# Contagious Body Percussion

*An investigation of flow behaviors in fourth and fifth grade elementary music classes*

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## INITIAL TOPICS OF INTEREST

As I began to explore different areas for my thesis, I was interested in a few different areas, including popular music education and autodidactism. My primary instrument is drumset, on which I studied performance within the context of a studio-music-and-jazz program in my undergraduate career. Further, I originally began teaching by working at a School of Rock.

I was curious about autodidactism because a lot of great musicians, including one of my favorite drummers, have claimed to be self-taught and because I am anything but self-taught. Not having direct, first-person insight on the matter, I was wondering what might distinguish the "self-taught" from the average learner (or what they may have in common in certain cases). However, as I explored the literature, I began to doubt the saliency of the idea of autodidactism, largely because of a developing awareness that the label "self-taught" or "autodidact" is probably best understood as a misnomer used to (self) describe those who simply learned in ways that they and others might consider non-traditional or informal in some way.

### Autodidactism

Solomon (2003), provides, background for the discussion of autodidactism, starting with defining the word in more complex distinction to its etymological origins. In particular, most people familiar with the Greek-derived word "autodidact" understand it to be synonymous with

"self-taught." However, as Solomon immediately acknowledges, "there is a problem. None of us could possibly be anywhere near to being completely self-taught" (p. 3). Humans exist in constant interaction with their environments, including other people, from which and whom they learn and, arguably, are taught. Nonetheless, there are activities which most would generally recognize as teaching and Solomon suggests a more complex use for the word "autodidact" – "to describe a range of people who prefer to teach themselves or to pick up knowledge from non-teaching situations, in one way or another" (p. 3). Further, she acknowledges the variety of learning styles that may fall under the category of non-taught learning – including solitary reflective activities – which she mentions are sometimes "intentionally taught and learnt" (p. 6), as well as imitation and apprenticeship. Continuing forward she highlights anecdotes of contrasting autodidactic learners and incorporates a wide array of philosophical, intellectual, and historical references that connect the concept of autodidactism to explorations of student learning, liberty, and constructivist philosophy.

Boden (2013), poses the question, "are autodidacts creative?" She then discusses this question's inherent complexity in largely abstract terms. She sets up a framework of creativity types – combinational, exploratory, and transformational, each of which may be either personally or historically contextualized. "Combinational creativity," she explains, "involves making unfamiliar connections between familiar ideas." Exploratory creativity finds potentially-new possibilities within a conceptual "space" and perhaps "tweaks" them. Transformational creativity, as it sounds, involves more "radical" changes (pp. 24-25). These types of creativity have some interesting similarities with the concepts used in Lori Custodero's flow research (discussed more in subsequent pages) on which this paper ultimately hinges. Boden then posits that there is a wide type-array of autodidacts, using as examples two varieties – the unschooled

and the defiant – which she draws from other chapters in the book in which hers appears, to propose a sort of boundless matrix of possible scenarios in which her central question may be answered differently. Ultimately, her main argument avoids a conclusive answer to the question and instead asserts a viewpoint of *how* the question, according to the author, ought to be answered. Her question and framework could be interesting tools for examining pedagogy but perhaps more for its insight on the nature of creativity than of so-called autodidactism and ultimately her article abstains from examining the type of learning in which I am interested (or directly examining any learning in the real world for that matter it would seem).

Resource-based learning seemed like it might be a possible stand-in for autodidactism. Scanlon (2003) discusses resource-based learning within the context of the Open University multimedia programs in the UK. The publication date of the book in which her chapter appears is on the older side for a piece which focuses on technology/media use in education. Therefore, and as is evident from a reading of it, many of the examples mentioned in the chapter are dated. In addition, the educational programs discussed are specifically within the realm of science, not music. However, she cites an interesting analytical structure for looking at engagement with, and understanding of educational resource materials (in this case, educational television) – "a four level model of impact describing an individual's involvement ... awareness... *curiosity*… *interest*... and *comprehension*" (p. 134). She also notes the ever-greater proliferation of resources, including the relatively novel (at the time) dissemination of educational materials via the web. The use of web-based resources is, to some extent taken for granted in today's context. However, Scanlon's mention of it reminds us of its potential and begs for inquiry into the reach and efficacy of its use.

## Self Regulation

Similar to resource-based learning, self regulation also seemed like an area of literature that could shed some light on the type of learning in which I was interested. And it is, in fact, an important facet of the overall construct that I ultimately sought to examine. Miksza, Roseth, and Blackwell (2018) describe a microanalytic study of three undergraduate instrumentalists' practice over a two-week period. This time window includes an intervention by one of the researchers targeted towards developing more effective practice strategies. The findings touch upon a couple important themes, including the proportionality of intervention effectiveness to the needs of the student, and the importance of effective goal setting. While the study claims to be about self-regulated learning, and the benefit of the doubt for this study is probably due, inclusion of an intervention still begs the question of how much and what kind of outside influence is allowable before learning ceases to be truly self-regulated. Ultimately, my own study provided me with an experiential basis for making this distinction, but the distinction, nonetheless, remains discretionary.

