, S. *Les Outils D'Excellence du Formateur: Tome 2: Concevoir et Animer des Sessions de Formation*, 12th ed.; ESF Editeur: Montrouge, France, 2017; ISBN 9782710132455.
128. Kanakis, I.N. *Teaching and Learning with Modern Teaching Aids: From Facial Expressions to Computers*; Grigoris: Athens, Greece, 1999; ISBN 96022309X.
129. Nicolaou, C. Modern Trends in Teaching Methodology in Adult Education. In Proceedings of the 1st Panhellenic Scientific Conference on Lifelong Learning on Lifelong Learning and Modern Society: Local Government, Education and Work, Thessaloniki, Greece, 27–28 June 2015.
130. Nicolaou, C. Modern Theoretical Approaches to Adult Education. In Proceedings of the 5th Student Excellence Conference 2017 of the Mediterranean College, Thessaloniki, Greece, 1 June 2017.
131. Royal, C. Managing Digital Products in a Newsroom Context. *Int. Symp. Online J.* **2017**, *7*, 45–66.
132. Giannakouloupoulos, A.; Varlamis, I.; Kouloglou, S. Technology and Journalism: Conflict and Convergence at the Production Level. In *The Handbook of Global Online Journalism*; Siapera, E., Veglis, A., Eds.; John Wiley & Sons: Chichester, UK, 2012; pp. 290–308. ISBN 9781118313978.
133. Salmon, G.; Edirisingha, P.; Mobbs, M.; Mobbs, R.; Dennett, C. *How to Create Podcasts for Education*; McGraw Hill: New York, NY, USA, 2008; ISBN 9780335235346.
134. Nicolaou, C. The Secret Power of Digital Storytelling Methodology: Technology-Enhanced Learning Utilizing Audiovisual Educational Content. In *Enhancing Education through Multidisciplinary Film Teaching Methodologies*; DeHart, J.D., Ed.; IGI Global: Hershey, PA, USA, 2022. [\[CrossRef\]](#)
135. Veglis, A.; Pomportsis, A. Journalists in the Age of ICTs: Work Demands and Educational Needs. *J. Mass Commun. Educ.* **2014**, *69*, 61–75. [\[CrossRef\]](#)
136. Caple, R.B. The Sequential Stages of Group Development. *Small Group Behav.* **1978**, *9*, 470–476.
137. Biggs, J. Constructivism and Instructional Design. In Proceedings of the 20th International Conference on Improving University Teaching, Hong Kong, China, 10–13 July 1995; pp. 387–398.
138. von Glasersfeld, E. Reconstructing the Concept of Knowledge. *Arch. Psychol.* **1985**, *53*, 91–101.
139. Biggs, J. Enhancing Teaching Through Constructive Alignment. *High. Educ.* **1996**, *32*, 347–364. [\[CrossRef\]](#)
140. Marzano, R.J. *Building Background Knowledge for Academic Achievement: Research on What Works in Schools*; Association for Supervision and Curriculum Development: Alexandria, VA, USA, 2004; ISBN 9780871209726.
141. Sellas, T.; Solà, S. Podium Podcast and the Freedom of Podcasting: Beyond the Limits of Radio Programming and Production Constraints. *Radio J. Int. Stud. Broadcast Audio Media* **2019**, *17*, 63–81. [\[CrossRef\]](#)
142. Shutaleva, A.V.; Golyshева, M.V.; Tsiplakova, Y.V.; Dudchik, A.Y. Media Education and the Formation of the Legal Culture of Society. *Perspekt. Nauk. I Obraz. Perspect. Sci. Educ.* **2020**, *45*, 10–22. [\[CrossRef\]](#)
143. Settle, Q.; Abrams, K.M.; Baker, L.M. Using Prezi in the Classroom. *NACTA J.* **2011**, *55*, 105–106.
144. Diamond, S. *Prezi for Dummies*; Wiley Publishing: Hoboken, NJ, USA, 2010; ISBN 9780470625866.

145. Aruan, L.; Sari, R.; Harahap, A.B. Using Prezi Online Software to Improve Teaching Listening Skill. *Int. J. Educ. Lit. Stud.* **2020**, *8*, 104–108. [\[CrossRef\]](#)
146. Chou, P.-N.; Chang, C.-C.; Lu, P.-F. Prezi Versus PowerPoint: The Effects of Varied Digital Presentation Tools on Students' Learning Performance. *Comput. Educ.* **2015**, *91*, 73–82. [\[CrossRef\]](#)
147. Sanchez, P.K.M.; Pazmino, M.F.; Gamez, M.R. Prezi as an Innovative Teaching Tool for the Strengthening of Significant Learning. *Int. Res. J. Manag. IT Soc. Sci.* **2020**, *7*, 72–83. [\[CrossRef\]](#)
148. Perron, B.E.; Stearns, A.G. A Review of a Presentation Technology: Prezi. *Res. Soc. Work Pract.* **2010**, *21*, 376–377. [\[CrossRef\]](#)
149. Dimoulas, C.; Sevastiadis, C.; Kalliris, G.; Matsiola, M.; Papanikolaou, G. Room Acoustics and Sound System Design of a Prototype Teaching Room with Videoconferencing Facilities. In Proceedings of the 108th AES Convention, Paris, France, 19–22 February 2000; p. 5141.
