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## The Music of *Undertale*: Participatory Culture, Video Game Music, and Creating Covers for YouTube

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### Abstract

Playing video games is one of the most popular leisure activities across the world. Video game music (VGM) is a musical art form prevalent in popular culture, and there is potential to use it for the music education of students. Using informal music learning (Green, 2002) and online participatory culture (Jenkins, 1992/2013) theories as grounds for inquiry, this multicase study explored how musicians used the music of *Undertale*—a popular 2015 independent video game created by Toby Fox—to inspire music making by publishing YouTube videos. Twelve case studies were conducted using methods outlined by Robert E. Stake (1995; 2006), each centered around a YouTube channel managed by creators who published *Undertale* music video covers. Data were analyzed around three themes: learning how to create for YouTube, creating covers of *Undertale* for publication, and interacting with others within the VGM community. By exploring the processes of VGM cover artists who

published on YouTube, music educators may be able to better guide students to develop skills for publishing content on the internet and connecting with others in meaningful ways online.

### **Introduction**

Playing video games on mobile devices, consoles, and computers is a leisure activity enjoyed by an estimated 3.24 billion people worldwide (Clement, 2021). Researchers have explored how video games stimulate learning and the creation of art (Cheng, 2014; Miller, 2012) and chronicled the advances of technology and sound recording capabilities through video game sound and music (Collins, 2008; Fritsch, 2013). Moreover, educators have identified learning outcomes playing video games could have for music learning (Cassidy & Paisley, 2013; Gower & McDowall, 2012; Havre et al., 2019; Paney, 2015). Video game music (VGM) is a musical art form prevalent in popular culture, and there is potential to use it for the music education of students at any level of schooling as well as through informal learning outside school. Reproducing VGM, specifically covering or arranging VGM, can help students learn music from a contemporary art form that is ubiquitous in their society, and this study explored the ways musicians used VGM to inspire music making through online participatory culture (Jenkins, 1992/2013), specifically by producing videos on YouTube.

### ***Video Games as Participatory Culture***

O’Leary and Tobias (2016) discussed how video games are designed for playful, immersive experiences, social engagement, and interactive activities. Tobias and O’Leary (2017) pointed out that even though video games and their music are in an early stage of inclusion within music education scholarship, video games “hold promise for expanding students’ musical engagement in ways that are connected to digital media” (p. 270). They provided strategies for incorporating social, historical, and cultural conventions into music classrooms with VGM through facilitated graded assignments, encouraging the formation of affinity groups, sharing musical projects, and musicking (O’Leary & Tobias, 2016). Informal music learning pedagogies like those popularized by Green (2008) can provide an inroad for VGM’s inclusion in the classroom. For example, when using informal music pedagogies within a wind band setting, students in Jones’s (2015) study opted to mashup music from the movie *Jurassic Park* and the video game *The Legend of Zelda*.

Informal music learning in the digital age is well situated in online participatory culture (Cayari, 2016; Waldron et al., 2018). Jenkins (1992/2013) explained about “participatory culture (a broad movement which takes many different forms across history), fandom (a specific kind of participatory culture with its own history and traditions), and Web 2.0 (a

business model which seeks to capitalize and commodify participatory culture)” (p. xxii). He insisted that distinctions should maintain between them which “allows us to use fandom as a base for critiquing many of the policies of Web 2.0 companies that seek to capitalize on free labor or commodify the gifts fans share” (p. xxii).

The labor and gifts created by fans posit “fans as participants [and separate them] from more traditional [or passive] ideas about spectatorship” (Jenkins, 1992/2013, p. xxi). In previous research (Cayari, 2020), I described how fan activity can also lead to “*fanception*, or a fandom existing within a fandom” (p. 397, italics in original), which might manifest when a cover musician fosters their own fandom that exists in a larger fandom centered around a video game. Such online fandoms exhibit characteristics of affinity spaces, which “are becoming prime spaces where people engage in 21<sup>st</sup> Century teaching, learning, doing, and being” (Gee, 2017, p. 28). Gee argued that gamers are connected to online affinity spaces that allow them to “discuss, learn, and teach about the games they play” (p. 29). O’Leary (2020) brought this concept to music education by studying how an online affinity space that featured predominantly VGM music, chipmusic.org, served as a gathering place for musicians. O’Leary then applied affinity space characteristics to classrooms, which could lead to students developing learning resources, sharing found educational aides, and peer-based feedback and criticism for students’ musical products as students self-guide their learning experiences as individuals or as a larger group.

Another common approach to understanding how online learning, creation, and connection take place is through observing the interactions that occur between people within communities of practice (Lave & Wenger, 1991). In an online community of practice, a person might enter an established online community as a lurker—one who observes without interacting with people or adding content. After lurking, the person may start posting content and interacting with others, becoming a *newcomer*, joining in through what Lave & Wenger would call legitimate peripheral participation (LPP).

“Legitimate peripheral participation” provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts, and communities of knowledge and practice. It concerns the process by which newcomers become part of a community of practice. A person’s intentions to learn are engaged and the meaning of learning is configured through the process of becoming a full participant in a sociocultural practice. This social process includes, indeed it subsumes, the learning of knowledgeable skills. (p. 29)

After a while, sometimes a person may actively share their knowledgeable skills through content creation, mentorship, or teaching, thus becoming an old-timer or veteran. Online communities of practice developed around music have been looked at by researchers in music education in various media including, but not limited to, text-based discussion boards (Bauer

& Moehle, 2008; Pinch & Athanasiades, 2012; Salavuo 2006), Facebook (Bernard et al., 2018; Palmquist & Barnes 2015), and YouTube (Cayari, 2016, 2021a).

### ***Learning Strategies for Online Music Creation***

Communities of practice research in music education has focused on activities outside music classrooms, yet music educators can serve as veterans inside the classroom as they guide students toward creating online content through individual, collaborative, and crowdsourced projects which can be categorized as do-it-yourself (DIY), do-it-with-others (DIWO), and do-it-for-others (DIFO), respectively (Cayari, 2021c). In another publication, I identified how these types of projects create different types of products and how they can be leveraged by music educators in the classroom (Cayari, 2021b). For example, students could create a *solo* multitrack recording that looks like clones singing in a quartet (DIY; Cayari, 2021c). Online collaboration (DIWO) can facilitate relationships with students working within the same music program (Anthony et al., 2020), develop partnerships with students from other schools (Clauhs, 2020), and feature music making with family members and friends (Cayari, 2015). Finally, the internet has allowed people to work with large groups of people who each contribute toward a product allowing participants to provide their skills *for* the benefit of others (DIFO; see Galván & Clauhs, 2020). DIY, DIWO, and DIFO dispositions can be fostered in students by having them practice various skills that encourage participatory culture.

While many music education courses in school focus on performance ensembles like band, orchestra, and choir, Tobias (2013) suggested skills beyond performing in large ensembles could be taught in music classrooms that promote participatory culture. These skills include, but are certainly not limited to, covering, arranging, parodying, satirizing, multitracking, remixing, sample-based producing, creating mash-ups, creating tutorials, remediating, commenting, and discussing. Each are ways students might “interact... with original works [and] web-based media” (p. 30). In a cross-sectional, self-administered questionnaire conducted at *Super Music and Gaming Festival* (MAGFest), a convention at which approximately 20,000 people gathered to celebrate music and video games, I found that respondents ( $n = 137$ ) found that people who published VGM online found that music theory courses and informal music learning practices—learning from listening to recordings, reading texts, and asking questions of others—were the two most useful approaches for learning the skills they needed to produce VGM online (Cayari, 2022). While informants in that study found that performance classes were helpful in preparing them to produce VGM online, after conducting one-tailed t-tests comparing the perceived usefulness of various learning strategies, I found that performance classes were significantly less helpful than music theory courses, informal music learning, private lessons, informal technology learning, and technology courses while being significantly more helpful than music history courses. Also,

informal technology learning was perceived as significantly less useful than music theory courses and informal music learning. These results inspired me to look more into how VGM creators develop the skills they might need to produce music online.

