journalism and media

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Media Studies, Audiovisual Media Communications, and Generations: The Case of Budding Journalists in Radio Courses in Greece

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Abstract: In this article, the quality of media studies education through effective teaching utilizing audiovisual media technologies and audiovisual content (audiovisual media communications) to budding journalists as adult learners (18 years and older) is researched, with results primarily intended for application in radio lessons at all educational levels and disciplines (including adult education). Nowadays, audiovisual media communications play an important role in the modern and visual-centric way of our life, while they require all of us to possess multiple-multimodal skills to have a successful professional practice and career, and especially those who study media studies, such as tomorrow's new journalists. Data were collected after three interactive teachings with emphasis on educational effectiveness in technology-enhanced learning, through a specially designed written questionnaire with a qualitative and quantitative form (evaluation form), as case study experiments that applied qualitative action research with quasi-experiments. The results (a) confirmed (i) the theory of audiovisual media in education, as well as (ii) the genealogical characteristics and habits of budding journalists as highlighted in basic generational theory, something which appears to be in agreement with findings of previous studies and research; and (b) showed that (i) teaching methodology and educational techniques aimed primarily at adult learners in adult education kept the interest and attention of the budding journalists through the use of such specific educational communication tools as audiovisual media technologies, as well as (ii) sound/audio media, as audiovisual content may hold a significant part in a lecture.

Keywords: media studies; audiovisual media technologies; audiovisual content; radio; multiple-multimodal skills; teaching methodology; lesson plan; generations; Xennials; adult education

Citation: Nicolaou, Constantinos, Maria Matsiola, Christina Karypidou, Anna Podara, Rigas Kotsakis, and George Kalliris. 2021. Media Studies, Audiovisual Media Communications, and Generations: The Case of Budding Journalists in Radio Courses in Greece. *Journalism and Media* 2: 155–192. https://doi.org/10.3390/journalmedia2020010

Academic Editor: Andreu Casero-Ripollés

Received: 1 March 2021
Accepted: 19 April 2021
Published: 27 April 2021

1. Introduction

The use of audiovisual media technologies and audiovisual content (audiovisual media communications from here on) in education, and especially in the field of media studies (e.g., courses in journalism, radio, television, social media, public relations, communication, etc.) (see Georgiadou and Kolaxizis 2019; Matsiola et al. 2019; Nicolaou et al. 2019; Şardagı and Öztürk 2019; Quinn-Allan 2010), contributes to effective teaching, to technology-enhanced learning, and to the provision of easier acquired knowledge (Frolova et al. 2020; Nicolaou 2019a; Nicolaou et al. 2019; Ewing et al. 2018). The triptych of information communication technologies (ICTs), which are the main backbone of the media (see Mbeke et al. 2010; Schiffrin 2017), provide the kind of knowledge that creates a new modernized and digital age of experiences for each generation, respectively (Thurder 2021; Nicolaou and Kalliris 2020; Nicolaou et al. 2019; Kim 2019; Edwards [2010] 2010) (something we

will discuss below). Audiovisual media technologies (including mass media, e.g., radio and television) are integrated in ICTs and are ubiquitous in education at all educational levels and disciplines (including adult education) as educational techniques and/or communication tools (Nicolaou and Kalliris 2020; Nicolaou et al. 2019), and they are used (a) to access, analyze, evaluate, create, and disseminate (digital) media literacy (see Gutiérrez Martín and Tyner 2012; Hobbs and Jensen 2009; Pulido-Rodríguez and Tortajada-Giménez 2008; Bleed 2005; Livingstone 2004); (b) to implement any advanced abilities and skills with competence (such as collaboration, critical thinking, creativity, etc.) (Farrington et al. 2012; Nicolaou et al. 2019); and (c) to achieve proper and constructive communication (verbal and non-verbal) as *communication skills* (see Nicolaou and Kalliris 2021; Nicolaou 2020; Tugtekin and Koc 2020; Nicolaou 2019c; Pulido-Rodríguez and Tortajada-Giménez 2008; Nicolaou 2014; Hargie [1986] 2006), for the teacher/instructor/educator (educator from here on) and the students/learners as well.

This research is part of the ongoing project "Audiovisual Media Communications in Media Studies of Radio courses" (henceforth, AMC-MSRC), which initiated in 2019, and which, in turn, is a part of a larger, ongoing research that explores the multidisciplinary field that incorporates media, audiovisual content, and education (MACE), and especially ICTs in adult education (in Greece and Cyprus), which began in 2016. Part of this research as secondary analysis was presented at the 6th International Scientific Conference of the Institute of Humanities and Social Sciences (Ινστιτούτο Ανθρωπιστικών και Κοινωνικών Επιστημών in Greek language) (IAKE in the official abbreviation for English language) on "Communication, Information, Awareness and Education in Late Modernity", held in Heraklion–Crete (Greece) in July 2020 (Nicolaou et al. 2021). The results of the reported research with the secondary analysis showed that the educational techniques and the audiovisual media communications (in particular the audiovisual content) used maintained the interest and attention of the participants (students/learners) (Nicolaou et al. 2021, p. 300), who were members of Generation Z (GenZ from here on) (people born from 1995 and onwards) (see Seemiller and Grace 2018; Twenge 2017), which was a risk in the field of education, but at the same time expected, considering their genealogical characteristics as members of the reported generation, and in particular how they consume audiovisual content compared to other generations (see also Podara et al. 2021b, 2020, 2019c). The research through the secondary analysis concluded that young students/learners as adult learners (18–25 years) attending media studies as budding journalists may find it easier to adopt new approaches and technological innovations, as well as the consumption of audiovisual content, over other academic programs and professions (Nicolaou et al. 2021), which is confirmed through other relevant research with young adult learners (see Nicolaou and Kalliris 2020; Podara et al. 2021b) and/or with students/learners studying in the field of media studies (see Podara et al. 2020; Matsiola et al. 2019; Podara et al. 2019b, 2019c, 2018; Paschalidis and Milioni 2010).

In summary, although this article follows a literature approach, the aim of this research is not to exhaust all the bibliographic references in relation to the triptych for media studies, audiovisual media communications, and generations, as the title suggests. This article, therefore, wants to highlight the relationship between the triptych and the modern and visual-centric way of our life, and the importance of the fact that everyone should possess *multiple-multimodal skills*, through an extensive and rich bibliography as a source of further study. Furthermore, notwithstanding the importance of radio as a medium, but also as an educational communication tool in education, which was already known from its discovery, nevertheless, very few studies and little research have been concerned with the design and creation of a lesson plan or course and/or curricula employing it, through research, considering its dual role as a cognitive field and as an educational communication tool at the same time. The main purpose of this research is, therefore, to fill this gap and to provide data that will eventually contribute to the quality of media studies education (e.g., through a training program, a course, or a seminar), using audiovisual media technologies as educational techniques and/or communication tools to provide technology-enhanced learning through

interactive teaching with emphasis on educational effectiveness to budding journalists as adult learners (18 years and older)—primarily intended for radio lessons at all educational levels and disciplines (including adult education)—considering the modern theoretical and methodological approaches and trends in education, and especially in adult education (see Nicolaou 2017; Nicolaou 2015). More specifically, the research objectives (RO) for this research were as follows:

RO1: Investigating (i) the attitudes and views of the budding journalists who participated in the interactive teaching, with emphasis on educational effectiveness towards the specific audiovisual media communications that were used, and in particular the audiovisual content (in this case the video, sound/audio media, and content of the presentation—something we will discuss below); and (ii) the suitability of specific audiovisual media communications to be used in any course of media studies education.
RO2: Testing the (new) theory of audiovisual media in education (e.g., teaching methodology and educational techniques) (Nicolaou et al. 2019) (something we will discuss below).

On the other hand, the research questions (RQ) that were investigated are as follows:

RQ1: Which of the parameters of educational effectiveness are related to the expectations of budding journalists?
RQ2: What is the relationship of the classroom equipment with the profile and demographics of the budding journalists?

In conclusion, based on the relevant literature review and corresponding findings of previous studies and research on the generations and generational cohorts in relation to the media (see, for example, Podara et al. 2020, 2019a, 2019b, 2019c) and the use of audiovisual media communications in education (see, for example, Nicolaou and Kalliris 2020), and especially in the field of media studies (see, for example, Matsiola et al. 2019), we assume that most generations' members have exactly the same genealogical characteristics and habits (e.g., media use) as highlighted in basic generational theory (e.g., Strauss and Neil Howe [1991] 1992; Tapscott 2009, 1998). At this point, we should mention that beyond the broadly known generations and generational cohorts, there are also other generations, such as *cusp generations* (i.e., *crossbreed generations* or *cross-over generations*) (see Codrington and Grant-Marshall [2004] 2013; Smit 2017). One such generation is the Xennials Generation (Xennials from here on), a *microgeneration* (see Taylor 2018), which is placed between two generations (see Roy 2019; Smit 2017), the Millennials or Generation Y/GenY (Millennials from here on) (people born from 1980 to 1994) (see Howe and William 2000; Howe and Nadler 2008) and Generation X (GenX from here on) (people born from 1965 to 1979) (see Strauss and Neil Howe [1991] 1992; Markert 2004), though its chronological position has not yet been officially defined (further information and reasons why this generation was included will be discussed below). In summary, to validate our working hypotheses, we set two from the beginning. We assume that:

H1. *The respective generations that are the sample of this research have the same genealogical characteristics and habits as their international peers.*

H2. *The Xennials as generation present the same genealogical characteristics and habits mentioned in the literature (see Roy 2019; Taylor 2018; Smit 2017; Codrington and Grant-Marshall [2004] 2013).*

2. Background and Literature Review and/or Related Work

The rapid development of ICTs in recent years has led to an increase in the production and distribution of multimedia material worldwide (Matsiola et al. 2018; Dimoulas et al. 2015), in addition to its consumption from and through the Internet—such as via (a) interactive websites and/or weblogs/blogs (e.g., interactive documentary, etc.); (b) online social networks (OSNs), social media, and platforms (e.g., LinkedIn, Facebook, Twitter, etc.); (c) audiovisual platforms with interactivity (e.g., YouTube, Vimeo, Netflix, etc.) as content-hosting and/or video-sharing websites that can be moved into the software as

a service (SaaS) model (e.g., a video posted on YouTube to transport you to the Netflix); (d) sound platforms (e.g., Mixcloud, SoundCloud, etc.); (e) photo/image and/or video sharing social networking services (e.g., Pinterest, Instragram, TikTok, etc.) proclaimed as 'social media' by the general public; (f) new media (e.g., Internet radio/TV or web-radio/TV, etc.); and so on—as *new technologies* (see Kholdarvovna 2021; Nicolaou and Karypidou 2021; Podara et al. 2021a, 2021b; Dimoulas et al. 2019; Matsiola et al. 2018; Podara et al. 2018; Karypidou 2012; Matsiola 2008). To summarize, 'ICTs' are an umbrella term (Nicolaou and Kalliris 2020, p. 969) that includes basically any communication device, application, and/or service via Internet (online service) as audiovisual media technologies in the global environment (Kholdarvovna 2021; Nicolaou et al. 2019). Nowadays, the Internet as ICTs is the culmination of the field of communication as a body of information (Kholdarvovna 2021; Chen and Zhang 2009), with access to *comprehensive multimedia communication* (Nicolaou 2011b, p. 43) to the people as *active online users* from and through the Internet with *multimodal content* (i.e., text, images/photograph, sound/audio media in the form of sound recordings, certain sounds, music/songs, sound effects (sfx), etc., as well as in the combined format with video), such as the media websites that add a cumulative value through the contributions of users (Antonopoulos et al. 2015, p. 48), which may even influence public opinion (Antonopoulos and Veglis 2013; Spyridou et al. 2013). This phenomenon occurs primarily in the younger generations' users (see Ryberg et al. 2011), such as GenZ (see Seemiller and Grace 2018; Twenge 2017) and Millennials (see Howe and William 2000; Howe and Nadler 2008), who tend to use the Internet and ICTs more and more in every aspect of their daily lives (see Podara et al. 2021b; Nicolaou and Kalliris 2020; Podara et al. 2020; Matsiola et al. 2019; Podara et al. 2018, 2019a, 2019b, 2019c) as *digital natives* (Prensky 2001a; Prensky 2001b). On the other hand, today we also have GenX (see Strauss and Neil Howe [1991] 1992; Markert 2004), the Baby Boomer Generation (people born from 1946 to 1964) (see Owram 1996; Jones 2008), and the Silent Generation (people born from 1925 to 1945) (see Strauss and Howe 1997; Carlson 2008), who are unfamiliar with the use of technology and especially with new technologies (e.g., with smart devices) as *digital immigrants* (Prensky 2001a, 2001b).

