How Do You Pod? A Study Revealing the Archetypal Podcast Production Workflow

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ABSTRACT

The creation, consumption and commercialisation of podcasts have increased rapidly in recent years, yet there is limited research exploring the creators who are often the source of the products in this relatively new medium, as well as the workflows they utilise in making podcasts. Based on semi-structured interviews with sixteen professional podcast creators, and subsequent thematic analysis, this paper 1) codifies and quantifies the activities involved in podcast creation, 2) distils the archetypal podcast production workflow, 3) finds that this workflow is remarkably consistent as a function of podcast genre and creator affiliation (independent or part of a media organisation), and 4) sheds light on the "creator" role that has become a distinctive feature of the medium. This snapshot of the inner workings of the creation process, in the evolution of a highly engaging medium, could form the basis for identifying potential innovations that would increase the interactivity of podcasts in future.

CCS CONCEPTS

• Information systems → Multimedia content creation.

KEYWORDS

podcast, audio production, production workflow, broadcasting

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1 INTRODUCTION

The medium of podcasting has evolved over the last twenty years to stand alongside more traditional media such as music, radio, and

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television, in terms of the amount of content being produced, its reach, and its economic importance [14, 26], yet relatively little knowledge exists concerning the workflows via which podcasts are created and produced.¹

"Guerilla Media" was an alternative term given to podcasting by the journalist who first reported on the phenomenon [24]. Although the now commonplace "podcasting" ended up being the term adopted, "guerilla media" provides an accurate representation of what podcasting felt like at its inception: independent, irregular, and somewhat orthogonal to "mainstream" broadcasting.

Podcasts past and present have been characterised as an example of independent media [28, 29], but it is also the case that many are now fully integrated in mainstream media, at the centre of a billion-dollar industry [36]. Podcasts are no longer only produced by amateurs or radio companies [13], but also by podcasting networks, and global corporations like Spotify and Apple.

In many regards, this particular industry behaves like other traditional media: just as musicians started relying on streaming platforms to distribute their content, podcasters are encouraged to use distribution platforms to make their work known [37]. Where radio saw its users shifting to smartphone-based consumption, so have podcasts [3]. Like series and films are relying more and more on paying subscriptions, individuals and platforms are also finding new ways to monetise podcasts [4].

These similarities, combined with the growing value of the industry and importance of this field of research, should perhaps indicate that an equivalent wealth of information is available concerning the underlying production processes of podcasting as for that of more traditional media (e.g., music, radio, television, film). However, besides some very informative how-to blog posts and books for helping beginner podcasters, there is relatively little research on podcast production workflows.

The independence, or perhaps the impression of independence, showcased by the wide variety of podcasts produced every single day should not prevent us from drawing conclusions from the medium as a whole. It is our hypothesis that a formal generalisation of podcast production workflows would allow the format to flourish, in turn providing justification and a framework for innovative

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¹Exceptions are: [1], which covers the fundamentals of podcast production, detailing each step of the process in the form of a "how-to" guide (such a format is also common on blogs and websites explaining the work that goes into making a podcast); [19], which describes a production workflow in an article discussing the role of post-production in the podcast creation process.

research in the field. Indeed, podcasts are already changing, becoming more and more interactive, with for example, the development of enhanced podcasting [5, 12] or new social podcasting platforms [8, 9, 17]. An archetypal podcast production workflow would enable these new technologies to be designed and integrated flawlessly into existing production conventions.

By "production workflow" we mean the sequence of events that begins with the idea for a programme and ends with a final product available to audiences. This is akin to operational sequence diagrams or flow diagrams where well-defined activities can be identified and placed in temporal order. We reflect on the singularities of podcast production workflows in relation to traditional radio broadcasting production methods, as described in the work of [11].

This study addresses the question: "Does an archetypal podcast production workflow exist, and if so how does this archetype vary as a function of genre as well as of the means of production (i.e., independent network versus major broadcasting company)?". In order to answer this question, we conducted semi-structured interviews with podcast creators and asked them to tell us about their production habits. After presenting an overview of the existing literature on the topic of production workflows and podcast production, we will 1) detail and 2) discuss our findings from the study conducted in the final two sections, respectively.

