

Mobile creation in communication studies and the challenge of its adoption in higher education

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Abstract

In the audiovisual industry it is increasingly common to find professional productions created with mobile devices, mobile journalism continues to grow, the smartphone market places increasing emphasis on camera quality and mobile cinema (created with smartphones) is more relevant every day. Yet despite this change at the industry level, the study 'Apps4CAV' reveals that future audio-visual creators receive no training in the use of mobile devices as part of their university courses. Communication and media students are aware of very few mobile applications for the production and distribution of audio-visual content and almost none for scriptwriting, pre-production and post-production. Moreover, they make scarce use of the well-known apps and perceive mobile devices to be valid tools for audio-visual creation only in the personal sphere, but not for academic or professional work. Should our universities provide training to those future audio-visual professionals in the development of mobile creation skills?

Keywords

media creation

mobile media

mobile learning

mobile journalism

mobile cinema

higher education

Mobile media and creation in the audio-visual industry

The computer-driven transformation of the media pointed out by Manovich (2001) has evolved. The newest phase in this evolution is centred on the mobile device, a meta-medium that houses existing media forms and permits the generation of new digital resources adapted to the mobile ecosystem (Márquez 2017). With the launch of the iPhone by Apple Inc. and the opening of the App Store in 2008, the age of conventional mobile telephones drew to a close, giving way to a new generation of smartphones (Snickars and Vonderau 2012; Goggin 2012). Alongside these devices, others such as tablets have become fundamental tools for mobile media, generating a flow of analysis and research due to constant technological change (Scolari et al. 2012).

The cultural and artistic industry of audio-visual creation was quick to adopt the new mobile devices as creative tools. Since 2000 smartphone use has become widespread in different areas of the audio-visual industry, driven by constant technological evolution that has seen them adopted with increasing prevalence, bringing changes to working methods and production in the industry and impacting the body of sector professionals (Suárez 2016). While mobile media creation was typically artistic and experimental in the first decade of the twenty-first century (Keep 2014; Berry and Schleser 2014; Berry 2017), professional creation began to grow in 2008 with the rising availability of apps specifically developed for the audio-visual industry (Batty 2014; Scolari et al. 2012), to the extent that it is now difficult to conceive an audio-visual production in which mobile devices have not played some role, mirroring the evolution of most everyday activities, on which mobile phones have an increasingly complex impact. Whether as tools for

filming, for pre-production or for post-production, mobile devices are now fixtures in the creation of both mainstream cinema and low-budget productions.

If we focus on the most tangible aspect of audio-visual production, filming itself, we note with interest that Spanish television channel La Sexta began to use smartphone connections in its coverage of the US elections in 2016. This and other journalistic strategies have been grouped together under the term MOJO (mobile journalism) (Lavín and Silva 2015; Westlund 2014), which enables many professionals to produce, edit and distribute coverage with their own resources. Mobile journalism is the subject of international manuals, workshops and conferences, which highlight clear advantages over traditional strategies in terms of agility, immediacy, versatility and cost. In addition to news coverage, advertising has also harnessed the potential of mobile creation, exemplified by the Apple short *Three Minutes* (Chan, 2018) and Bentley's *Intelligent Details* campaign (Reza, 2014), for which each process was carried out on a mobile device.

The creation of televisual and online content is not addressed in detail in this introduction. It should be noted, however, that mobile creation is increasingly common in the film industry (Suárez 2019), particularly in examples such as *Tangerine* (Baker, 2015) and *Unsane* (Soderbergh, 2018), both of which were filmed on iPhones.

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It can be argued that apps developed specifically for the audio-visual sector, alongside others with particular uses in this field, have genuinely altered production methods in the industry (Goldstein 2013). For example, if we need to know the position of the sun

for a scene due to be filmed in a few days' time, we no longer need a compass to pinpoint our exact position, a scoliometer to determine the behaviour of shadows from the surrounding buildings, SunPath software and so on; we simply need a smartphone and the right app (e.g., Helios Pro by Chemical Wedding). Apps are used across all of the creative processes, from scriptwriting to the post-production of distribution of fourth-screen content (Aguado and Martínez 2008; Miller 2014; Castillo-Pomeda 2016).