The pedagogical value of using and applying new technologies as educational techniques and/or communication tools within the educational process (e.g., through the implementation of a lesson plan) inside the classroom is already common knowledge in education (Khvilon and Patru 2004; Nicolaou et al. 2019; Nicolaou and Kalliris 2020), and especially in adult education, where it has been well-known for five decades (see Campeau 1974; McElreath 1974; Schramm et al. 1967; Waniewicz 1972). New technologies in the field of education five decades ago were considered the blackboard (1841), the motion picture (1940), as well as the (traditional) radio (1920) and the television (TV from here on) (1957) (Kent and McNergney 1999), which were used within the teaching methodology to offer learning opportunities and motivation as technological innovations (i.e., as innovative educational communication tools). Today, the modern approaches in teaching methodologies utilizing (new) technologies in enhanced different learning needs (Frolova et al. 2020) focus on the learning experience of students/learners (Ciobanu 2012; Skryabin et al. 2015), who should (a) be active participants and not only obtaining knowledge (Orlikowski 2008), and (b) be interested in something new or different in a way that makes it important (Nicolaou et al. 2019). The reason is because new technologies, such as audiovisual media communications, are the key to quality education and an important factor in achieving enhanced learning as serious educational communication tools for explaining basic concepts and promoting the traditional and web-based learning environments (see also Griva et al. 2020; Kourtidou and Gasparinatou 2019; Gutiérrez Martín and Tyner 2012). At the same time, they play (a) a critical role in the success of teaching-learning processes (Bugawa and Mirzal 2018), with learning opportunities (Muñoz-Repiso et al. 2015; Nicolaou 2019a; Peciuliauskiene and Barkauskaite 2007); and (b) a momentous non-verbal role in our psychological health, through the consumption of audiovisual content or narratives (Nicolaou

and Kalliris 2020), from early childhood (Alper 2013) to higher educational levels and adults learners (Nicolaou and Kalliris 2020).

Today, in an interconnected world, the contribution of audiovisual media communications is characterized as necessary (Nicolaou and Kalliris 2020, p. 984), as well as very suitable for use in educational procedures (Widodo et al. 2020; Farooq and Benade 2019; Nicolaou et al. 2019), because it helps students/learners to learn and understand how to learn better at all educational levels and disciplines (Nicolaou and Kalliris 2020; Nicolaou et al. 2019; Nicolaou 2019a) while giving them the opportunity to be skillful in the educational use of audiovisual media technologies through the educational procedure (Gisbert and Esteve 2016). Examples include (a) machine-assisted learning in highly interdisciplinary media fields (Chatzara et al. 2019), and/or (b) use of OSNs, social media, and platforms (e.g., LinkedIn, Facebook, Twitter, etc.), as well as audiovisual platforms (e.g., YouTube, Vimeo, Netflix, etc.), as educational resources that provide significant aid in learning (Tomyuk et al. 2019)—and not because they are fashionable or forced due to the current circumstances (e.g., due the effects of a pandemic), such as, for example, *podcasts* and *vodcasts*, which have been in the spotlight for more than a decade (see Ratchma and Zhang 2006; Sprague and Pixley 2008; Aguilar et al. 2011) and have gained popularity in the educational environment in the last year (i.e., in 2020) due to the COVID-19 pandemic (see, for example, Geha and Dhaliwal 2020). At this point, we should mention that a *podcast* is (a) distributed mainly from and through the Internet as a distribution tool (see Bonet and Sellas 2019; Sellas and Solà 2019; Sellas 2018) and (b) may be found in (i) different genres and/or categories and (ii) many forms (see Drew 2017b), as plain sound/audio media and/or enhanced with multimedia content (such as video) and thereby converted into a *vodcast* (see also Rae and McCarthy 2017; Schmittauer 2017; Dimoulas et al. 2019; McNamara and Drew 2019). Academically, it is primarily employed to disseminate course content (see Ballinas-Gonzales et al. 2020; Fernandez et al. 2015; Temperman and Lièvre 2009) and/or as learner-created content (Struck et al. 2011), due to its flexibility and versatility in use (e.g., the development of meta-skills, support for content learning, etc.) (see McNamara and Drew 2019; Drew 2017a; Drew 2017b; Struck et al. 2011), resulting in its ability to satisfy different learning experiences and to adapt to individual comprehension styles (see Nicolaou et al. 2019; Drew 2017b). To summarize, maximization of the engagement of students/learners in the educational procedure (a) can generate (i) motivation and stimulation of new perceptual skills and/or one's already obtained skills (e.g., soft skills, such as persuasive communication skills, versatility, critical thinking, emotional intelligence, etc.) (González-Salamanca et al. 2020; Nicolaou 2019a) as well as (ii) more opportunities, challenges, and social benefits that will lead to enhanced learning outcomes, interaction, and interplay with the audiovisual media communications (Nicolaou et al. 2019; Quinn 2018; Quinn et al. 2016), and/or learner–learner interaction or enjoyment (Nagy 2018; Turan and Cetintas 2020); in addition, (b) it will aid in exchanging experiences and gaining access to best teaching practices (Frolova et al. 2019), providing educational effectiveness in technology-enhanced learning. Furthermore, their efficiency can be strengthened if principles of theoretical frameworks, such as the theory of constructive learning (or constructivism theory) of von von Glasersfeld (1985) or the andragogy theory of Knowles (1989), are applied both to the content and the method of their development (see Nicolaou 2018a), and/or investigated through the technology acceptance model (TAM) (see, for example, Manolika et al. 2021; Matsiola et al. 2019; Fazil and Ward 2016) originally proposed by Davis (1989).

The capability of interaction and interplay nowadays has divided audiovisual media technologies, and especially the mass media, into old and new (as new and/or modern media) (see Buckingham [2003] 2009; Matsiola 2008; Nicolaou et al. 2019; Nicolaou and Kalliris 2020), and pushed them towards intelligent cross-media publishing as media practices and technology convergence perspectives (see Avraam et al. 2021; Katsaounidou et al. 2019; Veglis et al. 2016; Lugmayr et al. 2013). The interesting issue of the mass media in relation to the other audiovisual media technologies is that neither of them replaces

the other (e.g., the television has not replaced the radio, while the floppy disk has been replaced by the CD-ROM and/or DVD, and nowadays tends to be completely replaced by the USB), but they are evolved and/or re-evolved (see Karypidou 2006; Matsiola 2008; Nicolaou et al. 2021; Podara et al. 2020). A typical case is that of radio, where over the years, it has evolved from analog and/or conventional to digital (or otherwise electronic) (Flew [2002] 2014; Sellas 2013b; Blair [1999] 2002), and from satellite to today's internet radio or web-radio (Mirabito and Morgenstern [2004] 2017), which is essentially the provision of a radio service through the Internet (as an online service) (Matsiola 2008; Bonet et al. 2011; Nicolaou et al. 2021). The most common international name for this type of broadcast is *webcasting* (a combination of the words *web* and *broadcast*) and/or *internet broadcast* or *net broadcast* (or *netbroadcast*) (Mack and Ratcliffe 2007). Nowadays, the radio is a global innovative medium, which is constantly evolving, without losing its identity, in whatever form it may be encountered (see Nicolaou et al. 2021; Okeke et al. 2020; Karypidou 2006; Taachi 2000; Duby 1990), making it one of the first choices of the audience.

In summary, new media in recent years have begun to decisively influence the values, expectations, and interests of the population, especially among the younger generations (i.e., GenZ and Millennials) as *digital natives* who create new trends, attitudes, and stereotypes, as well as new forms of TV viewing and usage patterns as a sphere of entertainment, mainly through digital and mobile media (as smart device) for the digital media production practices which are now ubiquitous (see Hashem et al. 2017; Podara et al. 2018, 2019a, 2019b; D'yakova and Sechkareva 2019; Michalovich 2021; Podara et al. 2021b). This situation leads us to the conclusion that new journalists need to acquire, more than ever before, necessary and specific and/or combination *multiple-multimodal skills* through the curriculum. Thus, beyond the necessary quadriptych skills (journalistic, investigative, data, and computational skills), the new journalists need to have (a) *Journalists' ICTs skills* (i.e., basic skills, web publishing skills, web 2.0 skills, and webcasting skills) (see Veglis and Pomportsis 2014; Veglis 2013); (b) *data journalism skills* (see Veglis and Bratsas 2021; Charalampos Bratsas and Veglis 2018; Veglis and Bratsas 2017; Veglis 2013); (c) *growing media skills*; and (d) *cognitive skills* (e.g., know-how in situ) (see Sidiropoulos et al. 2019; Blumberg and Brooks 2017; Sidiropoulos and Veglis 2017; Salomon 1972). To achieve this, the curriculum in media studies education should amplify and apply educational effectiveness in technology-enhanced learning (Nicolaou et al. 2019), and there should be relevance to the media industry as well as to the modern and visual-centric way of our life, as mentioned in corresponding research (see Hafeez and Nauman 2020; Mellado and Alfano 2020; Nicolaou and Kalliris 2020; Nicolaou et al. 2019; Bennett and Kidd 2016; Carpenter 2009; Haig 2005), in order for students/learners in media studies at all educational levels and disciplines (including adult education) (a) to be able to cope successfully with the new job requirements in this virtual (digital) world for a sustainable future of the knowledge society (Griva et al. 2020; González-Salamanca et al. 2020; Nicolaou 2020; Quinn-Allan 2010); and (b) to have and/or build a successful professional practice and career (Griva et al. 2020; D'yakova and Sechkareva 2019; Griva et al. 2019; Mellado 2019; Gisbert and Esteve 2016; Veglis 2013; Quinn-Allan 2010; de Burgh 2003) as future journalists (tomorrow's new journalists).

Finally, effective integration of audiovisual media technologies at all educational levels and disciplines (including adult education) also requires dedicated and talented educators (see Guillén-Gámez and Mayorga-Fernández 2020; Nicolaou and Kalliris 2020; Ngah et al. 2019), especially regarding educators of media studies education, due to their scientific field (see Crawford et al. 2020; Matsiola et al. 2019; Nicolaou et al. 2019). In conclusion, all the educators, regardless of which educational levels and disciplines they work in, should need to combine communication techniques through audiovisual media communications within the educational process and the processes of appropriation and use of ICTs in teaching practices (see Brenes-Monge et al. 2020; Esteve-Faubel et al. 2020; Nicolaou 2020; Frolova et al. 2019; Griva et al. 2019; Ryabova et al. 2018; Veglis and Avraam

2001). Furthermore, they should facilitate broadening the educational process from the curriculum (see Seamon 1999; Nicolaou et al. 2019; Nicolaou and Kalliris 2020), while their textbook-centered material should be based on real-world Internet applications and services (see Seamon 1999; Hennessy et al. 2005; Nicolaou 2018b) from and/or through transactional and interactive distance (see Xalkidou and Gasparinatou 2020), always taking into account the inherent and specific characteristics—such as the culture, the needs (including special needs), the habits, the profile, and the digital identity—of students/learners (see Muñoz-Rodríguez et al. 2020; Nicolaou and Kalliris 2020; Ortiz-Jiménez et al. 2020; Nicolaou et al. 2019; Vuleta 2018; Courau [1993] 2017; Giannoumi et al. 2017; Rogers and Horrocks [1986] 2010; Jacobs 1989; Rogers 1961).

3. Research Approach Methodology, Methods, and Materials

This research applied the qualitative experiment method (see Robinson and Mendelson 2012; Hibler and Biswas 1992; Hibler and Biswas 1989) as a (new) research method utilizing ICTs (see Nicolaou 2021a), through interactive teaching for educational effectiveness (interactive teaching from here on) using audiovisual media communications (see, for example, Nicolaou and Kalliris 2020; Nicolaou 2019c; Nicolaou 2014) that demonstrates the use of interactive technology (see also Kennewell et al. 2008), and applying the theory of audiovisual media in education (Nicolaou et al. 2019), in a case study experiment that applied qualitative action research with quasi-experiments (something we will discuss below). This theory was proposed mainly for adult learners in media studies, and it summarizes and presents the main audiovisual media technologies (i.e., computer, visual media, sound/audio media, video, as well as social media and audiovisual platforms) that can be used and applied in a teaching environment, as well as the main teaching methodologies (i.e., *differentiated teaching* and *interdisciplinary teaching*) that are indicative for the use of audiovisual media technologies for the purpose of effective teaching and educational effectiveness (Nicolaou et al. 2019). In addition, we should mention that this theory is mainly based on (a) the self-directed learning theory of Knowles (1975) as adapted by Hammond and Collins [1991] (Hammond and Collins [1991] 2004); as well as (b) the andragogy theory of Knowles (1989), in relation to (i) the use of audiovisual media technologies (as referred mainly in Buckingham [2003] (Buckingham [2003] 2009), Newby et al. [1996] (Newby et al. [1996] 2006), and Newby et al. [1996] (Newby et al. [1996] 2006) and (ii) the integration of the ICTs (as mentioned above), which were originally used by professionals and practitioners in the field of business (e.g., marketing, public relations, advertising, etc.) (see Nicolaou 2015, 2011a, 2011b), in the educational process (mainly in adult education) (see also Nicolaou 2018a). In addition, part of this theory has already been presented and published in the proceedings of various international and non-international conferences in Greece and Cyprus from 2015 after blind peer reviews (see Nicolaou 2019a, 2019b, 2018b, 2017, 2015). It has already been applied to researches in testing, and those findings and results confirm it (see Nicolaou and Kalliris 2021; Nicolaou 2020; Nicolaou and Kalliris 2020).

