

To “Play That Funky Music” or Not:

**How Music Affects the Environmental Self-
Regulation of Undergraduate Writers**

Introduction

“I know how to take tests well but don’t make me write an essay!” “I would rather do math than English any day.” “Writing just seems like so much work!” “I became a science major so I don’t have to write.”

Being a science major, I hear phrases such as these uttered nearly every day by my peers. Why do students often shy away from writing? What is it about writing that is so terrifying and despised that leads to such negative thoughts by undergraduate students? Do they simply lack the knowledge and skills to produce an essay of merit? Are there perhaps too many distractions, such as online television, movies, and music, which limit the creative and intellectual capacity of young writers? Did the rise of technology, such as unlimited text messaging, and an array of social media sites including Facebook, Twitter, and LinkedIn, affect the current writing skills possessed by the undergraduate student body? Or is the lack of sophistication merely due to a lack of experience?

Review of Literature

“Writing is commonly viewed as a difficult and demanding problem-solving task” according to Milliano, Gelderen, and Slegers (2012, 304). Zimmerman and Risemberg (1997) established that there are four main processes involved in writing: “(a) a mental representation of the task, (b) problem analysis and goal setting, (c) problem translation between discourse and content components, and (d) resultant knowledge telling” (74). Therefore, “writing is more than a mental act, it is a behavioral event that creates a textual product with dynamic properties of its own” (74).

Because writing is such a highly developed skill, writers who are more experienced with the process are much more competent than less experienced writers; experienced writers not only

Comment [DD1]: Ultimately, I’ll suggest you go for a new introduction here; this one doesn’t set up the study the way readers will expect, given the piece’s subject.

In the paragraph, see the shift from “why don’t science students like to write” to “unsophisticated writing skills”? There’s a series of expansions or leaps (science students → all students; distaste for writing → lack of skills; lack of skills → distraction; distraction → technology, or, experience) that are pretty much conjectural and unsupported. (For what it’s worth, many science students are uncomfortable with writing because they’re uncomfortable with *language*, actually; it’s not objective enough for their taste and they are uncomfortable with the lack of precision it offers. Related, many science students are simply uncomfortable with human interaction—communication—outside a very narrow range of people and subjects.)

Anyway – This kind of conjecture isn’t sufficient to justify the study for other scholarly readers. Your intro should start at the actual question of self-regulation, distraction, and music itself. You’re not trying to solve the problem of why some science students are uncomfortable with writing; you’re trying to address the question of what roles music might play as a distractor and an element for self-regulation in writing process. So that’s where your intro should start, too. Eventually, see what you can do about that.

Comment [DD2]: This lit review is generally fantastic. ☺

know more about the topics they choose to write about, but also have a wider understanding of writing conventions (Milliano et al. 2012, 304; Sommers, 380). Furthermore, proficient writing depends upon high levels of self-regulation (Graham & Harris 3; Milliano et al. 304; Zimmerman & Risemberg 76). “Older writers are more experienced and competent in writing than younger ones, resulting in a more extensive repertoire of self-regulative strategies and knowledge about writing and an increase in self-regulatory activities” (Zimmerman & Risemberg 1997, 76). Self-regulation of writing is defined by Zimmerman and Risemberg (1997) as “self-initiated thoughts, feelings, and actions that writers use to attain various literary goals, including improving their writing skills as well as enhancing the quality of the text they create” (76). **Poor writing environments** or behavioral practices or low levels of self-efficacy can have detrimental effects to writing activities and the development of literary skill. Self-efficacy is defined by McCarthy, Meier, and Rinderer (1985) to be a self-evaluation of one’s own ability to write effectively (465). In their study assessing the writing ability and writing self-efficacy of college freshmen enrolled in beginning writing courses, self-efficacy for writing was strongly associated with the skills possessed by the writers. So, **if self-regulation increases self-efficacy,** self-regulation in writing produces better writing and better writers.

Three defined categories of self-regulation in writing are defined: personal processes (“writers’ self-regulation of cognitive beliefs and affective states associated with writing”), behavioral processes (“self-regulation of the writers’ overt motoric activities associated with writing”), and environmental processes (“self-regulation of the writers’ physical or social setting”) (Zimmerman & Risemberg 76). **Experienced writers, who have developed self-regulation, take special care to create an environment that is socially and physically favorable to the writing process, creating an “environmental structure” (Zimmerman & Risemberg 77).**

Comment [DD3]: Take a moment here to clarify (in a brief addition to the sentence, like a parenthetical) what counts as a poor writing environment. As one reader, I *assume* that would be “an environment that inhibits a particular writer’s production,” but I want to double-check.

You should be careful here to recognize that there are very few *universally* poor (or good) environments: different people actually operate differently (on all sorts of tasks) in any given environment, some being bothered by elements others don’t even notice, some being focused by things that distract others. Make sure your definition isn’t trying to over-generalize.

Comment [DD4]: *Self-efficacy* is not a synonym for “effectiveness,” which seems to be how you use it here and elsewhere in the article. It’s not a concrete measure of writing performance in any way. The term relates strictly to *self-perception*, not actual performance. It’s the difference between *being* an incredible long-distance runner (effectiveness), and *thinking* you’re an incredible long-distance runner (self-efficacy). In many cases, there’s a correlation between higher belief in one’s ability (self-efficacy) and higher performance (effectiveness), to a point. But the two are definitely not the same thing.

So, self-regulation might correlate with self-efficacy *if* a writer believes that they only write effectively in certain circumstances that the writer can regulate. In that case, self-efficacy beliefs *might cause* higher writing performance, but what you report of the study here doesn’t support that claim. Which makes me ask: is it really helping you here to talk about self-efficacy at all? Why not just stick to self-regulation and, at most, point out that self-regulation does also often correlate with self-efficacy?