This transformation of the sector and its evolution over time marks a field of study with a common thread: looking primarily at the involvement of mobile devices in audio-visual creation and production, we find references to mobile cinema (Atkinson 2014), mobile media making (Berry and Schleser 2014), mobile filmmaking (Berry 2016) and mobile cinematography (Suárez 2019).

Mobile media in university learning

If we look at the impact of this rapid transformation on university education, we see that there has been no real adoption of the new technologies (Mateus et al. 2017; Grané and Frigola 2018; Grané and Suárez 2019). Studies in communication and audio-visual media have not adapted to the new production scenario, despite growing market demand for the corresponding skills. This situation is commonly accounted for by the sheer time needed to train staff and students in the use of new tools (Benítez and Stepanian 2012: 131) and by general weaknesses in the development of professional skills in universities (Universia-Accenture 2007: 113), which, in turn, can be linked to doubts over the effective generational turnover of teaching staff (European Schoolnet and Digital Europe 2014: 13) and discrepancies between academics and audio-visual professionals with respect to the skills required for studies in this field (García et al. 2012: 414).

Various studies have noted the benefits of integrating mobile devices into educational contexts to aid students' development as future professionals (Sung et al. 2016; Suárez et al. 2013), in some cases showing that digital natives value the use of social media in teaching (Ventura et al. 2018). On this basis, it seems appropriate for the subject of mobile devices to be addressed in communication studies, particularly in the area of media creation (García-Ruiz et al. 2014; Ha and Yun 2014). It therefore remains necessary to strengthen ICT skills (Fundación de Tecnologías de la Información [FTI] and Asociación de Empresas de Electrónica, Tecnologías de la Información, Telecomunicaciones y Contenidos Digitales [AMETIC] 2013; Núñez et al. 2013; Correyero and Baladrón 2010; Vicente and Domínguez 2011).

The research project *Apps4CAV*, carried out in the field of mobile media and mobile learning, analysed the adoption of mobile devices for audio-visual creation by communication students at four universities in Catalonia. The project was specifically conceived to focus on students, as the future of audio-visual communication, and not on teaching staff, syllabuses at the different faculties or even content. Participants were aged predominantly between 18 and 25 years and came to class armed with a variety of tools and materials – cameras, video cameras, notebooks, clapperboards, light metres – all on a single device: their mobile phones. The question that guided the research, however, was the following: are they really aware of the tools that they are carrying?

This question encourages reflection on the need to reconsider education in digital media (Buckingham 2003; Dezuanni 2014) and the relationship between everyday practice and

the teaching resources linked to mobile technologies (Aymerich-Franch and Fedele 2014; Gómez et al. 2012; among others).

Apps4CAV: Do students use mobile devices to create audio-visual content?

Apps4CAV: Study of the use of mobile applications for audio-visual creation by students of Audiovisual Communication in Catalonia (Redice 2016-1480) is a research project in the field of university teaching innovation funded by the University of Barcelona's Institute of Education Sciences. Its objectives can be divided into four broad areas: knowledge, use, perception and training in mobile audio-visual creation across the different production processes (scriptwriting, pre-production, production, post-production and distribution). The objectives target answers to the following questions:

- Do students know that there are apps for audio-visual creation?
- Do students know that there are apps for each of the processes in an audio-visual production?
- Are there particular processes for which students know of more apps?
- Do they use the apps that they know?
- Do they consider these apps to be suitable for professional audio-visual creation or only for personal creation?
- Do students receive university training in the use of these tools?

The questions were the core of this innovative project, which focused for the first time on the use of apps exclusively for audio-visual creation in the field of communication studies.

Apps4CAV used a quantitative methodology based on the analysis of descriptive and frequency data compiled via a survey – the specifics of the methodology are detailed in Suárez et al. (2019). A total of 481 responses were received from first- and fourth-year students of the bachelor's degrees in Audiovisual Communication at the University of Barcelona, the University of Vic-Central University of Catalonia and Rovira i Virgili University, the bachelor's degree in Audiovisual Media offered by Tecnocampus (an affiliated centre of Pompeu Fabra University) and the bachelor's degree in Communication and the Culture Industry at the University of Barcelona. Responses were recorded automatically and processed by SPSS statistical analysis software.