Now, as far as the specific research is concerned, it was carried out in the academic year 2018–2019, and specifically at the end of the spring semester 2019, in Thessaloniki (Greece), with adult journalism students/learners (18 years and older) (budding journalists from here on) who are studying media studies in educational institutions (to be discussed below). The interactive teaching was held in the last lecture of each course as a *repetition lesson*, because it was based on pre-existing knowledge, after the relevant approval, ethical clearance, and ethical committees of the educational institutions where the research was implemented.

In conclusion, this research (qualitative experimental method) as methodology is part of the field of qualitative research (due to interactive teaching as case study) (see Cohen et al. [1980] 2018; Papanastasiou and Papanastasiou 2005; Siardos [1997] 2005). It follows a quantitative analysis through a specially designed written questionnaire in the form of an evaluation (to be discussed below), which was given to the budding journalists after the

completion of the interactive teaching (experiment), and was filled by those who agreed to participate in this research. Furthermore, we should mention that this specific type of methodology is widespread and is part of the new research methods (see also Nicolaou 2021a) that have led to the redistribution, re-evaluation, and reintegration of traditional research methods (see Nicolaou and Kalliris 2020, p. 970). Finally, this research is also considered action research (see McNiff 2017; McNiff 1995), because the lead researcher was associated with the participants/budding journalists in the interactive teaching as educator (i.e., the educator/lead researcher interacted with the participants/budding journalists). In this case, classroom action research (CAR) (Khasinah 2013) has been applied (see, for example, Handayani and Alperi 2021).

3.1. Planning the Research Method: Experiment

This research, as mentioned above, was carried out with the qualitative experiment method, and more specifically the quasi-experiment (Siardos [1997] 2005, pp. 139–41). A total of three (3) experiments were performed in the form of interactive teaching based on a lesson plan (original lesson plan from here on), which was used as a lecture in 2013 in the Journalism program for adult learners at the Adult Education Centers of the Cyprus Ministry of Education, Culture, Sport, and Youth, during the school year 2013–2014 in the city of Larnaca/Larnaka in Cyprus. The lecture through presentation was entitled "*organization of a radio station and the organization of news and music radio production*" (of any form), and was adapted for anyone to follow. For the needs and purposes of this research, the original lesson plan (to be discussed below) and the presentation was updated and revised (new presentation from here on), while it also passed relevant *testing* (Papanastasiou and Papanastasiou 2005, p. 204) (i.e., pilot research), as a method of checking the validity of the research (in this case the interactive teaching). Thus, five PhD candidates of the School of Journalism and Mass Communications, Faculty of Economic and Political Sciences, Aristotle University of Thessaloniki (Thessaloniki, Greece), as experts in the field, were selected as participants in the pilot research in March 2019, and interactive teaching was revised based on participants' feedback before research officially began.

The main educational communication tool for the audiovisual media technologies was *visual media*, such as *projected visual materials* through presentation software package (e.g., Microsoft PowerPoint, Prezi, Apple Keynote, etc.), as a presentation that promoted and enhanced interactivity (presentation from here on) (see Hallewell and Crook 2020; Moulton et al. 2017; Chou et al. 2015; Settle et al. 2011). In this case, the software selected for creation of the presentation was Prezi (https://www.prezi.com/, accessed on 1 March 2021), which is an online Adobe-Flash-based presentation software for creating interactive visuals for virtual presentations, slides for holding text, images, video, and animations to facilitate the delivery of information that engage, inspire, and teach (Settle et al. 2011; Diamond 2010; Perron and Stearns 2010). It also allowed us to download the presentation as a file on our personal computer (PC) (e.g., desktop and/or laptop, tablet, etc.) and runs without an internet connection (offline). The presentation in Prezi is navigated by zooming in and out of different points on the canvas as a main window, and is not based on slides like other software programs (e.g., Microsoft PowerPoint) (see Settle et al. 2011). This gives flexibility and enables the presenter (in this case, the educator/lead researcher) to use the presentation exactly as s/he wants, thus creating an indirect interaction, maintaining the attention and interest of the audience (in this case, the participants/budding journalists). Prezi is considered an application and implementation of innovation, as well as one of the most effective instructional and educational communication tools for knowledge acquisition and audiovisual skills (e.g., listening skills) (see Aruan et al. 2020; Sanchez et al. 2020; Chou et al. 2015).

In summary, the new presentation was enriched with rich multimodal content (in this case, mainly with sound/audio media files), which were mainly used as examples to understand the theory in practice. At this point, we should mention that the uses of all multimodal content and material (as audiovisual content) were made with the relevant per-

mission and approval of the creators and companies/organizations/structures/institutions, while (a) the relevant European provisions on the use of personal data (General Data Protection Regulation—GDPR) were applied, and (b) the Helsinki ethics protocol was followed throughout of this research (World Medical Association 2013). In closing, all experiments were performed in different places (venues), at different times, and in different periods, but they were all performed by the same educator/lead researcher, used the same basic equipment/educational communication tools (audiovisual media technologies: PC, overhead projector/projected visual materials via presentation software, and use of presentation remote control), and lasted the same duration (90 min), while all the participants/budding journalists attended exactly the same presentation (as audiovisual content) and the same lecture (interactive teaching). Finally, at this point, we must mention that the educator/lead researcher was an experienced adult educator, who is also a trainer of adult educators, certified public relations professional, journalist, and music producer/sound engineer, with studies in communication, public relations, journalism, music, and sound recording, as well as in education, curriculum, and instruction, with over 10 years of experience in Cyprus and Greece (a) in teaching (verbal and non-verbal) communication, journalism, electronic media, and teaching methodology courses in adult education and higher education, and in the training/education of executives for primary and secondary general education; as well as (b) in the field of mass media and media industry as a (i) journalist in print and electronic/digital press, as well as radio media, (ii) social media manager, content creator, and copywriter, and (iii) music producer, sound engineer, and disc jockey (DJ), with over 1000 h on air, and many radio and non-radio (i.e., music and/or TV) productions. He has also given his voice in TV and radio commercial spots, as well as cartoons/animated movies, as a voice-over artist.

Lesson Plan

The original lesson plan was based on curriculum development at the micro level (Ioannidou-Koutselini 2013). It was applied as a methodological approach to the edification and differentiation of teaching practices in a mixed class (Koutselini-Ioannidou 2008), in combination with the theoretical approaches of adult education (Courau [1993] 2017) and the teaching methodology employing means of communication (audiovisual media technologies) ([1989]), as a new approach to teaching methodology in adult education (see Nicolaou 2017, 2015). Moreover, the following were used: (a) sound/audio media samples and excerpts from works and sound/audio media spots (i.e., sound/audio media files) by undergraduate students from the courses *Audio Production*, *Radio Production,* and *Production and Presentation of Radio News* from the University of Nicosia (Nicosia/Lefkosia, Cyprus) (during the period 2007 to 2012); and (b) sound/audio media spots (sample of work) from MediaZone, University of Nicosia (Nicosia/Lefkosia, Cyprus) (https://mz.unic.ac.cy/, accessed on 1 March 2021) (until 2012), enriched.

On the other hand, the final lesson plan (a) was based on creating material and content for radio courses (see Kalliris et al. 2019; Matsiola et al. 2019; Salmon et al. 2008) to the requirements of a cross-disciplinary profession (such as the journalistic profession today), focusing mainly on legal issues in technology-related fields (see Veglis and Maniou 2019; Royal 2017; Gillmor 2016; Giannakoulopoulos et al. 2012; Siapera and Veglis 2012; Carpenter 2009; Donaldson and Knupfer 2002); and (b) accurately applied the theory of audiovisual media in education (Nicolaou et al. 2019), using *differentiated teaching*—"which can be applied to mixed capacity faculties by providing challenging learning experiences" (Nicolaou et al. 2019, p. 7)—as a teaching methodology employing audiovisual media technologies (see also Nicolaou 2019a; Hewitt et al. 2013; Shattery and Rapp 2003); while the main journalists' ICTs skill was *webcasting skills* (Veglis and Pomportsis 2014, p. 65). Moreover, the 3P (presage-process-product) model of classroom learning (Biggs 1995, p. 397) was applied, which is based on the theory of constructivism (von Glasersfeld 1985), where learners can learn anything at any age (Marzano 2004; Biggs 1996). Particularly, it implemented (a) commentary and views on the content of the lecture (in this case, the inter-

active teaching), so that it could be applied and experienced with it, using the reactivating and re-energizing memory, as well as (b) experiential involvement of the learners from and through brainstorming, practical application, discussion, and group discussion, as educational techniques using audiovisual media technologies (see Nicolaou et al. 2019), in order to achieve proper and constructive communication (verbal and non-verbal) through the dialogue (see Nicolaou and Kalliris 2021; Nicolaou 2020; Xalkidou and Gasparinatou 2020; Nicolaou 2019c, 2014; Pulido-Rodríguez and Tortajada-Giménez 2008). More specifically, the main educational activities of the final lesson plan were carried out in the interactive teaching through (a) presentation (from and through audiovisual media communications) as the main educational communication tool, which was enriched with multimodal content and material; (b) storytelling, which helps learners emotionally, and allows them to construct meaning on a personal level, and helps literacy competency (see Engel 1995; Farmer 2004; Pavlik and Pavlik 2017; Piaget 2002; Podara et al. 2021a); and (c) theatrical performance by the educator/lead researcher (who does the interactive teaching) through digital storytelling as role-play, which is a common method in communication skills training (Lane and Rollnick 2007). These activities are (i) exercises of representation, (ii) exercises of memory activation, (iii) brainstorming, (iv) guided didactic discussion and learning discussions with experiential education, (v) awakening and plenary debate, and finally (vi) meta-cognitive knowledge and evaluation meta-cognitive skill. At this point, we should mention that these educational activities are based on the same educational activities from a lesson plan with a different theme ("Life Skills: The Importance of Non-Verbal Communication"), which was carried out and presented as an interactive educational seminar/workshop (from and through audiovisual media communications) in Thessaloniki in the context of the Panhellenic Conference with International Participation on "Re-Reflections on Childhood" in 2014 (Nicolaou 2014), while the same lesson plan was used in the framework of the various actions of the Cyprus Pedagogical Institute (Παιδαγωγικό Ινστιτούτο Κύπρου/ΠΙΚ in Greek language) (Nicosia/Lefkosia, Cyprus) during the school years 2013 to 2016 (see, for further information, Nicolaou and Kalliris 2021, pp. 307–9).

The new presentation as audiovisual content was adapted to the new trends in radio as interactive radio—for example, (i) podcasts as a distribution tool (see Bonet and Sellas 2019; Sellas and Solà 2019; Sellas 2018) and (ii) use of social networks, social media, and platforms (such as Facebook, Twitter, and Instagram), audiovisual platforms (such as YouTube and Vimeo), and sound platforms (such as Mixcloud and SoundCloud) as promotional tools and/or creative tools for new audiovisual content for a radio show and/or radio music show (see Nicolaou and Karypidou 2021; Bonini et al. 2014; Bonini and Toni 2014; Sellas 2013)—and ethical and copyright issues in music (see Costa 2016, Costa 2017). Jt was also enriched with additional multimodal content and material, such as (a) sound/audio media spots from local radio stations in Thessaloniki (Greece); (b) the sound/audio media spots by adult learners of the *Radio-Television Media* module from the "Kostis Palamas" program (http://kostispalamas.uoa.gr/, accessed on 1 March 2021) at the school in Thessaloniki, under the responsibility of the School of Journalism and Mass Communications, Faculty of Economic and Political Sciences, Aristotle University of Thessaloniki (Thessaloniki, Greece) (October to November 2015); and (c) case studies from the (i) sound/audio media spots from the Cypriot Radio Station of the University of Cyprus, UCY Voice (student radio station with local scope in Nicosia/Lefkosia on the frequency 95.2 FM and pancyprian scope through Internet and Internet application/app for Android mobile phones) (Nicosia/Lefkosia, Cyprus) (http://ucy.ac.cy/ucyvoice/, accessed on 1 March 2021) (until 2015) (Appendix A); and (ii) sound/audio media excerpts from the radio music show *Music is Emotion* (*Η μουσική είναι συναίσθημα* in Greek language) by the Cypriot Radio Station of the University of Cyprus, UCY Voice (2013 to 2015) (Appendix B) (Appendix C) (Appendix D); as well as (d) video (see, one example, Appendix E). These were used after special processing with digital filters (sound/audio media and video) through software as well as Internet applications and services (mainly free, open-source,

cross-platform software, software composition analysis) (see Aguayo Gonzalez et al. 2009) such as Audacity (https://www.audacityteam.org/, accessed on 1 March 2021) and Freemake Video Convert (https://www.freemake.com/, accessed on 1 March 2021), which were utilized for digital editing before being used in the interactive teaching.

