

Mindfulness and Music:

Investigating the Effect of Mindfulness Techniques in Musical Practice

An Honors Thesis (HONR 499)

by

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Thesis Advisor

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Muncie, Indiana**

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Abstract

Meditation is a practice that has been important for generations in Eastern cultures, but in recent years it has gained traction in the Western World. Specifically, educators and musicians are utilizing mindfulness, a concept taken from meditation, to aid in both Socio-Emotional Learning as well as practical performance gains in the classroom. Research by Anderson (2016), Czaikowski and Greasley (2015), and Diaz, Silveira, and Strand (2020) support this practice. Building off of this data, this study asks music students at Ball State University to include mindfulness techniques in their practice sessions and to self-report perceived improvements in practice efficiency and performance gains. While the study was interrupted before data collection could be obtained, prior research supports the hypothesis that students will experience performance and efficiency increases when adding mindfulness exercises to personal practice.

Acknowledgments

Although the study was not carried out in full, none of it would have been possible without Dr. Ann Harrington's continued support through advising on the project. I want to offer my sincere thanks for her mentorship and guidance throughout not only this project but through my entire college experience.

I would also like to thank Dr. Emert for his support and guidance, especially amid a global pandemic. Corallee Young also played a large part in the success of my thesis.

Finally, I'd like to thank all of the professors I have had at the Honors College who challenged me to think in new ways.

Process Analysis Statement

Since my freshman year, I have been thinking about my honors thesis. I am a very inquisitive person by nature and love to investigate how and why things work. At some point, I landed on the topic of mindfulness and its implications for musicians. Like many of my colleagues, I have struggled with managing stress and anxiety throughout my college experience. I will never forget the day I was on the verge of a panic attack and sat under a tree in the North Quad to try a guided meditation to calm myself down. After that, I had a very personal interest in meditation and began to follow the research, particularly concerning musicians. I stumbled across a podcast for marching arts educators that detailed one band's experience with implementing a meditation at the beginning of the rehearsal. The instructors reported a much higher level of focus and noted that students were progressing faster than in previous seasons. This flipped a switch in my brain and set me on the path of investigating the phenomenon for myself.

I had not previously completed any sort of formal study, so Dr. Harrington, my advisor, was critical at helping me succeed. I completed the CITI research certification and began to work on my IRB application. Dr. Harrington helped to refine my research questions into something I could tangibly do during my undergraduate work at Ball State. After IRB approval in October of 2019, I began to recruit participants, which is where I hit my first major roadblock. Originally, I planned on a pool of 12-16 subjects so that I could have wide enough of a research pool. To keep the research integrity, I did not ask any personal friends to participate but rather visited music education classrooms to recruit subjects. Compensation was offered through professional development points, something required each semester for music education students. To remove any sense of obligation, I asked those interested to fill out an interest form by scanning a QR

code on the recruitment flyer. After two days of canvassing at least six different classes, I received no responses on my form. I tried visiting classrooms once more and still received no responses.

At this point, the semester was nearly over so I decided to try again in the spring when there would be fewer academic responsibilities affecting participation. My classroom appearances were not working, so I emailed the recruitment information to people who had mentioned an interest in the previous semester but not officially signaled an intent to participate. I was able to get a much smaller pool of three students by the end of February of 2020, and I planned on begin research the week following spring break. This backfired when the Covid-19 pandemic caused BSU to close its doors. I tried to transition the study to be conducted virtually, but two of my subjects decided against participating, and one eventually stopped replying to my communications. At this point, I had completely given up on the thesis, as I did not see a way to completion. In addition, my advisor ended her tenure with the school, leaving me with a half-finished thesis and no advisor. I also began student teaching in the Fall semester, so I knew I would not have the time or resources to conduct a new study.

The honors college reached out to me after I applied to graduate, and I explained the situation above. Dean Emert met with me and helped me come up with a plan to still finish my thesis. I was not aware that Dr. Harrington could still give me a grade as she was no longer a faculty member and I did not know how to write a thesis based on a study that was never carried out. Both Dean Emert and Dr. Harrington deserve ample credit for this thesis coming into fruition as they showed me a path forward. Even though I did not get to collect any raw data, I was able to find further research that supported my hypothesis. It is my hope that the work I have

done will be picked up and expanded upon by another researcher to further inform best practice on including mindfulness exercises in musical practice and instruction.