2 THEORETICAL BACKGROUND

2.1 Production Workflows

According to [10, p. 267], "workflow process definitions (workflow schemas) are defined to specify which tasks need to be executed and in what order." Mathematically, a workflow's abstraction is a directed graph, where each node represents a stage or a process, and the vertices linking these nodes represent a path to take from one stage to the next [15]. Traditionally, workflows are represented as diagrams, showing a series of events, sometimes grouped together, linked by arrows representing the common "path" to get from an idea to a finished product. [11] investigates radio production workflows in different settings through operational sequence diagrams. Comparably, [32] describes four phases for a progressive animation pipeline through a simple diagram, and [31] speaks of common workflows in TV production in prose rather than by using visual

A production workflow is an invaluable tool when trying to integrate new tools into established media practices [38], as was the case for digital music production [35] and 4K digital production for movies [27]. This is one of the many benefits of having an established production workflow for a medium. In gaming for instance, [30] describes how to use typical production phases to evaluate user experience.

In parallel creative domains, production workflows have been used for decades to reveal the inner workings of creative processes. In music production, countless educational books and articles cover the typical pipeline of the creative and production process, such as [25], who sees two main phases – one of preparation and one of action, subdivided into shorter, manageable events. Music production workflows have evolved over time with, for example, the normalisation of automatic mixing over analogue practices [21]

and will most likely change again with the inclusion of new tools such as AI assistants or digital production software.

This evolution not only demonstrates that workflows are influenced by the standardisation of some technical practices, but also that having an identifiable production workflow can act as a springboard for innovative practices. For podcasting, a medium intrinsically linked to technology, it seems unavoidable that workflows will change with the introduction of new podcasting tools. If we are able to identify an archetypal podcast production workflow, not only will it act as a snapshot of the nature of podcast production in the early 2020s, but also as a potential basis for podcasting innovation

2.2 Podcast Production

The potential applications of an archetypal podcast production workflow (outlined above) motivate the present endeavour. When we talk of podcasts, we mean specifically "native podcasts" rather than on-demand radio [33]. Podcast production processes have been widely documented on various websites, blogs and how-to guides intended for budding podcasters [1, 2, 6, 7]. There has been some academic scrutiny into podcast production, specifically focusing on advising professors and educators on how to produce podcasts to accompany their teaching [34].

[19] talks about a podcast production workflow more specifically, but the material this article is based on is unavailable. [19] identifies 4 stages in podcasting: conception and development, raw content curation, post production, distribution. However, this is more akin to a guide or tutorial rather than the discussion of the results of a scientific study.

This paper aims to bridge the gap between existing knowledge of podcast production and the reality as it is being practised today, as a function of individual and organisational differences, target genres, and budgetary allowances.

3 METHOD

3.1 Study design

The topic of this paper was investigated as part of a set of interviews exploring the perspectives of podcast creators on both workflow and next-generation podcasting tools, but we restrict our focus to workflow in the current paper. It took the form of semi-structured interviews [22] with independent and British Broadcasting Corporation (BBC) podcast creators, encompassing their views on their current work and the future of podcasting, for approximately 45 minutes per participant over Zoom. This study was conducted with ethical approval from the University of York Arts and Humanities Ethics committee.

3.2 Participants

We recruited sixteen participants through word of mouth, internal BBC communication channels and specialised media advertisement. 62% were independent creators – that is, they were not affiliated with any major production or broadcasting company or network, whilst the other participants worked for the BBC in various departments. Although a gender balance would have been ideal, only 3 participants identified as female, and it is unclear whether this disparity is a fair representation of the industry, or a shortcoming