The main content of the new presentation after the update and the revision was:

1. The radio studio as a premise (e.g., the requirements of room acoustics, web radio automation for audio stream, etc.), as well as its equipment (e.g., working console, sound systems, etc.) and the process of recording;
2. The comprehension of sound as a physical quantity, and also basic acoustics rules and management;
3. Types of radio format, style, and content, and the language and terminology of radio;
4. New forms and challenges of radio: jingle refreshers brainstorming for shows, developing practical stories for radio, radio jingle production class, news clips, effective use of sound effects and writing for the ear;
5. How to use free and open-source software from and through the Internet to quickly and easily create sound/audio media spots (see Kotsakis et al. 2020; Vryzas et al. 2020; Kalliris et al. 2019; Matsiola et al. 2019; Nicolaou et al. 2019; Tsipas, Nikolaos, LazarosVrysis, CharalamposDimoulas, and George Papanikolaou, 2015; Kotsakis et al. 2012a; Kotsakis et al. 2012b; Aguayo Gonzalez et al. 2009; Salmon et al. 2008; Dimoulas et al. 2000).

Concluding, we should mention that all sound/audio media spots and excerpts were digitally edited as the original audio material reached its final optimized form employing up-to-date, non-linear, and non-destructive techniques (Kalliris et al. 2019). Quality of learning (QoL) parameters, such as the learning outcome and its relation to the prior knowledge status (Kalliris et al. 2014), but also the physical attributes of initial material, were taken into account during the editing procedure, since poor material may lead to the creation of negative emotional response (Kotsakis et al. 2014; Kalliris et al. 2011). More specifically, the sound editing and mixing were done through Audacity 2.1.3, Adobe Audition 3.0, and WaveLab 7, and the video editing and production through Magisto by Vimeo 6.2.4.20511 (mobile app), Freemake Video Convert 4.1.10, Movie Maker 10, and YouTube Studio (online service).

3.2. Participants

In this research, we gathered data from a convenience sample of 62 budding journalists (18 years and older) who were studying media studies in Thessaloniki (Greece) at the end of the spring semester 2019. More specifically, the sample is divided into three (3) groups (experiments): (a) 22 postgraduate students in the course *Web Radio* and (b) 26 undergraduate students in the course *Radio Journalism*, who attend the respective study programs of the School of Journalism and Mass Communications, Faculty of Economic and Political Sciences, Aristotle University of Thessaloniki (Thessaloniki, Greece) (AUTh from here on); as well as (c) 14 learners in the course *Organization-Production-Presentation of Radio Shows*, who attend 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). The research sample is members of the GenZ, Millennials, Xennials and GenX. In summary, the specific sample used in this research through the qualitative experiment method based on the literature is conceptually valid (Siardos [1997] 2005, pp. 143–45) and considered acceptable (Cohen et al. [1980] 2018; Gall et al. [1974] 2006) to be the sample in research that uses the experiment method in general (see Cohen et al. [1980] 2018; Papanastasiou and Papanastasiou 2005).

3.3. Data Collection, Processing, and Analysis

The conducted research, although it is a qualitative method as mentioned above, was based on quantitative analysis through a specially designed written questionnaire

(evaluation form from here on) as a measuring instrument, which was given to the budding journalists after the completion of the interactive teaching (experiment). At this point, we should mention that this measuring instrument is based on the "feedback form" of the Cyprus Pedagogical Institute (Nicosia/Lefkosia, Cyprus), which uses it for its various actions, and it has been widely used in many studies and much researches (Hadjilouca-Mavri and Sofokleous 2013; Nicolaou 2020; Nicolaou and Kalliris 2021). In the context of ongoing research that explores the MACE (as mentioned above), which includes also the ongoing project AMC-MSRC to which this research belongs, the feedback form was further revised and redesigned, initially in the context of (a) the research/project "Non-Verbal Communication" (NVC), which began in 2014 and was completed in mid-2020 in Cyprus and Greece (Nicolaou 2020, pp. 169–70), with the main aim of understanding the necessary, not only theoretical but mainly practical, knowledge relating to non-verbal communication at all levels, in order for the participants to be able to effectively use the techniques that compose its rich range of communication (see also Nicolaou and Kalliris 2021; Nicolaou 2020, 2019c, 2014), through the experimental method of the quasi-experiment (Siardos [1997] 2005, pp. 139–41); as well as (b) the first phase (of three; research investigating the profile and professional identity of Greek and Greek-Cypriot adult educators in a *visual-centric*, *technological*, and *multimedia* era-triptych dimension) (see Nicolaou 2021b) of the main research that explores the MACE, using the interview method through conventional and new technologies (see also Nicolaou 2021a). This also functioned as a method of ascertaining the effectiveness of all the questionnaires (one of them was the corresponding "evaluation form") used in the third phase (of the main research MACE) as a pilot survey, which began in March 2019 and was completed in April 2019, following all the relevant instructions and tests proposed by the bibliography (see Nicolaou and Kalliris 2020, pp. 974–75); and as a research and development method (also known as *methodological development* or the *multi-methodological approach*) (see, for example, Mingers and Brocklesby 1997). Regarding the specific evaluation form, it was divided into three parts, with incorporated adapted parameters from the dynamic model of educational effectiveness of Kyriakides et al. (2009) (i.e., orientation, structuring, modelling, application, questioning, assessment, management of time, and classroom as a learning environment (p. 13)), while its final form was tailored to be relevant to the fields of this research:

1. The first part constituted 11 questions in quantitative format, with a five-point Likert scale (see Likert 1932; McLeod 2019) relating to the degree of satisfaction of quality (1 = 'Very Poor' to 5 = 'Excellent') for the "expectations", the "organization", the "interesting suggestions", the "discussion time", the "development issues" (if they were interesting), the "questions/answers" at the end of the seminar, the "knowledge" acquired (theoretical background investigation), the "time" (time conducted), the "venue", the "period" (when it took place), and the "equipment" of the classroom (classroom equipment from here on);
2. The second part consistuted one open-ended question (qualitative format) relating to the learner's views, to provide feedback, retrieve the problems, and evaluate possible solutions of the budding journalists regarding interactive teaching through audiovisual media communications (as comments and/or suggestions);
3. The third part constituted questions about the profile and demographics (i.e., gender and age group) of the sample.

For the best presentation of data and interpretation of the results, the questions of the first part were grouped into two categories, with seven and four questions, respectively, based on (a) the "acquired knowledge organization" (including the "expectations", which are not considered parameters of educational effectiveness) and (b) the "spatial technical/logistical infrastructure". The separation of the questions was considered appropriate for the aims of this research. The experiments, as mentioned, were performed in different places (venues), at different times, and in different periods, while each communication classroom was designed differently and held its own classroom equipment (e.g., one classroom was equipped with an interactive whiteboard, another with an audio system and

a working console, etc.). Although the classroom equipment is considered part of the audiovisual media communications (mainly as audiovisual media technology) and is used as an educational communication tool for the implementation of the lecture (see Luttrell et al. 2020; Moreno-Guerrero et al. 2020), in this case, the separation was necessary (a) due to the different classrooms' equipment, and (b) based on the objective of this research that specifically investigates audiovisual content (and not the audiovisual media technologies) (RO1).

Moreover, exclusively due to the aim, the purpose, and the hypothesis of this research, in the evaluation form, in the 3rd part regarding the age question, we defined the age group 39–43 years as Xennials. Xennials, as mentioned above, are placed between Millennials and GenX (see Roy 2019; Smit 2017), though without an official chronology yet because that is still under study in the international academic scene. As a generation, it emerged because most of the young teenagers (age group 13–19 years) tended to have different genealogical characteristics and habits than the members of the generation to which they belonged (see Roy 2019; Taylor 2018; Smit 2017; Codrington and Grant-Marshall [2004] 2013). The Xennial generation has been mentioned quite often in the print and electronic/digital press, both in the international and the Greek press as well, for the last decades; however, academics and researchers have only recently begun to investigate it (see Roy 2019; Taylor 2018; Smit 2017). Based on the systematic search of the literature review from and through the Internet, it seems to be closer to GenX. In summary, the only reason we include it is to investigate whether this generation really exists based on the genealogical characteristics and habits mentioned in the literature (H2). For the above reasons, GenX 1 has necessarily been defined as the age group 44–53 years, while in the presentation of the results in the next section (Section 4), and in the corresponding tables and figures, GenX 2 (age group 39–53 years) is also presented, which includes the entire GenX as defined in the literature. Here, it should be mentioned that the names of the generations were not in the evaluation form.

After performing the experiments and collecting the answers at the end, the data were analyzed and coded mainly from and through Internet applications and services. Specifically, they were inserted in IBM Statistical Package for Social Sciences (SPSS) (version 25) and in the specialized online platform *Survs.com*, which were the software programs selected for the descriptive and statistical analysis. Prior to performing the analysis, the internal reliability of quantitative query data was tested using the "Cronbach's alpha" index through SPSS, and the internal reliability of all quantitative queries (11 questions) from the evaluation form delived $\alpha = 0.708$, thus characterized as reliable ($\alpha > 0.700$) and providing the assurance of the internal reliability of the data (Field [2000] 2018).

All results of this research are presented in the next section (Section 4) as a whole or individually, or in single tables, or in double entry tables with percentages or rounded percentages, averages (mean values), or standard deviations (SD) after analysis through SPSS and *Survs.com*. In addition, to reveal and assess the correlations in relation to the research questions of this research, a Spearman's rho correlation through SPSS was performed. Finally, the qualitative data collected from the second part of the evaluation form were (a) grouped and adjusted as quantitative data in the form of keywords (i.e., jingles, news clip, identity, theory in practice, bridge, thematic broadcasts, presentation, and video) (something we will discuss in more detail in Section 4) through data segmentation and hermeneutical coding (see also Coffey and Atkinson 1996; Flick [1995] 2009); and (b) presented in graph form (as figures) through Microsoft Office Excel 2007, for better understanding (Fink 1995).

4. Results

4.1. Sample Characteristics and Descriptive Statistics

The final convenience sample of this research consisted of 62 budding journalists from Thessaloniki (Greece) at the end of the spring semester 2019. The statistical distribution of the variable of gender was 30 males, with a percentage of 48%, and 32 females, with

a percentage of 52%. More specifically, their age groups were as follows: (a) 45 budding journalists 18–25 years, with a percentage of 72.5% (22 males, with a percentage of 49%, and 23 females, with a percentage of 51%) (GenZ); (b) 9 budding journalists 26–38 years, with a percentage of 14.5% (4 males, with a percentage of 44%, and 5 females, with a percentage of 56%) (Millennials); (c) 5 budding journalists 39–43 years, with a percentage of 8% (2 males, with a percentage of 40%, and 3 females, with a percentage of 60%) (Xennials); and (d) 3 budding journalists 44–53 years, with a percentage of 5% (2 males, with a percentage of 67%, and 1 female, with a percentage of 33%) (GenX 1). Details on the budding journalists' demographics (age groups/generational cohorts and gender) are provided in Table 1.

Table 1. Budding journalists' demographics.

	18–25 Years (GenZ)			**26–38 Years (Millennials)**			**39–43 Years (Xennials)**			**44–53 Years (GenX 1)**			**39–53 Years (Gen X 2)**		
	f	**%**		**f**	**%**		**f**	**%**		**f**	**%**		**f**	**%**	
Males	22	35.5	49	4	6.5	44	2	3	40	2	3	67	5	8	62
Females	23	37	51	5	8	56	3	5	60	1	1	33	4	5	38
Average Total	45	72.5	100	9	14.5	100	5	8	100	3	5	100	8	13	100

On the other hand, as mentioned above, the sample of the research that participated in the three (3) experiments included (a) 22 postgraduates students, with a percentage of 35% (12 males, with a percentage of 55%, and 10 females, with a percentage of 45%) (first experiment); and (b) 26 undergraduates students, with a percentage of 42% (8 males, with a percentage of 31%, and 18 females, with a percentage of 69%) (second experiment), from the AUTh; as well as (c) 14 learners from the IEK, with a percentage of 23% (10 males, with a rate of 71%, and 4 females, with a rate of 29%) (third experiment). More details on the experiments and gender of budding journalists are presented in Table 2.

Table 2. Experiments and gender of budding journalists.

	First Experiment [1]			**Second Experiment** [2]			**Third Experiment** [3]			**Average Total**	
	f	**%**		**f**	**%**		**f**	**%**		**f**	**%**
Male	12	19	55	8	13	31	10	16	71	30	48
Female	10	16	45	18	29	69	4	7	29	32	52
Average Total	22	35	100	36	42	100	14	23	100	62	100

[1] Postgraduates students, AUTh. [2] Undergraduates students, AUTh. [3] Learners, IEK.