Introduction

In recent years, musicians and educators have become increasingly interested in mindfulness. Meditation, an important component of mindfulness, has been practiced in eastern cultures for generations due to its significance to the Buddhist religion, but now the practice is beginning to gain traction in more mainstream and secular western culture (Stefan, 2011). In 1979, molecular biologist Jon Kabat-Zinn developed the first secular mindfulness course for patients struggling with chronic depression, anxiety, and stress. Kabat-Zinn defined mindfulness as "...paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994, p.4). Since then, academics, as well as educators, have been interested in what else mindfulness can do. In fact, the University of Massachusetts, University of California Los Angeles, and University of California San Diego all have dedicated centers to research aspects of mindfulness and to offer education about its practice (University of California, University of Massachusetts, 2020). Harvard Medical School hosts the Mindfulness Research Collaborative (MRC) which brings researchers, scholars, and practitioners together to do research, write collaborative papers, and conduct multi-site research on the subject of mindfulness (Vago, 2020).

A study by Czajkowski and Greasley, in which university singers participated in eight weeks of two-and-a-half-hour group classes on breathing meditation, body scan meditation, yoga, eating meditation, and walking meditation, found a positive correlation between implementing mindfulness exercises and perceived performance improvements (2015). That data

suggests that there is a place for mindfulness in the musician's toolkit. The application of this, however, is limited in scope as participants were involved in long, multi-week classes in order to learn and be able to effectively use mindfulness exercises. A study by Diaz, Silveira, and Strand compressed the instructional portion down to a five-day, self-guided module offered to undergraduates as a part of an intro to music education class. Nearly 86% self-reported improvement in academics, music practice, and music performance, and almost all participants attributed mindfulness to improving their general wellness (2020). Those results suggest that mindfulness techniques can be taught and effectively used in a much shorter time frame while still achieving positive qualitative results. Additional research has also shown the benefits of mindfulness for musicians goes far beyond simply achieving better performance. A study by Anderson showed that students as young as fourth grade can also benefit from those techniques. Researchers had the non-control group of students listen to 20 pairs of excerpts and asked them to indicate whether the two items in the pair were the same or different. Students were also given instructions that focused on characteristics of mindfulness such as openness to novelty, alertness to distinction, sensitivity to different contexts, awareness of multiple perspectives, and orientation in the present. While the goal of the study was not primarily to assess performance gains, it found an increase in students' Musical Aptitude Profile and Music Audiation scores compared to the group that was not receiving mindful listening instructions (2016). Given that students performed higher on the Musical Aptitude Profile, it is plausible that this exercise could impact their future performance abilities.

As a music educator, this is something that interests me greatly and could potentially help guide my future music students on their path to success. While the previous literature does

suggest a positive correlation between mindfulness and musicianship, my study will investigate attaining these qualitative results in the most efficient way possible.

I anticipate that the participants who engage in the mindfulness sessions will report that they experienced benefits as a result of those sessions. While the research backs this hypothesis, the importance of mindfulness in music performance has long been recognized by performing musicians. For example, the musician Laraaji, who is also a laughter meditation practitioner from New York City, has always seen the connection between the two disciplines. He says that before going into the creative process, he usually does some meditation or other mindfulness techniques until he gets a better vision of what he wants to create. The topic has also been included in expert opinion publications published by music educators. Marching Roundtable, a podcast from Marching Arts Education that brings on several great pedagogues in different areas of the marching arts, recently published an episode titled "Using Meditation with your Group for Better Focus and Success." In the podcast, band directors John and Nicole Slick (2017) shared how they incorporated ten minutes of guided meditation at the beginning of marching band rehearsals. They reported that the group was far more productive and focused during the season than ever before, with relationships between staff and students described as much more positive.