Comment [DD5]: I want to really stress that, at least here, Z&R define a favorable environment as relative, not universal: whatever is favorable to a given writer’s process. (I don’t know if they’re consistent with that; if they do ever try defining it universally, you should show that here.) Here, then, environmental self-regulation is shown not as “creating a distraction-free environment” but as “creating whatever environment *works* for the writer.” That distinction is going to get crucial later in the paper. If you think Z&R would disagree with what I’m saying here, this is the place to talk about it.

Marcus (1988) conducted a study in environmental structuring using individuals from the 3rd, 8th, and 11th grades. The students were asked to write a brief essay in a room with a distracting radio and television set, and their behaviors before, during, and after writing were recorded. The quality of essays was higher for subjects who spent less time watching the television or who turned down the volume on the radio and the television. The results of Marcus show that students who restructured their environment with fewer distractions were more successful writers.

Comment [DD6]: It would help, for what's coming later in the study, to get more detail about the nature of the distraction. Your results, for example, distinguish between lyrical and instrumental music (different levels of distraction). What is this study based on, in those terms?

Music, according to Marcus, then, is classified as a *distraction*. In sharp contrast, Rauscher (1993) claimed that listening to Mozart music immediately prior to testing made a statistically significant impact on the spatial reasoning scores versus silence and calming instructions. This increased aptitude for logical deductions resulting from the calming music was dubbed "The Mozart Effect." However, in spite of these claims, no long-lasting effects—usually no longer than 12 minutes—were observed; moreover, there was no relation to an increase in IQ. Eager to test the benefits of the Mozart Effect in the field of medicine, the University of Illinois Medical Center found significant improvement in the number of epileptic shock episodes per day in patients and comatose patients were on average reduced by 40%-50% (Jenkins, 2001). Clearly, listening to music affects the brain in positive ways and cannot be simply written off as a distraction while writing.

Comment [DD7]: Again, I'd want to stress here that, as you've written the account at least, Marcus found that distracted writers who lessened the distraction wrote better—an example of environmental self-regulation, but not a clear justification for a conclusion that radio, television, and what's on them are *necessarily* distractions for every writer, and definitely not distractions of the *same severity*. So self-regulation for each writer could result in different solutions to the radio and TV.

Comment [DD8]: Are you trying here for a summary statement of how Marcus seems to think about music in writing? If so, try something a bit less factual-sounding than "is classified." Listen to the difference if you write something like this: "Marcus, then, essentially treats music as a distraction. Yet some other studies, and the reports of many writers, suggest otherwise." See how that's a "broader" statement that controls the flow of the whole conversation, rather than just transitioning between two individual studies?

Historical fiction writer K.M. Weiland (2009) is a strong advocate of listening to music while writing, for inspirational reasons before and during the writing process. She points out that many character sketches and stories have grown out of a few simple song lyrics playing on the radio while driving home. Ideas flow just as readily while she is writing through a selection of

Comment [DD9]: I'd recommend combining this and the next two paragraphs, maybe then adding a topic sentence like "many writers report music being important to their writing processes."

instrumental music, particularly from movies, as they often contain a powerful variation of sounds.

Creative copywriter Christopher Jackson (2009) shares similar views. Music elicits an emotional response that can change a writer's mood, and, therefore, the tone or direction of the writing. Furthermore, music, especially through headphones, blocks out the many distractions tearing writers' from their work, such as people, background noises, and unrelated thoughts, promising the focus needed to succeed in writing.

Novelist Larry Brooks (2009) also finds success in his writing endeavors while listening to movie soundtracks, and "advocate[s] the use of music to tap into a level of perception, appreciation and creative energy that seems otherwise inaccessible." He believes music can take writers to a whole new level of unexplored ideas. Writers seek to elicit a response in readers, and he suggests that writing while listening to and truly feeling the music is the only way to make this become a reality.

Due to the diversity of opinions regarding the role of listening to music while writing, I developed a study to understand music's effect on purposeful writing in the academic setting, which relies heavily on research (as opposed to creative writing). By purposeful writing, I mean faculty members' writing that is to be published; for students, I mean writing that is important to their major field and will be evaluated.

Determining whether music is better at creating a distraction or eliminating distractions in academic writing will provide a better understanding of the environmental process of self-regulation, and perhaps be the answer to the struggling undergraduate writer.

Assumptions

Comment [DD10]: This paragraph (and go ahead and combine it with the next one) will tie your completed lit review to whatever question your introduction poses—it will say, basically, "This diversity of opinion is why it's important to attempt to study [my research question] directly," that being as you so well state it here, "music's effect on purposeful writing in academic settings."

Comment [DD11]: As one reader who's studied a lot about writing processes, I'm uncomfortable with the implicit assumption here that there will be a universal, one-size-fits-all answer available to this question. If I were doing this study, my hypothesis (formally) would be something like, "Highly self-regulated writers will exhibit strong preferences regarding music but those preferences will vary widely from silence to rap-metal."

In contrast, the way you frame this question seems to already eliminate that possibility—that the answer could be "either, varying by circumstance and writer." This framing sounds like you truly expect—even after conducting the study—to find an answer that will be always one or the other. Such binaries are almost always an automatic red herring when studying human systems—there's just too much variability to make perceptual stuff all true all the time.

So: can you find a way to frame what you're looking at/for that *doesn't* preclude the possibility of a mixed finding?

It was assumed in this study that the subjects are aware of their writing process, as I did not directly observe the writing process of any of the participants, and that the participants in the study answered the questions asked in the interview truthfully.