### ***Purpose of Study***

VGM inspires fan activity that might interest educators who want to encourage music making for online publication through participatory culture. Educators might use VGM as source material for musical learning and performance or encourage students to arrange, compose, or perform within the art form. This multicase study explored how a video game encouraged learning, music making, and the development of communities online. Specifically, I explored how *Undertale* (2015), an independent video game created by Toby Fox, inspired YouTube creators to make cover music videos (covers hereafter) that led to learning, online performance, and the expansion of fandoms. The guiding questions for this study were:

- 1) What were the learning strategies used by YouTube creators to make cover videos of *Undertale*?
- 2) How did *Undertale* inspire musicians to make the music they produced on YouTube?

### **Methods**

Case study is a method of inquiry that focuses on understanding the uniqueness of an entity (Stake, 1995). Stake (2006), who developed a rigorous method for cross-analyzing multiple cases, insisted that a *quintain* is identified. A quintain was defined as “an object or phenomenon or condition to be studied...[as a] collective target” (p. 6), which serves as an overarching theme on which a multicase study is focused. Both cases and the quintain help a researcher learn about “particularization more than generalization” (p.8), and multicase study “is not so much a study of the quintain as it is a study of cases for what they tell us about the quintain” (p. 7). Therefore, a multicase study was used to explore the impact *Undertale* had on the musical creation and learning strategies used by musicians who publish VGM covers online.

### ***The Quintain and Cases: Identifying Channels and Creators that Inform the Inquiry***

I first identified a video game that stimulated a large amount of derivative user-generated content centered around a musical online fandom. *Undertale* was released on September 15, 2015, which was 20 months before I started the study. A YouTube search for “Undertale + Cover” yielded over 3 million results, confirming that I would have enough informants to develop a robust multicase study. Thus, *Undertale* served as the collective target around which this study was designed.

Creators' YouTube channels served as the boundaries for cases. In previous studies (Cayari, 2011, 2016), I found that a YouTube channel allows for a natural binding for a case study because a large amount of data is contained on a website that provides links to other online content that can serve as additional data. After obtaining IRB approval, I recruited 12 YouTube creators who served as the main informants for this study. The cases were selected through purposeful sampling with the intent to recruit diverse informants that represented various genders including transgender and cisgender artists, races, ages, genres, and instrumentations. Subscriber counts were considered so I could include perspectives from highly popular VGM artists and active creators who had smaller audience bases who had established themselves as VGM cover artists.

I looked for channels that had at least 50 total videos and two or more videos inspired by *Undertale*. I used my own knowledge as a fan in conjunction with referrals from other informants for recruitment. A signed informed consent form was collected from each participant, who was given the option of including identifying information or using a pseudonym. All informants requested that their channels be included in any research publication. Including identifiable information gives the informants credit for their creative works in research dissemination. A list of informants' information, including chosen names, YouTube channels, ages, genders, races and ethnicities, current countries, and occupations, can be found in Table 1 to show their diversity (see appendix). Also included are a list of instruments used and styles of music performed for *Undertale* covers as well as the number of subscribers and views on their YouTube channels in January 2018, the beginning of this study.

### ***Data Collection***

I collected YouTube analytics including video names; URLs; and counts of views, likes, dislikes, and comments. Then, I watched the *Undertale* covers on informants' channels to get a sense of how they interacted with the music. I crafted an introductory email questionnaire that included questions about demographics; instruments, equipment, and software used to create covers; musical background and education; experiences with *Undertale*; and experiences with YouTube and other social media. While waiting for their answers, I observed the *Undertale* covers on their channel. An online field note template was developed like the measure I used in previous studies (Cayari, 2011, 2016). The template included *a priori* categories and space for emergent categories, jottings, questions, and proclivities. The template was also divided into two sides to allow for objective observations on the left and subjective thoughts on the right (Sunstein & Chiseri-Strater, 2007).

After each participant returned their questionnaire and videos were observed, I developed a semi-structured interview for each participant. Interviews were conducted on Skype and lasted

between 50 and 90 minutes. They were recorded and transcribed. The transcripts were submitted to the informants for member checking to increase validity. They were given two weeks to respond with any edits; four of the informants offered small changes, two responded with no need for changes, and six did not respond. Each participant was given a \$30USD Amazon gift card for their involvement, which was funded by an internal grant from my university.

### ***Cross Case Analysis: Exploring Trends and Outliers Across Cases***

All case data were analyzed in a three-step process (Emerson et al., 2011). First, observations and interview transcripts were divided into chunks and assigned initial themes and codes. *A priori* themes—inspiration and learning—aligned with the research questions, and codes were emergent. Second, codes were analyzed, and similar topics were combined. Lastly, data were assigned final codes, which were used to create case reports.

I created a series of worksheets adapted from Stake (2006; see [Supplementary Materials](#) for the following worksheets) to conduct the multicase analysis. Data from each case were compiled around themes (Worksheet A) to inform case reports (Worksheet B). Case reports showed the prominence of themes as they related to each case, the expected utility of the cases for developing the themes as they related to the quintain, and case-specific findings. Then, the utility of cases for each theme was assessed and rated (Worksheet C). After that, case-specific findings were analyzed, which helped to identify trends across cases. To do this, I coded each finding and grouped similar findings to develop merged findings (Worksheet D). Worksheets C and D were used to develop assertions, which “in a cross-case report are the researchers’ Findings about the Quintain” (Stake, 2006, p. 41, capitalizations in original). Finally, the assertions were placed on a matrix (Worksheet E), which ranked how important they were for understanding the themes.

## **Findings**

The following multicase analysis describes the ways the informants learned the skills they needed to produce VGM covers and publish them on YouTube; the ways they went about creating *Undertale* covers; and the evolution some informants had from learner to creator to veteran, mentor, or facilitator of music making. By considering these three trends, music educators may better understand how to guide students through participatory culture inspired projects that span informal music learning on the internet; musical, digital content creation; and communities of practice.

### ***Learning How to Make VGM Covers for YouTube***

Informants acquired the skills for creating *Undertale* covers on YouTube through various

approaches they learned in formal and informal contexts (see Worksheet A, Theme 2). School wind band programs taught informants how to read music, play their instruments, and work within an ensemble. Private lessons helped informants develop and hone their technical skills. Formal piano lessons were most common, and some took lessons in percussion, wind band instruments, fretted and non-fretted strings, voice, and composition. Informants who played popular music discussed informal music learning activities, particularly jamming with others, asking questions of veterans, and playing with recordings to learn VGM.

### *Learning in Schools and Lessons*

None of the informants identified a time when VGM was explicitly taught to them in school music programs. de Leon, an award-winning composer from the Philippines, summed up a prevailing sentiment when asked if he had any VGM represented in his school music program: “No, not even one, never.” However, informants found they could incorporate VGM into their university studies. Smith, who taught woodwind lessons at an Australian University said:

At the old legacy parts of music institutions, there’s an attitude that video game music is not worthy of study. But that stereotype is talked about more than actual. I was tossing around doing my master’s thesis on video game music, and I never received any pushback.

Further, TeraCMusic arranged *Undertale* music for her undergraduate orchestration course, later played by the school’s orchestra and pep band. Similarly, Eiene created a three movement “Jazz Video Game Medley”<sup>1</sup>, in which he recorded with his fellow undergraduate students and published YouTube videos that featured him conducting the ensemble, behind-the-scenes footage, and the score with text commentary for listeners. Finally, Henderson’s digital distribution course encouraged her to “start learning how to release and license covers properly and stop *just* putting them on YouTube.” She registered her compositions and arrangements with performing rights organizations, which helped her connect her music with Spotify, allowing her to get both mechanical and performance royalties. This allowed Henderson to “think of everything as residual income” and encouraged her to consider how she could “make sure that [her] stuff is commercially available at all times.” The degree programs chosen by Eiene and Henderson had curricula, facilities, and faculty that specialized in creating content that could be published online. Yet, both spent years learning how to create VGM covers they published on YouTube before pursuing their degrees. Their success on YouTube was a contributing factor of why they enrolled in a university program that could take their creation to the next level.