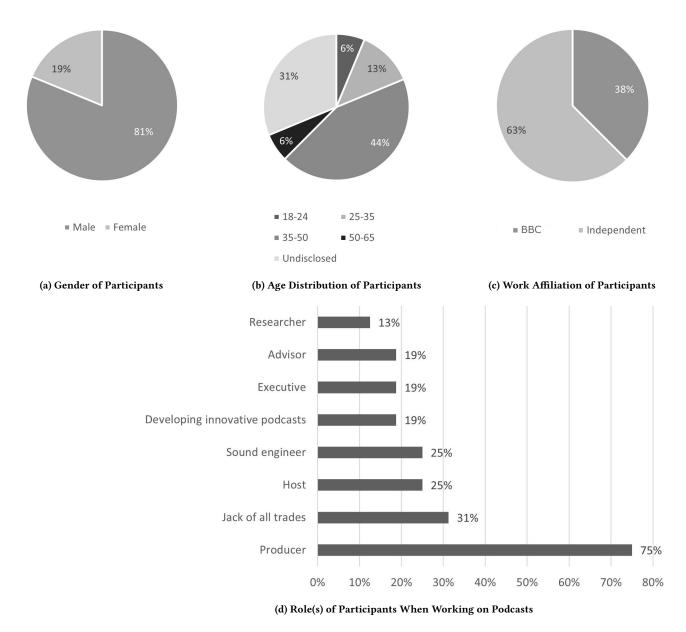


Figure 1: Overview of the profiles of the participants involved with the study conducted. (a) represents the gender, (b) the age, (c) the affiliation, (d) the professional roles distribution of the participants.

of our recruitment process. 44% of participants were between the ages of 35 and 50, and 75% had over 5 years of experience in the field, with a few reporting having been involved with podcasting since the early days of the medium.

Figure 1 contains the affiliation, gender, and age distribution of the participants, as well as their current occupations, with one participant able to give several descriptors for their work. "Producer" was the most common occupation, with over 75% of participants describing producing as one of their main roles when making a podcast. This wide variety of descriptors motivated the use of the

term "creator" to refer to the participants as a group, as it includes all the roles included in the making of a podcast. Participants were involved in a wide spread of genres of programmes (Spotify genre classification): Lifestyle (38%), Stories (25%), Business and Technology (19%), Educational (19%), True Crime (13%), News & Politics (13%), Sports (6%), Comedy (6%) and Music (6%).

3.3 Procedure

Within the interview, participants were asked the following question: "Do you have a particular workflow when creating a podcast?"

Table 1: Codes and themes emerging from the analysis of participants' transcripts, according to the method of [16]. The number of participants mentioning the code or theme is n. Each participant was only counted once.

Initial Codes	n	Thematic Group	n
Advising	3	Advising	3
Casting or Booking Conceptualisation Organisation Research Scripting Work-shopping	4 9 7 3 8 1	Pre-production	15
Recording Soung-designing Edition	15 5 13	Production	15
Publication Revisions	9 8	Post-production	13

Interviews were transcribed using Descript and corrected by one author, before being transferred into NVivo for the purposes of conducting a thematic analysis [16, 18, 23]. When analysing the transcripts, we searched for synonyms and equivalent ideas used across the interviews, and coded the concepts using a term that would encompass each emerging aspect. The number of participants mentioning each code was noted. Codes were then brought together into thematic groups, as required in the "Phases of Thematic Analysis" described by [16], and the number of participants mentioning each group was recorded, with a participant only being counted once per group.

4 RESULTS AND ANALYSIS

4.1 Typical Workflow for Podcasting

All participants spoke of following a specific routine for podcast production, although it could vary slightly depending on the project's requirements. Overall, some similarities emerged between participants' answers. To interpret them, we performed a thematic analysis on the transcripts of the interviews. The thematic analysis revealed the codes and thematic groups shown in Table 1.

The first column represents the initial key codes found when looking at the typical workflow descriptions. The number of participants n who mentioned the concept is noted in the second column. The deduced thematic groups and the number of participants who mentioned them appear in columns three and four, respectively.

Although n gives valuable insight into the prevalence of each process, this result also seems to correlate with our participants' jobs. If we compare column two of Table 1 with Figure 1c, 19% of participants reported being "Advisors", which corresponds to n=3 for the code "Advising". Similarly, 25% of participants reported being "Sound engineers" and the same participants mentioned "sound design", together with another participant describing themselves as a "jack of all trades". The value of n allows us to contextualise and justify our generalisation, but should not be thought of as a true

representation of the amount of industry professionals undertaking a particular action within the workflow produced.