150. Aguayo Gonzalez, C.R.; Dietrich, C.B.; Sayed, S.; Volos, H.I.; Gaeddeert, J.D.; Robert, P.M.; Reed, J.H.; Kragh, F.E. Open-Source SCA-Based Core Framework and Rapid Development Tools Enable Software-Defined Radio Education and Research. *IEEE Commun. Mag.* **2009**, *47*, 48–55. [\[CrossRef\]](#)
151. Kalliris, G.; Dimoulas, C.A.; Veglis, A.; Matsiola, M. Investigating Quality of Experience and Learning (QoE & QoL) of Audiovisual Content Broadcasting to Learners Over IP Networks. In Proceedings of the 2011 IEEE Symposium on Computers and Communications (ISCC), Kerkyra, Greece, 28 June–1 July 2011; pp. 836–841. [\[CrossRef\]](#)
152. Kotsakis, R.; Dimoulas, C.; Kalliris, G.; Veglis, A. Emotional Prediction and Content Profile Estimation in Evaluating Audiovisual Mediated Communication. *Int. J. Monit. Surveill. Technol. Res. (IJMSTR)* **2014**, *2*, 62–80. [\[CrossRef\]](#)
153. Kalliris, G.; Matsiola, M.; Dimoulas, C.; Veglis, A. Emotional Aspects and Quality of Experience for Multifactor Evaluation of Audiovisual Content. *Int. J. Monit. Surveill. Technol. Res. (IJMSTR)* **2014**, *2*, 40–61. [\[CrossRef\]](#)
154. Kalliris, G.; Matsiola, M.; Dimoulas, C.A.; Veglis, A. Emotional Aspects in Quality of Experience and Learning (QoE & QoL) of Audiovisual Content in Mediated Learning. In Proceedings of the IISA 2014, the 5th International Conference on Information, Intelligence, Systems and Applications—IEEE, Chania, Greece, 7–9 July 2014; pp. 198–203. [\[CrossRef\]](#)
155. Kotsakis, R.; Dimoulas, C.A.; Kalliris, G.; Veglis, A. Emotional Descriptors and Quality of Experience (QoE) Metrics in Evaluating Mediated Learning. In Proceedings of the IISA 2014, the 5th International Conference on Information, Intelligence, Systems and Applications—IEEE, Chania, Greece, 7–9 July 2014; pp. 232–237. [\[CrossRef\]](#)
156. Likert, R.A. Technique for the Measurement of Attitudes. *Arch. Psychol.* **1932**, *140*, 55.
157. Kyriakides, L.; Creemers, B.P.M.; Antoniou, P. Teacher Behavior and Student Outcomes: Suggestions for Research on Teacher Training and Professional Development. *Teach. Teach. Educ.* **2009**, *25*, 12–23. [\[CrossRef\]](#)
158. Ordudari, M. Translation Procedures, Strategies and Methods. *Transl. J.* **2007**, *11*.
159. Nicolaou, C.; Matsiola, M. Cross-Cultural Methodology for Translating and Weighting Foreign Language Questionnaires: The Case of an International Cross-Cultural Translation Model. In Proceedings of the 9th International Scientific Conference of the Institute of Humanities and Social Sciences on Citizen, Education and Political Participation, Heraklion—Crete, Greece, 27 May 2023.