Methods

My method will involve selecting twelve undergraduate music students of various instruments, divided randomly into three groups of four people. To qualify for the study, the participant must be a student of the Ball State School of Music, be 18 years of age, and practice a musical instrument at least three (3) times a week. Each group is assigned a different task: group one (figure 1) will be asked simply to try and pay attention to when they are being off task and to refocus, group two (figure 2) will be asked to do a series of breathing exercises for two minutes

before each practice session, and group three (figure 3) will be asked to do a four-minute guided meditation before each practice session. Before the beginning of the study, I will meet with each group in a conference room at the BSU library to discuss what is being asked of them and to provide any training necessary. Group two will receive written instructions and group three will receive an audio recording that will lead them through their respective treatments. For the first week of the study, participants will be asked to practice normally and to log each practice session, via a Qualtrics survey, by indicating the length and how effective they believe they were at reaching their practice goals, to establish a baseline. After this preliminary week, the participants will begin using their assigned mindfulness techniques. This will include an overall rating of effectiveness for the week with supporting rationale statements and the total number of practice sessions/hours practiced per week. The study will last for five weeks. At the end of the study, I will collect the logs and code the participants' comments for themes. I will also conduct interviews with each participant to ask them to elaborate on any effects that they observed, and to ask for questions about their practice logs as needed. After the final interview, identifying information will be eliminated for use in the final data analysis. I will then transcribe the interviews and code them for themes.

Active Focus

One of the key aspects of mindfulness is being more aware of your own body and your current place in time. You might think of it as “living in the moment,” so to speak. Active focus is possessing an awareness of your own thoughts and having the ability to redirect them. In terms of your practice session, this might mean noticing your thoughts are wandering to another class or assignment, or perhaps checking your phone, and redirecting your attention back to your practice goals. It is a natural human behavior to lose focus, but with active focus, we can become more aware of when we are actually off task and maximize productivity.

Figure 1 – Instructions for Group 1

Breathing Exercises

Please perform the exercise below **seated** with proper playing posture at the beginning of each practice session using a physical or digital metronome. Try to be as full as you can on the inhale and as empty as you can on the exhale.

Metronome – 100 BPM

Breathe in for 4 counts and out for 4 counts. Do this 4 times.

Breathe in for 3 counts and out for 3 counts. Do this 4 times.

Breathe in for 2 counts and out for 2 counts. Do this 4 times.

Breathe in for 1 count and out for 1 count. Do this 4 times.

Take a deep breath in and sigh out.

Figure 2 – Instructions for Group 2

Guided Meditation (transcript)

Hello, and welcome to your daily mindfulness exercise.

Together, let's bring our body into a relaxed and comfortable position, either sitting or lying down for these 4 minutes of turning inward.

If your eyes are not closed already, allow them to close and have a moment of rest.

Start taking deeper, more relaxed breaths.

In and out in and out

Can you feel where your body is making contact with the surface below you?

Begin to notice the points of tension in your body.

With each exhale, let's imagine that we are releasing those spots of tension.

Feel the tension in your feet fall away.

Feel the tension in your legs fall away.

Feel the tension in your hips fall away.

Feel the tension in your core fall away.

Feel the tension in your chest and shoulders fall away.

Feel the tension in your neck fall away.

Feel the tension in your face fall away.

With each breath becoming more relaxed, and more aware of your own body

Allow your thoughts to pass by as if watching cars on a highway, seeing them for a moment before disappearing. We are often so worried about what is going to happen, or what needs to be done, that we forget to pay attention to the present.

Just for a moment today, allow your worries to pass by, and take a minute to just be.

... (30 sec silence)

Slowly, let's begin to draw our attention back to our breathing.

When you feel ready, begin to blink your eyes back open.

As we continue our day, let's try and be more aware of our own bodies and what is happening in the present. Have a wonderful practice session.

Figure 3 – Instructions for Group 3

Results

Due to the Covid-19 pandemic that broke out at the beginning of 2020, Ball State University closed its campus in March. After having the study approved by the IRB, I had planned on starting the data collection right when the shutdown occurred. I reached out to students who had indicated their interest in taking part in the study and found most were either unwilling or unable to complete the study. There was one subject who originally said they would be able to but eventually stopped communication. As such, there is no data collected from the study that would allow for any meaningful discussion.