Excluding "Advising", which was mentioned as part of various stages of the production process, three groups were identified, using widely accepted media production terminology:

a) Pre-production

Pre-production comprises the concepts of conceptualisation, organisation, research, scripting, work-shopping and casting/booking. Participants for whom conceptualisation was part of their pre-production process (9 out of 16) remarked their projects often began with questions:

"Often it begins with research. It starts with a story idea, with a theme and with exploring that theme and understanding how much depth there is in a particular story, then you decide the format: is this a one-off? is this a documentary? [...] Has it got enough juice and story in it to be a podcast series? If it does, then what format does that take?" - Participant A

"How can we sustain that? What are the threads that need to be involved? [...] What are the voices that we need? We just throw everything onto the table, and then [ask] okay, how does this [story] break down? Where is our episode? Where do we start? What are the characters we need to introduce first?" - Participant B

"We first were trying to decide: is this something we pitch to one of our employers? [...] The next question was format, literally, what is it going to sound like? So, we went through a couple of different iterations of [versions]: what if we started it out this way? How do we want to organize? How much do we want to cover? Do we want to have guests? Do we not want to have guests? How do we want to integrate them into the show?" - Participant C

Organisation was portrayed as a crucial matter, particularly for large-scale productions and weekly shows, where creators spent a lot of time planning episodes in advance, often relying on planners and productivity or organisation software. It was apparent that a lot of thought goes in planning episodes, booking guests or actors, organising recording sessions, etc. All but one of the four of participants reporting being involved in "Stories" also talked about "scripting". But, as seen in Table 1, 50% of participants overall mentioned scripting as being a part of their workflows. So, what other type of programmes were these creators involved with? After querying our data, we noticed that scripting was part of the workflow of those working within the following genres: stories, lifestyle, music, news and politics, sport, true crime, and comedy.

Only one BBC creator used the term "work-shopping", seemingly as a practice that could be equivalent to both "conceptualisation" and "scripting" occurring at the same time.

b) Production

All but one participant mentioned being involved in the production and recording phase. This participant was a sound engineer and advisor, who had more impact at the beginning and end of the production workflow. Recording was reported to be done in studio, over the internet, in a closet or a bedroom, with several creators

mentioning the COVID-19 pandemic as a factor in the adoption of more "creative" recording set-ups.

Although sound design and editing would be considered postproduction processes in other media like film or game design, we argue that for podcasts, these steps play an integral part of the final product, where recording, sound designing and editing function like a constructive loop rather than a linear process.

Most participants followed an iterative production workflow, with 50% of interviews mentioning revisions occurring at one point or another of their projects. For creators of scripted programmes, it was described as common practice to write a script, record audio, then to go back to modify the script until it was deemed satisfactory.

"We had a full script, and a full draft of audio. [...] It sounded awful, but you have to get that first can of grumpy draft out. And from there, I went back to the script myself and with the story editor re-worked and re-worked that for two other months." - Participant B

c) Post-production

Similarly, revisions were triggered in the post-production phase by superiors, advisors, colleagues, or the creators themselves, deciding to go back to the production phase to amend their programme until they were satisfied with the result.

"It goes through a rough cut and a final cut, and editorial approvals, and then rounds of feedback and improvements, kind of like an iterative process in that sense." - Participant A

This was common for BBC and independent creators alike. The post-production phase often involved these kinds of revisions, and then a publication phase would follow wherein the podcasts were distributed and promoted. Participant D summarises the post-production phase quite succinctly:

"This is good enough, set a release date. Get it out there, and get it to the people."

4.2 Workflow Archtype

Figure 2 represents the podcast creator's archetypal workflow, inspired by the operational sequence diagrams graphs appearing in [11]. This generalisation into an archetype stems from the observations made in Section 4.1. A gradient (shading) is applied to each concept and group introduced in Table 1 as they appear in Figure 2, to represent the frequency of participants mentioning the term in their interviews (c.f. Table 1, column two), from white (1 participant or 6%) to black (16 participants or 100%). The flow between categories was inferred from the sequential order transpiring from the interviews.