Comment [DD12]: You won't need this as a stand-alone section. Delete it.

Participants

Comment [DD13]: You do fantastic work in this section in clarifying who you worked with and the basis of your choices. ☺

In order to become better acquainted with the role of music in purposeful writing, I gained IRB approval (USU Assurance: FWA#00003308) and drafted a series of interview questions to explore the writing process and musical background of my participants. For manageability purposes, I decided to interview faculty and students at only one university. A land-grant public research institution with a student body of around 28,000, Utah State University is dominated by a Caucasian population. USU general education requirements include two English writing courses (one or both of which may be waived by an appropriate ACT, AP Language, AP Literature, or IB English Test Score), as well as two upper-division courses (ranging from 1-4 credits each) that are classified as Communication Intensive (CI), generally fulfilled by a students' major.

Comment [DD14]: "I conducted a series of IRB-approved interviews"

Comment [DD15]: "a small group of university faculty and students." (Then realign the following sentences around that.)

The twelve participants in this study include three professors from the Department of Biology (College of Science), three professors from the Department of English (College of Humanities and Social Science), three professors from the Department of History (College of Humanities and Social Science), as well as three students, one from each of the respective departments. I chose to interview professors of similar age who have a great deal of writing experience, with multiple publications and/or books in print, as their extensive writing experience would consider them to be experts in their field of writing. My method of selection of professors was not entirely random; I conveniently selected two English professors and two Biology professors from whom I have received instruction. The remaining five professors,

Comment [DD16]: offer a decade? "in their forties," "in their fifties," whatever.

Comment [DD17]: "I used, in part, a convenience sample, selecting two..."

however, were located through an online directory on the respective departmental websites, based on their number of publications in their fields. I contacted these professors via email to schedule the interview; however, due to the busy schedules of research professors, I did not receive a perfect response rate. To obtain my desired participation of three professors from each of my selected departments, I contacted seven Biology professors (a response rate of 43%), four English professors (a response rate of 75%), and five History professors (a response rate of 60%).

I did elect to use a convenience sample of friends for the student participants, of which I received a response rate of 100%. Biology Student Participant is a sophomore in the Honors Program studying Biology with an emphasis in Neurobiology; English Student Participant is a junior studying English with an emphasis in Literature; History Student Participant is a senior in the Honors Program in Classical Studies. Although gender did not seem to play any role in the results of my study, I will note that four of the participants are female (33% of participants), and the other eight are male (67% of participants).

My decision to select participants from different departments across campus was to ensure that my results do not apply solely to one style of writing, because the focus of writing in different majors varies greatly. Biology Student admitted not writing a single academic paper throughout the year, English Student writes one or two essays a week, and History Student usually writes one or two essays in an average month, which shows a different level of writing experience.

Methodology

In order to determine the role of music in purposeful writing, I conducted a case study, composing a list of in-person interview questions (see Appendix A). Participants were provided

Comment [DD18]: I'll advise you to drop pretty much all reference to response rate in this study. If you had conducted a large scale survey, response rate would be extremely important in data analysis. But in a small-scale interviewing study, it really doesn't make that much difference, and so it doesn't help us to know. It's enough to say, "To fill out my complement of three professors from each department, I contacted professors listed in their department's online directories, based on their number of publications until I had enough participants." Or something like that. In other words, you can streamline it a lot.

Comment [DD19]: Here's a thing you'll need to address, beginning somewhere in this paragraph (probs after you finish naming majors): all your friends are honors students or the equivalents (gpa's >3.9). So, you've wound up with a group of high-ability, high-engagement students. That's fine—if you want to find your best writers, this is a good place to start looking, and if you want to find the best self-regulators, it follows to check among this crowd. But you need to *acknowledge* that skew in your sample explicitly, and consider how it may have tilted your results as compared with a broader student populace.

Related, it would also be good to acknowledge that most of your professors would have been honors students or their equivalent as well. Not every professor did really well in undergrad, but most were high-ability and showed it. So your sample of professional writers has the same skew. Again, not a "problem," but important to show *your* awareness of this central characteristic.

Comment [DD20]: This naming convention is unusual in Rhet/Comp research publications; feel free to either assign pseudonyms for ease of reference – Bob for Biology, Elaine for English, Harry for History, like that—or, just use simple descriptors like "the biology study" and "the history student," rather than treating their fields as formal names.

Comment [DD21]: This is actually a specific research method with a technical definition that doesn't resemble what you did here, so I'll ask you not to use the term. I'd recommend you start this section something like this: "Having selected participants, I conducted an in-person interview with each and the followed up with an additional question by e-mail."

You can delete the info about IRB and anonymizing, as readers will take it as a given once you've indicated IRB approval as you did earlier.

with IRB consent forms and all interview responses were immediately made anonymous. Depending upon responses I received on prior questions, I elected not to ask all 22 questions, as they seemed inapplicable. Participants were asked Questions 1-3 and 12 to provide a background of their writing experience. Questions 4 and 13 were my fundamental research questions, providing the baseline for my conclusions, which I chose to ask at different points in the interview to confirm the participants' answer. Questions 5-11 were only asked if I received an affirmative answer to Question 4. To understand the role of music in the lives of my participants and to determine whether music was a big part of their lives, I utilized Questions 14-21. Participants were encouraged to share their own thoughts in Question 22, which yielded a large range of results and insights. Upon reviewing the interview transcripts from my twelve participants, I chose to ask a follow-up question via e-mail (see Appendix B), which also became a major contributing factor to my research conclusions.