Use of mobile devices by audio-visual students

To examine the use of mobile devices and apps by audio-visual communication and media students, *Apps4CAV* asked participants ($n=481$) specifically about three different creation environments: personal, academic and professional. The results revealed that 359 students use their mobile or tablet for personal audio-visual creation compared to only 105 for academic creation and 76 for professional creation.

With respect to specific creative processes, students do not use mobile devices in most cases. Specifically, only 132 students reported using mobile devices for scriptwriting (27.4%), 45 for pre-production (9.4%), 71 for filming and production (14.8%) and 100 for post-production (20.8%). These results indicate that mobile devices do not form part of the students' daily toolbox as audio-visual creators, and yet for tasks such as photography and distribution they are particularly prevalent: 441 use photography apps and 386 use distribution apps. Crucially, though, the apps reported in the survey are widely used among the general public (Instagram, Vimeo, Facebook and YouTube) and

reflect students' use of their smartphone camera for personal creations rather than academic or professional activities. As shown in Figure 1, then, students do not use mobile devices for audio-visual creation through specialized apps.

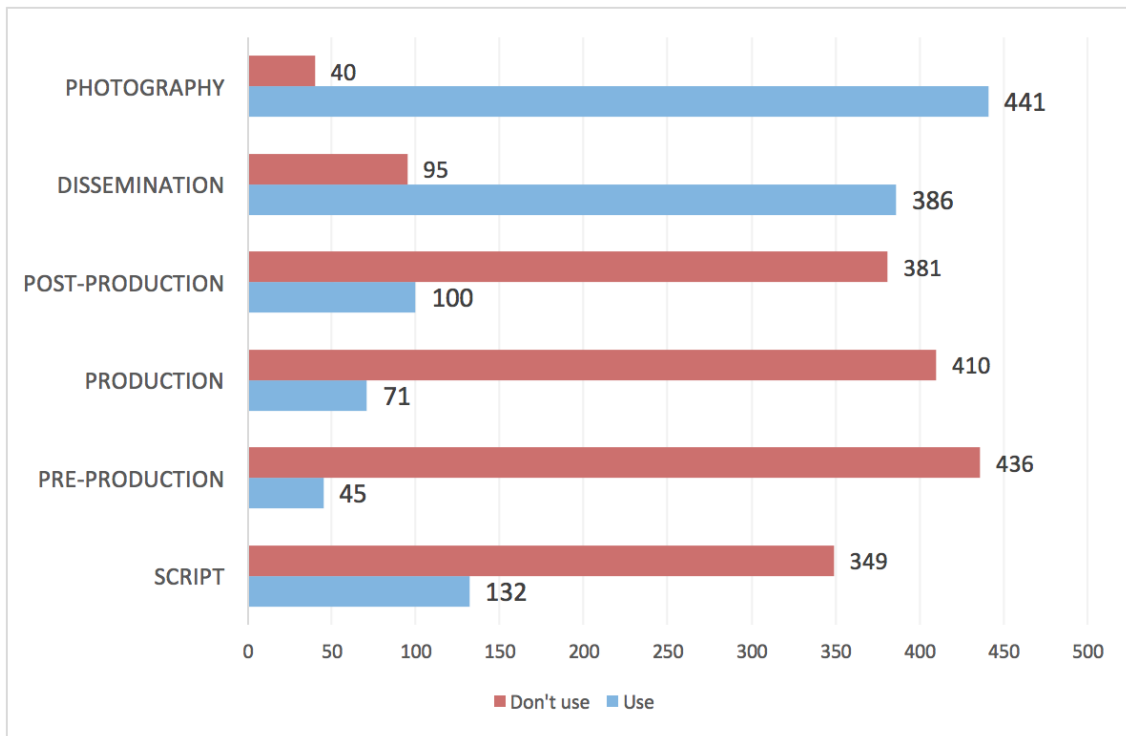


Figure 1: Use of apps in audio-visual creation processes.

Looking at the participating universities, the results show a clear and consistent tendency across all centres; thus we can claim to be dealing with a general phenomenon. Figure 2 breaks down the results for the core processes in the creation of an audio-visual product (pre-production, production and post-production) in each of the degrees considered.