4.1.1. Acquired Knowledge Organization

The grouped total responses of the sample in terms of the degree of satisfaction obtained from the evaluation form in the category "acquired knowledge organization" ranged mainly between the choices of the five-point Likert scale from 3 to 5 ("Fair" to "Excellent"), with more answers given to option 5 ("Excellent"). The largest percentage of option 5 ("Excellent") was presented in the "questions/answers" made at the end of the interactive teaching (49 budding journalists, with a percentage of 79%). Regarding the averages, the question which gained the highest percentage was also the "questions/answers" at the end of the interactive teaching (mean value: 4.77, SD: 0.459), while the lowest percentage was on the "knowledge" they acquired (theoretical background investigation) on the subject (mean value: 4.27, SD: 0.772), something that is purely subjective for every individual (Nordtug 2007). This low percentage was expected, because the interactive teaching was held in the last lecture of each respective course, as mentioned above. Additionally, it was based on pre-existing knowledge, operating as a repetition part of each course. Further information and details on the grouped total responses of budding journalists' "acquired knowledge organization" are provided in Table 3.

Table 3. Grouped total responses of budding journalists' "acquired knowledge organization".

Degree of Satisfaction	Very Poor	Poor	Fair	Good	Excellent	Mean	SD
Expectations			4–6%	25–40%	33–53%	4.47	0.620
Organization			5–8%	29–47%	28–45%	4.37	0.633
Interesting Suggestions			7–11%	23–37%	32–52%	4.40	0.689
Discussion time			10–16%	10–16%	42–68%	4.52	0.763
Development issues			8–13%	25–40%	29–47%	4.34	0.700
Questions/answers			1–2%	12–19%	49–79%	4.77	0.459
Knowledge		1–2%	9–15%	24–39%	28–45%	4.27	0.772

From the average values of "acquired knowledge organization" based on the gender and age groups (generational cohorts) of the sample, as well as the experiment (level of study/place of conduct of the interactive teaching), we see that the highest values were retrieved by the females, the age group 26–38 years (Millennials), and the second experiment, while the lowest were retrieved by the males, the age group 44–53 years (GenX 1), and the third experiment. Detailed results on "acquired knowledge organization" questions can be found (a) for gender in Table 4, (b) for age groups (generational cohorts) in Table 5, and (c) for experiments (level of study/place of conduct of the interactive teaching) in Table 6.

Table 4. Mean values and standard deviations of "acquired knowledge organization" questions in relation to gender of budding journalists.

	Expectations		Organization		Interesting Suggestions		Discussion Time		Development Issues		Questions/ Answers		Knowledge	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Males	4.30	0.702	4.20	0.610	4.23	0.728	4.53	0.581	4.20	0.610	4.73	0.521	4.00	0.871
Females	4.63	0.492	4.53	0.621	4.56	0.619	4.50	0.842	4.47	0.751	4.81	0.397	4.53	0.567

Table 5. Mean values and standard deviations of "acquired knowledge organization" questions in relation to age groups (generational cohorts) of budding journalists.

	Expectations		Organization		Interesting Suggestions		Discussion Time		Development Issues		Questions/ Answers		Knowledge	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
18–25 years (GenZ)	4.44	0.624	4.31	0.668	4.38	0.716	4.56	0.725	4.38	0.684	4.78	0.471	4.22	0.795
26–38 years (Millennials)	4.44	0.726	4.56	0.527	4.56	0.726	4.33	0.866	4.22	0.833	4.89	0.333	4.56	0.726
39–43 years (Xennials)	4.60	0.548	4.60	0.548	4.60	0.548	4.20	1.095	4.20	0.837	4.60	0.548	4.40	0.894
44–53 (GenX 1)	4.67	0.577	4.33	0.577	4.00	0.000	5.00	0.000	4.33	0.577	4.67	0.577	4.00	0.000
39–53 (GenX 2)	4.63	0.518	4.50	0.535	4.38	0.518	4.50	0.926	4.25	0.707	4.63	0.518	4.25	0.707

Table 6. Mean values and standard deviations of "acquired knowledge organization" questions in relation to the experiments (level of study/place of conduct of the interactive teaching) of budding journalists.

	Expectations		Organization		Interesting Suggestions		Discussion Time		Development Issues		Questions/ Answers		Knowledge	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
First experiment [1]	4.50	0.510	4.42	0.643	4.35	0.689	4.58	0.703	4.31	0.736	4.88	0.326	4.23	0.710
Second experiment [2]	4.50	0.673	4.41	0.503	4.50	0.673	4.32	0.894	4.36	0.727	4.68	0.477	4.36	0.848
Third experiment [3]	4.36	0.745	4.21	0.802	4.36	0.745	4.71	0.511	4.36	0.633	4.71	0.611	4.21	0.802

[1] Postgraduates students, AUTh. [2] Undergraduates students, AUTh. [3] Learners, IEK.

4.1.2. Spatial Technical/Logistical Infrastructure

The grouped total responses of the sample in terms of the degree of satisfaction from the evaluation form in the category "spatial technical/logistical infrastructure" ranged mainly from 2 to 5 ("Poor" to "Excellent") in the five-point Likert scale, with more answers given for option 4 ("Good"). The largest percentage of option 5 ("Excellent") was collected in the question for the "classroom equipment" (26 budding journalists, with a percentage of 42%). Regarding the average values, the question that gained the highest percentage was the one regarding the "period" (when it took place) (mean value: 4.19, SD: 0.743), followed very closely by the "classroom equipment" (mean value: 4.18, SD: 0.897), while the lowest percentage was regarding the "venue" (mean value: 3.60, SD: 0.819). More information and details on the grouped total responses of budding journalists' "spatial technical/logistical infrastructure" are provided in Table 7.

Table 7. Grouped total responses of budding journalists' "spatial technical/logistical infrastructure".

Degree of Satisfaction	Very Poor	Poor	Fair	Good	Excellent	Mean	SD
Time		3–5%	12–19%	26–42%	21–34%	4.05	0.858
Venue	1–2%	3–5%	23–37%	28–45%	7–11%	3.60	0.819
Period		1–2%	9–15%	29–47%	23–37%	4.19	0.743
Classroom equipment	1–2%	2–3%	8–13%	25–40%	26–42%	4.18	0.897

From the average values of "spatial technical/logistical infrastructure" based on the gender and age groups (generational cohorts) of the sample, as well as the experiment (level of study/place of conduct of the interactive teaching), we see that the highest values are presented by the males, the age group 26–38 years (Millennials), and the second experiment, while the lowest are the females, the age group 39–43 years (Xennials), and the third experiment. Detailed results on "spatial technical/logistical infrastructure" question can be found (a) for gender in Table 8, (b) for age groups (generational cohorts) in Table 9, and (c) for experiments (level of study/place of conduct of the interactive teaching) in Table 10.

Table 8. Mean values and standard deviations of "spatial technical/logistical infrastructure" questions in relation to gender of budding journalists.

	Time		Venue		Period		Classroom Equipment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Males	3.97	0.928	3.77	0.858	4.23	0.679	4.10	0.803
Females	4.13	0.793	3.44	0.759	4.16	0.808	4.25	0.984

Table 9. Mean values and standard deviations of "spatial technical/logistical infrastructure" questions in relation to age groups (generational cohorts) of budding journalists.

	Time		Venue		Period		Classroom Equipment	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
18–25 years (GenZ)	4.11	0.804	3.51	0.869	4.24	0.645	3.98	0.941
26–38 years (Millennials)	3.89	1.054	3.89	0.782	4.33	0.866	4.78	0.441
39–43 years (Xennials)	3.80	1.095	3.80	0.447	3.40	1.140	4.80	0.447
44–53 years (GenX 1)	4.00	1.000	3.67	0.577	4.33	0.577	4.33	0.577
39–53 years (GenX 2)	3.88	0.991	3.75	0.463	3.75	1.035	4.63	0.518

Table 10. Mean values and standard deviations of "spatial technical/logistical infrastructure" questions in relation to the experiments (level of study/place of conduct of the interactive teaching) of budding journalists.

	Time		Venue		Period		Classroom Equipment	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
First experiment [1]	4.15	0.732	3.58	0.643	4.12	0.766	3.31	0.736
Second experiment [2]	3.77	0.973	3.86	0.774	4.23	0.813	4.59	0.503
Third experiment [3]	4.29	0.825	3.21	1.051	4.29	0.611	3.29	1.069

[1] Postgraduates students, AUTh. [2] Undergraduates students, AUTh. [3] Learners, IEK.

4.2. Correlations

Based on the correlation of questions related to the parameters of educational effectiveness from the results of budding journalists, most correlations regard the "time" and are strongly correlated with (a) the "development issues" (cor.coe 0.599, $p < 0.01$); (b) the "knowledge" they acquired (theoretical background investigation) on the subject (cor.coe 0.356, $p < 0.01$); and (c) the "period" (cor.coe 0.603, $p < 0.01$). Detailed results for the correlation of questions related to the parameters of educational effectiveness can be found in Table 11.

On the other hand, based on (a) the correlation of questions related to the expectations of budding journalists in relation to parameters of educational effectiveness from the "acquired knowledge organization", they are strongly correlated with the organization (cor.coe 0.372, $p < 0.01$), the "interesting suggestions" (cor.coe 0.451, $p < 0.01$), and the "knowledge" they acquired (theoretical background investigation) on the subject (cor.coe 0.326, $p < 0.01$) (Table 12), while (b) the correlation in relation to the "classroom equipment" with the profile and demographics of the budding journalists are correlated only with the age of the sample (cor.coe 0.368, $p < 0.01$) (Table 13). Further details on budding journalists' expectations and the parameters of educational effectiveness from the "acquired knowledge organization" are provided in Table 12, while details on the relation of the "classroom equipment" with the profile and demographics of the budding journalists are provided in Table 13.

Table 11. Spearman's rho correlation test for parameters of educational effectiveness.

		Organization	Interesting Suggestions	Discussion Time	Development Issues	Questions/ Answers	Knowledge	Time	Venue	Period	Classroom Equipment
Organization	Cor Coe	1.000	0.179	0.095	0.295 *	0.243	0.259 *	−0.007	−0.077	0.000	0.222
	Sig. (2-tailed)		0.163	0.461	0.020	0.057	0.042	0.957	0.550	0.998	0.084
Interesting suggestions	Cor Coe	0.179	1.000	−0.012	0.382 **	0.103	0.671 **	0.175	0.086	0.271 *	0.465 **
	Sig. (2-tailed)	0.163		0.925	0.002	0.425	0.000	0.174	0.505	0.033	0.000
Discussion time	Cor Coe	0.095	−0.012	1.000	0.034	0.183	−0.040	0.599 **	0.009	0.333 **	−0.135
	Sig. (2-tailed)	0.461	0.925		0.792	0.155	0.756	0.000	0.942	0.008	0.296
Development issues	Cor Coe	0.295*	0.382**	0.034	1.000	−0.016	0.410 **	0.205	0.183	0.270 *	0.107
	Sig. (2-tailed)	0.020	0.002	0.792		0.901	0.001	0.109	0.154	0.034	0.408
Questions/ Answers	Cor Coe	0.243	0.103	0.183	−0.016	1.000	0.238	0.356 **	−0.058	0.125	0.019
	Sig. (2-tailed)	0.057	0.425	0.155	0.901		0.062	0.005	0.654	0.332	0.883
Knowledge	Cor Coe	0.259 *	0.671 **	−0.040	0.410 **	0.238	1.000	0.123	0.065	0.113	0.192
	Sig. (2-tailed)	0.042	0.000	0.756	0.001	0.062		0.342	0.615	0.380	0.136
Time	Cor Coe	0.202	−0.007	0.175	0.599 **	0.205	0.356 **	1.000	0.197	0.603 **	−0.018
	Sig. (2-tailed)	0.116	0.957	0.174	0.000	0.109	0.005		0.124	0.000	0.891
Venue	Cor Coe	0.121	−0.077	0.086	0.009	0.183	−0.058	0.197	1,000	0.355 **	0.338 **
	Sig. (2-tailed)	0.348	0.550	0.505	0.942	0.154	0.654	0.124		0.005	0.007
Period	Cor Coe	0.176	0.000	0.271 *	0.333 **	.270*	0.125	0.603 **	0.355 **	1,000	0.089
	Sig. (2-tailed)	0.171	0.998	0.033	0.008	0.034	0.332	0.000	0.005		0.494
Classroom equipment	Cor Coe	0.215	0.222	0.465 **	−0.135	0.107	0.019	−0.018	0.338 **	0.089	1.000
	Sig. (2-tailed)	0.093	0.084	0.000	0.296	0.408	0.883	0.891	0.007	0.494	

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

Table 12. Spearman's rho correlation test of budding journalists' expectations with the parameters of educational effectiveness from the "acquired knowledge organization".