Self regulation also has an important intersection with the literature on popular music education. Kafara (2017) substantially draws on Paulo Freire's concept of critical pedagogy and the thoughts of its intellectual disciples, such as Henry Giroux, while discussing "The History of Punk" – "an ongoing free course started in May 2012 in Edmonton, Canada." The course's philosophy emphasizes accessibility, engagement with differing perspectives, anti-hierarchical, student-driven learning, and the value of amateurism. According to Kafara, "the course provides a way for like-minded people within and outside of the academy to examine issues such as inequality, racism and environmentalism through punk music, culture and activism," and aims to overcome "barriers" to education such as "Cost, admissions requirements, age, and personal

challenges" (p. 110). He details various examples of student participation and activities, including the use of social and independent media for expression. The course's musical focus clearly relates to culturally relevant forms of pedagogy and its philosophical underpinnings, I suspect, have much in common with the learning preferences of those who claim the mantle of "autodidact." In addition, the importance of the issues with which it engages points to the ability to contextualize music learning with socially and societally purposive thought and criticism, thereby possibly adding to students' sense of intrinsic motivation, also an important aspect of the construct I eventually examine. The article, focusing on removing obstacles, lines up with much of the literature mentioned here in terms of the creation of safe spaces. It also sits at the intersection of self-regulated learning and popular music education, which brings me to the next topic of interest.

## Popular Music Education

Hebert (2011) discusses the history and development of popular music pedagogy, including unmodern, elitist, but nevertheless extant attitudes towards popular music and its inclusion in curricula. In particular he argues against the negative aesthetic judgements against popular music made by certain scholars, referring to them as "elitist critiques of newer genres of which they have little familiarity" (p. 16), and contextualizes that scholars in the first half of the twentieth century who pursued the same types of anti-modern arguments against the aesthetic and cultural value of jazz, by most accounts, ended up on the wrong side of history. However, he also uses the development of jazz pedagogy – a "rather unsettling story" (p. 14) – in the twentieth century as (hopefully) a foil for the teaching of new genres. In particular, he notes that "jazz may convincingly stake its claim to offering a relatively democratic form of musicianship, [but] this

characteristic seems inadequate within the actual practices institutionalized in schools" (p. 16). Thus, he emphasizes that solely including culturally relevant music in schools does not amount to a progressive teaching practice, a sentiment later echoed by Powell and Burnstein (2017). He warns of the "challenges…. institutionalization [poses] due to [popular music pedagogy's] emphasis on creativity and 'cutting edge' practices rather than cultural heritage" and the possibility of popular music pedagogy's inadvertent, philosophical self-defeat if the methodology used tends more towards canonical reproduction than an emphasis on original creation and democratic learning.

Powell and Burnstein (2017) outline the content focus and methodological approach that the organization Little Kids Rock advances. They define the term 'Modern Band' according to core instrumentation – "guitar, bass, keyboards, drums, vocals and technology" (a look at LKR's website also reveals the inclusion of ukulele in this core instrumentation) – and repertoire – "music that is familiar to students" (p. 245). They also outline the Music as a Second Language (MSL) approach that the organization promotes and uses to train teachers, asserting that music, "like language, is best learned in conversation with others who have already achieved some level of fluency and in such a way as allows for uncorrected musicking" (p. 246). They elaborate that the approach values the creation of a comfort zone that disarms students' affective filters, drawing on Hendricks et al.'s ideas about creating safe spaces, and offers the strategy of whole group performance as a way for students to engage without feeling put on the spot. Further, they embrace the ideas of approximation and scaffolding, as well as the inclusion of composition and improvisation in the curriculum. Finally, they conclude: "just performing popular songs on traditional instruments or using the strict formal learning techniques often found in band and orchestra can fail to match the content with appropriate tools for learning (Green, 2002, 2008.)

Utilizing a framework of Music as a Second Language in the Modern Band classroom is one solution to this inherent problem" (p. 251). Given the organization's central role in the advent and development of Modern Band programs around the United States, reference to their principles naturally informs a discussion of popular music education.

Ideas present in popular music education, such as the ones discussed in the aforementioned sources, inform the spirit of my teaching, including the reasoning behind my repertoire choices, the structure of lessons, and my interactions with students. While popular music education isn't the singular, direct focus of my research, it is a part of its context.

Regarding autodidactism, it seemed like a bit of a fool's errand to study something that does not exist in a strict sense - as seemingly acknowledged even by the editor of a book on the topic (the previously referenced Solomon chapter). I also needed to consider that my intended research context would be, as a student teacher, under hierarchical shared control with my mentor/cooperating teacher and thus felt that a particular focus on popular music education or on autodidactism might be a risky or impractical bet. Thus, I followed the breadcrumbs I found in autodidactism literature to self-regulation, popular music education, autotelicism (a concept mentioned as a part of the literature directly concerning flow) and finally to my main topic of flow. I had been familiar with the basic concept of flow from Elliott and Silverman (2015). Now, upon revisiting the topic, it was clear to me that, out of everything I had examined, it seemed it was the most useful and relevant lens given my interests and my research context.

## FLOW

A discussion of flow must begin with Mihalyi Csikszentmihalyi, who grew up in Europe during World War II seeing the devastation, suffering, and pain of that time and how it affected the adults around him. These experiences inspired him to ask the question, "what makes a life

worth living?" Through investigating this question, he found the field of psychology and subsequently identified the flow construct in interviews with people from disparate fields - such as music, business, figure skating, and poetry - during the 1970s. Flow has since become the topic of a variety of research. A method notable among this research, besides interviewing, is the Experience Sampling Model (ESM) in which researchers would have participants carry paging devices which would prompt them at random times to report on their mental and emotional states. This research led to multiple books, including *Flow* (Csikszentmihalyi, 1990). More recently, Csikszentmihalyi and Nakamura (2018) provide a recent and authoritative introduction to flow states and compare and contrast these experiences with other altered states of consciousness. The authors delve into the characteristics of these flow experiences – *full concentration*, "*a merging of action and awareness," losing "track of time or…a distorted experience of time," "a loss of self-consciousness," and "a sense of control"* (p. 106). They also detail the necessary conditions for such experiences to happen – "*a balance between challenge and skills," "clearly defined immediate goals,"* and *"clear immediate feedback,"* (pp. 107-108). They discuss how these experiences are innately rewarding and purpose driven – 'autotelic' – and how humans and their environments have likely selected for flow capability and pursuit throughout evolutionary history. They reference Aristotle in explaining the roots of the word 'autotelic' – which describes "states that have goals (*telos*) which are contained in themselves (*auto*)" (p. 110). Looking forward, the article emphasizes the importance of nurturing this pursuit of challenging flow experiences for a "fuller, better life" (p. 113).