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<sup>1</sup> “The Jazz Video Game Medley” by Eiene was retrieved from <https://youtu.be/501jOOimQVc..>

Similarly, Fauzi, who arranged virtual orchestrations using MIDI and piano rolls, shared that even though he took music technology courses for his undergraduate degree, “most of the knowledge [needed for producing YouTube covers] was self-taught beforehand.” Other informants, particularly those who learned in music programs that did not specialize in media creation, did not perceive school music as helpful for learning how to create content for online platforms. For example, TeraCMusic said, “There’s only so much that can be taught professionally or in an institution for YouTube and the kind of videos that I make. I think most of what I do for my VGM covers would have been better off with me learning it myself.” Perry, who had two music performance degrees and an artist’s certificate lamented about the lone music technology course he took in his master’s program:

When I took [a computer music course], I was hoping to learn more about production value, how to mix and master, what's going on when I use a compressor, and not just how am I responding to all these little knobs and buttons. That’s [the type of experience] I wish I had more of.

Unfortunately, Perry’s course did not cover these tasks. Rather, it focused on notation and “tech for electronics in the classical world” like *musique concrète* and Max MSP. In contrast, Samantha Ballard, a harp player, discussed how her music theory and technology courses helped lay the groundwork for her to create VGM covers online. Her courses in college helped her learn how to develop her own arrangements for her instrument, which is discussed below; how to place microphones for recording; and the basics of DAW software.

### *Self-Directed Informal Learning*

Every participant in the study used informal learning to learn both musical and technological skills. Three prevalent ways informants learned informally were seeking guidance from veterans, jamming and playing with friends, and copying or mimicking recordings.

*Seeking guidance from veterans.* OverClocked ReMix (OCR), founded in 1999, was “a community dedicated to the appreciation and promotion of video game music as an art form.”<sup>2</sup> Briggs, who produced electronic dance music (EDM) covers and founded a music promotion company, explained:

Most of my production education came from online, not school. We didn't have YouTube in the 90s. You couldn't just look up a tutorial. I was on AOL Instant Messenger and connecting directly with the other people on the OverClocked ReMix forums. We would swap works in progress and explain how we did things. We learned from each other.

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<sup>2</sup> OverClocked ReMix website was retrieved from [https://ocremix.org/info/About\\_Us](https://ocremix.org/info/About_Us).

While in high school and undergraduate university, Perry turned to OCR to self-direct his technological learning. He joined the community, listened to remixes posted by OCR users, and “had dreams of being able to do it [himself] someday.” He started experimenting with *Finale* by inputting notation and using MIDI playback. He confessed, “It was a pipe dream until after my first year of college when I decided I really want to try to make my own remix.” As he posted on the forum, he made friends and they guided him “towards the materials and resources that [he] needed.”

*Jamming with peers.* While asynchronous text-based, audio-enhanced forums were important to the informants who were learning in the early 2000s, many informants discussed how synchronous chat and video streaming platforms in the 2010s connected them to mentors and peers. Vokle was a prominent platform on which a host would stream video and audiences could interact via text chat. The host could also invite users onto video. Eiene explained,

JaytehAnonymous used to host Vokle streams. Ro Panuganti and I used to hang out in the chat. At one point, I was on a video question, and Ro was on a video question as well, so we were inadvertently having a webcam chat.

Often, Panuganti—an electric guitar hobbyist—watched streams of his favorite YouTube creators and developed relationships with fellow fans like Eiene. These interactions inspired collaborations in which the two created VGM covers by sending tracks back and forth, taking turns mixing them, and giving each other feedback. The two expanded their circle of online friends. Panuganti, Eiene, Henderson, and TeraCMusic developed *WowieTalk*, a podcast on YouTube for which they discussed video games, music, social interactions, and other common interests. In the inaugural episode, Panuganti explained that the format was inspired by other VGM creators whom they had enjoyed watching. *WowieTalk* exhibited jamming—in the form of music and discussion—with friends as they shared their works and built off each other’s ideas.

*Copying to learn.* The members of *WowieTalk* copied veteran creators on YouTube by duplicating the format of other podcasts in “shorter [segments] going through talking points and funny, stupid debates,” according to Panuganti. Similarly, all informants identified veteran VGM YouTube creators who inspired them to create their covers, and each discussed how the predominant way they learned music for their covers was by listening to recordings. Repeated listening of VGM was done in three ways: playing the game, consuming derivative content, and listening to the original soundtrack.

Experiencing the music of *Undertale* often first occurred when informants played the game. However, some informants also spent hours watching *Let’s Play* videos, a vernacular term that describes livestreams and edited videos of someone else playing a game. Fauzi explained, “I got to see Jacksepticeye and Markiplier play it, and then played the game for myself. I got

all these [cover] ideas from watching those play throughs.” While only three informants mentioned watching Let’s Plays, all the informants listened to covers produced by YouTube artists. de Leon’s introduction to the game was seeing fellow YouTube creators’ covers. He saw that the “*Undertale* hype was really through the roof and the positive effects it has on RichaadEB’s channel. Richaad’s subscriber count really skyrocketed and I wanted a piece of that.”

Also, all informants learned the music of *Undertale* by listening to the original soundtrack and recreating it on their instruments of choice, whether that was MIDI piano-roll on a Digital Audio Work Station (DAW) in the case of Fauzi or flute, voice, and piano in the case of Henderson. Panuganti exemplified what one would expect from an electric guitarist as he improvised while playing over others’ covers, the soundtrack, or his own backing tracks inspired by *Undertale*. Improvisation over self-created background tracks was also common for jazz musicians Eiene and Perry as well as Waters, who specialized in ambient music. Electronic music producers Fauzi, Tenkitsune, and Briggs used rote learning techniques to input sounds by ear as they created their covers in DAWs through notation input or capturing sound through MIDI and electronic instruments.

*Leveraging online resources.* Others who learned predominantly using staff notation discussed how they found or created notation for their VGM projects. Ballard, a professional harp player explained,

I tried to arrange by ear when I could, but I find it difficult when there are lots of parts at the same time. I looked up a transcription, because trying to figure harmonies is hard to do by ear. For the last song in *Undertale Medley*, I looked up a transcription for two guitars and then edited that for harp.

Eiene used his middle school’s library computers to download MIDI files from VGMusic.com—an archive with over 4,200 VGM midi files that can be downloaded—then loaded them into Sibelius, thus converting them into notation. As Eiene became better at transcribing and playing by ear, he created lead sheets for his arrangements, which he made available through links in his videos’ description boxes.

Finally, some informants also used video tutorials online to learn. Fauzi both watched and created piano tutorials in which a player’s hands were visible on the keyboard and a scrolling piano roll visualized the music.<sup>3</sup> When Eiene was learning how to play bass, he searched YouTube when he needed direction or was curious about more efficient ways to play the bass.

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<sup>3</sup> A piano roll video tutorial of “Ruins” by Fauzi was retrieved from [https://youtu.be/Vvx2\\_IhKATI](https://youtu.be/Vvx2_IhKATI).

While musical tutorials were only mentioned by a few informants, all of the informants discussed how they used YouTube videos to learn technical (having to do with scenery, lighting, properties, costume, sound, etc.), production (having to do with the planning, rehearsing, and presentation of a work), and distribution (having to do with post-production aspects including marketing, availability, and monetization) skills.

### ***Covering Undertale on YouTube***

Common rationales for covering *Undertale* included four prevalent sentiments: (a) watching covers and thinking, “I could do it too” (Ballard); (b) wanting to “expand the sounds of the original soundtrack” (Fauzi); (c) “focusing on what’s popular” (de Leon); and (d) “conveying emotions or stories” (Waters).