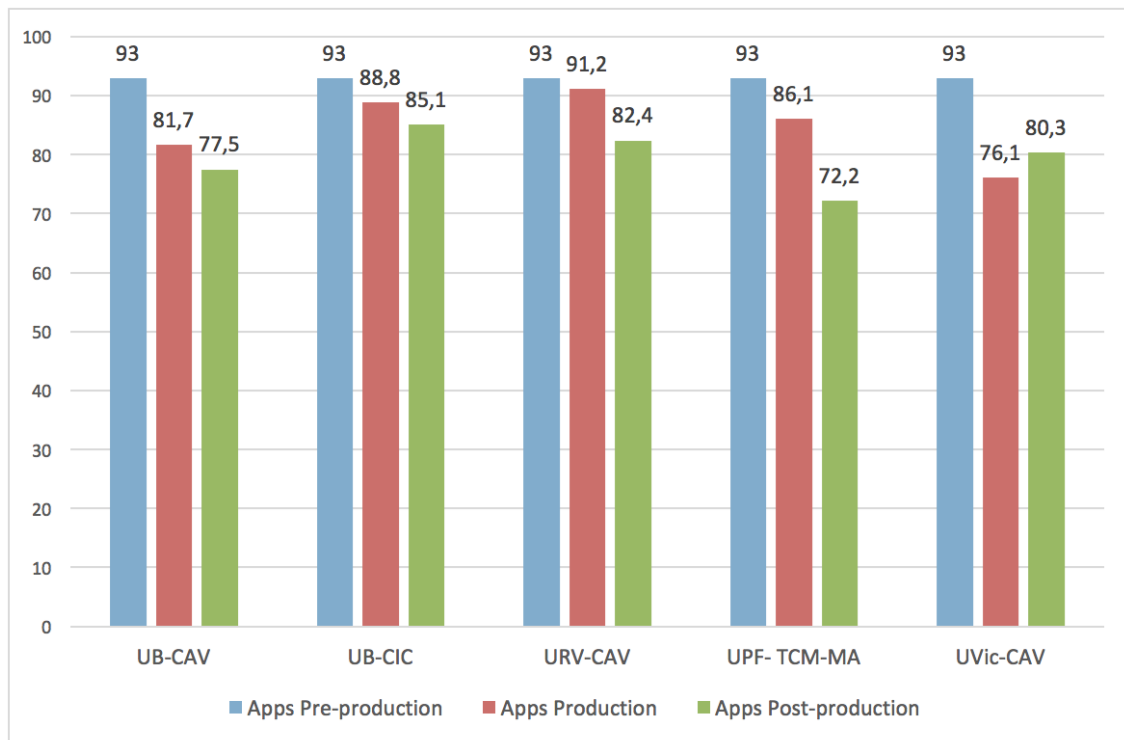


Figure 2: Not use of apps in pre-production, production and post-production.

For each of the three processes we observe a clear tendency not to use apps in the *fourth year* (they are not used by 86.7% of students in pre-production, 88.7% in production and 87.3% in post-production) and *first year* of studies (92.6% of students do not use apps for pre-production, 83.7% for production and 75.8% for post-production).

The low level of app use for specific creative processes should be considered symptomatic of a general lack of knowledge. As we see in Figure 3, students were not familiar with the most specialized apps but had all heard of the most common social media tools. The only area in which this is not borne out is post-production, where we find apps that are also available as standard computer packages (e.g., Adobe Premiere Clip).