A particular project might call for certain steps to be skipped or repeated, with the most common iterative production patterns represented in Figure 2, going from recording/sound-editing to scripting/work-shopping, and from editing to recording/sound-editing. If we look at narrative podcasts, from the point of view of both an independent (participant D) and a BBC creator (participant E), there is a clear, common process:

"Let's say this is a scripted piece. You get the concept going, [...] recording the scripts' content in order. You go through various edits, reviews, you might record a couple of those scripts and then just edit the audio and then listen back to it and [...] add this, maybe add that [...]. It depend It depends on the constraints of the project, it might be once, or twice, or three, or four times, depending on how much time you've got. Then you get to the final products and review it, so that the higher up people listen to it, or in my case, I'm the person calling the shots." – Participant D.

"You've got the script ready; you've gone through four or five drafts with the writer, and you're more or less happy with it. You format it [and] you send that out to the actors; you get your cast together; you have your recording day, or two days, or three days, or however long it takes. And then at that point I would send notes to [a] supervisor and they would cut it together and send me a speech edit, which might be a bit too long. [...] I will then cut it down again so that it's closer to the time and get rid of the bits I didn't like and play around with it for a bit. Send it back to them. Usually with, if I can, some of the key elements of music on. Then they'll cut it together with the music and sound design elements. [...] And then we kind of have a system of sending it back and forth probably about three more times with notes." – Participant E

5 DISCUSSION

5.1 Conclusions

This paper presents the results of a study carried out with a group of industry professionals, with the aim of better understanding their typical podcast production workflow. A remarkable finding of these interviews and subsequent thematic analysis is the high level of consistency in the production workflow described by podcast creators, and distilled in the archetypal workflow shown in Figure 2. As well as the assembling of the workflow itself being a contribution of this paper, the consistency with which it is used constitutes an important finding: our analysis indicates the archetypal workflow does not vary considerably with genre; nor does it vary much between independent creators and those working at the BBC. Rather, the small differences in production processes came from the specific needs of particular projects. These differences do not alter much the overall appearance of the archetypal workflow. The most common variations entail a skipped or added node, or one creator iterating through a loop of existing nodes more often than another.

The iterative nature of podcast production was highlighted, both via reporting the results of our thematic analysis, and select quotations of our participants. These iterations (which most often constitute revisions) can be triggered by a formal process, like a supervisor or editorial board requesting changes to the latest version of the podcast, or take place organically throughout the project. The "constructive loop" (editing \rightarrow revisions \rightarrow recording and sound design \rightarrow editing etc.) that we identified via our interview analysis underlines the importance of iteration in podcast creation and production, and contrasts with rather more linear post-production processes in other media. While some of the creators we talked to worked alone, the importance of collaboration was made apparent in all

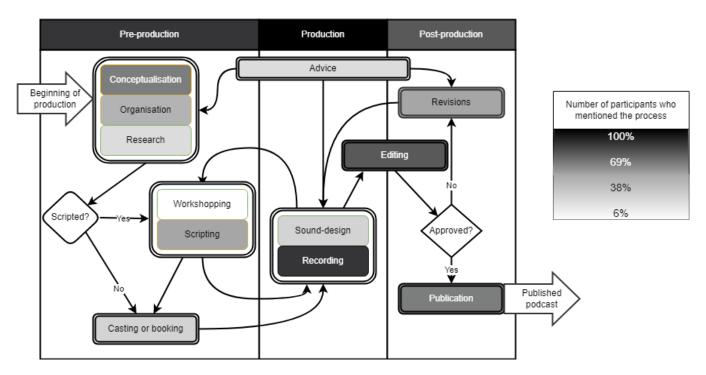


Figure 2: The archetypal podcast production workflow, using the codes and themes presented in Table 1. A gradient corresponding to the frequency of participants mentioning the concept is associated with each idea. Editing is represented at the threshold between production and post production, as it could be included in both groups.

our conversations, with the role of "advisor" being mentioned on several occasions as a key personality in the podcast production process.

The preliminary analysis of the participants' occupations revealed the multifaceted nature of the work of individuals in the podcasting industry. Although predominant when asking the participants to describe their role, "producer" is often too reductive to encompass the variety of tasks required to make a podcast. Instead, we see a "creator" role that more accurately represents the contributions of these individuals.