Various other scholars have looked at flow in connection to music and music education. Hendricks, Smith, and Stanuch (2014) grapple with the unfortunate reality that certain, "far too common" (p. 35) contexts in music education lead to an increase in performance - or even other

kinds of - anxiety. Specifically, they address the topics of the learning environment, competition, and motivation – contrasting extrinsic and/or fear-based motivation with the more desirable intrinsic motivation – in other words, autotelic tendencies - educators should wish to promote. They emphasize the need to recognize the individuality of students, the importance of considering students whom competitive structures may adversely affect, even if such structures do not have a uniform effect across all students, and, interestingly, cite research on high level musicians that "suggests that ability and achievement does not lead to a reduction of anxiety in highly competitive situations" (p. 36). They also discuss elitism, i.e. the tendency among many people to overvalue talent versus effort, growth, and learning. Finally, they propose a number of ways to create a "safe space" in which students may thrive musically and creatively, including paying undivided attention to the current moment of the teaching environment, utilizing carefully selected challenges, encouraging the positive behavior of students' peers and parents, sensing external "factors [which] influence students' music making" (p. 38), and bucking convention when necessary, perhaps by eschewing traditional authoritarian power structures in the classroom.

Ross and Keiser (2014) conducted a study examining the relationship between personality and people's proclivity towards flow experiences. Specifically, the study utilized the five-factor model consisting of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (O.C.E.A.N.), and draws the most significant linkage between flow and personalities that showcase strong tendencies in Neuroticism and Agreeableness. It also links the capacity for clear goal setting to the likelihood of more frequent flow experiences, saying "findings suggest that what is important about—and even driving—the relationship of flow-propensity to personality is the capacity to maintain clear goals and direction" (p. 7). These

personality characteristics, and especially this emphasis on goal setting, are important ways in which to think about students and their needs when planning and evaluating instruction.

Clementson (2019) details a study of flow experiences in a middle school band program. The study thoroughly combines multiple quantitative and qualitative research approaches. The quantitative approaches, used with multiple band classes, consist of the collection of demographic data, surveys, and an employment of ESM. The qualitative approach was a case study of one of the band classes from the quantitative sample. Ultimately the author interprets the combined findings as ambiguous except for students' preference for rehearsing concert repertoire over other common activities. However, he suggests that the findings raise certain important questions. In particular, Clementson asks whether or how ESM sampling is (most) effective for learning about the flow experiences of young adolescents. He acknowledges that his timing of self reports, despite best efforts to optimize this parameter of the study, might still have allowed students to self-edit their responses. He also suggests that the current language used to elicit self reports, particularly in regard to the parameter of flow concerning the balance between challenge and skill, might be currently suboptimal for the age group in concern and that a change in wording might prime students to offer more accurate assessments of their own mental states and perceptions. Importantly, the author also suggests that Custodero's observational approach might be useful in the young-adolescent context, especially as it is unclear, in Clementson's words, "whether a young adolescent can identify their own flow and then communicate those feelings to a researcher…." (p. 55). Finally, he emphasizes the importance of establishing student autonomy in an encouraging atmosphere where they receive clear feedback, as well as the importance of considering differing student perceptions.

### Flow Indicators

As I realized that I would be examining flow in my student teaching placement, I also realized I would need a system for identifying flow behaviors. Serendipitously, I came upon the work of Lori Custodero (2002, 2005), which details her examination of "four age-relevant, naturally occurring settings for music education," including infants in a self-driven, musically suggestive environment, toddlers in slightly more structured sessions in the same environment, and young children up to eight years old in either a violin program or Dalcroze (movement based) class. Custodero served as teacher and researcher for the infant and toddler groups and video was collected for each. Given the inapplicability of methods used in flow research on older subjects, a dedicated protocol was used for describing subjects' flow experiences based purely on observations of their behavior. This protocol involves seven specified 'flow indicators' (eight if splitting up the social awareness indicators as I do) - i.e. self-assignment, self-correction, deliberate gesture, anticipation, expansion (transformation of a presented activity to make it more challenging), extension (continuing an activity after the teacher has ended it), and awareness of adults and peers. Custodero's indicators serve as the direct foundation for my own study.

## RESEARCH QUESTIONS

This study asks, first, what does flow look and sound like from the perspective of a student teacher (me) observing his fourth and fifth grade general music classes? Then, based on these observations, it asks (a) which of Custodero's flow indicators are most readily observable in this context, and (b) how does the particular classroom activity relate to the perceived likelihood of each indicator's occurrence.

## METHODS

I collected videos using my iPhone on a tripod or, in the case of one video, my iPad. Use of the latter was simply a matter of convenience but the necessary difference in placement of it did end up procuring a unique perspective compared to the other videos. Each video was the length of a class period – roughly fifty minutes, which is the total allotment of meeting time every class receives for music class each week, although fourth and fifth graders also have the option to join chorus.