Results and Analysis

Although the answers to the interview questions could not be completely quantifiable, I was able to draw significant conclusions regarding the role of music in academic writing. I found that my sample had a broad range of participants, ranging from those who “constantly listen to music” (Biology Student) to those who feel that “music cuts me off from daily experiences” (History Professor 3)¹. This wide range of participants provided me with results that can be generalized more readily.

All of the professors in my study responded that they write meaningful and purposeful work at least once a week if not daily (Question 1), and eight of them shared that they enjoy or mostly enjoy the writing process (Question 2), with the exception of Biology Professor 2: “I am

¹ Note that I chose to name the participating professors Professor 1, Professor 2, and Professor 3 based solely on the order that I interviewed them in their respective Departments, and in no way correspond to their responses.

Comment [DD22]: It will be worth the space to find a way to list questions directly here, rather than sending readers flipping to the appendices. Let's think about how we might do that. You've grouped the questions nicely in this explanation, so I think what we'll be able to do is insert the questions after each intro sentence, and use smaller print – 10 would work here in manuscript (the journal will use its own typesetting, of course). So,

“Participants were asked questions 1-3 and 12 to provide background on their writing experience:
1. ...
2. ...”

Where, in smaller type most questions will only take up a line and the list will look pretty compressed and readable.

Comment [DD23]: “were not”; or, “could not be completely quantified”

Comment [DD24]: Your sample size is simply not large enough to justify such sweeping conclusions; you'll need to consistently limit and hedge your findings statements. For example, “I was able to draw meaningful conclusions regarding the role of music in these writers' academic writing that can help us think about music in academic writing more broadly.”

The sentence concluding this paragraph is also more hopeful than accurate. Your study offers important *indications* of trends but your N is simply too small to confidently claim you're identifying broad-based trends.

(Also, “significant” has a very precise technical meaning in social-science and science research that can only be achieved with statistical analysis, so don't use it outside that context.)

Comment [DD25]: As one reader, I had no confusion about this at all; let's delete this note.

Comment [DD26]: In most cases you can cut the question tags. (They're helpful to the writer when doing data analysis but mostly not to the reader who cares about results more than tracing technicalities like which questions are being answered when.)

not particularly fond of the writing aspect of my job, but it is a big part of it.” Furthermore, only Biology Professor 3 reported writer’s block as a problem while writing (Question 12): “I experience writer’s block if I do not set aside enough time for myself to write, so I set aside a large period of time every week to devote to writing.” Based on these answers, I have concluded that these professors can be considered experienced and skilled writers.

Comment [DD27]: It *might* be worth noting this as an example of environmental self-regulation in itself, just to continue keeping readers focused and help them with examples.

Question 4, referring to writing with or without music playing, provided me with resoundingly consistent results which I determined to be statistically significant. All three (100%) of the Biology Professors responded that they prefer silence over music while writing, Professors 2 and 3 demanding absolute silence. They both shared that they cannot have music playing and will close their doors when they write so they can eliminate any distractions in the hallways. Professor 1 shared that “If I am working on a section of a paper that I don’t have to think very hard, for example the Methods section, I am not very worried about distractions and will often listen to music, but not always.” If Professor 1 does choose to listen to music while writing, Professor 1 selects classical or instrumental jazz (Question 5); “It has to be something without lyrics, otherwise I get too distracted.”

Comment [DD28]: Well ... really?

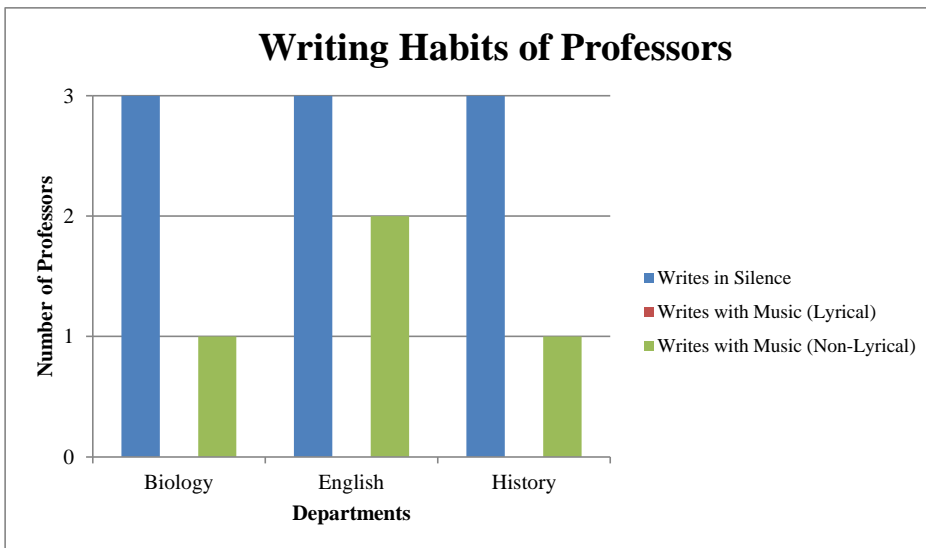
Comment [DD29]: You’re using this attribution a lot, but it’s rare in writing in this field. Consider “reported,” “explained,” “stated,” “said,” “revealed,” “detailed,” “disclosed,” “announced,” etc.

English Professor 1 simply does not listen to music while writing, but decided, with some pondering, that “All of my music has lyrics and I think it would be too distracting.” English Professor 2 responded that “It doesn’t matter” whether there was music while writing or not, as long as there were no lyrics. If there are distractions in the hallway or there is a television on at home, Professor 2 will turn on classical music or jazz to drown out these distractions; however, if there are no distractions, “I can have music on or not, it doesn’t matter.” English Professor 3 shared that most of the writing process is completed at home where classical music is always playing. “I do like having [non-lyrical] music on in the background while writing...