160. Kvale, S. The Qualitative Research Interview: A Phenomenological and a Hermeneutical Mode of Understanding. *J. Phenomenol. Psychol.* **1983**, *14*, 171–196. [\[CrossRef\]](#)
161. Dahlin, E. Email Interviews: A Guide to Research Design and Implementation. *Int. J. Qual. Methods* **2021**, *20*, 16094069211025453. [\[CrossRef\]](#)
162. Paraskevopoulou-Kollia, E.-A. Methodology of Qualitative Research: Interviews and Online Interviews. *Open Educ. J. Open Distance Educ. Educ. Technol.* **2020**, *15*, 24–37. [\[CrossRef\]](#)
163. O'Donnell, E.; O'Donnell, L. Towards Supporting Academic Authors, Researchers, and PhD Students in Higher Education. In *Scholarly Publishing and Research Methods Across Disciplines*; Wang, V., Ed.; IGI Global: Hershey, PA, USA, 2019; pp. 110–134. [\[CrossRef\]](#)
164. O'Donnell, E.; O'Donnell, L. Technology-Enhanced Learning: Towards Providing Supports for PhD Students and Researchers in Higher Education. In *Handbook of Research on Scholarly Publishing and Research Methods*; Wang, V., Ed.; IGI Global: Hershey, PA, USA, 2015; pp. 231–251. [\[CrossRef\]](#)
165. Fink, A. *How to Analyze Survey Data*; Sage: Thousand Oaks, CA, USA, 1995; ISBN 9780803973862.
166. Moreno-Guerrero, A.-J.; Rodríguez-Jiménez, C.; Gómez-García, G.; Ramos Navas-Parejo, M. Educational Innovation in Higher Education: Use of Role Playing and Educational Video in Future Teachers' Training. *Sustainability* **2020**, *12*, 2558. [\[CrossRef\]](#)
167. Luttrell, R.; Wallace, A.; McCollough, C.; Lee, J. The Digital Divide: Addressing Artificial Intelligence in Communication Education. *J. Mass Commun. Educ.* **2020**, *75*, 470–482. [\[CrossRef\]](#)
168. Nunnally, J.C.; Bernstein, I. *Psychometric Theory*, 3rd ed.; McGraw Hill: New York, NY, USA, 1994; ISBN 9780070478497.
169. Flick, U. *An Introduction to Qualitative Research*, 4th ed.; Sage: London, UK, 2009; ISBN 9781847873248.
170. Kalliri, E.; Veglis, A. Psychological Practices Applied by Media Organizations to Data Visualizations in Relation to the Environment. *Open J. Animat. Film Interact. Media Educ. Cult.* **2022**, *3*. [\[CrossRef\]](#)

171. Karypidou, C.; Veglis, A. Visualization Tools for Producing Environmental Data Journalism Articles. *Annu. Greek-Speak. Sci. Conf. Commun. Lab.* **2022**, *1*, 54–62. [\[CrossRef\]](#)
172. Karypidou, C.; Bratsas, C.; Veglis, A. Visualization and Interactivity in Data Journalism Projects. *Strategy Dev. Rev.* **2019**, *9*, 44–60. [\[CrossRef\]](#)
173. American Psychological Association. *Publication Manual of the American Psychological Association*, 7th ed.; American Psychological Association: Washington, WA, USA, 2020.
174. Comrey, A.L.; Lee, H.B. *A First Course in Factor Analysis*, 2nd ed.; Psychology Press: New York, NY, USA, 1992; ISBN 9781315827506. [\[CrossRef\]](#)
175. Boddy, C.R. Sample Size for Qualitative Research. *Qual. Mark. Res.* **2016**, *19*, 426–432. [\[CrossRef\]](#)
176. Sandelowski, M. Sample Size in Qualitative Research. *Res. Nurs. Health* **1995**, *18*, 179–183. [\[CrossRef\]](#) [\[PubMed\]](#)
177. Cohen, L.; Manion, L.; Morrison, K. *Research Methods in Education*, 8th ed.; Routledge: London, UK, 2017; ISBN 9781138209886.
178. Gall, M.D.; Borg, W.R.; Gall, J.P. *Educational Research: An Introduction*, 8th ed.; Longman Publishing: Harlow, UK, 2016; ISBN 9780205488490.
179. Nicolaou, C. Defining the Sound Preferences of Generation Z. In Proceedings of the 10th International Scientific Conference on Social and Educational Adaptability, Heraklion—Crete, Greece, 16 May 2024.