#### *“I Could Do It Too”*

All informants watched covers by veterans in the VGM community, which often inspired them to create covers. Veterans’ videos inspired every participant to try creating for themselves, and experimentation was at the crux of their entries into cover creation. Ballard was a harpist who gigged and taught in a private studio. She regularly “watched others making harp covers of video game music and thought, ‘I could do it, too. Or, do it better in some cases since I had more training.’” Ballard’s inspiration was to use her skills as a harpist to participate in the VGM community. Contributing to the community as a creator rather than a passive observer was discussed by all informants, exemplifying the transition from lurker to contributor. Ballard also gave back to the community by publishing her sheet music on [musicnotes.com](http://musicnotes.com), a sheet music website whose “staff of professional arrangers ensures quick-to-market production of the largest selection of officially licensed pieces.”<sup>4</sup> The idea of applying one’s unique skills toward creating covers was not just relegated to playing instruments or singing. de Leon studied visual arts as part of his comprehensive undergraduate arts degree. He recalled:

I have my visual arts chops, so I try to combine that with my musicality. I saw Mary Lesterberg's [MIDI art] work. I thought: This is amazing, I can do that, but I want to do it with video games. It was definitely in the plan to include the [*Undertale*] motifs, to make it appealing visually and sonically, because, oh, I’m watching Frisk [the main character] doing battle with the dummy [a monster]. I’m watching Frisk doing battle with Undyne, but I can also hear their themes. I think that adds an extra layer of appeal. After a day or two of trial and errors: Okay, let’s do this.”

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<sup>4</sup> Ballard’s sheet music store was retrieved from <https://www.musicnotes.com/sheet-music/artist/samantha-ballard>.

Figure 1 shows the two types of MIDI art de Leon created: Picturesque piano rolls that include the motifs of each character composed by Toby Fox and arranged by de Leon<sup>5</sup> and visual drawings entered into MIDI piano rolls that focused on visual representation that had little to no regard for sound representation.<sup>6</sup>

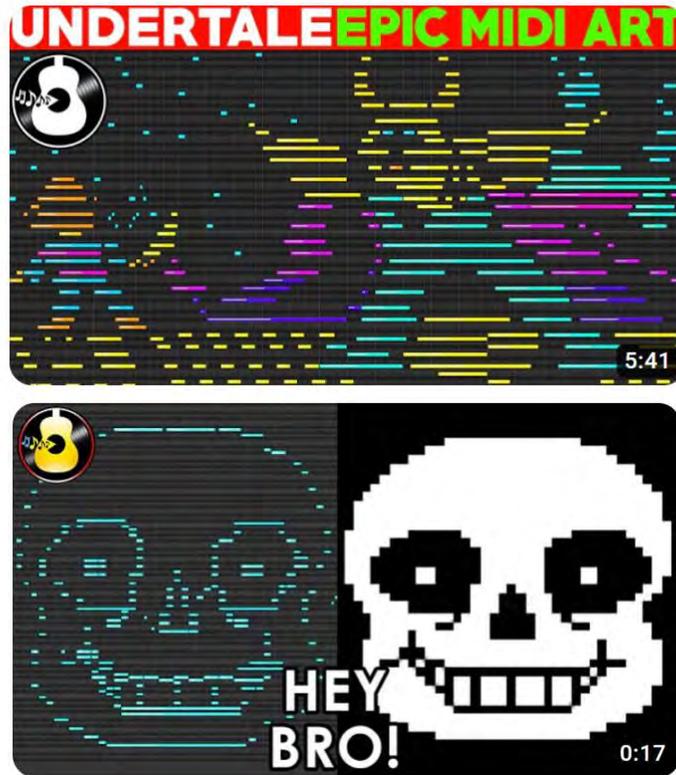


Figure 1. Thumbnail of MIDI art by Diwa de Leon (String Player Gamer).

*“Expand the Sounds of the Original Soundtrack”*

Another rationale for creating *Undertale* covers was that informants apply their preferred style to the soundtrack. Smith, who created woodwind quartets using an Electric Wind Instrument (EWI) explained, “A lot of those 16-bit tracks don’t work as straight transcriptions for a solo [cover artist because there are too many parts]. The 8-bit tracks like ‘Snowy’ will frequently work for me because it’s like an analog to chamber music.” Many MIDI arrangements have no dynamic contrast or musical expression because notes were entered into notation software and .mid sound files were created without musical interpretation or expression. For Smith,

<sup>5</sup> de Leon’s MIDI art video featuring motifs was retrieved from <https://youtu.be/5fs-OyFJ6UQ>.

<sup>6</sup> De Leon’s MIDI art video focusing on visual representation

playing the music of *Undertale* on his EWI allowed him to infuse the original soundtrack's MIDI sequencing with dynamics and musical interpretation.<sup>7</sup> He not only played EWI quartets as solo multitrack videos but also arranged VGM for asynchronously recorded ensembles he formed with his peers.<sup>8</sup> Henderson performed an operatic interpretation of "Oh! One True Love."<sup>9</sup> In *Undertale*, the main character finds himself on stage with Metaton, a robotic character who *sings* a love song. The MIDI tones of the original cannot communicate words, but the lyrics of the song appear on screen. Henderson sang the song accompanied by herself playing piano, flute, and singing in chorus. She believed, "For the comedy to come across, it makes sense for the song to be operatic. It is an aria, but the lyrics are ridiculous." Fauzi used computer software including MIDI as well as self-created and commercially produced instrument samples to make arrangements that listeners suggested sounded like recordings of a live orchestra. One listener commented, "I find this after my school's orchestra played this song ["Hopes and Dreams"]. It sounded similar and just as mind blowingly amazing." Fauzi described the *Undertale* soundtrack as:

Flexible. If I could sum video game music up in a phrase, it would be 'film music.' I look at my orchestrations as an expansion of the original. I try to make it better in some way. People have already heard the original as an 8-bit soundtrack. When people come to listen to covers, they are looking for other people's interpretations. I stuck to the original motifs, and I've added some extra stuff to surprise the viewer.

Fauzi's discussion of extra stuff exemplifies how prevalent fan tribute is within covers for the creators and listeners of covers. The vernacular term for the extras Fauzi referred to are called *Easter eggs*. Briggs shared, "I always put little Easter eggs, inside jokes, and memes in my mixes. There was one where only two of my fans have ever noticed it." Easter eggs can compel audiences to listen to a cover many times as they attempt to find hidden material, especially when the artist announces they exist.

Easter eggs, when found, might give the listener satisfaction because they discovered something hidden. Briggs suggested that Easter eggs can also trigger a "nostalgic response" elicited by a motif. While informants in this study wanted to experience nostalgia themselves when they created their covers, they also wanted to provide listeners with content that helped them reconnect with the video games that they enjoyed. This further helped creators and audiences to develop relationships and participate in the *Undertale* fandom and participatory cultures. These connections resulted in informants reliving emotions they had while playing the *Undertale* game as well as channeling those emotions while making their music.

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<sup>7</sup> "Snowy" by Smith was retrieved from <https://youtu.be/yH7q5-80C7w>.

<sup>8</sup> One of Smith's arrangements for a woodwind trio was retrieved from <https://youtu.be/ZcKLEDuTBiA>.

<sup>9</sup> "Oh! One True Love" by Henderson was retrieved from <https://youtu.be/cf9gjoIngJs>.

Briggs became popular in the EDM VGM community much to the credit of his remix of the “Tem Shop,” which was reuploaded, remixed, and sampled with the most viewed version released under the GameChops label on December 4, 2015, which had over 17 million views as of the writing of this article.<sup>10</sup> However, acclaim over “Tem Shop” overshadowed Briggs’s early career. He explained:

I narrowly avoided the dreaded curse of YouTube: Having an audience that only cares about one thing that you did or one type of content. I was nearly stuck making *Undertale* remixes forever just to please my listeners!