Comment [DD30]: You’ll need to account for this use of music in ways I don’t recall the study doing yet: music as a regulator of *other* distractions. That’s a really big deal in the context of your study. It suggests that for some writers (about a third of your sample, it looks like?) music is not only not *consistently* a distraction, but it is actually a *tool* for environmental self-regulation. That is, one axis of looking at music is as an environmental element that requires self-regulation; but **your study has exposed a *second axis* whereby music is not just *what is regulated*, but a *means of regulation***. See the difference? That’s big, and important, it seems to me, and really bears talking about when you get to your Discussion section.

[however]...In the office I am less likely to have music on unless there is a distraction in the hallway.” Both English Professor 2 and 3 share the belief that they cannot have distractions while writing and non-lyrical music is effective in eliminating distractions, yet have no trouble writing in silence because they do not actively seek out music before or during the writing process.

History Professors 2 and 3 do not listen to music while writing, Professor 2 demanding silence (“Music, as well as noise in the hall, is very distracting”), and Professor 3 “...enjoy[ing] the quiet.” “Most of the time,” History Professor 1 listens to Baroque or chant while writing, “use[ing] music to a certain extent as white noise, but it has to be the right white noise... [because]...Music could easily turn into a distraction.” When the writing is a topic that requires a lot of concentration, Professor 1 often chooses silence over music. Once again, evidence shows that a productive writing environment must be free of distractions, with only one professor using music to eliminate distractions.



Comment [DD31]: It's not the subject of your study, by the way, but as one reader I'm fascinated here by profs who choose to write in their offices, since we're on the subject of self-regulating environment and talking about writers encountering distractions that one would very predictably encounter in university-office writing environments. Why aren't people who need absolute peace for writing, choosing to write in an environment they actually *can* effectively regulate—which is not their office with a loud hallway outside?

Comment [DD32]: This is a really important concept probably worth talking about a bit more. Technically, of course, music is the *opposite* of white noise (which is mathematically random sound across a certain frequency range), but the *effect* this writer is pointing at is important, again because it suggests music as an environmental *control* rather than an environmental *feature*, per se.

Comment [DD33]: Above you say that English 2 and 3 both use it to control distractions. ??

It seems three other things might be important to sum here:

No one says they *must* have music to write. That's a little surprising (at least until we look at the population interviewed to begin with; 3 of 9 already don't do much with music in their lives, which is probably high compared to the general populace). So that seems really important to emphasize.

And, you actually have almost half the sample (and again, this is tough because of the small N – “half the sample” is not that many people in raw terms) who *do* use music while writing, including at least one “most of the time.” Are you sure you're reporting this finding with sufficient emphasis? I'm not....

Third, you note at the end, but should note here too, the big big lack of *non-lyrical* music. That's interesting for what it says about the *nature of* music as a distraction when it is. That being, what would be *most* distracting about music for any of these writers is the *competing language stream*—carrying the conversation of their writing in their head simultaneous with the conversation created by lyrical music. Compare that to the other frequently mentioned distraction—hallway “noise”—that is, people *talking loudly* in the hallway. I think we're getting a trace of a pattern about *what's* distracting that's worth talking about here. Not in any certain way—just, note the tendency?

In the bar chart above, I have indicated that all nine professors write in silence, and have indicated the number of professors that can write with music under the right conditions.

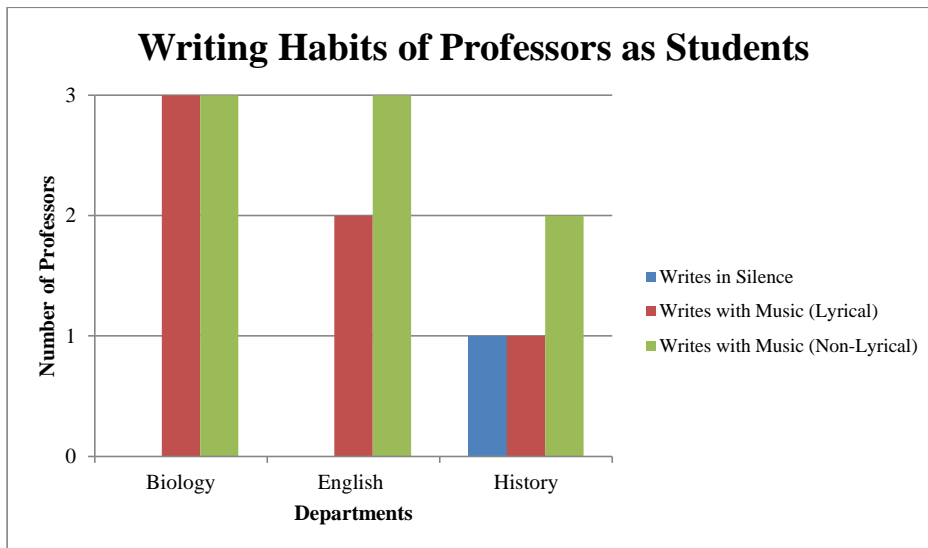
These results conclude that professors, who are skilled writers, are effective environmental self-regulators. They have insisted in eliminating distractions while they write, whether that is through silence or by using music in the background to eliminate these distractions. The professors that listen to music on occasion while writing commonly share the belief that music makes them feel good, which benefits the writing process. In response to Question 10, Biology Professor 1 shared that “Music is not influential [in the writing process] to a great degree, but it might make you feel better—keep you going and focused.” English Professor 3 answered that “Music puts me in a more comfortable place while writing and makes me feel good, and so anything that can make me feel comfortable is helpful to the writing process.” This “atmosphere of comfort” (English Professor 3) is in fact another method of self-regulation, as the writer has found a state of peace in which to write, that is evidence of the goal environmental self-regulation.