Discussion

Based on the supporting research it is highly likely that students would have experienced a perceived increase in practice efficiency and performance ability. Group one would be most likely to have the least amount of gains, with group two and three producing a greater effect. In the study by Anderson, the data showed that more is needed than simply asking students to "notice" differences in a pair of excerpts. Instead, the student group that showed increased scores on the Music Aptitude Profile were given specific directions and examples while the control group was simply asked to notice differences (Anderson, 2016). Given this, group 3 had the most likely chance to increase practice efficiency and performance gains, as the guided meditation primed students for what to expect. In addition, because both groups 2 and 3 require active participation in a mindfulness exercise, both groups would likely have increased buy-in.

A study by Sternbach about collegiate music students show a high level of stress in relation to many of their peers in other majors (2008). Another study by Brodsky indicates that

musicians are among the top five occupations to report mental illness (1996). Sternbach's study recommended that the best way to combat this is to address the ways students critique their practice and how they prepare for performance. Kabat-Zinn's definition of mindfulness emphasizes a non-judgmental attitude, which could help students from harsh self-critique. Given the aforementioned data, as well data that shows meditation lowers blood pressure, cortisol, and epinephrine, indicators of stress, mindfulness exercises could help musicians manage the unique challenges of their field and perform at their highest abilities (Sharma, 2015). Even though this study was not carried out in its entirety, I believe it was at least worthwhile to examine the previous research and hypothesize ways to replicate benefits in personal practice. With a wider subject pool and directed analysis, music educators could begin to implement these exercises in their classrooms

Limitations and Implications for Future Research

Of course, this is all hypothesized. Variable such as previous experience with meditation, religious background, prior performance ability, and practice habits may impact the effectiveness of mindfulness exercises. For students who previously had poor focus or unplanned practice sessions, perceived gains may have more to do with building better practice habits than mindfulness exercises themselves. Conversely, students who already have a disciplined practice regiment would likely not see the same level of gains as the aforementioned group, but these high performers may tend to have more stress which negatively affects focus and performance. In addition, all data collected would be qualitative and based on the subject's perception. To control for this in future studies, researchers could restrict the subject pool to those least likely to have conflicts with meditation and draw from a pool of students who are at the same general

performance level. A Musical Aptitude Test or another standardized performance test could be given at the start and end of the study. However, as music performance and its reception is an inherently subjective experience, it may be insignificant to try and collect quantitative data. Moreover, asking students to self-report could be seen as a mindfulness exercise, as students must be aware of and analyze their practice sessions.

Conclusion

Meditation and music are two things that I have a lot of passion for, so I am always excited to see the two come together. Getting better, faster, has always been of great importance for musicians. At the present date, the world is still struggling with the Covid-19 pandemic, but I would like to one day collect real data to analyze. The outcome of my study would be submitted for presentation at the research poster session of the Indiana Music Educators Association Research and Best Practices Poster Session. I anticipate that the findings of the study could be used by educators and students all across the country. My target audience is current and pre-service music educators. If teachers are able to take and adapt the information from the study to their ensembles and individual students, the next generation of musicians will be much more equipped to execute more effective practice sessions for themselves and those they teach. There is also evidence discussed above that suggests mindfulness will support students in other aspects of their lives, giving them important skills in self-regulation and helping them seek a career in music without unhealthy levels of stress.

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IRB HUMAN SUBJECTS RESEARCH APPLICATION AND PROTOCOL FORM

PRINCIPAL INVESTIGATOR INFORMATION

The Principal Investigator (PI) MUST be a Ball State University Faculty, Staff, Graduate Student or Undergraduate Student research.

Principal Investigator Name: Chase Malcom

Current Degree: BS Department: Music Education

Email: ccmalcom@bsu.edu Phone Number: +1 (317) 374-2629

Affiliation: BSU Undergraduate Student Type of Student Research: Honors Thesis

Principal Investigator Research Experience:

1. Have you ever been a Principal Investigator? Yes No
2. How many years have you been conducting research in any capacity? Years
3. Have any of your prior studies been suspended or terminated by BSU or a third party? Yes No
4. Have you or any member of your research staff ever been sanctioned for unethical behavior in research activities? Yes No

PRINCIPAL INVESTIGATOR AGREEMENT:

I have read and understand the Ball State University's "Policy for the Protection of Human Subjects in Research," as stated in the Faculty and Professional Personnel Handbook, and I agree:

- a. to accept responsibility for the scientific and ethical conduct of this research study,
- b. to obtain IRB approval prior to revising and altering the research protocol, informed consent, or study documents, and
- c. to immediately report any serious adverse events and/or unanticipated problems as a results of this study to the IRB within 24 hours.