The balance of producing covers from a single source and finding an audience that appreciates your music beyond that source is a challenge that many participants experienced. Briggs had a large catalogue of 179 videos at the time of this study with over two million views. So, it was more likely that Briggs’s listeners would have plenty of options to learn about his music outside of *Undertale*. In contrast was fellow GameChops recruit Tenkitsune, who was just starting out as an EDM producer and created a remix of *Undertale* track “Hopes and Dreams.” Tenkitsune believed that covers caught the attention of listeners, and they hoped that audiences would later consume their original work as well. Tenkitsune capitalized on the nostalgia and popularity of *Undertale* by remixing *Undertale* with original work “A Cup o’ Latte” and titled the track “Hope & Dreams and a Cup of Latte.”<sup>11</sup>

#### *“Focusing on What’s Popular”*

Covering music usually garnered more views on YouTube than original music for informants. de Leon, a famous and award-winning composer from the Philippines, explained, “I focused on VGM because I wanted YouTube to be my full-time career. The only way to achieve that is by making covers because covers are popular.” He, like many informants, identified RichaadEB, a veteran YouTube creator, as the one who inspired them to cover *Undertale* as he was one of the first artists to publish derivative *Undertale* content. de Leon began covering *Undertale* music before he played the game because he saw how much attention RichaadEB and Eiene were getting on their covers. de Leon saw how “Richaad’s subscriber count really skyrocketed because of *Undertale*, and [he] wanted a piece of that action.” After covering a song, he fell in love with the music, played the game, and created a four-volume collection called *Strings of Determination*, which included 42 *Undertale* covers.<sup>12</sup>

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<sup>10</sup> “Tem Shop” by Briggs was retrieved from <https://youtu.be/Gu8A8uWJJaA>.

<sup>11</sup> “Hopes & Dreams and a Cup of Latte” by Tenkitsune was retrieved from <https://youtu.be/VAbCjNmPqHg>.

<sup>12</sup> *Strings of Determination* by de Leon was retrieved from <https://youtu.be/GzBzg0SU-ZE>.

Eiene also capitalized on the popularity of *Undertale* and invited his viewers to submit videos of themselves singing the opening theme of “Home.”<sup>13</sup> Over 100 fans recorded the 13-note melody, and Eiene compiled a split-screen crowdsourced choir. The choir visually enhanced Eiene’s cover with some singing in costumes, with pets and stuffed animals, or holding signs with jokes or thank you messages to Toby Fox or Eiene (see Figure 2 for screenshots of the crowdsourced choir). Eiene found a sense of kinship with people who enjoyed making music inspired by video games. He often claimed, “If you play game music on your instrument, I’m going to be your friend.” This sentiment exemplifies how fandoms can exist on YouTube and function as affinity spaces that bring fans together. Eiene created a way for fans to make music together.

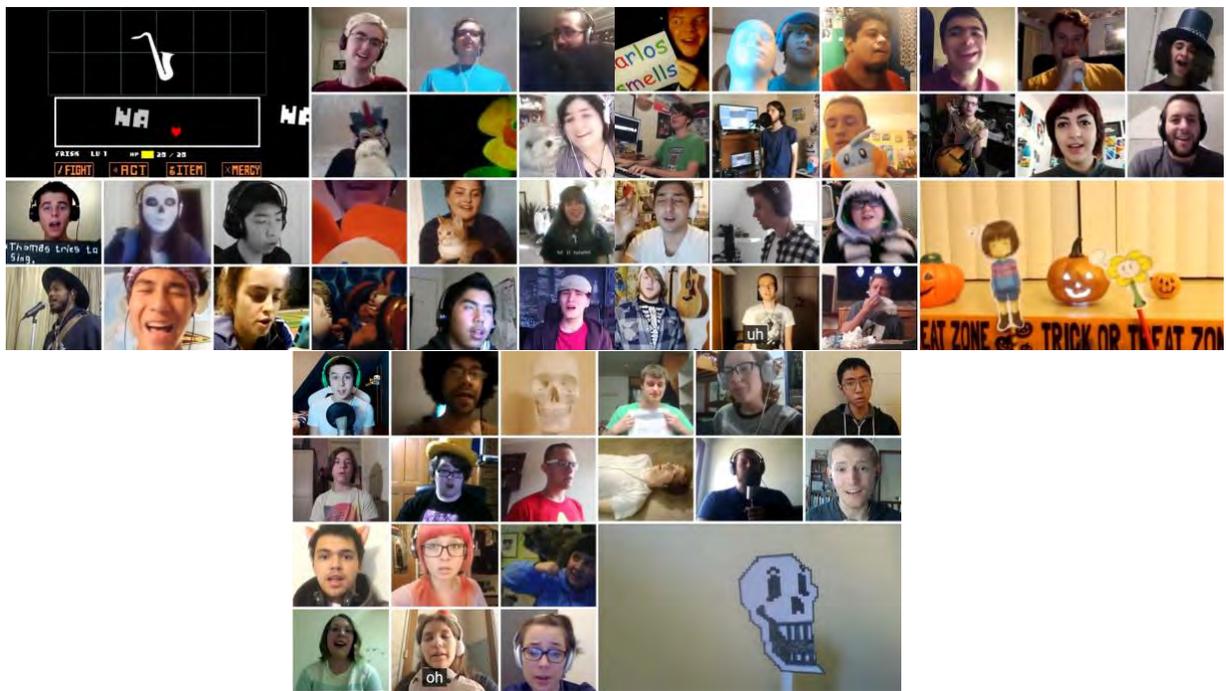


Figure 2. Screenshots of Carlos Eiene’s (insaneintherainmusic) virtual choir from “Home.”

### “Conveying Emotions or Stories”

A final rationale for creating *Undertale* covers was to connect with audiences through emotions and storytelling. Waters summed,

A big part of music is expressing something through tones, and the most amazing feeling is when someone else picks up on that. You’re able to convey emotion or story

<sup>13</sup> *Home* by Eiene was retrieved from <https://youtu.be/IotSCSLOKnc?t=347>. The crowdsourced choir can be seen at 5:47.

or something through a medium that isn't typically thought to convey such deep things. One of my primary goals with music is to connect with people emotionally through story, through music. [For covers,] there is the combination of the emotional experience of the game, me trying to express that emotion through my instruments, and the connection with my friends.

These connections included talking through text via comments, other social media, and private messages; reminiscing through speech in person and online; and collaborating with friends to create covers in the form of albums, invited individual covers, and recordings with her virtual band, Involved in the Troubles.<sup>14</sup> While Waters used synthesizers, fretted strings, and percussion to create ambient music to convey emotions, Perry and Briggs used added lyrics to tell stories to their listeners.

Perry's cover of "Hopes and Dreams" was a cinematic rock music video that featured Perry playing instruments, singing parody lyrics, gameplay, and acting.<sup>15</sup> He "started making up words to 'Hopes and Dreams' in the shower." While the lyrics were aligned with the story of *Undertale*, Perry confessed that the lyrics were dedicated to his friend Doug. In a vlog, Perry explained, "[Hopes and Dreams] is actually quite a bit more personal of a project to me than you might think. There are some very deep, personal, and serious feelings that are behind it."<sup>16</sup> Perry explained how his friend Doug faced similar challenges to a character in *Undertale*:

Doug was a very close friend of mine in high school. He was a very talented artist; he was also a passionate gamer. He really loved video game music just like I do, and he was really interested in making fan games. Doug had a bit of darkness to him...He had struggled with some mental health issues when we were younger.

Perry shared that his friend committed suicide and that he released the parody at the end of Suicide Prevention Week. He concluded his video saying,

I hope this video provides a bit more context to what I was trying to express in my last music video. It can seem strange to reserve such intense and personal thoughts and feelings for something from a video game, but, you know, games inspire me just as many works of art in literature, music, and theater do, and I'm happy that I was able to find another way to process these feelings that I have.