Ultimately, I ended up watching and writing descriptions and commentary for four videos. Three videos were of a fourth grade class that meets on Fridays during second period, which begins at 9:35 AM. These videos show the class in lessons on the recorder and ukulele. One video, the second one recorded and analyzed, was of a fifth grade class that meets on Thursdays during third period, which begins at 10:30 AM. My process for analyzing the video evolved somewhat over the course of the project, but, overall, I used a couple distinct approaches. The first approach was to describe events chronologically and then to analyze my descriptions using the flow indicators. This was my basic approach for the first video – one of the videos of the fourth grade class. For this video, the process also involved a lot of stopping and manually rewinding, and therefore a lot of difficulty in maintaining my own sense of flow, as constantly trying to rewind by hand to a specific spot became disruptive of my thought process. This issue, coupled with a feeling that I wasn't necessarily giving each indicator its due attention, led me to take a different approach with the second video.

For this second video, a video of the fifth-grade class, I figured out how to use the computer application VLC media player to loop sub-segments of the video. I first determined general segments to loop based on distinct classroom activities, of which I had made notes while

I observed in the first approach, but which for this approach, I made a preliminary step before writing descriptions and commentary. Each segment ranged from about three to fourteen minutes, with the median and the mode being about six minutes – the entire set, rounded down to the nearest minute, being {3, 4, 5, 6, 6, 6, 14}. For each segment I made a concerted effort to observe each indicator, one at a time (although I didn't always see one at a time), often still manually rewinding within the preset loop, especially when that loop was on the longer side. This approach, likely along with the effect of having had some practice at this observation by this point, yielded significantly more data overall. It was, however, also a significantly slower one. For the subsequent two videos, I endeavored to use an iterated style of the first approach, this time using my more-trained perception and the videos to asynchronously observe as I might as an in-person, real-time observer. More specifically, I watched the videos without rewinding and with minimal pausing (i.e. only to check names a couple times and connect my computer to its charger when it ran out of battery), handwriting descriptions in short-hand as I watched. I then analyzed these descriptions using the indicators. While this approach allowed for quicker processing of the raw video data, it also gave me a way of testing my perceptiveness of the indicators at this later stage of the process - in essence providing a sort of before-and-after test of my ability to use the flow indicators as an observational framework.

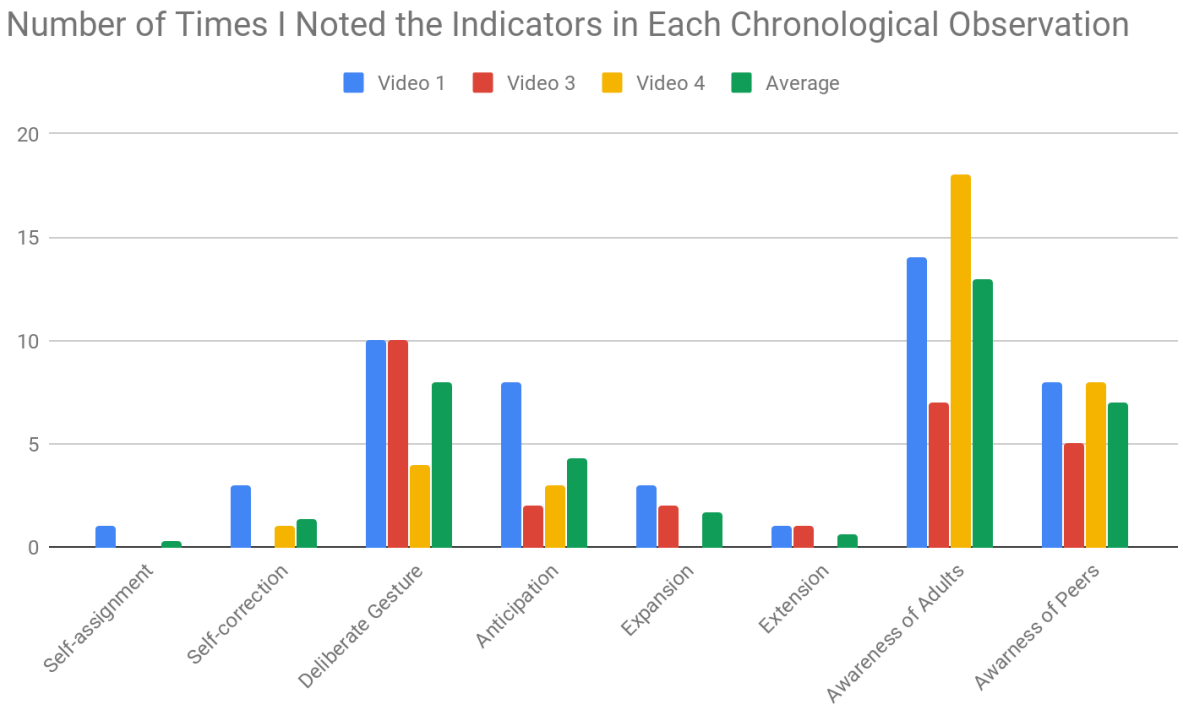
In addition, I will include a couple anecdotes that come from memory as a participant in the teaching and learning environment. While this was not a source of a significant amount of data, these anecdotes will serve to illustrate certain take-aways.

# RESULTS

## Ready Observability

The results presented first are some trends from the videos for which I used the chronological method of observation. These results in particular help to answer the question of which of the indicators are most readily observable in this context. For the first video - filmed on October 25th, 2019 - I wrote 3.5 pages of typed description and commentary. A similar but much more efficiently gathered 2.5 pages of handwritten notes came from the third and fourth videos, filmed on November 8th and December 6th respectively. All of these videos were of the fourth grade class. Figure one contains a chart of the number of times I noted each flow indicator in each of these videos as well as the average of these numbers. The same results are written out below as well.