FACULTY ADVISOR INFORMATION

If the Principal Investigator (PI) is a STUDENT with Ball State University, a BSU Faculty Member advising or supervising the student must be listed below:

Faculty Advisor Name: Dr. Ann Harrington

Current Degree: PhD Department: Music Education

Email: amharrington3@bsu.edu Phone Number: +1 (765) 285-5405

FACULTY ADVISOR ASSURANCE STATEMENT

As the Faculty Advisor for this study, I certify that I have reviewed and support this protocol and approve the merit of this research project and the competency of the investigator(s) to conduct the project. My involvement in this study is as follow (Check Box):

I will be involved in this project. My name is listed and my responsibilities (described in the Key Personnel section) include

supervision and oversight of this project.

KEY PERSONNEL

List all Key Personnel (including Faculty Advisor), other than the PI, who will have a role in the research project (*Thesis and Dissertation*

Committee Members are not required unless they will work with you on your research project):

Add More Personnel

Personnel Name	Department / Organization	Role on the Study	Responsibilities
Dr. Ann Harrington	Music Education	Faculty Advisor	To oversee and guide research through development of project through data analysis and reporting

HUMAN SUBJECTS RESEARCH TRAINING

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)

As of January 1, 2010, Ball State University policy requires that all Principal Investigators, Faculty Advisors, and all Key Personnel complete the CITI Training. To comply with the educational requirement, you and all key personnel (including faculty advisor) must have completed the online training modules on the protection of human subjects. For more information and link to CITI's website, please go to the [Office of Research Integrity website](#).

Have you and all key personnel completed the required online training modules? Yes No

NOTE: If this is your first BSU IRB submission, please include a PDF copy of your CITI Training Certificate, along with your Key Personnel.

Responsible Conduct of Research Training Modules (RCR)- If your project is federally funded by the National Science Foundation, you and all key personnel (including faculty advisor), must complete the Responsible Conduct of Research Training Modules on CITI, along with the Basic/Refresher Course or Biomedical Course.

OTHER TRAINING

Are there any specialized training(s) required for your project (i.e., certification for medical procedure, training in crisis response, etc.)? Yes No

RESEARCH PROJECT INFORMATION

Project Title: Mindfulness and Music: Investigating the effect of mindfulness techniques in musical practice

***The Project Title must match all documents and**

IRBNet. SUBJECT INFORMATION

Total Number of Participants (Estimate or Range): 3 - 16 Gender: Both Male and Female

Age of Participants: Minimum Age 18 Maximum Age (If no max. age limit, indicate with N/A or None) N/A

SUBJECT POPULATION

Check all that apply:

Normal Adult Population (18 years or older)

12/3/2015-

Students (18 years or older)

Children (Minors)/Students (0-17 years)*

Pregnant Women (Physical Experiments, Examinations, or Medical Research)* Prisoners*

- People with Diminished Capacities*
- Persons undergoing and/or receiving Health, Medical, Rehabilitative, Treatment/Services, etc. * Persons undergoing Social/Psychological Counseling*
- Other (Explain):