		Organization	Interesting Suggestions	Discussion Time	Development Issues	Questions/ Answers	Knowledge
Expectations	Cor Coe	0.372 **	0.451 **	0.234	0.225	0.043	0.326 **
	Sig. (2-tailed)	0.003	0.000	0.067	0.078	0.739	0.010

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

Table 13. Spearman's rho correlation test for relation of the "classroom equipment" to the profile and demographics of the budding journalists.

		Gender	Age	Level of Study/Place of Conduct of the Interactive Teaching
Classroom equipment	Cor Coe	0.144	0.368 **	0.432 **
	Sig. (2-tailed)	0.264	0.003	0.000

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

4.3. Audiovisual Media Communications

In the open-ended question, where the budding journalists recorded their views on the interactive teaching (as comments and/or suggestions), they mentioned (a) the use of audio spots/audio files (as sound/audio media), with a percentage of 73% (45 budding journalists out of 62) (audiovisual content); (b) the content of the interactive teaching presentation, with a percentage of 58% (36 budding journalists out of 62) (audiovisual content); and finally, (c) the use of video, with a percentage of 18% (11 budding journalists out of 62) (audiovisual content) (Figure 1). More details in relation to age groups (generational cohorts) and gender of budding journalists are provided in Figures 2 and 3.

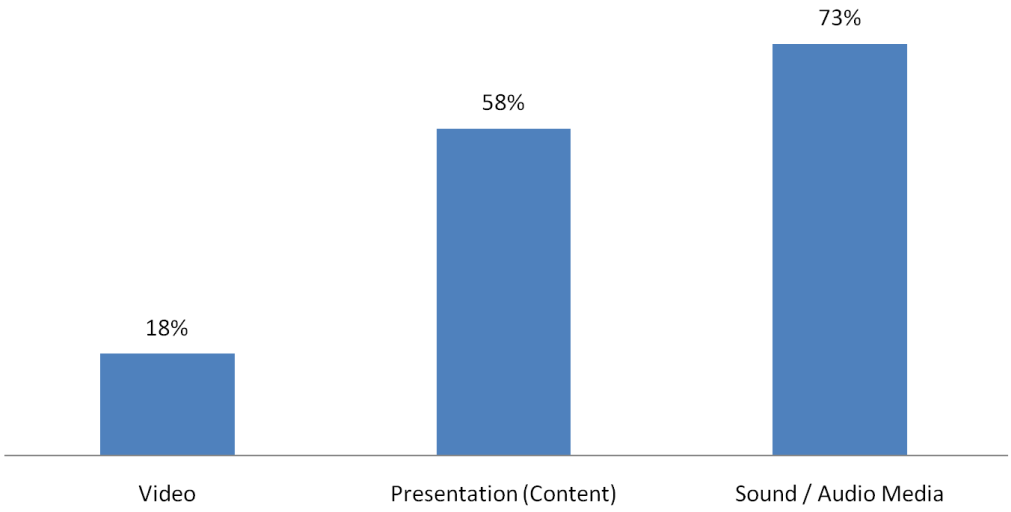

Figure 1. Grouped and adjusted qualitative data as quantitative data from the second part of the evaluation form in three categories.

More specifically, the following were reported: (a) sound/audio media spots (e.g., trailer, teaser, etc.) (jingles from here on), examples of various radio shows (e.g., a music show), with a percentage of 34% (21 budding journalists out of 62) (audiovisual content); (b) sound/audio media excerpts with "bridge" examples commonly used between two songs or for linking topics, with a percentage of 23% (14 budding journalists out of 62) (audiovisual content); (c) sound/audio media spots with examples of "news" (e.g., re-

portage, news headlines, news bulletin, etc.) ("news clip" from here on), with a percentage of 15% (9 budding journalists out of 62) (audiovisual content); (d) sound/audio media spots with examples of "thematic broadcasts" (e.g., top5, topic of the day, agenda of the day, etc.), with a percentage of 35% (22 budding journalists out of 62) (audiovisual content); (e) sound/audio media spots with examples of "identity" that someone who broadcasts on the radio should have, with a percentage of 45% (28 budding journalists out of 62) (audiovisual content); (f) the content of the interactive teaching presentation, with a percentage of 58% (36 budding journalists out of 62); (g) the presentation as a means of understanding the theory in practice, with a percentage of 24% (15 budding journalists out of 45); and finally (h) the use of video, with a percentage of 18% (11 budding journalists out of 62) (audiovisual media communications) (Figure 4). More details in relation to age groups (generational cohorts) and gender of budding journalists are provided in Figures 5 and 6.

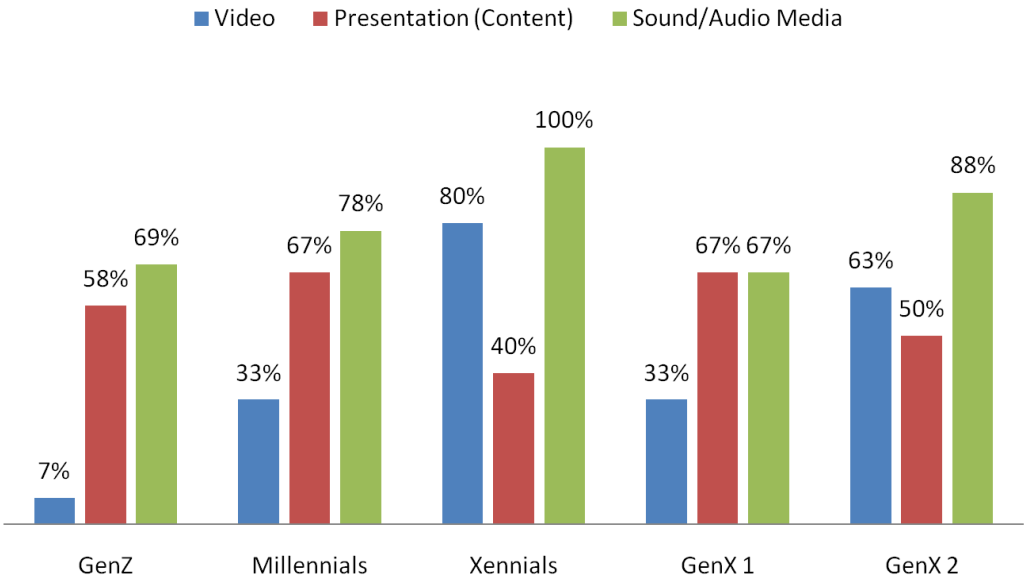

Figure 2. Grouped and adjusted qualitative data as quantitative data from the second part of the evaluation form in three categories of budding journalists based in age groups (genealogical cohorts).

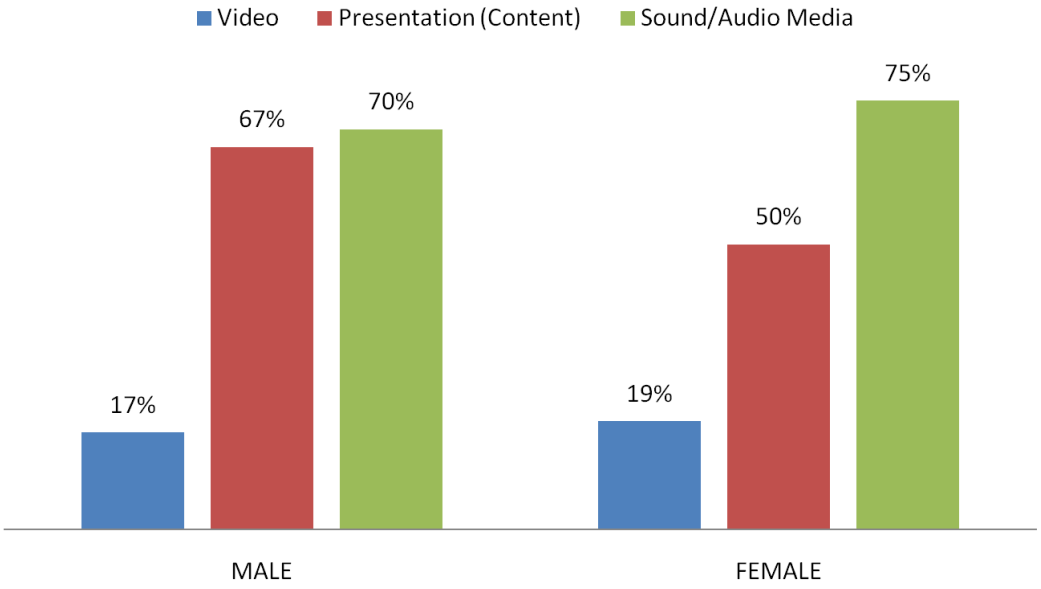

Figure 3. Grouped and adjusted qualitative data as quantitative data from the second part of the evaluation form in three categories of budding journalists based in gender.

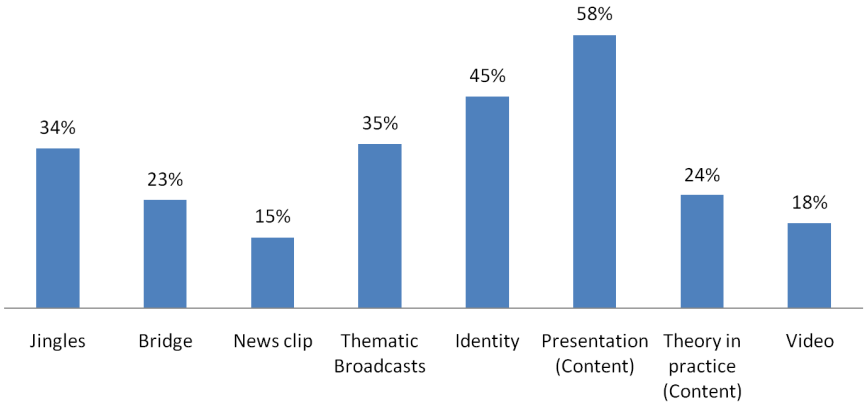

Figure 4. Grouped and adjusted qualitative data as quantitative data from the second part of the evaluation form.

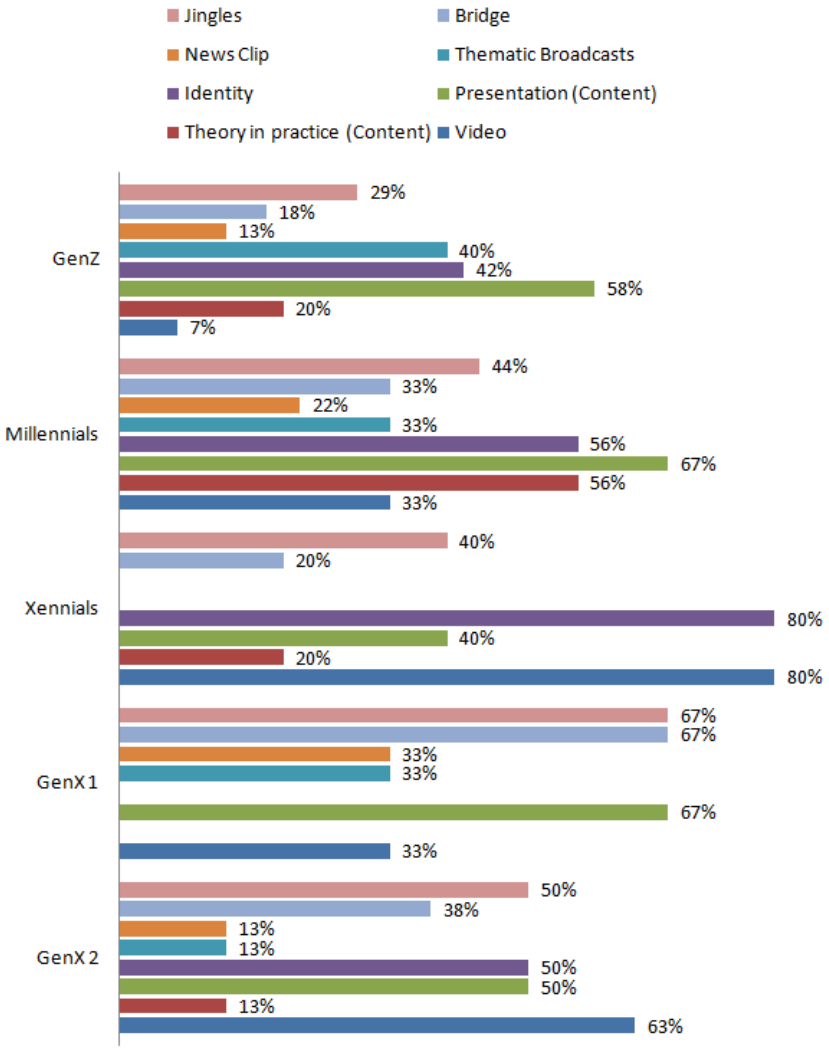

Figure 5. Grouped and adjusted qualitative data as quantitative data from the second part of the evaluation form based in age groups (genealogical cohorts).

