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"Credibilitizing": How Underrepresented Audio Engineers Build Social Capital

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ABSTRACT

This paper introduces the concept of "credibilitizing", a grounded theory (GT) describing how professionals from underrepresented groups (UGs) respond to their desires to be taken seriously as audio engineers. Based on findings from participant interviews after immersive audio workshops, the study found that as UGs pursue their careers, they become weary of "codebreaking": the process of attempting to decipher the unwritten rules and expectations of gatekeepers in the audio industry. Afraid of "leaking out" of the audio career pipeline, they evade the process of codebreaking and instead "leak up" through the pipeline by building social capital with mentoring, role models, and networking. Along the way, they find new purpose and a way to sustain their careers. One important finding from the study is that UGs are seeking *applied* knowledge (e.g., workflow templates, session practices), not "mentoring for mentoring's sake". In this way, they can pass along these skills to others in safe spaces and pursue freelancing and independent projects, thus sustaining their livelihoods. Based on the concept of "credibilitizing", this paper describes building social capital within educational environments and professional mentoring opportunities as ways for UGs in audio to achieve their desire to be taken seriously.

1 Introduction

In my dissertation, *Immersive but Not Inclusive, Immersive but not Inclusive: Challenges Faced by Underrepresented Groups [UGs] in Immersive Audio* [1], I shared data regarding the participation of underrepresented groups in immersive audio (RQ1); the barriers to entry and discouraging influences (BEDIs) which exist in immersive audio (RQ2); and how these BEDIs might be lessened or removed (RQ3), with the ultimate aim of discovering the main concerns of participants in immersive audio workshops (RQ4a) and how they process those concerns (RQ4b).

For RQ1 I found that:

- as of 2024, fewer than 5.9% of producers for popular ("hit") songs are women [2] (that number was 2% in 2019) [3];
- fewer than 10% of presentations on immersive audio at AES conferences were done by women between 2012-2019 [4];
- there are very few women (fewer than 2%) and minorities (fewer than 1%) who belong to the Atmos Facebook group [5];
- there are few women (fewer than 10%) and minorities (fewer than 1%) who belong to the Spatial Audio in VR/AR/MR Facebook group, and this number has decreased over time [5];
- as of 2024 fewer than 15% of people working in sound design for video games in

the US are women and 3% are non-binary [6];
- also in sound for video games, minorities account for approximately 17% of the total number of professionals (Latino / Hispanic 8%, Asian 6%, Black 3%) [6];
- fewer than 9% of post sound producers in Hollywood's Motion Picture Editors Group are women, while in the UK only 4 to 5 out of 60 audio post-production roles were held by women (around 8.3%), [7],[8]; and
- very few, if any, leaders or directors in sound at leading ("AAA") game audio companies are Black or female [7].

For RQ2, I found that BEDIs include gender- and race-based discrimination; microaggressions; gatekeeping; and economic factors including access to technology via educational programmes [7]. Importantly, Brooks et al [9] found that the prevalence of certain types of microaggressions were worse in recording studio environments than in STEM in general. I also discussed the phenomenon of a "leaky pipeline", which is also found in STEM and refers to the fact UGs do not progress through the audio pipeline and STEM career paths at the same rate as their white male peers [10]. The existence of a leaky pipeline illustrates that there is good representation of UGs at the beginning of the pipeline, but not at the end, negating the myth that UGs "just aren't interested" but rather that BEDIs are a causing people to "leak out" [10].

The answer to RQ3 highlights the importance of building **social capital**: the relationships, trust, and networks that help people succeed and thrive in their chosen career. For underrepresented groups in audio, this often means finding or creating networks that offer safety, encouragement, and opportunity when BEDIs are encountered. According to Laird [11], these systems of equity are strengthened through role models, networks, and mentorship, the key ingredients for building social capital.

2 Methodology

Finding the answers to RQ4a and RQ4b involved the undertaking of a grounded theory (GT) study, a rigorous and widely used qualitative research method used to develop theoretical explanations of human behavior grounded in data collected from those exhibiting that behavior [12]. In GT, ideas and concepts emerge from the data; in this case, interviews with 23 participants and observations made within the timeframe of the study.

The data was collected, reviewed, coded, and grouped into higher-level concepts and categories. Altogether, 270 codes and 1,382 coded segments were generated. Analysis followed the GT stages of open, axial, and selective coding, supported by constant comparison, memoing, and theoretical sampling until saturation was achieved. The core category began to emerge as the researcher saw that several codes could be categorized under the themes "Going it on their own," "Pushing," "Learning," "Seeking Mentorship," "Innovating," "Seeking Women's Affiliation," and "Teaching". Each of these described the ways UGs persisted and survived in the field: "leaking up", not "leaking out" [1].