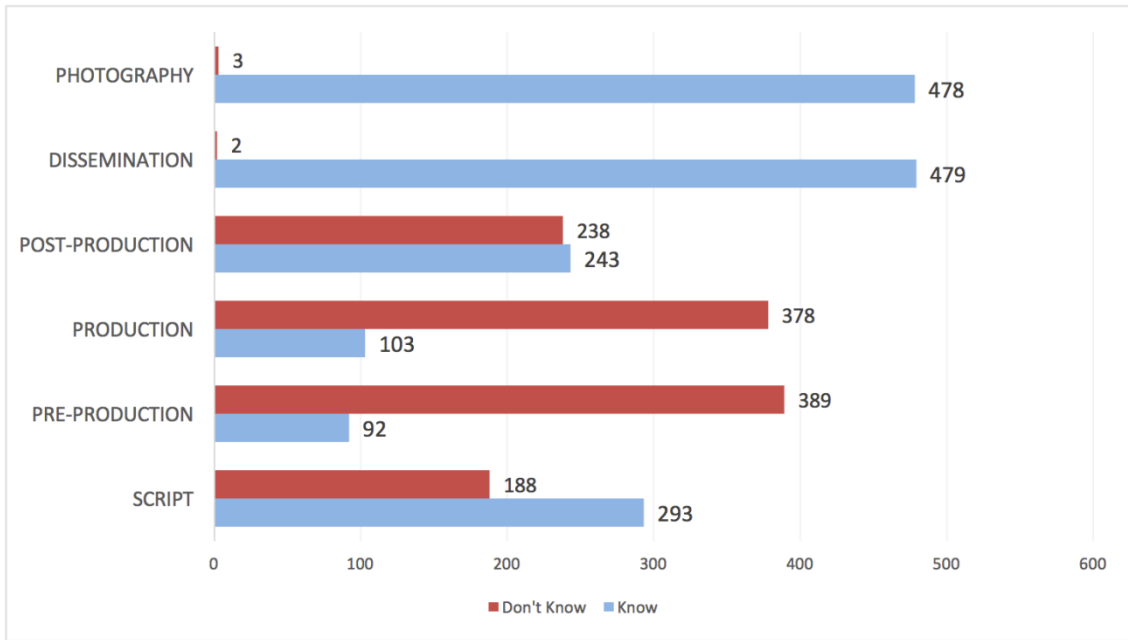


Figure 3: Knowledge of apps for audio-visual creation, by process.

When focusing specifically on the use of apps in the university setting, a clear trend is observed:

	Academic use		Non-academic use	
Never	200	41.6%	111	23.1%
Rarely	162	33.7%	99	20.6%
Sometimes	85	17.7%	123	25.6%
Often	32	6.7%	113	23.5%
Always	2	0.4%	35	7.3%

Table 1: Frequency of academic and non-academic use of audiovisual creation apps in university learning.

Students use audio-visual creation apps in the university setting for *non-academic* purposes, 41.6 per cent of participants stating that they *never* use audio-visual creation apps academically. More than 75 per cent of students have never or only rarely used audio-visual creation apps in the university setting for academic work.

In seeking to establish a relationship between these data and the training that students receive at their universities, we find that, broadly speaking, *they have not received any training*: 299 students (62.2 per cent) have never received any training and 106 (22 per cent) have received very little.