SUBJECT RECRUITMENT

1. Will the research project be advertised on any electronic/paper media (*Email, Social Media, etc*)? Yes No

RECRUITMENT PROCEDURES

1. Describe in detail how you will recruit your participants for your study:

Course instructors at Ball State University will be contacted via email to request permission to recruit participants from their instrumental music methods courses. With the permission of the course instructors, I will make a brief announcement at the end of a class period in which I was invited to speak. This announcement will make students aware of the opportunity to participate. In the announcement I will state that volunteer participants will be asked to incorporate one of three mindfulness techniques into their personal practice schedule. I will also let the participants know that participation would involve attending one 20-minute instructional meeting, incorporating one of three minute mindfulness technique into their personal daily practice, answering four brief questions after each practice session as well as six brief questions at the end of each week (via qualtrics), and participating in a 15-minute exit interview at the end of the three-week data collection period. Volunteer participants will be asked to provide their email addresses at the end of the recruitment announcement. I then will provide a Qualtrics link via email for participants to enter their responses at the specified times. Those responses should take approximately three minutes to complete. I will then clearly state to the potential volunteers that the entire participation time comittment involves a three-week period in which the participant will respond to the four brief Qualtrics items after each daily practice session (one minute per day), the six brief Qualtrics items each week (2 minutes), one educational meeting in which techniques will be introduced (20 minutes), and one exit interview with the researcher (20 minutes). I will also let the participants know that, although three different mindfulness techniques will be used, information about all techniques will be available to all participants at the end of

2. If any screening (questionnaire) will be done for recruitment, will the questionnaire data be used for the study if the participant is not qualified for the study?

- Yes No Not Applicable to this Study

SUBJECT INCLUSION/EXCLUSION CRITERIA

Inclusion Criteria: A set of conditions that must be met in order for subject(s) to participate in the study (*including age of the participants*)

Participant must: Be a student of the Ball State School of Music; be 18 years of age; practice at least three times a week

Exclusion Criteria: A set of conditions that the subject(s) may not be allowed to participate in the study.

N/

POTENTIAL RISKS/DISCOMFORTS TO THE SUBJECT(S)

Will there be any anticipated or potential risks or discomforts to the subject(s) during the study? (*The federal regulations (45 CFR 46) define minimal risk, "...the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves that those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests."*)

- Yes No

DECEPTION/COERCION OF SUBJECT(S)

Deception- Withholding information for the purpose of the study.

Coercion- Intimidating, threatening, or force to participate.

Will this project involve either Deception or Coercion? Yes No

SUBJECT AND STUDY BENEFITS

Will there be any benefits to the subject and/or to the study? No Yes

Participants will be provided with one mindfulness session per week that may have a positive impact on their daily lives.

PROJECT SITE LOCATION

Provide the following information where you will conduct your study (location of data collection, interviews, etc.)

Check all that apply:

Ball State University Campus (including Burriss Laboratory School)

Building: Room Number(s)

Off-Site Locations or Schools

Internet (Be sure to read any policy regarding data ownership and protection)

Online Survey Sites (Check all that apply)

Qualtrics

Survey Monkey

MTurk (Amazon)

Other

If you are using Qualtrics, do you plan to use Geo-tracking (function on Qualtrics to track participants IP addresses)?

Yes, I plan to use Geo-Tracking.

No, I will not use Geo-Tracking and will click on the **Anonymize Response** button in the *Survey Options* buttons (top area)

IU Ball Memorial Hospital (Contact Alfreda Bright- abright@iuhealth.org. BMH's

IRB) International Countries

U.S. Based Field

Study Other

LETTER OF SUPPORT: Any research that is conducted at a **non-BSU institutions or organizations** is required to obtain a Letter of Support. The Letter of Support must be on the institution or organization's letterhead and signed by a person of authority to grant access to the site for the study (i.e., Director, Manager, Principal, Superintendent, etc.). The Letter of Support must be uploaded on IRBNet as part of your package submission. An email message is **NOT** sufficient to meet this requirement.

In cases where sites, agencies, etc., have not been identified yet (original submission), please indicate this in the Application and make sure to upload the letter on your IRBNet project number once the letter is obtained. This is handled as a Modification process once the project has been approved.

COLLABORATIVE/MULTI-SITE RESEARCH PROJECTS

Will the proposed research project be conducted as a collaborative research (i.e., research that involves two or more institutions/ organizations that hold **Federalwide Assurances*** and have duly authorized IRB's)?

***Federalwide Assurance**- An institution committing to the Department of Health Human Services that will comply with the requirements in the HHS Protection of Human Subjects regulations at [45 CFR part 46](#).

Yes No

FUNDING

Have you applied for funding or have receive funding for your project? Yes No

DATA- COLLECTION, STORAGE, AND SECURITY

1. Will any information regarding the participant's identity (e.g., name, DOB, SSN, ID Number, address, phone, etc.) be collected on Informed Consent(s) or Study Documents?