To put these findings in perspective, we can look at the work of [11] on radio production processes. [11] distinguishes three phases of drama production: before (preparation), during (recording) and after recording (editing), and details the recording and editing phases in operational sequence diagrams. Although the possibility to iterate between phases is not considered, iteration within the two phases occur (e.g. listening to edits and deciding on takes, choosing different effects and music, and editing to time), and a "satisfaction" gate is in place at the end of the production process, quite like the one appearing in Figure 2. [11] also provides an operational sequence diagram of radio documentary production, which finds more similarities with the archetypal podcast production workflow presented in this study. Indeed, concepts like work-shopping, contacting interviewees/guests, recording interviews, are common to most non-fiction podcast productions. However, in both drama or documentary productions, there is no mention of the publication process. In comparison, we found in our interviews that 56%

of participants mentioned the publication process as part of their production workflows.

Many independent creators reported thinking of publication from the beginning of their production process, with prepared images and social media templates to help promote their podcasts, and BBC creators enjoyed the help of dedicated teams/team members working on publishing, marketing and promoting their releases. The publication phase appears more fundamental to the podcast production workflow than it is in radio. We could postulate that this is because, unlike radio shows, podcasts have to stand out to be consumed. Choosing a podcast is an active decision, where a listener has to browse through a library or catalogue to pick a programme. With radio, content is directly delivered to the listener. This comparison with [11] underlines the intrinsic singularities of the podcast production process, where the creator holds a unique role, being invested in all steps of a podcast-specific production workflow.

It is our intention that this investigation into podcast production workflows brings new insights into the inner workings of this flourishing medium – insights that may benefit researchers and industry professionals alike, and could and provide grounding for further research and future innovations in the medium.

5.2 Limitations

The thematic analysis was performed by one researcher, and subsequently reviewed by two others. It is therefore expected that some choices for codes and grouping would reflect the subjective and unavoidable preconceptions this team had on podcast production.

The choice of integrating the "development" phase, which appears in other workflow description for creative practices [27, 32], into the pre-production phase stems from the lack of distinction made by interviewees between the two stages, as the elements contained in what we called pre-production (i.e., conceptualisation, organisation, research, work-shopping, scripting and casting/booking) were often spoken of as part of the same production step.

The creators interviewed, although representing a variety of genres and principal occupation, were not as diverse as one might hope for a study aiming to "generalise" a concept. Our participants were based in the United Kingdom, United States, Canada and Columbia, with a good knowledge of English (the language in which the research was conducted). This excludes a significant portion of the international podcast industry, however, where production workflows may be different.

The size of the production teams were not systematically collected. It was clear that some independent creators had worked alone on some projects, and that some production teams at the BBC were also described as small or minimal, but we also talked to creators who had engaged in larger scale-projects. This variance in team size did not seem to impact production workflows, but further investigation should be carried out to verify this claim.

The comparison drawn between independent and mainstream broadcasting companies was made on the basis that the BBC was an accurate representation of the latter. However, there is a possibility that other large broadcasters do not share similar production patterns. Therefore, it would be valuable to confirm this framework with creators affiliated with other production companies.

5.3 Further Work

In addition to the verification of this workflow through a subsequent study with other podcast creators, it would be interesting to compare this archetypal podcast production workflow to corresponding workflows from other media, like radio, film, or TV. By looking at the disparities between these media's workflows, we could draw useful conclusions regarding cross-media productions. Through an investigation of commonalities and variations in these workflows, factors could be examined and lead to interesting interdisciplinary parallels being discussed.

As similar production pipelines are used to enable research and innovation in parallel fields, it is our aim that this archetype will be used as a starting point for trying to find new ways to make podcasts. This could involve the creation of new podcast production tools or evaluating and reshaping the current processes for creating podcasts. A practical application of using this archetypal workflow to integrate new interactive technologies to podcasts could focus on object-based audio personalisation, as described by [39].

Beyond academia and individuals/companies concerned with audio production and R&D, the archetypal podcast production workflow introduced in this paper may serve a larger audience of podcast aficionados and independent creators – perhaps even some of the one in ten UK adults who have stated their intention to begin making a podcast in 2022 [20], as they begin their podcast-creation journeys.

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