Figure 1:



### Video One

In the first video, I noted self-assignment (SA) once (which instance was of a non-musical behavior), self-correction (SC) thrice including one ambiguity, deliberate gesture (DG) ten times including one ambiguity, anticipation (ANT) eight times, expansion (EXP) thrice including one ambiguity, extension (EXT) one ambiguous time, awareness of adults (AOA) fourteen times, and awareness of peers (AOP) eight times.

### Video Three

In the third video, I noted SA and SC zero times, DG ten times including three ambiguities, ANT twice, EXP twice ambiguously, EXT once ambiguously, AOA seven times, and AOP twice including two ambiguities.

### Video Four

In the fourth video, I once again noted SA zero times but noted SC once. I also noted DG four times, EXP and EXT zero times, AOA a peak eighteen times including two ambiguities, and AOP eight times.

## Descriptions

Some examples from my descriptions will help to answer the question of what I found flow to look and sound like in the fourth and fifth grade classes in my student teaching placement. The first example here - and one of my subjective favorites from the study - comes from video 2, which provides a record of the November 7th fifth-grade class. The video began recording at 10:36 AM and I analyzed it using the slower process, which, as mentioned before, involved looping segments of the video and dedicatedly observing for each indicator. While slower, it also

yielded significantly more written data than the chronological observations. Specifically, from this video, I wrote eighteen pages of typed commentary and description.

The example happens near the thirty-two minute time stamp while students are practicing ukulele with a play-along video - put together by Jill Reese - of the song “Thunder” by the popular band, Imagine Dragons. In the classroom, there are enough ukuleles for half the class. Thus, students take turns, which is why some of them are not playing. The description from this example reads thus: “Several students mouth or sing the words to the song, including Santiago, Dillon S., Mina, Yeldana, and Kaeley. In addition, Mina comes up with some hand movements to go along with the song, and she and Dillon start a trend of patting and clapping to the chorus, which Eden and Lilyna pick up on and join.” The most obvious indicator seen in this example is awareness of peers (AOP) as certain students start a behavior and others imitate it. It also ambiguously illustrates, through the original behavior which motivates imitation, either self assignment (SA) or expansion (EXP).

Such ambiguity is a trend in the chronological and the looping data, and in this case depends on the indiscernible perspective of the student - i.e. on what they perceive as the essence of the teacher-presented activity. Specifically for this case, they could see that essence as ‘playing the ukulele,’ which would indicate self assignment. Alternately, however, they could see it more broadly as ‘engaging with the song,’ which would indicate expansion. While I may lean towards one interpretation, it is important to acknowledge both possibilities. Essentially, disambiguating the interpretation here requires answering the question of whether the students see their behavior as *part of* or *apart from* the presented activity.

Simultaneously during this video clip, which lasts about fifteen seconds, other behaviors are also observable, including those seen in my interaction with a student during which I show

him an alternate strumming technique, allowing him to avoid discomfort he has expressed about his thumb as a result of using the default technique of the classroom. Such simultaneity is a common theme in the data overall and serves as a reason that the looping approach is particularly useful. It allowed me to observe more of what happened in a single moment that I might have missed by observing in normal, real-time circumstances.

A second example serves as a simple description of deliberate gesture and anticipation. This one comes from the third video, recorded on November 8th at a time stamp of about nineteen and a half minutes. The class is practicing the song, "It's Raining," from the Recorder Karate curriculum. I describe the behavior of a particular girl who "sits up straight, looking down at times… or up at the front of the room where the music is." Another example of deliberate gesture reads, "Ryan, despite directions to hold the ukulele with strings facing forward, holds it with strings facing up at him, likely so that he can be intentional about where to place his fingers on the fretboard." One that contains AOA, AOP, and ANT reads, "Grace raises hand, Jeannie: gestures & says "yeah," Grace: "did we do uuuuh...I don't know what order it goes in but...did we do our yellow belts last week?" Multiple students confirm, such as Tara: "I think yeah we did get our yellow belts" and Cooper: "Yeah, I put them on." Jeannie responds that they did earn their yellow belts last week and that they will be working on orange belts and will have the chance to earn it today. While Jeannie is responding, Cooper has hand raised." Yet another demonstrating AOA and perhaps AOP is, "Jeannie [my cooperating teacher] tells the class they have the 'best E' of any class. Jesse asks, 'can we tell Ms. Kara that?'" A clear example of self correction comes in the form of the following: "Marcel initially fingers an A accidentally, but quickly lifts his finger off the second hole in front to change to B."

In my observations, of the video and simply from being in the classroom, I also noticed some behaviors that didn't fit neatly into the indicators. Some such behaviors seemed to, in fact, counter-indicate flow, such as, "Ryan yawns," or "Multiple students fidgeting - i.e. Grace rocking back and forth, Tara & Becket swinging legs from chairs …*Strikes me as anxious/restless"* (Italics indicating commentary as distinct from observation). In addition, in person, I noticed behavior that seemed challenge monitoring in a broad sense but not necessarily for the sake of making the activity more challenging. One such example is a student, while playing ukulele, trying to switch chords and persisting with the switch even as they chord bypasses them. This behavior has some similarities to extension and/or deliberate gesture but also some differences which I will discuss further in the section on my conclusions and implications for teaching and research.