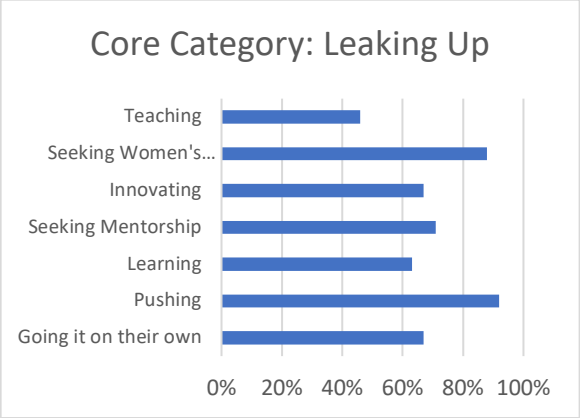


Table 1. The occurrence of various themes related to the core category. Percentages reflect the number of interviews (out of 23) in which the themes occur.

The main concern of participants, "being taken seriously", was identified through constant comparison of participants' narratives describing ongoing efforts to prove their competence and emerged as the central issue uniting participants' stories. Through memo sorting and theoretical coding, this was elevated to the conceptual level of *credibility* (being taken seriously) as the main concern, and "leaking up, not leaking out" as the core category explaining how participants address it. [1]

3 Emergent Theory



Figure 1: Visual map of theory

In Figure 1, we see a visual map of the final theory. I wrote, "The main concern of these participants is to be seen as credible ("to be taken seriously"). They are fighting for recognition as they yearn to be seen as competent within their respective audio fields of music, live sound, audio branding, podcasting, and post-production. Within an industry that has been shown to exhibit several barriers to entry and discouraging influences (BEDIs), participants are trying to 'crack the codes and conundrums' of sexism, confidence, secrecy, rigour, and rank which are vague and sometimes completely hidden. In order to advance in their careers, some benefit from the endorsement of male colleagues, while others consider themselves "lucky" to find a way in. Others struggle not only to find respect for their talents and abilities but also to find very specific types of mentorship. In many cases this mentorship is desired because participants are having to sustain their careers with freelance work, and they are looking to solve specific problems – not just to find mentorship for the sake of it. During their journey, many abandon futile codebreaking efforts and instead look for welcoming spaces with affinity groups who help provide them with validation, role models, and mentorship. Through the process they find renewed purpose and identity, engaging in creative and innovative productions and conceiving of ways to share their knowledge and passion outside of the upper echelons of a male-dominated audio industry." [1]

4 Credibilitizing Framework

"Credibilitizing" is a coin I termed; a gerund that comes from the process of "seeking and gaining credibility, the desire to be taken seriously" [9]. Gerunds are part of the coding process (e.g. "seeking", "becoming", "upskilling") and are used to describe basic social processes (BSPs). In this case, credibilitizing is the process by which individuals work to be taken seriously.

A GT *framework* denotes a set of concepts derived from participants' lived experiences that explains a BSP. Thus, the credibilitizing framework shows the interactions between UG individuals and their networks that enable underrepresented audio engineers to acquire recognition, authority, and belonging.

This paper proposes a framework structured around the findings of my research and the research of others in the context of educational environments and professional mentoring.

4.1 Educational Environments

Educators are increasingly recognizing the importance of supporting marginalized students in audio and related fields by creating safe spaces. In 2003, Terri Winston was a professor at City College in San Francisco. Responding to a need to increase representation, Winston increased women's enrollment from 12% to 43% - the highest percentage of any recording arts institution in the United States [13]. She would go on to create Women's Audio Mission, which as of 2025 has "provided training and mentoring to 25,000+ women, girls, and gender-expansive individuals" [14].

At Elon University in North Carolina, the Leading Women in Audio conference is an opportunity for students to learn from role models and was hosted each year from 2019-2022 [15].

The Music Department at City St George's University of London (UK), where I teach, has recently begun its "Safe and Sound" initiative, an online space for female presenting and non-binary music and sound students to connect and ask questions in a comfortable and safe environment [16]. In this way, students and staff collaborate on ways to develop inclusive events and peer-support networks. The University also holds an inclusive spaces workshop at the beginning of the year to acquaint new students with codes of conduct and communicate the importance of inclusive behavior.