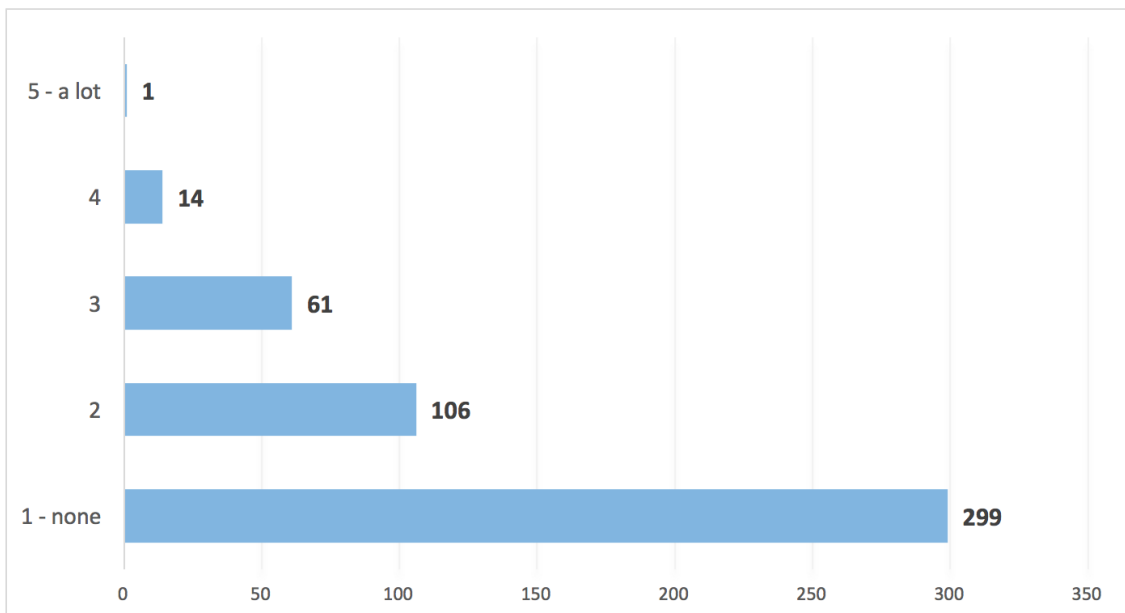


Figure 4: University training in the use of apps for audio-visual creation.

Finally, students were consulted about the perceived importance of integrating audio-visual creation apps into their degree competences, which they were asked to value with one of six adjectives ('useful', 'suitable', 'motivating', 'unnecessary', 'unsuitable', 'banal'). There was a clear perception that this form of training would be 'useful' ($n=360$), 'motivating' ($n=224$) and 'suitable' ($n=154$). Only 30 students deemed it 'unnecessary', 16 'banal' and 6 'unsuitable'.

Students were also asked whether they considered it important to learn to use these tools as part of their university education: 68.8% said that it was 'important' or 'very important', 22.5% were indifferent, 6.7% said that it was 'not very important' and 2.1% ($n=10$) 'not at all important'. These results invite us to question whether their vision of the future – students consider the apps important to their learning process – has been taken on board by the universities.

Finally, audio-visual communication and media students at Catalan universities consider mobile devices to be highly suitable tools for personal audio-visual creation but far less suitable for academic and professional creation. Specifically, students were asked whether they see mobile devices as valid tools for these three creative environments – personal, professional and academic – and unanimously declared them valid for personal creation (97%), whereas opinion was more divided with respect to academic (68%) and professional creation (55%). 15% declared that they were unsure whether mobile apps were valid for academic work and 17% considered them not valid for this environment, while 29% considered them not valid for professional audio-visual creation and 16% deemed them not at all valid for this environment.

These results are worrying from an educational point of view if we consider that smartphone use has found its way into almost every area of daily life but is again excluded from the classroom.

Looking to the future: Do our universities need to update their training?

Audio-visual creation with mobile devices has evolved as users have encountered and engaged with new media and social networks. Apps provide the terrain in which mobile technology has become indispensable for any production in the audio-visual industry. As such, if we ask whether professionals make use of mobile creation tools in the audio-visual industry, the answer is a resounding yes. Tools evolve at pace and the use of mobile devices in the audio-visual industry continues to grow; the current scenario is merely the start of a process the scale of whose evolution we cannot yet determine.

This situation gave rise to the questions addressed in the *Apps4CAV* project. From the results it is apparent that students are not familiar with all of the apps available in their field (except where these are in general use among the public), nor do they consider them suitable for professional audio-visual creation. A lack of university training in the use of these tools is also made clear.

Inevitably, then, a gap is identified between the training requirements of audio-visual communication and media students and the real content of syllabuses and individual subject plans on scriptwriting, pre-production, production and post-production. We must ask ourselves whether students would be more likely to use these types of tools and integrate them into their skill sets (demanded, we must remember, by the industry) if they were familiar with them through university studies and if they should feature in

the list of competences defined for studies in this field. It is down to researchers to open doors that can help the staff and students of audio-visual communication and media courses to identify the creative potential of mobile devices and learn to use apps for audio-visual production processes. Only then will it be possible to promote a genuine democratization of the media and drive convergence towards an environment in which new creators can build new audio-visual narratives thanks to a more suitable relationship between university learning and the professional world.

This reflection is not intended to undermine current schooling in audio-visual communication at our universities; rather, it aims to demonstrate that there is an urgent need for teaching policies that actively examine the professional environment, channel investment into continuous learning among teaching staff and readdress the use of smartphones in audio-visual communication and media classrooms.

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Note

¹ For more information on mobile or smartphone production, see Suárez, R. (2019). Del selfie a Hollywood: breve historia de la creación audiovisual con dispositivos móviles. in Suárez, R. et al. (2019).