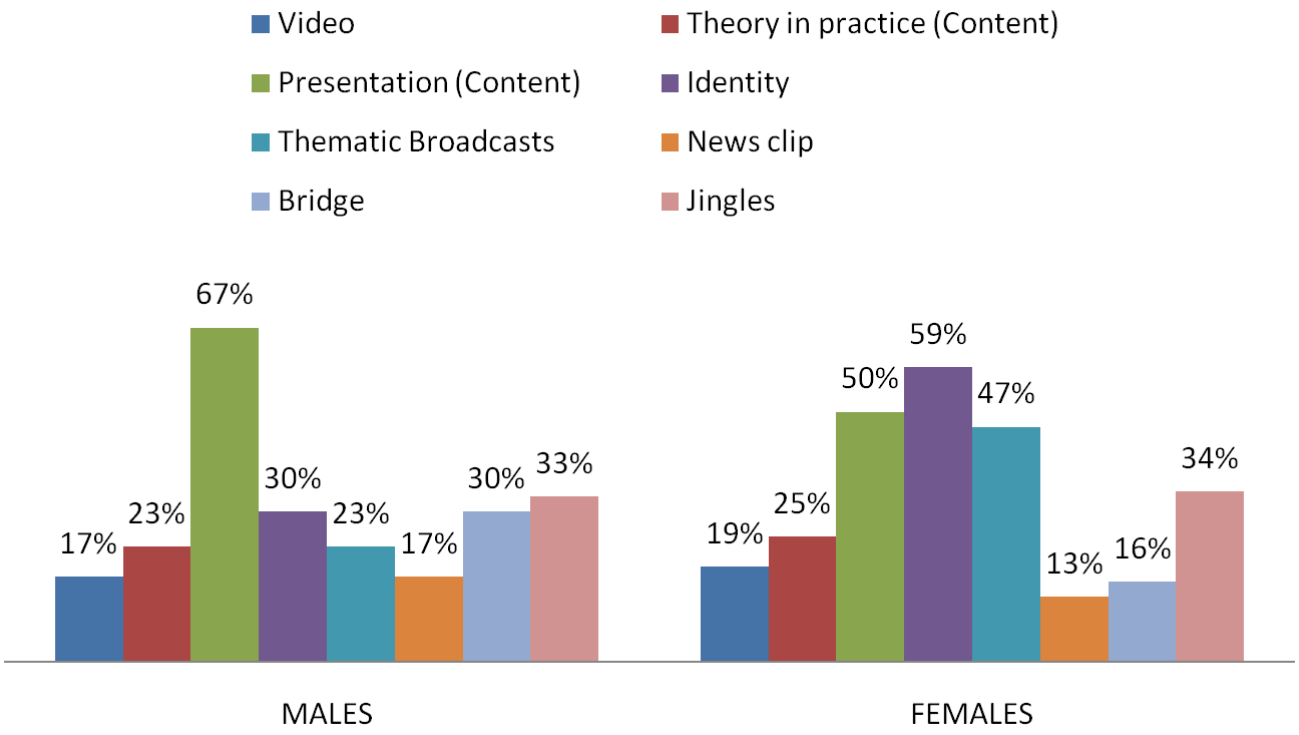

Figure 6. Grouped and adjusted qualitative data as quantitative data from the second part of the evaluation form based in gender.

5. Discussion

The results, through interactive teachings, revealed that the main purpose of the research has been achieved, while they are in accordance with the literature on provision of technology-enhanced learning through the use of audiovisual media technologies in education (see, for example, Chatzara et al. 2019; Papadopoulou 2019; Tzima et al. 2019), and especially in the field of media studies (see Georgiadou and Kolaxizis 2019; Matsiola et al. 2019; Sidiropoulos et al. 2019). It is apparent that this interactive teaching using audiovisual media technologies, which were enriched with multimodal content and material (e.g., podcasts, sound/audio media spots, etc.) from radio stations (including Internet radio or web-radio) as audiovisual content, has several positive effects for media studies education for both technical and university education, something that is documented in the literature, as well as confirmed through the findings and results of other relevant research (Ballinas-Gonzales et al. 2020; Niemetz et al. 2019; Matsiola et al. 2019; Struck et al. 2011; Vukić and Šulentić 2020). This leads us to the main conclusions that perhaps budding journalists (a) perceived that this interactive teaching has the capability to promote and enhance interactivity and flexibility in learning, and (b) can more easily adopt new technological innovations, as well as consume audiovisual content in contemporary ways and platforms because of their studies, especially the younger ones (see Nicolaou et al. 2021; Podara et al. 2020; Paschalidis and Milioni 2010). Furthermore, the success of interactive teaching may be due mainly to the educator/lead researcher, who (a) has (i) an academic background and (ii) professional experience, while (iii) his "[. . .] scientific fields provide a sufficient combination of content, technological and pedagogical knowledge" (Matsiola et al. 2019, p. 4), as the *identity triptych* of the educator as the key factor; and who (b) had interacted with the participants/budding journalists through the lectures (interactive teachings) within the CAR (see Khasinah 2013), which suggests how important its institutionalization is in the context of the educational process and/or the effective integration of audiovisual media communications in lesson plans for educational effectiveness (see also Nicolaou and Kalliris 2020).

More specifically, in terms of research objectives:

1. The attitudes of budding journalists, derived from the research towards the specific audiovisual media communications (as educational communication tool) that were used in the interactive teaching (lecture from here on), are as follows. Based on (a) their answers to the open-ended question in Figures 1 and 4, we can safely say that they have a positive attitude to the usage of audiovisual media communications in a lecture and that they accept them, something which is also confirmed in research that has investigated the way various external factors (i.e., personality traits, self-efficacy, subjective norms, satisfaction) would lead learners to efficiently use technology in general, and audiovisual media technologies specifically, during academic courses through the TAM (see Manolika et al. 2021; Matsiola et al. 2019; Fazil and Ward 2016). From (b) their answers in Tables 3 and 6, as well as the correlation of questions in Tables 11 and 12, we can safely say that the specific audiovisual media communications are considered helpful in comprehending the lecture, as presented in relevant literature (see Nicolaou et al. 2019; Nicolaou 2019a, 2019b, 2018a, 2018b). Finally, (c) they can be used in any course of media studies, because they kept the interest and attention of the budding journalists (see also Matsiola et al. 2019), as in various and relevant research (see Nicolaou 2020; Nicolaou and Kalliris 2020; Nicolaou and Kalliris 2021). In summary, we should mention that these specific audiovisual media communications may be more easily adopted by budding journalists as innovative educational tools, because they can recognize and understand the relative advantage, compatibility, complexity, and reliability of them, and thus get more comfortable in adopting new ideas (see Podara et al. 2020; Matsiola et al. 2019; Podara et al. 2019a; Podara et al. 2019b; Podara et al. 2019c; Podara et al. 2018; Paschalidis and Milioni 2010), something which is confirmed through the diffusion of innovation (DoI) theory, which states that the success of any new form of communication depends on how easily it fits into people's lives (Rogers [1962] 2003).
2. We can safely state that the application of the (new) theory of audiovisual media in education (Nicolaou et al. 2019) through the final lesson plan (interactive teaching/lecture) is considered appropriate, as in relevant research that was applied (see Nicolaou 2020; Nicolaou and Kalliris 2020; Nicolaou and Kalliris 2021). More specifically, the specific audiovisual media technologies (i.e., PC, overhead projector/projected visuals materials via presentation software, and use of presentation remote control) that promote and enhance interactivity (see also Kennewell et al. 2008), the *differentiated teaching* as teaching methodology, and the educational techniques are included in the theory of audiovisual media in education (Nicolaou et al. 2019).

On the other hand, following the correlation of questions related to the parameters of educational effectiveness (i.e., organization, interesting suggestion, discussion time, question/answers, knowledge, time, venue, period, and classroom equipment) (see Table 11), and answering the RQ1, we see that a well-organized lecture with interesting suggestions manages to achieve its goal and satisfy the budding journalists' expectations (Table 12). In the same framework, the acquired knowledge (theoretical background investigation) on the subject is also correlated with the expectations (Table 12), something that is purely subjective for every individual (Nordtug 2007). Based on the above result, we can say that this may be due to the proper planning of a lesson plan (including educational activities, educational techniques, and/or communication tools, etc.), where, in this case, the final lesson plan was based on a previous lesson plan (in this case, the original lesson plan as mentioned above), while the educational activities of the final lesson plan were based on the educational activities of a previously tested lesson plan which (a) was carried out and presented as an interactive educational seminar/workshop (from and through audiovisual media communications) in the context of an international conference in Thessaloniki (Greece) in 2014 after blind peer reviews (Nicolaou 2014); (b) was used in the framework of the various actions of the Cyprus Pedagogical Institute (Nicosia/Lefkosia, Cyprus) during the school years 2013 to 2016 (see, for further information, Nicolaou and Kalliris 2021, pp. 307–9); and (c) was used in the research/project NVC in the form of an interactive

educational training/education, through the experimental method of the quasi-experiment (Siardos [1997] 2005, pp. 139–41), in Cyprus and Greece from 2014 to 2020 (Nicolaou 2020, pp. 169–70). At this point, we should mention that the aforementioned previous lesson plan was recently evaluated as reliable, and therefore appropriate and suitable, through research in the third phase of the main research that explores the MACE with active adult educators as adult learners during the school year 2019–2020 from Athens and Thessaloniki in Greece in February 2020, and from Nicosia/Lefkosia and Limassol/Lemesos in Cyprus in June 2020 (Nicolaou and Kalliris 2020, pp. 973–74). The results of the aforementioned research emphasize that this is due to (a) the right selection of audiovisula media technologies, and (b) the use of appropriate audiovisual content (especially sound/audio media and video) after special processing with digital filters through software as well as Internet applications and services (Nicolaou and Kalliris 2020), which will be adapted "[. . .] based on the adult learners' profile and the genealogical characteristics of each generation" (Nicolaou and Kalliris 2020, p. 987). In this case, familiar, famous, and well-known excerpts and scenes from various foreign, Greek, and Cypriot-Greek TV programs (e.g., animated movies, TV series, TV productions, and movies) were used (Nicolaou and Kalliris 2020, pp. 971–72), which are finally "[. . .] considered helpful for adult learners to make sense and understand a lesson [. . .]" (Nicolaou and Kalliris 2020, p. 984), because they are practiced in a safe environment from and through the media with digital storytelling (see Farmer 2004; Metallinos 1991; Nicolaou 2019a; Pavlik and Pavlik 2017; Terry and Peck 2020). This seems to be confirmed through (a) the results of this research (Section 4), as well as (b) the literature that argues that adult learners learn when the education has a direct relation to everyday life (see Courau [1993] 2017; Nicolaou 2017, 2015). The above results, and, especially, those for RO1 and RQ1, may be due to the specific audiovisual content used. More specifically, the audiovisual content (a) was closer to them as students/learners journalists (e.g., sound/audio media samples, excerpts and spots from other students/learners journalists, and/or case studies from the student radio station) (see also Vukić and Šulentić 2020) and/or (b) was already familiar and contemporary (e.g., sound/audio media spots from local radio stations in Thessaloniki). Therefore, as a final concluding comment on the above and the results for RO1 and RQ1, we could say that students/learners as well as educators can reap the benefits of a previously tested lesson plan as well as save time by using certain aspects of the lesson plan (e.g., materials, procedures, educational activities, educational techniques and/or communication tools, etc.) (see also Kowalsky 2014). In addition, based on the result of RQ1 (Table 12), as well as on all results of this research (Section 4), we conclude that the specific parameters of educational effectiveness from the dynamic model of educational effectiveness (see Kyriakides et al. 2009, p. 13) set out in the evaluation form are considered crucial and important in assessing a program, course, lecture, and/or seminar, while it can be used as an assessment tool by any educator at all levels of education and disciplines (including adult education) (see also Hadjilouca-Mavri and Sofokleous 2013; Nicolaou and Kalliris 2020; Nicolaou and Kalliris 2021).

The results on the RQ2 showed that in relation to the classroom equipment, correlations with (a) the age of the sample, as well as (b) the level of study and the place where the interactive teaching was conducted, emerged (Table 13). Additionally, at this point, we should mention that the results have shown that the venue, time, and period of a lecture (Tables 7–11) are crucial and decisive factors for the implementation of a program, course, lecture, and/or seminar—in fact, in other research too (Nicolaou and Kalliris 2020, p. 986). This should be taken into account by the educator, as more studies could investigate.