To confirm that these professors have developed the skill of self-regulation throughout their career, my follow-up interview question (see Appendix B) explored these professors’ writing habits while they were an undergraduate and a graduate student. I compared the results to their present writing state, using my professor participants as a self-controlled group, and found that 8 of the 9 (89%) of the Professors listened to music while writing as a college student.

Biology Professors 1, 2, and 3 listened to lyrical or non-lyrical music while writing. As students, all three of the English Professors listened to music while writing. English Professor 1 enjoyed non-lyrical music, while Professors 2 and 3 listened to lyrical or non-lyrical music while writing. History Professor 1 listened solely to non-lyrical music while writing in college.

History Professor 3 listened to non-lyrical or lyrical music while writing; “I wrote my dissertation listening to pop radio! It kept me going and awake... [because]...Pop is lighthearted and fun.” Professor 3, who writes in silence now, demonstrated knowledge on growth as a writer, and admitted that the music was not especially beneficial to the writing process: “I enjoy the quiet [now] because I am past the learning curve.” History Professor 2 was the sole professor that insisted on silence while writing as a student. Because I have assumed that the professors’ writing abilities have increased since their graduation, **I have confirmed through these results that self-regulation is indeed an acquired skill through extensive refining with consistent writing.** In college, these professors had not yet mastered environmental self-regulation, as they have shown to presently possess.

In the chart below, I have indicated that all except one History Professor listening to music as an undergraduate and graduate student.



These results are further confirmed through the analysis of the interviews I conducted with the three student participants. Biology Student shared that “Classical music is preferred

Comment [DD34]: I don't think so. In order to conclude that people who used to listen to music while writing and now don't *have become better self-regulators* (and thus that self-regulation is an acquired skill), you have to first be warranting that *listening to music while writing is a distraction that self-regulation eliminates*. (A warrant is a belief you already have to hold in order for a given logical inference to make sense.)

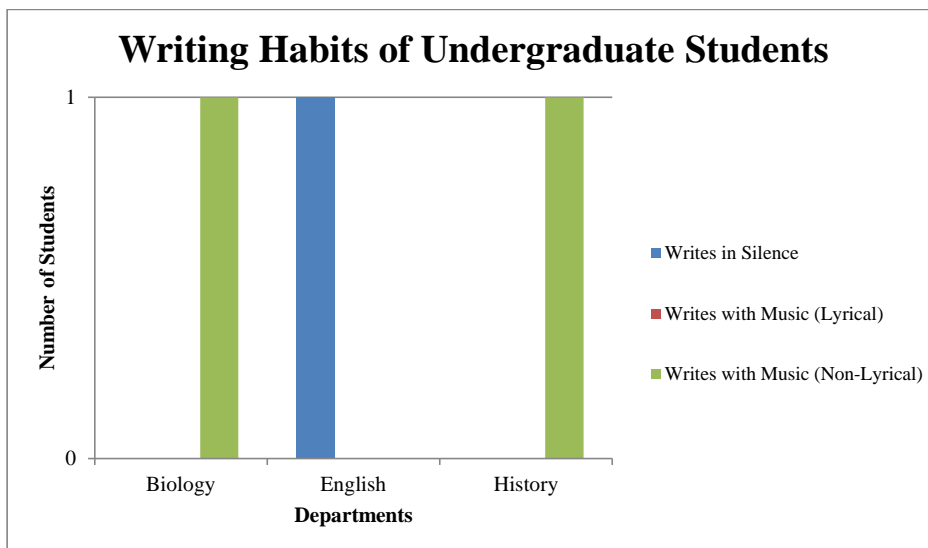
The problem is that you've actually shown the opposite so far, as does other research: that music is *not necessarily* a distraction at all; it depends on the writer and their circumstances. These writers' changes in writing processes can't then be automatically taken as an *increase* in self-regulation, because you haven't shown that they *were*'t self-regulating when they were younger and listening to music. (See, you seem here to treat "listening to music" as by definition lack of self-regulation, but your own data show that not to be the case.) The use of music as younger writers might have been (and probably was) every bit as much self-regulation as defaulting to silence is for a little more than half of them now.

Furthermore, you seem to be warranting that as students these writers were less successful than they are now as professionals. But you're showing us no grounds to think so, and in fact, given that these former students have become professors, an incredibly difficult job to get which demands excellence starting in undergrad and increasing through each level of education, the most reasonable conclusion is that they were (for their fields) at least very good writers as undergraduates, and probably superb (among undergraduates)—as you are. This is where the sample of honors students comes back to bite you a little bit: whatever they're doing or have done is almost by definition *working*.

So to me as one reader, what's most interesting here is the evidence that writing processes evolve with time even while the writers are successful throughout. I wonder if it's a general trend that fully adult brains require greater limits on environmental stimulation to hit the same degree of focus as younger brains, which could account for why successful writers seem to need less music and be less tolerant of distraction as they age. But that's just a guess for another study. ☺

Here, you need to decide what you can actually legitimately conclude from the data you have. That would seem to be that successful college writers evolved their environmental self-regulation as they aged and progressed professionally, remaining successful writers. Can you see anything else in this finding that you can know with reasonable certainty?

when writing papers...[because]...it is stimulating.” English Student, in contrast, needs to be alone in the silence to write; “Music is an excuse to become distracted.” However, History Student needs music to stay awake and focused, listening only to movie soundtracks while writing. “The purpose of such work is to help invigorate you and help the movie seem more interesting without distracting you from what is happening... [and]...It helps me focus on the words I am using, reading, and wanting to convey.” The table below summarizes the role of music in purposeful writing of the Students across the Departments.