## LIMITATIONS

Before concluding, it is important to note that this study has limitations. Unlike Custodero's research, in which she uses multiple coders to establish reliability, my study relies on my perspective alone and thus is especially subjective. Secondly, as a student teacher who spent just a few months in the classroom from which I derived my observations, I must acknowledge the relative lack of experience in the teaching environment and that my perspective lacks the advantages of a longer cultivated familiarity, although perhaps that same perspective could have some benefits of novelty as well. I must also acknowledge the relative newness of this complex research framework to me and that, inherent from the improvement I felt in my ability to use it is the fact that said ability was uneven across the duration of the study. Finally, my videos were limited to a single perspective and thus lacked power to show me what I might see from walking around the room as a teacher. These same events that the camera had trouble showing me were,

however, also difficult to observe while I taught as doing so would take me out of appropriate flow in my role as a student teacher, especially if I tried to devote enough mental energy to remembering such observations for later. Such problems might be solved in part simply from greater habituation to a teaching role and environment coupled with a dedicated journaling habit, and/or with the use of additional camera angles and techniques.

## CONCLUSIONS AND IMPLICATIONS

The rapid succession and simultaneity of behaviors, including flow-indicating behaviors, revealed by conducting video observations in the fourth and fifth grade general music classroom reinforce the importance of designing an educational environment and curriculum that works as a flow-perpetuating system. Teachers, certainly including myself, should avoid making assumptions about what students are doing outside of their immediate focus and realize that the teacher's duty to devote attention to scaffolding the learning of each student also yields each student plenty of discretionary time in which they are not under the direct gaze of the teacher. Beyond the interactions that happen directly between teacher and student, the teacher's job is to plan ways to encourage the students' best instincts towards semi-independent - if not autodidactic - learning.

Given the ubiquity of social awareness by middle childhood, established by previous research (Custodero, 2005; Wood, 2017) and certainly supported by my own observations here, teachers' best resources for scaffolding students' learning may be the students themselves, through peer learning and assessment and also through their independent behaviors as they learn to monitor their own flow through challenge-raising *and* challenge-lowering behaviors, some of which may be thought of as possible inversions of Custodero's challenge monitoring indicators. For instance, *delay* within a presented activity may exist as an observable inverse for anticipation

(distinct from deliberate gesture due to its focus on temporal specificity rather than intensity of focus, and from extension due to its appearance during instead of after the presented activity), and transformation of an activity in order to simplify it, or in other words the *contraction* of it, may exist as an inverse of expansion, which by the nature of the term itself and the definition of it that Custodero provides, generally emphasizes the raising of challenges, which seems to make sense for infants and younger children who have been her subjects of study, and whose relationship with challenge seems to be one of greater desire than the perhaps more complex relationship older children - who have, notwithstanding early childhood trauma, likely amassed more experience with anxiety as well as boredom - may have with challenge. This seems to be supported by the relative lack of self-assignment in my observations, which have a parallel in the developmental trajectory established by Custodero. This likelihood also hints at the possible importance of counter-indications and their potential inclusion in future research. From a more practical stand-point, teachers should, of course, try to sense when students are out of flow in order to correct that situation. As Elliott and Silverman (2015) write:

> "...we must make certain that music teaching-learning episodes *spark, support, enliven, arouse, sustain, and advance positive personal experiences* of musical emotions, personal-artistic meaningfulness, self-confidence, self-identity and musical identity, optimal flow experiences, and the fullest possible personal and musical growth of the individuals we teach and serve." (p. 203)

In regard to the question of how the classroom activity affects the perceived likelihood of observing flow in students, my observations seem to line up to some degree with the findings of

Clementson (2019) in that they suggest a greater overall level of flow during rehearsal of repertoire than seen during skill-focused activities. This observation suggests that music teaching is best guided by reference to clear and immediate goals that have a sense of meaning and authenticity to the students, a suggestion that very directly aligns with flow theory in general as well as the philosophy of John Dewey (1938). Some of this proclivity for certain activities, such as repertoire rehearsal, may have to do with a phenomenon touched upon by Reese (2019), which is to say, the assumption of a temporary alternate identity. Reese, in the context of a community ukulele group, found that part of what members of the group enjoyed, and indeed through which they, in part, found flow, was the ability to think of themselves as real musicians - professionals, rockstars, or whatever the conception of "real" may be to the individual - instead of their day-to-day identities. A demonstration of this phenomenon can be found as well through the behavior of a student in one of my videos. While holding the ukulele during a play along video, instead of sitting down cross-legged like most of his classmates, he sits up on his knees, writhing his body around and making sounds with his mouth - "baew baew" - harkening to mind a lead guitarist in a rock band taking a solo on stage.

Finally, and related to the limitations mentioned before, a more trained eye and experienced teaching practice may better allow for adding journaling as a feasible data source, which could yield different insights and there remains potential for behavioral observation of flow in more contexts, including again extending the age range as well as examining different musical activities, including but not limited to modern band (beyond ukulele) and music technology/production contexts.

# Annotated Bibliography

Boden, Margaret (2003). Are autodidacts creative? In Solomon, J. (Ed.). (2003). *The passion to learn: An inquiry into autodidactism*. Retrieved from https://ebookcentral-proquest-com.proxy.library.nyu.edu

Boden, in this chapter, poses the title question – "are autodidacts creative?" – and then discusses its inherent complexity in largely abstract, analytical terms. She sets up a framework of creativity types – combinational, exploratory, and transformational – and then posits that there are a wide array of autodidactic types, using as examples two varieties – the unschooled and the defiant – which she draws from other chapters in the book, to propose a sort of boundless matrix of possible scenarios in which the central question of the chapter may be answered differently. The main crux of the chapter, thus, is less about answering the question than it is about *how* the question, according to the author, ought to be answered.