In regard to our hypotheses, and in particular the primary hypothesis (H1), we see that the results have confirmed that the budding journalists have exactly the same genealogical characteristics and habits as highlighted in basic generational theory (see Strauss and Neil Howe [1991] 1992; Tapscott 2009, 1998), and more specifically as *digital natives* and as *digital immigrants* (see Prensky 2001a, 2001b) (Tables 5 and 9, Figures 2 and 5). Additionally, in Figures 2 and 5, we see that the sound/audio media content attracted more attention and interest from GenZ members, who are mainly characterized as visual, than the actual visual

content (see Seemiller and Grace 2018; Twenge 2017). This is an interesting result and should be explored further at a later stage, or explored through other studies (e.g., in adult education) and/or based on genealogical group. Today, most GenZ members are at the learning age, while later they will be tomorrow's adult learners. If sound/audio media in the educational procedure is to be the future medium and the key to success in teaching methodology, then new methodological approaches will emerge, and sound/audio media will be the mode of cognition.

On the other hand, regarding the second hypothesis (H2), we see that what the literature states is confirmed (see Roy 2019; Taylor 2018; Smit 2017; Codrington and Grant-Marshall [2004] 2013), and that Xennials as a generation really exist and present the same genealogical characteristics and habits (see Tables 5 and 9, Figures 2 and 5), confirming the theory of crossbreed generations (see Codrington and Grant-Marshall [2004] 2013; Smit 2017). Moreover, by including the Xennial generation in our research, we are among the first researchers in Greece to study it, especially in the fields of our research. Based on our results, we came up with the conclusion that further research on this generation is needed, especially in media studies education as consumers of audiovisual content from and through the media, as well as in adult education as adult learners.

In addition, the results in Tables 4 and 8 show that the answers from females are more positive in relation to the answers from males, which is a common phenomenon, especially in various research conducted in Cyprus and Greece in relation to the use of technology, new technologies, and ICTs in general in the last decade (see Nicolaou and Kalliris 2020; Matsiola et al. 2019; Karypidou 2012; Nicolaou 2011a, 2011b). In addition, the results in Figures 3 and 6 show the preferred form of audiovisual media communications used in the interactive teaching, where males found the content of the presentation (as audiovisual content) interesting, while females found the sound/audio media (as audiovisual content) interesting. This is something that would be good to investigate further at a later stage or to investigate through other research.

In summary, this research is part of the ongoing project AMC-MSRC, which initiated in 2019, and which is a part of a larger, ongoing research project that explores the multidisciplinary field of MACE and ICTs in adult education (in Greece and Cyprus), which began in 2016. The results from this research, unfortunately, cannot allow their generalization to the population, and certain limitations are imposed due to the methodology and the small number of the sample. Finally, what we should bear in mind based on the results and the final lesson plan used is (a) that the teaching methodology should apply the principles of adult education if the learners are adults (see Courau [1993] 2017; Nicolaou 2017, 2015; Rogers and Horrocks [1986] 2010), and (b) the correct use, but also the appropriate choice, of audiovisual content with appropriate processing that we will use from and through audiovisual media technologies (see also Nicolaou and Kalliris 2020, p. 986), especially sound/audio media.

6. Instead of An Epilogue: Retrospection, Limitations, Future Research and Conclusions

The use of audiovisual media communications is an integral part of the educational process, and it is not an easy task (see Pakpahan et al. 2020; Nicolaou et al. 2019). The educator must firstly acquire specific skills and abilities in ICTs (see Nicolaou 2021b; Griva et al. 2020; Guillén-Gámez and Mayorga-Fernández 2020; Nicolaou and Kalliris 2020; Ngah et al. 2019; Nicolaou et al. 2019; Armakolas et al. 2018), as well as *communication skills* (see Nicolaou and Kalliris 2021; Nicolaou 2020; Tugtekin and Koc 2020; Nicolaou 2019c; Pulido-Rodríguez and Tortajada-Giménez 2008; Nicolaou 2014; Hargie [1986] 2006) and *multiple-multimodal skills,* in order to survive in this virtual (digital) world (see Nicolaou 2020; Nicolaou and Kalliris 2020; Nicolaou et al. 2019). Moreover, the effective integration of audiovisual media communications in a lesson plan for educational effectiveness requires a *multimodal educator* who will have "[. . .] imagination, charisma, uniqueness, nervousness, patience, and perseverance [. . .]" (Nicolaou and Kalliris 2020, p. 987) for amplifying the curriculum (see also Nicolaou 2021b; Nicolaou et al. 2019; Nicolaou 2016a; Nicolaou 2016b),

in particular, in the case of an educator in media studies education (see Gutsche 2019) as a *media literacy educator* (Hobbs and Jensen 2009, p. 8), who will impart new knowledge and "digital wisdom" (see Prensky 2009) to budding journalists, tomorrow's new journalists.

In summary, this research has unraveled the data that eventually contribute to the quality of media studies education (e.g., through a training program, a course, or a seminar) utilizing ICTs, and more specifically, using audiovisual media technologies as educational techniques and/or communication tools to provide technology-enhanced learning through an interactive teaching with emphasis on educational effectiveness to budding journalists as adult learners (18 years and older). The results of this research, which would more readily serve a specific group of students/learners whose studies are in the field of media studies is, are primarily intended for radio lessons at all educational levels and disciplines (including adult education). In addition, the generalization of its results and the reproduction of results in a different socio-economic background are a matter of further scientific enquiry. Although this research took place before the COVID-19 pandemic, based on the theory of audiovisual media it could theoretically be done from and through the Internet. The 'new' so-called (a) teaching methodologies, as COVID-19 teaching methods, and (b) educational communication tools, as COVID-19 teaching tools (see also Grubaugh et al. 2020), have already been studied, researched, and applied for about three decades (see Nicolaou et al. 2019; Nicolaou 2019a; Nicolaou et al. 2003; Apple 1991; Hawkridge 1990; Papert 1987), following the development of the first web browser by Tim Berners-Lee in 1990 (see Berners-Lee 1999; Sarridis and Nicolaou 2015; Giomelakis et al. 2019; Nicolaou and Karypidou 2021). This is something that will be explored at a later time as one of the next stages in the framework of the ongoing project mentioned above in relation to media studies of radio courses (i.e., the AMC-MSRC).

In conclusion, the use of audiovisual media communications presupposes a new way of approaching an effective teaching (Nicolaou and Kalliris 2020; Nicolaou et al. 2019; Nicolaou 2019a) with constructive communication (verbal and non-verbal) (see Nicolaou and Kalliris 2021; Nicolaou 2020; Tugtekin and Koc 2020; Nicolaou 2019c; Pulido-Rodríguez and Tortajada-Giménez 2008; Nicolaou 2014; Hargie [1986] 2006), which is something that media studies education should definitely focus on from now on. Any type of audiovisual media communications must be customized, and it must take into consideration the inherent and specific characteristics (see Muñoz-Rodríguez et al. 2020; Nicolaou and Kalliris 2020; Ortiz-Jiménez et al. 2020; Nicolaou et al. 2019; Vuleta 2018; Courau [1993] 2017; Giannoumi et al. 2017; Rogers and Horrocks [1986] 2010; Jacobs 1989; Rogers 1961) as well as genealogical characteristics of learners as *digital natives* or *digital immigrants* (Prensky 2001a; Prensky 2001b). In addition, the educator must become their competent operator and keep up with new trends and changes (Nicolaou et al. 2019), as in the case of radio. Finally, what we should bear in mind is that learning will never end; it will evidently be lifelong, since radio is one of the first media choices of the public (see Nicolaou et al. 2021; Okeke et al. 2020; Karypidou 2006; Taachi 2000; Duby 1990), and this situation will remain for a long time.

Author Contributions: Conceptualization, C.N. and G.K.; methodology, C.N.; software, C.N., M.M. and R.K.; validation, C.N., M.M., C.K., A.P., R.K. and G.K.; formal analysis, C.N. and M.M.; investigation, C.N.; resources, C.N., M.M. and A.P.; data curation, C.N., M.M. and R.K.; writing—original draft preparation, C.N.; writing—review and editing, C.N., M.M., C.K. and A.P.; visualization, C.N.; supervision, G.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The research was conducted according to the guidelines of the Helsinki ethics protocol (World Medical Association 2013) and the relevant European provisions on the use of personal data (General Data Protection Regulation—GDPR).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the research.

Data Availability Statement: The data presented in this research are available on request from the corresponding author. The data are not publicly available due to the fact that they are part of the ongoing project AMC-MSRC, which initiated in 2019, and which is a part of a larger, ongoing research project that explores the multidisciplinary field that incorporates MACE, which began in 2016. This research has not yet been completed at the time of writing this article.

Acknowledgments: We would like to thank all the creators for the relevant permission and approval to use their work, the teachers/instructors/educators who gave us their consent to use their classroom, and their students/learners, as well as the students/learners from the School of Journalism and Mass Communications, Faculty of Economic and Political Sciences, Aristotle University of Thessaloniki (Thessaloniki, Greece) and the Public Vocational Training Institute in Sindos (Thessaloniki, Greece) who participated in this research. Furthermore, we thank Stella Stylianou from the Cypriot Radio Station of the University of Cyprus–UCY Voice (Nicosia/Lefkosia, Cyprus) and staff from the Cyprus Pedagogical Institute (Nicosia/Lefkosia, Cyprus) for their valuable assistance in the ongoing projects AMC-MSRC and MACE. We are also particularly grateful to Georgios Mantios, Constantina Hadjidemetriou, Demetra Kontouli, and, of course, Melanie Pouyia, who participated in the proposed procedures and strategies for rendering culture-specific concepts, and read this manuscript before submission, as well as before publication. In addition, we thank Giolanta-Alexia Stoits and Eliza Stylianou Fatta for their valuable help and the correct choice of words/terms from Greek to English. Moreover, we would like to thank the anonymous reviewers as well as the handling editors for the valuable comments and suggestions that helped us to improve this work. Finally, we would like to thank all those who believed in our work.

Conflicts of Interest: The authors declare no conflict of interest.

Abbreviations

AMC-MSRC	Audiovisual Media Communications in Media Studies of Radio courses
AUTh	Aristotle University of Thessaloniki
CAR	Classroom Action Research
CD-ROM	Compact disc read-only memory
COVID-19	Coronavrus disease 2019—official name for the disease caused by the SARS-CoV-2 (2019-nCoV) coronavirus
DJ	Disc jockey
DoI	Diffusion of innovation
DVD	Digital video disc or digital versatile disc
GDPR	General Data Protection Regulation
GenX	Generation X
GenY	Generation Y
GenZ	Generation Z
H	Hypothesis
ICTs	Information communication technologies
MACE	Media, audiovisual content, and education
NVC	Non-verbal communication
PC	Personal computer
QoL	Quality of learning
RO	Research objective
RQ	Research question
SaaS	Software as a service
SD	Standard deviations
SPSS	Statistical Package for Social Sciences
TAM	Technology acceptance model
TV	Television
UCY	University of Cyprus
USB	Universal serial bus

Appendix A

UCY Voice: Spots and Jingles video URL: https://www.youtube.com/playlist?list=PLly1nLMoKZSKv1DtXX1hC120OnjfWoGIr (accessed on 1 March 2021).

Appendix B

Music is emotion: spots and jingles video URL: https://www.youtube.com/playlist?list=PLly1nLMoKZSJUGO1op4PZFYpVYPBcMAnF (accessed on 1 March 2021).

Appendix C

Music is emotion: top5 video URL: https://www.youtube.com/playlist?list=PLly1nLMoKZSK1MpDO2IX0tmAx2TN85-wl (accessed on 1 March 2021).

Appendix D List with Selected Broadcast Music Programs from the Radio Music Show *Music is Emotion* (*Η μουσική είναι συναίσθημα* in Greek Language) by the Cypriot Radio Station of the University of Cyprus—UCY Voice (2013 to 2015), Which Were Used in the Final Lesson Plan as a Case Study

1. Music is Emotion—(29 October 2013) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-29-10-2013/ (accessed on 1 March 2021).
2. Music is Emotion—(4 November 2013) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-04-11-2013/ (accessed on 1 March 2021).
3. Music is Emotion—(26 November 2013) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-26-11-2013/ (accessed on 1 March 2021).
4. Music is Emotion—Xmas Greek Spirit (17 December 2013) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-17-12-2013/ (accessed on 1 March 2021).
5. Music is Emotion—Xmas Spirit (24 December 2014) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-xmas-spirit-24-12-2014/ (accessed on 1 March 2021).
6. Music is Emotion—Kelly Clarkson (11 February 2015) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-kelly-clarkson-02-11-2015/ (accessed on 1 March 2021).
7. Music is Emotion—Greek (25 February 2015) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-greek-25-02-2015/ (accessed on 1 March 2021).
8. Music is Emotion—(4 March 2015) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-04-03-2015/ (accessed on 1 March 2021).
9. Music is Emotion—Boyce Avenue (18 March 2015) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-boyce-avenue-18-03-2015/ (accessed on 1 March 2021).
10. Music is Emotion—Final (29 April 2015) [UCYVoice] URL: https://www.mixcloud.com/constantinos-nicolaou3/music-is-emotion-final-29-04-2015/ (accessed on 1 March 2021).

Appendix E

WELCOME VIDEO | MY STORY video URL: https://youtu.be/acBr_Af8eVE (accessed on 1 March 2021).

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