The participating students are all of similar academic achievement, all maintaining GPAs of above a 3.9. Due to the greater volume of writing assignments required of the English Student, as well as the reported view on listening to music while writing, I have determined that English Student has a higher level of writing sophistication and has developed a greater degree of writing self-regulation than either Biology Student or History Student.

To make certain that these results were not obtained through a sample of participants with little interest in music, I used the answers to Question 17, as well as influences from Question 16

Comment [DD35]: These again appear to be unsupported inferences that *presuppose* the conclusion they purportedly *reach*. I'm with you in concluding that the English student is a more experienced writer in that they're consistently producing more writing for classes. (And I can grudgingly follow the equation of sophistication and self-regulation, another leap.)

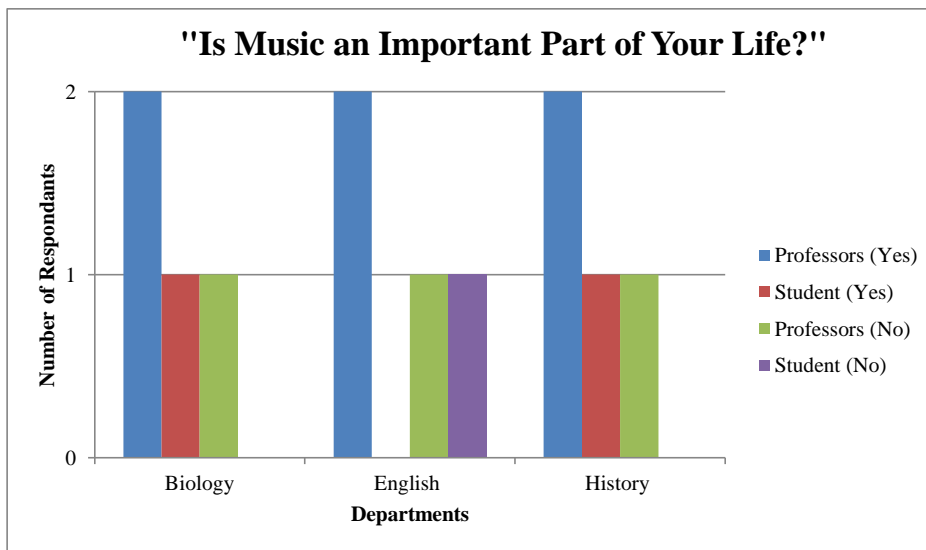
But I don't believe you can get from "greater experience" to "a higher level of writing sophistication" on that datum (amount of writing done) alone. It's a conclusion you would likely draw only if you *already wanted to believe* the English writer was more sophisticated, and the only apparent reason you would want to believe that is if you already wanted to believe that writing in silence is more sophisticated than writing with music, or in the equation you make, that silence represents self-regulation and music represents a lack of self-regulation. But again, your own data have already demonstrated the opposite conclusion, that high-quality writing can be produced both in the presence and absence of music, depending on the writer, and that the presence of music is often a *highly* self-regulatory move, as some writers use it to control their environment and focus.

Now, everyone in your study is getting about the same grades, which means that everyone's writing processes are working pretty much equally well for them, assuming we define process effectiveness by the resulting writing. And that doesn't actually say *anything* about self-regulation per-se, except, perhaps, that it likely indicates high self-regulation on the part of each writer. But there's no reason we couldn't conclude that in fact these writers all *poorly* self-regulate and produce good writing in spite of it.

So, for these reasons, the equivalences you're trying to draw here between experience and degree/effectiveness of self-regulation, and the resulting equivalence between self-regulation and silence that your argument winds up at, just aren't legitimate inferences either in a logical sense or even in an intuitive one, given the evidence you've developed that music is not a decisive factor in writing quality.

and 21, to determine how many of my participants considered music to be an important part of their life. Biology Professors 1 and 2, English Professors 2 and 3, and History Professors 2 and 3, as well as Biology Student and History Student, a result of 67% of total participants, confirmed that music was indeed an important part of their daily lives. There was no correlation between this answer and participant academic department. These results are summarized in the graph below.

Comment [DD36]: Again, I think it will be most helpful to have been including, if not full statements of the questions, then topic descriptions of the questions, right in the text here for readability.



All twelve participants (100%) have at least one year of musical or voice training (Question 19); however, only seven (58%) claim to have enjoyed this experience or continue to produce music. No correlation existed between the enjoyment of musical production and academic department. Regarding Question 21, all twelve participants (100%) claimed to have an emotional attachment to some genre of music. Therefore, musical background was not a strong factor in this study.

Comment [DD37]: Probably not a discussion to add to the article, but I'll ask in case: it strikes me that these writers are all significantly more likely than the general population to listen to non-lyrical rather than lyrical music. I'm continuing to suspect that in looking at high-intellect, life-of-the-mind kinds of people in the study, we would see differences in *how* they experience music and how they use it in comparison to the more general populace. I can't say that for sure, of course, but it would be something I'd look for in additional study.

Anyway, I ask because I'm wondering if you have any more fine-grained data about *how* important a part of their lives music is, and important *in what ways*, and *what music*? You were very smart and absolutely right to try to control for this variable in your study; I find myself wishing the control were a little more refined than the overall "importance in your life" question seems to make it. If the data just aren't there, then so be it; but if you did have additional info on this, it might be good to include some of it here.