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<sup>14</sup> "Determination," a three-album series produced by Amie Waters and RichaaEB was retrieved from <https://youtu.be/Xqx90Bth94w>. "Megalovania," a three-movement collaboration produced by Waters and featuring Smith, TeraC, and others was retrieved from [https://youtu.be/WnDJdwp\\_Gq8](https://youtu.be/WnDJdwp_Gq8). "Once Upon a Time (Undertale)" featuring Waters's online band Involved in the Troubles was retrieved from <https://youtu.be/GHwIICxOCCI>.

<sup>15</sup> "Hopes and Dreams" by Perry was retrieved from <https://youtu.be/idLazLtaWMM>.

<sup>16</sup> This excerpt was edited down from the transcript of the vlog Perry published. Ellipses have been omitted to make the excerpt easier to read. The vlog was retrieved from <https://youtu.be/cAqtzaAHCuc>.

Covering “Hopes and Dreams” helped Perry retell the story of his favorite *Undertale* character, tell the story of his friend, and process his feelings about both.

For a more jovial example, Briggs also applied self-reflective lyrics to an *Undertale* track and character. Briggs took the advice of a friend who said he should “accept, double down, and embrace the fact that Temmie is what you’re seen as right now;” after all, his cover of the character’s theme had millions of views. Briggs cosplayed as Temmie at VGM conferences and night clubs, and he regularly spun his remixes of “Tem Shop” at gigs. When Briggs created “Collecting Junk with Temmie,” a nerdcore autobiographical reflection with lyrics he came up with when he was “rap roleplaying as this character,” he realized, “All of the things that I describe in the song showed me how much I truly identified with that character and how I was projecting myself onto her.”<sup>17</sup> Perry’s and Briggs’s parodies are the most explicit examples of how informants connected emotionally and empathized with characters from *Undertale*; however, many informants discussed how creating covers allowed them to emote not only the feelings they got when playing the game but also the mood that different characters or atmospheres portrayed at various parts of *Undertale*.

### ***Becoming Veterans in the VGM Community***

All informants except Fauzi were veteran YouTube cover creators at the time of this study. However, even he quickly became a leader in the VGM community because his orchestrations garnered over three million views in a little over a year. Shortly after he hit 100 subscribers, Fauzi started teaching his creative process through livestreams that featured him orchestrating through MIDI by going back and forth between his arrangement, looking at the score of *Undertale*, and listening to the original soundtrack.<sup>18</sup> The most common way informants served as veterans of the VGM community was to answer viewers’ questions about how they created covers via the comment section on YouTube. Some informants created tutorial or informational videos to help others learn. Topics included *behind-the-scenes* videos that showed the creative process, *how-to* videos that showed technical and song learning approaches, and *experiential* or *documentary* videos that detailed creators’ experiences that might be helpful for others who want to embark on similar endeavors. For example, Eiene created a series of videos about his audition process for the Berklee College of Music.<sup>19</sup>

Informants viewed speaking and performing at conferences, on podcasts, or for live streams as

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<sup>17</sup> “Collecting Junk with Temmie” by Briggs was retrieved from <https://youtu.be/TIr5OH6Uhhg>.

<sup>18</sup> [Recorded Livestream] ASGORE Behind the Scenes by Fauzi was retrieved from [https://www.youtube.com/watch?v=xXHPji92\\_EA](https://www.youtube.com/watch?v=xXHPji92_EA)

<sup>19</sup> Eiene’s audition vlog was retrieved from <https://youtu.be/VTpOVGhN76w>.

ways to inform others in the VGM community. de Leon gave guest lectures at universities in the Philippines and conferences. He perceived himself as “just talking about what I love,” and did not realize that he was a role model for others. de Leon ruminated:

I was reluctant at first to be a mentor. I have this selfishness where I want to keep everything I learned on my own to myself because why should I teach anyone? Nobody taught me this. I learned this on my own, and I don't owe anyone anything. Eventually, people were approaching me asking me for advice. I was so amazed. Why are people approaching me? I'm a nobody. I'm just some guy on the internet who plays videos. When I realized the impact I was having on my following, on my friends, on my subscribers, and that was empowering.

Perry, who worked in a higher education music program, discussed similar empowerment when he connected his YouTube and VGM creation with his job in academia. Because of his success on YouTube and other sound recording media, Perry was asked by his department head to provide audio production lessons for students at his university. Perry's veteran mentorship was prominent in both his university and the online VGM community. He published “Undertale Variations (for Solo Marimba)” with Materia Editions, the sheet music press that evolved out of the Materia Collective.<sup>20</sup> Materia is a VGM record label, music publisher, and rights administrator that started as an online community that recruited cover artists to submit tracks around individual video games and published compilation albums. *Fallen: An UNDERTALE Tribute* was Materia's third project that included 97 tracks on nine discs.<sup>21</sup> Perry directed it, leaving him responsible for recruiting musicians, programming the track order, and providing artists with feedback. All these tasks required Perry, as a mentor, to interact with contributors through online communication.

Inspired by Materia, OCR, and GameChops, Briggs co-founded Tiny Waves, a company that promotes music and events that “empower musicians and cultivate a thriving, positive community.” Briggs spearheaded a 35-song compilation album titled *Straight from the Underground*.<sup>22</sup> Tiny Waves also promoted raves in Orlando, Florida and at conventions across North America. Briggs's role as a veteran of online music production evolved into his role as a CEO to achieve his vision of a “thriving and actively creative community” as a

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<sup>20</sup> “Undertale Variations” by Perry was retrieved from <https://youtu.be/Orhmf4tkDeg>.

<sup>21</sup> *Fallen: An UNDERTALE Tribute* produced by Perry was retrieved from [https://www.youtube.com/watch?v=unOvRqZ6M3U&list=OLAK5uy\\_IPXvgZ3M\\_oapNQmc9S71UrKgamu9D9vU](https://www.youtube.com/watch?v=unOvRqZ6M3U&list=OLAK5uy_IPXvgZ3M_oapNQmc9S71UrKgamu9D9vU).

<sup>22</sup> *Straight from the Underground* produced by Briggs was retrieved from [https://www.youtube.com/watch?v=217EhUGCHhQ&list=OLAK5uy\\_mAhsjw3WaReenU\\_zl7-Nt5zu4br3-FvWw](https://www.youtube.com/watch?v=217EhUGCHhQ&list=OLAK5uy_mAhsjw3WaReenU_zl7-Nt5zu4br3-FvWw).

mentor who provides EDM creators the space, community, and resources to share their music online and in offline venues.

### **Implications**

The guiding questions for this study were: What were the learning strategies used by YouTube creators to make cover videos of *Undertale*, and how did *Undertale* inspire musicians to make the music they produced on YouTube? In this section, I summarize how informants used media, technology, and practices through participatory culture. Then, I discuss how participatory culture was the catalyst for informants to go from contributors of the *Undertale* fandom, an affinity space, to veteran creators in a musical community of practice on YouTube. Finally, I consider how this study might inform participatory culture practices that could be incorporated in music classrooms.

#### ***The Media, Technology, and Practices of Participatory Culture***

When considering the activities of the informants within a participatory culture, it is important to identify the media, technology, and practices they used or created to produce *Undertale* covers. For this study, YouTube served as the field site for data collection, and it was the medium through which informants published their music. Distribution of covers expanded beyond YouTube at secondary sites. For example, Spotify was used by informants to monetize content and make music accessible to larger audiences through an audio-only format; BandCamp was used to sell albums; Twitch was used to perform live through streaming. Vokle, Twitch, forums like OCR, and YouTube were affinity spaces that bore discussion about musical learning, creative endeavors, and recorded performance. The technology informants used was diverse and varied drastically from entry-level hardware and software to professional-level industry standards. While some informants used cameras on their phones, others used digital single-lens reflex (DSLR) cameras. DAWs used ranged from free software like Audacity and GarageBand to industry standard programs like Logic Pro and Pro Tools. MIDI was captured through EWI, keyboard input, or piano rolls where they would point and click notes and drag boxes on screen to delineate duration.