Csikszentmihalyi (1990). *Flow: The psychology of optimal experience.* [Kindle Version]. Retrieved from https://www.amazon.com/Flow-Psychology-Experience-Perennial-Classics-ebook/dp/B000W94FE6/ref=tmm_kin_swatch_0?_encoding=UTF8&qid=&sr=

Csikszentmihalyi, M., & Nakamura, J. (2018). Flow, Altered States of Consciousness, and Human Evolution. *Journal Of Consciousness Studies*, 25(11–12), 102–114. Retrieved from

http://search.ebscohost.com.proxy.library.nyu.edu/login.aspx?direct=true&db=edswah&AN=000451363500006&site=eds-live

This article provides an introduction to flow states and compares and contrasts these experiences with other altered states of consciousness. It delves into the characteristics of these experiences and the necessary conditions of their presence. It also discusses how these experiences are innately rewarding – 'autotelic' – and how humans and their environments have likely selected for flow capability and pursuit throughout evolutionary history. Looking forward, the article emphasizes the importance of nurturing this pursuit of challenging flow experiences for a "fuller, better life" (p. 113). These important concepts and ideas have definite applicability in educational contexts and may serve as an interesting lens through which to view autodidactism and popular music education.

Custodero, Lori A. (2005). Observable indicators of flow experience: A developmental perspective on musical engagement in young children from infancy to school age. *Music Education Research, 7*(2), 185-209.

This article details a study examining "four age-relevant, naturally occurring settings for music education," including infants in a self-driven, musically suggestive environment, toddlers in slightly more structured sessions in the same environment, and young children up to eight years old in a violin program or Dalcroze (movement based) class. The author served as teacher and researcher for the infant and toddler groups and video was collected for each. Given the inapplicability of methods used in flow research on older subjects, a

dedicated protocol was used for describing subjects' flow experiences based purely on observations of their behavior. This protocol involves seven specified 'flow indicators,' - i.e. self-assignment, self-correction, deliberate gesture, anticipation, expansion (independently increasing the difficulty of an activity), extension (continuing an activity after the teacher has ended it), and awareness of adults and peers. These flow indicators could be of great use in observing my own students in my student teaching experience in elementary grades.

Custodero, Lori A. (2002). Seeking challenge, finding skill: Flow experience and music education, arts education policy review, 103:3, 3-9, DOI: 10.1080/10632910209600288

Clementson, Casey J. (2019). A mixed methods investigation of flow experience in the middle school instrumental music classroom. *Research Studies in Music Education, 41*(1), 43-60, DOI: 10.1177/1321103X18773093

This article details a study of a flow experiences in a middle school band program. The study thoroughly combines multiple quantitative and qualitative research approaches. The quantitative approaches, used with multiple band classes, consist of collection of demographic data, surveys, and an employment of the Experience Sampling Method (ESM) and the qualitative approach was a case study of one of the band classes from the quantitative sample. Ultimately the author interprets the combined findings as ambiguous except for students' preference for rehearsing concert repertoire over other common activities. However, he suggests that the findings raise certain important questions. In

particular, Clementson asks whether or how ESM sampling is (most) effective for learning about the flow experiences of young adolescents. He acknowledges that the timing of self reports, despite best efforts to optimize this parameter of the study, might still allow students to self-edit their responses. He also suggests that the current language used to elicit self reports, particularly in regard to the parameter of flow concerning the balance between challenge and skill, might be currently suboptimal for the age group in concern and that a change in wording might prime students to offer more accurate assessments of their own mental states and perceptions. Importantly, the author also suggests that Custodero's observational approach might be useful in the young-adolescent context, especially as it is unclear, in Clementson's words, "whether a young adolescent can identify their own flow and then communicate those feelings to a researcher…." (p. 55). Finally, he emphasizes the importance of establishing student autonomy in an encouraging atmosphere where they receive clear feedback, as well as the importance of considering differing student perceptions.

Dewey, John (1938). *Experience and Education*. [Kindle Version]. Retrieved from https://www.amazon.com/Experience-Education-Kappa-Delta-Lecture-ebook/dp/B00120954O/ref=tmm_kin_swatch_0?_encoding=UTF8&qid=&sr=

Diaz, Frank M. (2011). Mindfulness, attention, and flow during music listening: An empirical investigation. *Psychology of Music*, 41(1), 42–58, DOI: 10.1177/0305735611415144

Diaz, Frank M. & Silvera, Jason M. (2012). Dimensions of flow in academic and social activities among summer music camp participants. *International Journal of Music Education*, 31(3), 310–320, DOI: 10.1177/0255761411434455

Hebert, David G. (2011). Originality and institutionalization: Factors engendering resistance to popular music pedagogy in the U.S.A. *Music Education Research International, 5*, 12-21. Retrieved from http://search.ebscohost.com.proxy.library.nyu.edu/login.aspx?direct=true&db=rft&AN=A789007&site=eds-live

This article discusses the history and development of popular music pedagogy, including unmodern, elitist, but nevertheless extant attitudes towards popular music and its inclusion in curricula. It uses the development of jazz pedagogy in the twentieth century as a foil for the teaching of new genres and emphasizes that solely including culturally relevant music in schools does not amount to a progressive teaching practice. As per its title, it warns of the possibility of popular music pedagogy's inadvertent, philosophical self-defeat if the methodology used tends more towards canonical reproduction than an emphasis on original creation and democratic learning.