A common theme among these newer programs is empowering students to take control of their experience. For example, the Crossfade Collective at

the University of Michigan established a framework whereby students could engage with the community through creative production, and in doing so "foster innovation and collaboration in electronic music and media arts among historically marginalized individuals." [17]

In Mexico, the "Líder del Mañana" (Leader of Tomorrow) program at Tecnológico de Monterrey inspired author David Kenji Calderón-Miyamoto to document his experience with students in Music Technology [18]. The program "provides full scholarships and comprehensive support to academically gifted students from economically disadvantaged backgrounds in Mexico". Calderón-Miyamoto recounts that "some Music Technology students have begun engaging in peer mentoring, collaborating with younger students on music productions, live audiovisual shows, and institutional music competitions. This organic extension of mentorship suggests that fostering a culture of shared knowledge and teamwork can enrich the Music Technology Program and create lasting change" [18].

Thus, some educational environments are becoming places to help students *credibilitize* by acknowledging BEDIs and responding to them by empowering students to build social capital by providing economic access, role models, and introducing them to networks that will help them build social capital.

4.2 Professional Mentoring

Professionals from UGs have in many cases already begun divesting from male-dominated spaces, and as they credibilitize they build a renewed sense of purpose and identity. There are now more safe spaces than ever; in 2018 Dobson catalogued over 70 "feminist audio collectives" [19]. Since then, organizations such as Black Sound Society (UK), She-Q Audio (Canada), We Make Noise (USA), and We Are Moving the Needle (USA) have emerged, and have spread their footprint globally. These safe spaces (both online and in person) enable credibilitizing by removing many common microaggressions and allowing the free exchange of ideas in a supportive environment.

In terms of mentoring, Women's Audio Mission hosts continuing education courses and WAMCon, a conference aimed at women which offers "hands-on workshops, mentoring sessions, and panels designed to offer insights into both creative and technical aspects of audio production, along with valuable networking opportunities with industry pros." [20] By highlighting Oscar and Emmy-winning post-production sound professionals, they are adding role models to the social capital "formula". Similarly, We Are Moving the Needle is an organization which bridges opportunity starting at the university level with college chapters and over $800,000 in scholarships, removing economic barriers and providing access [21].

In the *Immersive but not Inclusive* study, participants emphasized a desire for mentorship that is practical, not symbolic. For example, as one participant in the study said, "when you are actively looking for a system … let's say a dialog edit. How do we do this? There are four, five, six ways of doing it, so until we find confidence in our own way, how do we find methods, find people to show us? In uni of course I have been shown it …I wish it was more readily available: actively sending around templates. How can we adapt them for ourselves?" [1] Rather than "mentoring for mentoring's sake," they seek actionable support: for example, mix templates, session workflows, and dialogue editing tips. Mentors should meet mentees where they are and offer guidance grounded in the realities of the work.

In 2021, I founded Immersive and Inclusive Audio as a non-profit organization. As a result of my research, the two-fold mission of the organization is to provide "affordable mentoring program in a safe environment showcasing role models" and "create a pipeline of skilled, underrepresented groups with the necessary social capital to work in immersive audio within the audio industry" [22]. As an Avid Learning Partner, we have awarded 41 Dolby Atmos Certifications and 19 Pro Tools Certifications. Our students are professionals who have gone on to work for post houses in the UK and major record labels.

5 Future work

Participants in these safe spaces feel like they can "relax their shoulders", avoiding microaggressions while being inspired by teachers who look like them and come from similar backgrounds. As one person said, "any time I am in that environment I can let out a deep long breath where I hadn't realized my shoulders were tensed" [1]. To fully understand credibilitizing, it would be good to interview the BSPs of participants who *do not* have access to these spaces to discover how they thrive and succeed, or whether they are more prone to "leaking out".

6 Conclusion

In summary, this paper has demonstrated that *credibilitizing* functions as a social process through which UGs sustain their participation in the industry. They are finding the need to build building social capital within educational and mentoring environments while remaining outside of the upper echelons of the audio industry. They do this as a strategy for resilience and visibility in their own careers as they "leak up, not out" of the pipeline. The credibilitizing framework outlines how educators and organizations can provide safe spaces to help UGs fulfil the dynamics of creating social capital through mentoring (with scholarships to ensure access), networking, and role models at conferences. However, the process of credibilitizing takes place outside of structures that remain shaped by exclusionary gatekeeping. Therefore, understanding these dynamics is important to painting a full picture of the basic social processes at work, and gatekeepers must still be called upon to engage with the process and provide career and mentoring opportunities. Together, these tools can be a roadmap for creating systemic change in audio education and industry practice.

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