Finally, the creative practices participants used were as unique to each informant as their own personality. By exploring multiple cases for this study, it was clear that the *Undertale* fandom served as a diverse and inclusive affinity space for a musical participatory culture that allowed informants to publish covers by applying their musical and technological knowledge regardless of the genres, styles, instruments, or technological tools in which they specialized. Genres represented included opera, (neo)classical symphonic orchestrations and small ensembles, pop/top-40, jazz, EDM, nerdcore, musical theater, progressive rock, rhythm and blues (R&B), synth wave, rock and roll, and others. Furthermore, informants applied their

musical styles to these genres; for example, Henderson applying aria stylings to a love song, Briggs parodying a song by adding autobiographical lyrics, Eiene performing an improvisation guided by a lead sheet he created, and Perry free improvising over an ambiance track that indicated a biome from the game.

### ***Participatory Culture: Progression from Affinity Spaces and Fandoms to Communities of Practice***

YouTube provided a platform on which affinity spaces formed and where participatory culture abounded, thus building upon the *Undertale* fandom. Contributing to the *Undertale* fandom as well as the community of VGM cover artists and consumers on YouTube exemplifies participatory culture practices discussed by Jenkins (1992/2013). Indeed, informants created content for YouTube, a “Web 2.0 company that...capitalize[d] on [the informants’] free labor” (p. xxii) by bringing consumers and activity to the website through comments and derivative works.

While the company benefited from participatory culture, the informants also capitalized on their contributions and were the inspiration for derivative works on their derivative works, which can be better understood using a concept I previously termed *fanception* (Cayari, 2020), the phenomenon that describes a fandom that exists within a fandom. Informants all participated in the *Undertale* fandom through playing the game, listening to the original soundtrack as well as other creators’ covers, and engaging in conversation via message boards, comment sections, chatrooms, and private servers on platforms like Discord and Slack. Viewers consumed the derivative creations of the informants, and fandoms developed around their works. Eiene developed a large following of *raindrops*, a nickname he gave his fans; and other people asking for his lead sheets and participating in his choir exemplify examples of derivative works on a derivative work as fans joined in the participatory culture by posting their own versions of Eiene’s arrangements.

GameChops, Materia Collective, and Tiny Waves were organizations that specialized in producing VGM and thus had affinity spaces developed around them. While *fanception* can be reduced to a novel phenomenon, its importance to music educators can be seen in tracing how affinity spaces may evolve into communities of practice and how the participants in these communities have a natural evolution from learner to creator to mentor. A GameChops fandom existed within the VGM fandom as the label had merchandise, albums, and get-togethers at conferences. GameChops was instrumental in the growth and popularity of Briggs, who amassed a huge following and fandom around the “TemShop” remix and a subsequent album release, *Straight from the Underground*, which was one of the first projects produced through his company, Tiny Waves. There is also a Tiny Waves fandom that has become a top producer of VGM albums as well as live events like concerts, raves, and club

promotions.<sup>23</sup> Briggs went from learner of technological skills on sites like YouTube and discussion forums to music producer, from fan of *Undertale* to cover producer, and from contributor to musical collectives to production company owner. On a smaller scale, every informant shared how they enjoyed helping others learn how to be better musicians and video creators, sharing the knowledge they had with their viewers on YouTube.

### *Participatory Culture Practices in the Classroom*

Informants developed learning approaches and creative practices that may seem solitary in nature. For example, spending time practicing instruments and voice, recording and editing audio-visual tracks, staging the recording space, and distributing media were done in informants' home studios without interaction with others. This solitary approach to creating videos for publication online supports the findings of previous research on other YouTube channels that focused on cover performances (Cayari, 2011, 2016). Yet, VGM as a musical form serves as an online affinity space and community of practice, and individual games' fandoms can further focus musicians' involvement in participatory culture.

### *Learning Practices*

Informants in this study interacted with others and user-generated content to learn. Examples included watching tutorial videos; using websites dedicated to sharing media that could be used to learn and mimic other music; and gathering on social media platforms with fans, peers, and mentors. Feedback was sought and given through discussion forums, chatrooms, social media (comments on YouTube, Tweets on Twitter), livestreams, and direct messages with veterans or peers. Finally, cover videos on informants' channels served as evidence of growth archived on YouTube. Creators looked back and read comments from viewers that guided their future learning and music making. Each of these activities can be used for informal music learning in the classroom through project-based learning, and examples of such abound in the literature (Cayari, 2015, 2021b; Cremata & Powell, 2017; Pinch & Athanasiades, 2012; Waldron et al., 2018).

### *Creative Practices*

Informants needed to attend to a wide variety of skills to be able to develop a successful YouTube channel that included musical, technical, production, and distribution proficiencies. While musical skills were able to be learned by most informants in learning institutions, the other topics were only addressed in specialized courses in undergraduate and graduate courses. However, informal learning was used to learn additional instruments as well as nearly

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<sup>23</sup> Tiny Waves website was retrieved from <https://www.tinywaves.us>.

all technical, production, and distribution skills. Some exceptions were Eiene, Fauzi, and Henderson, who pursued higher education degrees that specialized in music technology or digital music production; each of them cited their success on YouTube as inspiration for pursuing advanced degrees. Additionally, Ballard discussed how her single music technology course in her music performance degree laid the groundwork for her to understand microphone placement and DAW sound editing.

Fauzi, who had completed only one semester of a music technology degree, stated that he had not yet learned anything at his university that he had not already learned on his own. TeraCMusic suggested that creating online content was more appropriate to learn outside the music classroom rather than within. While TeraCMusic expressed excitement hearing her arrangements of *Undertale* being played by her university bands, she did not identify any experiences in her school courses that explicitly taught her how to produce online content. She suggested that learning skills for producing YouTube videos might be better off learned out of school on one's own rather than as part of musical curricula. Perhaps this was because she did not have instructors who were adequately equipped to teach her the skills she would have found useful for creating YouTube videos. Unfortunately, Perry's computer music course, which he took to be able to learn how to better produce remixes and recordings, did not meet his expectations. He and Briggs, both of whom were undergraduates before 2010, turned to online forums to learn from strangers who eventually became friends as they became part of the forum communities. Briggs, Perry, and Fauzi explicitly discussed how informal technology learning was much more efficient than the music technology courses they took in school. Only Ballard discussed how useful her music technology courses were in her abilities to produce her covers.

Ultimately, the findings of this study can provide some inspiration for music educators to consider how they might best serve students who may be interested in creating online musical media on sites like YouTube. Teacher-organized virtual ensembles may provide an opportunity for students to get used to creating media in a controlled environment (see Galván & Clauhs, 2020). Setting up formal (teacher-organized) and informal (student-organized, teacher-consulted) projects that encourage media creation in the classroom can give students the encouragement they need to make music outside of the classroom (for examples of how I have set up these types of projects, see Cayari, 2016, 2021b, 2021c), and a common finding in much of my previous research has been that these types of projects help students get over their initial fears of creating and producing online (Cayari, 2011, 2016, 2021b).

The skills Tobias (2013) identified as musical ways to be involved with online participatory culture were prevalent in this study. This study provides examples of how students might participate in musical affinity spaces or fandoms by recreating such activities in the

classroom. All informants were covering, arranging, and multitracking *Undertale* music. Briggs and Perry created parodies that were autobiographical in nature, meshing their favorite characters with their lived experiences. Non-musical skills were also prevalent in the informants' lives. Informants learned and offered advice through commenting and discussion, positing them sometimes as newbies and other times as veterans, depending on if they were in an experimental stage or had a tried-and-true process for creating. Finally, informants developed ways to help others learn and make music as conference speakers, album producers, and teachers. Specifically, Fauzi created various types of videos that were tutorials or educational including piano-roll tutorials and live work sessions that showed viewers how he went about creating his MIDI orchestrations. Each of these projects could be practiced in classrooms, and music education researchers have explored how to approach teaching album and track production (Clauhs et al., 2019), online collaboration (Cremata & Powell, 2017), and tutorial creation (Kruse & Veblen, 2012).