Hendricks, K. S., Smith, T. D., & Stanuch, J. (2014). Creating Safe Spaces for Music Learning. *Music Educators Journal*, *101*(1), 35–40. https://doi-org.proxy.library.nyu.edu/10.1177/0027432114540337

This article grapples with the unfortunate reality that certain music education contexts lead to an increase in performance or even other kinds of anxiety. Specifically, it addresses the learning environment, competition, motivation – contrasting extrinsic and/or fear based motivation with the more desirable intrinsic motivation educators should wish to promote – and elitism, i.e. the tendency among many people to overvalue talent versus effort, growth, and learning. It proposes a number of ways to create a "safe space" in which students may thrive musically and creatively, including paying undivided attention to the current moment of the teaching environment, utilizing carefully selected challenges, encouraging the positive behavior of students' peers and parents, sensing external "factors [which] influence students' music making" (p. 38).

Kafara, Rylan (2017). "Here we are now educate us": The punk attitude, tenets, and lens of student-driven learning. In Smith, G. D., Dines, M., & Parkinson, T. (Eds.). (2017). *Punk pedagogies: Music, culture and learning*. Retrieved from https://ebookcentral-proquest-com.proxy.library.nyu.edu

This chapter substantially draws on Paulo Freire's concept of critical pedagogy and the thoughts of its intellectual disciples, such as Henry Giroux, while discussing "The History of Punk" – "an ongoing free course started in May 2012 in Edmonton, Canada." The course's philosophy emphasizes accessibility, engagement with differing perspectives, anti-hierarchical, student-driven learning, and the value of amateurism. The chapter details various examples of student participation and activities, including the use of social and independent media for expression. The chapter's musical focus clearly

relates to my interest in culturally relevant forms of pedagogy and its philosophical underpinnings, I suspect, have much in common with autodidactic learning preferences.

Miksza, P., Roseth, N. E., & Blackwell, J. (2018). Self-Regulated Music Practice: Microanalysis as a Data Collection Technique and Inspiration for Pedagogical Intervention. *Journal of Research in Music Education*, 66(3), 295–319. https://doi-org.proxy.library.nyu.edu/10.1177/0022429418788557

This study references some possibly useful work on self-regulated learning and, on this basis, describes a microanalytic study of three undergraduate instrumentalists' practice over a two-week period. This time window included an intervention by one of the researchers targeted towards developing more effective practice strategies. Although the findings are not generalizable in and of themselves, they touch upon a couple important themes, including the proportionality of intervention effectiveness to the needs of the student, and the importance of effective goal setting. While the study claims to be about self-regulated learning, inclusion of an intervention begs the question of how much and what kind of outside influence is allowable before learning ceases to be truly self-regulated.

Powell, Bryan & Burstein, Scott (2017). Popular music and modern band principles. In Smith, G. D., Moir, Z., Brennan, M., Rambarran, S., & Kirkman, P. (Eds.). (2017). *The routledge research companion to popular music education*. Retrieved from https://ebookcentral-proquest-com.proxy.library.nyu.edu

This chapter outlines the content focus and methodological approach that the organization Little Kids Rock advances. It defines the term Modern Band according to instrumentation and repertoire and outlines the Music as a Second Language (MSL) approach that the organization promotes and uses to train teachers. Given the organization's central role in the advent and development of Modern Band programs around the United States, reference to their principles naturally informs a discussion of popular music education.

Reese, Jill A. (2019). Uke, flow and rock'n'roll. *International Journal of Community Music*, 12(2), 207–227, DOI: 10.1386/ijcm.12.2.207_1

Ross, S. R., & Keiser, H. N. (2014). Autotelic personality through a five-factor lens: Individual differences in flow-propensity. *Personality and Individual Differences*, 59, 3–8. https://doi-org.proxy.library.nyu.edu/10.1016/j.paid.2013.09.029

This study examines the relationship between personality and people's proclivity towards flow experiences. Specifically, it utilizes the five-factor model consisting of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism, and draws the most significant linkage between flow and personalities that showcase strong tendencies in Neuroticism and Agreeableness. It also links the capacity for clear goal setting to the likelihood of more frequent flow experiences. These personality

characteristics could be interesting ways in which to think about students and their needs when planning and evaluating instruction colored by a flow lens.

Scanlon, Eileen (2003). How does resource-based learning help the self-directed learner? In Solomon, J. (Ed.). (2003). *The passion to learn: An inquiry into autodidactism*. Retrieved from https://ebookcentral-proquest-com.proxy.library.nyu.edu

This chapter discusses resource-based learning within the context of the Open University multi-media programs in the UK. The publication date of the book is on the older side, especially when considering this chapter, which focuses on technology/media use in education. Therefore, many of the examples mentioned in the chapter are dated. In addition, the educational programs discussed are specifically within the realm of science. That said, there are some generalities about resource-based learning and its relationship to autodidactic learning which could serve as interesting points of discussion and inquiry.

Sinnamon, S., Moran, A., & O'Connell, M. (2012). Flow among musicians: Measuring peak experiences of student performers. *Journal of Research in Music Education*, 60(1), 6–25, DOI: 10.1177/0022429411434931

Solomon, Joan (2003). Theories of learning and the range of autodidactism. In Solomon, J. (Ed.). (2003). *The passion to learn: An inquiry into autodidactism*. Retrieved from https://ebookcentral-proquest-com.proxy.library.nyu.edu

This chapter, written by the book's editor, serves as background for the discussion of autodidactism, starting with defining the word, for the purposes of the book, in more complex distinction to its etymological origins. The chapter incorporates a wide array authorial-intellectual and historical references. In addition, it acts as somewhat of a roadmap to the rest of the book, introducing potential threads of exploration on the wider topic.

Wood, Chip (2017). *Yardsticks: Child and Adolescent Development Ages 4–14.* Turner Falls, MA: Center for Responsive Schools, Inc.