Discussion

The results to this study **prove** that **environmental self-regulation** does in fact contribute to more sophisticated writing, and environmental self-regulation includes eliminating distractions, **including lyrical music**, around the area of writing. Undergraduate writers who struggle with formulating essays or struggle with writing self-efficacy **must attempt to learn how to self-regulate their writing**. Professors teaching introductory writing courses should share their knowledge in self-regulation **with blossoming writers**, which will help students not only develop into better writers but also alleviate the fear and anxiety associated with college writing. **Establishing self-regulatory techniques** early in the academic career will produce a higher writing self-efficacy, better writers in the future, and professionals who can communicate effectively in all fields of study, not just those who graduate with a degree in English.

Limitations

My study provides a better understanding of the challenges faced by undergraduate students who struggle with writing, yet I do realize my sample size was small (n=12), and my total response rate was a mere 63.2%, which may have biased the results of my research. Professors who did not respond or who declined an interview due to a busy schedule may have a different approach to writing. Also, my participant population was derived from a single university with little ethnic diversity. Expanding the study to include a larger participant population would give these results greater validity.

Acknowledgements

Many thanks to the participants—remaining unnamed due to IRB confidentiality—who agreed to set aside a portion of their valuable time for my interview questions. I am especially grateful to my mentor, Dr. Joyce Kinkead, who answered my countless questions throughout my

Comment [DD38]: *Prove* is a big word, and not one that will work for this study. (Though, interestingly, “disprove” will in some cases.) You want to stick with words more like “suggest,” “point to,” “imply,” “show,” “demonstrate,” or “reveal,” as appropriate.

Comment [DD39]: Actually, your study doesn’t show this because it hasn’t shown varying degrees of self-regulation (when that’s *not* defined as “silence while writing”) in relation to varying degrees of writing sophistication. I think you cited some other studies that show it; you can premise it, then, but not claim that your study actually supports it. Let me know if we need to talk more about this point.

Comment [DD40]: This phrasing suggests that lyrical music is inevitably a distraction, which is not a finding that your study has supported in any universal sense. Obviously the writers in your study find it to be a distraction and that’s important, but that’s all we really know on that for sure, I think.

Comment [DD41]: I’d suggest this would be better stated as “self-regulation of writing process and environment is obviously important for undergraduate writers to be developing.” But, again, I would not agree that your study has actually demonstrated that they *don’t* currently; I just think it’s a general, unarguable truth that part of developing knowledge and ability with writing is developing self-regulation, and younger students are likely to be less good at it (which is not “self-efficacy,” remember) than more experienced ones.

Comment [DD42]: Agreed wholeheartedly, and again, an important general principle of writing instruction. Can we clarify here, though, that you are *not* saying “professors should teach students to write without music?” I feel like you *wish* you could say that (this is the sense I get), but your study hasn’t supported that conclusion. What it’s supported, on the question of music, seems to be that professors should encourage students to experiment with different ways of using music and different kinds of music in their processes, perhaps especially for reducing other distractions. Would you care to explicitly say something like this? I think it would be pretty cool.

Comment [DD43]: Would you say a little about what these are? The study hasn’t really given any examples so far.

Comment [DD44]: Not necessary as a standalone section. As noted earlier, response rate isn’t important to discuss in this study. And the one limitation you *really* need to discuss—the all-honor-student sample—should be discussed back up in the participant section and be returned to in a couple places where results warrant it.

research and my writing, and provided such prompt feedback. I would have easily been overwhelmed without her guidance, encouragement, and support throughout the entire process.

Appendix

Appendix A: List of Interview Questions

Preface: I am conducting a study to look at the role of music in purposeful writing. For the study, I am interviewing an equal number of faculty members and students. {N.B. The questions below are largely identical for both audiences; however, the wording changes slightly, depending on if the interviewee is a faculty member or a student. }

1. How often do you write academic papers (*faculty version*: in your area of specialty) that are considered meaningful and purposeful to your education/career?
2. Do you enjoy writing these papers or do you consider it to be a task? Why?
3. Do you usually write large portions of your paper at one time or do you usually take breaks? Why?
4. Do you listen to music while writing these academic papers? Why or why not?
5. What is your preferred musical choice when writing these papers? Why?
6. Do you listen to any other genres of music? What and when?
7. Does your musical choice vary when engaging in purposeful writing, or is it always the same?
8. Does your musical choice change in different stages of writing (draft vs. final)?
9. Does your musical preference while writing vary depending on your mood or length of time you have allotted for writing?
10. In your opinion, do you believe music is influential in your writing process?
11. Do you ever feel inspired to write or come up with an idea that was missing from your paper after listening to music?
12. Do you often experience writer's block? If yes, how often? Is there a specific trigger (e.g., lack of ideas, distractions, etc.)? How do you usually overcome this?
13. Would you consider music to be better at eliminating distractions or creating a distraction while you are writing? Why?
14. What is your most commonly used device for listening to music (e.g., radio, iPod, Pandora, etc.)? Is there a reason for this choice?
15. Do you have a special playlist? If yes, why have you selected these songs?
16. How often do you listen to music on a daily basis?
17. Would you consider music to be an important part of life or white noise for mundane tasks like chores, exercise and driving? Why?
18. Do you listen to music before sleeping or while sleeping?
19. Do you play a musical instrument or sing currently or in the past? (Which?) Why or why not?
20. How many concerts or other musical performances do you attend on a yearly basis?

Comment [DD45]: Redundant info that should be deleted here.

21. Do you feel emotional attachment to any particular musical genre? Why or why not?
22. Is there anything else you would like to add about your writing process or your musical interests that was not addressed in the questions above?

Appendix B: Follow-up Interview Question

1. While you were an undergraduate and/or graduate student, did you listen to music while writing? If yes, what and why?

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