180. Manolika, M.; Kotsakis, R.; Matsiola, M.; Kalliris, G. Direct and Indirect Associations of Personality with Audiovisual Technology Acceptance Through General Self-Efficacy. *Psychol. Rep.* **2022**, *125*, 1165–1185. [\[CrossRef\]](#) [\[PubMed\]](#)
181. Brinia, V.; Selimi, P.; Dimos, A.; Kondea, A. The Impact of Communication on the Effectiveness of Educational Organizations. *Educ. Sci.* **2022**, *12*, 170. [\[CrossRef\]](#)
182. Paraskevopoulou-Kollia, E.A.; Kurniasih, N.; Michalakopoulos, C.A. How ICT Teachers Feel About Teaching: A Comparative Study Between Greece and Indonesia. *Eur. J. Educ. Stud.* **2021**, *8*, 126–152. [\[CrossRef\]](#)
183. Nicolaou, C. Opportunities and Challenges in Educator Development: Audiovisual Media Communications and Multiple-Multimodal Skills. In *Innovations in Teacher Development, Personalized Learning, and Upskilling the Workforce*; Chakravarti, S., Ed.; IGI Global: Hershey, PA, USA, 2023; pp. 24–47. [\[CrossRef\]](#)
184. Nordtug, B. Education as Subjectivity: Three Perspectives on The Construction of Subjectivity and The Position of Knowledge. In *Education in the Era of Globalization*; Roth, K., Gur-Ze'ev, I., Eds.; Springer: Dordrecht, The Netherlands, 2007; pp. 161–184. ISBN 9789048174850. [\[CrossRef\]](#)
185. Batu, M.; Tos, O. Kültürel Değişim Temelinde X ve Z Kuşağının Ebeveynlik Algısı: Zmet Tekniği Temelinde Bir Analiz. *Akdeniz Üniversitesi İletişim Fakültesi Derg.* **2022**, *38*, 194–217. [\[CrossRef\]](#)
186. Nicolaou, C.; Matsiola, M.; Dimoulas, C.; Kalliris, G. Outlining the Ethos of Generation Z from and through Music and Radio. In Proceedings of the EFoC: Envisioning the Future of Communication II, Kastoria, Greece, 11–12 December 2023.
187. Prensky, M. Digital Natives, Digital Immigrants Part 1. *Horizon* **2001**, *9*, 1–6. [\[CrossRef\]](#)
188. Prensky, M. Digital Natives, Digital Immigrants Part 2: Do They Really Think Differently? *Horizon* **2001**, *9*, 1–6. [\[CrossRef\]](#)
189. Seamon, M.P. Connecting Learning & Technology for Effective Lesson Plan Design. In Proceedings of the 54th Annual Conference and Exhibit Show of Association for Supervision and Curriculum Development Annual Meeting, San Francisco, CA, USA, 6–8 March 1999.
190. Kowalsky, M. Collaborative Learning Design in Librarian and Teacher Partnerships. In *Collaborative Models for Librarian and Teacher Partnerships*; Kathryn Kennedy, K., Green, L.S., Eds.; IGI Global: Hershey, PA, USA, 2014; pp. 111–120. [\[CrossRef\]](#)
191. Loukaidis, K.A. *Statistical Data Processing Using IBM SPSS STATISTICS 19*; Epifaniou: Nicosia, Cyprus, 2011; ISBN 9789963974428.
192. Nicolaou, C. The use of audiovisual media in adult education. In Proceedings of the 5th International Scientific Conference on Interdisciplinary Cognitive, Educational and Social Challenge, Heraklion—Crete, Greece, 5–7 April 2019; Pantazis, S.C., Maraki, E.P., Striligas, G.E., Beladakis, E.D., Tzortzakis, I.A., Arvanitis, C.E., Psaltaki, E.E., Ntroumpogiannis, C.S., Eds.; IAKE: Heraklion—Crete, Greece, 2019; Volume A, pp. 155–163, ISBN 9786188450721.
193. Mishra, P.; Koehler, M.J. Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teach. Coll. Rec.* **2006**, *108*, 1017–1054. [\[CrossRef\]](#)
194. Gómez-Trigueros, I.M.; Ruiz-Bañuls, M.; Ortega-Sánchez, D. Digital Literacy of Teachers in Training: Moving from ICTs (Information and Communication Technologies) to LKTs (Learning and Knowledge Technologies). *Educ. Sci.* **2019**, *9*, 274. [\[CrossRef\]](#)
195. Delgado-Algarra, E.J. *ICTs and Innovation for Didactics of Social Sciences*; IGI Global: Hershey, PA, USA, 2020; ISBN 9781799828822. [\[CrossRef\]](#)
196. Döring, U.; Müller, B.; Rohr, S.; Ruhrmann, J.; Schäfer, M. Listen and Read: The Battle for Attention: A New Report About Key Audience Behaviour in the Age of eBooks, Audiobooks and Podcasts. *Publ. Res. Q.* **2022**, *38*, 40–52. [\[CrossRef\]](#)
197. Gutsche, R.E. Introduction: Teaching in Post-Truth—Challenges, Lessons, and Innovations in Journalism Education. *J. Mass Commun. Educ.* **2019**, *74*, 127–129. [\[CrossRef\]](#)

198. Hobbs, R.; Jensen, A. The Past, Present, and Future of Media Literacy Education. *J. Media Lit. Educ.* **2009**, *1*, 1–11. [[CrossRef](#)]
199. World Medical Association. World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. *JAMA* **2013**, *310*, 2191–2194. [[CrossRef](#)] [[PubMed](#)]

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