### *Cultural Practices*

The participatory culture that surrounds VGM that can be leveraged in the classroom to help students connect to culture, for video game play is one of the most popular leisure activities across the world (Clement, 2021). Music educators often include popular culture in their performances and curricula to capture students' attention and allow students to express themselves with music that they find meaningful. Pops concerts, informal music learning projects for which students choose the music to perform, and explorations that emphasize cultural and historical relevance that help students feel seen and represented are activities that can utilize VGM in the classroom. TeraCMusic's pep band and orchestra arrangements, Eiene's jazz orchestrations, commercially published VGM, or student arrangements could be placed in concert programs. Smith's woodwind arrangements, Perry's mallet percussion medley, or Ballard's harp solos could be pursued during solo and ensemble contests. Encouraging students to mimic original soundtracks or find sheet music online to create their own renditions could be informal projects that students could pursue. Informal music learning projects can allow students to work with friends, choose the music they want to pursue, and learn through collaborative experimentation—all recommendations for impactful informal music learning in the classroom (Green, 2008).

Finally, VGM can be a culturally relevant art form that students can explore to express themselves as part of a community or fandom. Additionally, *Undertale* deals with aspects of belonging and caring for others. As some informants played the game, they learned about themselves. When they created their covers, they discovered things about themselves. Briggs wrote an autobiographical parody by adding lyrics to a cover using the theme of a character he dressed up as at conferences and performed as while spinning at raves. Perry wrote lyrics to a track called "Hopes and Dreams" and retold the story of his favorite character that had many

parallels to his friend who had committed suicide. These two examples show how VGM helped informants apply emotional intelligence to their music and love for video games.

### Conclusion

While this study was conducted in 2018 and *Undertale* was released in 2016, *Undertale* as a cultural phenomenon serves as a timeless example of how VGM can serve as an art form that can be useful for music educators to help their students learn, make music, and find meaning. The informants and their covers provide context for music educators to consider the importance that teaching online production might have in the classroom and identify what type of skills may be helpful when preparing students to make music online and offline. Teaching students how to navigate social media, forums, and publication platforms safely and effectively would be beneficial to students who want to engage with content from their favorite fandom. That might also give students a starting point for being involved with online affinity spaces and creating content within participatory online cultures. By cultivating lists of online affinity spaces like OCR, Materia Collective, Tiny Waves, or even the privately run Discord servers and YouTube channels of informants, teachers and students can learn from veterans who have skills and examples of works that can be copied and adapted for classroom projects. These spaces might also provide collaborative endeavors that students may want to pursue as part of their schooling or outside of the classroom. By further exploring the VGM community and how it can provide an engaging affinity space online that may allow students to create content inspired by their favorite fandoms, music educators may be able to better utilize the ubiquity of the internet and the popularity of video games to give their students another online participatory culture in which they can learn, create content, and make music.

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### **About the Author**

Christopher Cayari (he/they; DrCayari on social media) is an associate professor of music at Purdue University, West Lafayette that has been studying YouTube since 2008. Christopher’s research topics including online musical performance; informal music learning; video game music; identity; and marginalized voices in music education, specifically sexuality- and

gender-diverse individuals (LGBTQIA+) and Asian Americans. He is a musical theatre performer and has written and performed his autoethnographic award winning one-person shows across the world. Their many accolades include being a 2021 NAMM-CMS Fellow, the 2021 Emerging Researcher Award from the Centre for Music Education Research, the 2018 Outstanding Ally Award from the Purdue University LGBTQ Center, and the 2015 Outstanding Dissertation Award from the Counsel of Music Education Research. He conducts workshops and clinics about popular music, ukulele, music research methodologies, online music production, and music technology education across the US and internationally.

## Appendix

**Table 1**

*List of informants and pertinent information about their identity and analytics*

Chosen Name	YouTube Channel Name	Age	Gender or pronouns	Race & Ethnicity	Current country of residence	Number of <i>Undertale</i> Videos	Subscribers at start of study	Total channel video views at start of study
Carlos Eiene	insaneintherainmusic	19	Male	Mixed (half Caucasian, half Filipino)	USA	15	157,968.00	25,129,925.00
Samantha Ballard	Samantha Ballard	24	Female	Caucasian/ White	USA	4	39,442.00	3,740,634.00
Ro Panuganti	Ro Panuganti	24	Male	Indian (2nd generation, born in USA)	USA	4	8,430.00	1,213,776.00
Doug Perry	dougdrumultimaperry	30	Male	White	USA	10	2,665.00	508,659.00
TeraCMusic	TeraCMusic	25	Female	White, Italian-American	South Korea	4	11,298.00	865,805.00
Thomas	Sky Tenkitsune	20	They them their	Asian	Vietnam	8	7,211.00	1,672,070.00
Amie Waters	Amie Waters	30	*Trans-Feminine Non-Binary	White	USA	15	20,659.00	3,137,600.00
Sulaiyman Fauzi	Sully Orchestration	18	Male	Southeast Asian/ Malaysian	England	54	19,452.00	4,149,242.00
Julia Henderson	Julia Henderson	26	Female	Caucasian	Canada	2	4,055.00	330,799.00
Ben Briggs	bbriggsmusic	29	Male	White	USA	6	11,819.00	1,897,085.00
Diwa de Leon	String Player Gamer	37	Male	Filipino	Philippines	56	121,113.00	28,726,896.00
Peter Anthony Smith	Soundole	30	Male	Australian (European descent)	Australia	4	3,541.00	503,285.00

**Table 1 (continued)***List of informants and pertinent information (continued)*

Chosen Name	Genre or style of <i>Undertale</i> covers	Occupation	Description of instruments used for videos
Carlos Eiene	Jazz	Undergraduate student (Major: contemporary writing & production)	Saxophones, bass, guitar, keyboard
Samantha Ballard	Classical	Performer, instrumental instructor	Harp
Ro Panuganti	Progressive metal	Engineer	Electric guitar, bass, drum machine
Doug Perry	Classical, rock	Musician, educator	Mallet percussion, keyboards, V-drums, melodica, keytar, auxiliary percussion
TeraCMusic	Classical, a cappella	Native English Teacher in South Korea	Violin, viola, keyboard, guitar, voice
Thomas	Electronic dance music (EDM), mashups	Undergraduate student (Major: art)	Keyboard, turntables, samples
Amie Waters	Elektronica, ambient, rock, folk	Self-employed performer, producer, and composer	Synthesizers, drum machine, guitar, bells, saxophone, Modded video game products (chiptunes), melodica, hand percussion
Sulaiyman Fauzi	Orchestral	Self-Employed (YouTube), undergraduate student (Majors: mathematics, physics, music technology)	Digital orchestration software, keyboards, samples
Julia Henderson	Opera, classical	Piano & voice teacher, performer, composer, arranger, producer, Graduate student (Master's: music technology and digital media)	Voice, flute, piano, glockenspiel, electric guitar
Ben Briggs	Electronic dance music (EDM)	Musician, online entertainer, DJ, producer, record label owner, promoter	Keyboard, turntables, samples
Diwa de Leon	Orchestral, classical, a cappella, metal, MIDI piano roll	Composer, arranger, sound designer, music producer	Violins, guitars, basses, keyboard, voice
Peter Anthony Smith	Classical	University lecturer, instrumental tutor	EWI (electronic wind instrument)

*Note:* All identity and analytic data displayed were captured verbatim at the time of the informants entering into the study except where noted. \* denotes a current gender or pronouns, which changed between the time of starting the study and the completion of this manuscript.

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