Yes No

If Yes, explain why and what security measures will be taken:

Names will be recorded on informed consent documents for research integrity. Email addresses will be collected in order to distribute Qualtrics links. Consent forms will be scanned and transferred to a password protected computer and paper copies will be destroyed.

If you are collecting identifiable information, will the information be stored with the participant's responses? Yes No

2. Are you planning on using the participant's identifiable information on presentations or publications? Yes No

3. Will you be using Audio or Video Recording for your

project? Yes No

Will the recordings be used for presentations or publications?

Yes No

4. Where will the data (electronic/paper) be stored during and after the study is complete? (Check all that apply): Locked Cabinet/Office

Password Protected Computer/Flash Drive/DVD/CD or other Storage

Media Home

Online Data Storage

Other

5. How long will you keep the data (raw and final)?

Raw data will be retained for 3 years.

If your data (raw) is retained indefinitely, please provide an explanation for why and make sure that you have an explanation on the informed consent:

6. Who will have access to the raw and final data besides yourself? (Check all that

apply): Faculty Advisor

Research Team (Co-PI, Research Assistant, Graduate Assistant, etc.)

- Off Campus Collaborator or
 Consultant Sponsor
 Federal Agency (NIH, FDA, NSF,
 etc.) Other

DATA CONFIDENTIALITY/ANONYMITY

Anonymous Data: Defined by where the researcher(s) may not identify of the subject with his/her data at any time during the study.

(Online or Paper Surveys/Questionnaires, archival de-identified data, etc.)

Confidential Data: Defined by when coding the identity of the subject and his or her data by using personal identifiers, there exists a means for identifying the subject.

(Interviews, audio or video recordings, using identifiable information, etc.)

Indicate whether your data is Anonymous or Confidential and explain what provisions will be taken to maintain privacy and security:

Data will be confidential. Participants will choose a pseudonym for themselves. Responses to Qualtrics items and interview questions will be connected to their pseudonym, but not to their real names.

SPECIAL TYPES OF DATA

1. Family Educational Rights and Privacy Act (FERPA)

A. Will educational records or information found in educational records, as defined by FERPA

be use? Yes No

2. Health Insurance Portability and Accountability Act (HIPAA)

A. Will health, medical, or psychological records or information found in medical/health records, as defined under HIPAA

be used? Yes No

COMPENSATION

1. Are subjects being paid or receiving incentives for participating in the study? Yes No
2. Are subjects being reimbursed for expenses (travel, gas, food, hotel, etc.)? Yes No
3. Will students receive extra credit for a course if they participate in the study? Yes No
4. Will students receive class or departmental research credit for their participation? Yes No
5. Is there a completion bonus? Yes No
6. Will there be compensation for research-related injury? Yes No
7. If the participants withdraw from the study (during or after), will they receive their incentive/compensation or research credit? Yes No Partial/Pro-Rated

If No, please explain why:

8. Other (Please Explain):

If you are using BSU funds, you will need to contact the [BSU Office of University Controller](#) (765-285-8444) or visit their website for procedures and policies regarding tax information to be collected from participants.

SUBJECT FINANCIAL EXPENSES

Will subjects have any financial expenses to participate in the study (i.e., travel, gas, food, hotel,

etc.)?

Yes

No

NOTE: If a subject has to travel to the location site to participate in the study via car, plane, train, bus, etc., they will incur financial expenses.

STUDY PROTOCOL

STUDY PURPOSE

State the objectives of the research and, when appropriate, any hypotheses you have developed for the research.

The purpose of this study is to investigate the perceived effects of incorporating mindfulness techniques into musicians personal practice, specifically on practice efficiency.

RATIONALE

Explain the need for the research. Describe the data that the project is expected to provide and how the data will contribute to existing information in the field. Provide a concise description of the previous work in the field.

NOTE: If you are planning on using students in your class as research participants, please explain why you want to use them in your study.

Multiple studies have been conducted on the topic of incorporating meditation and mindfulness techniques into the classroom. Valentine and Sweet (1999) noted much higher performance in attention span from participants in the meditation groups, as opposed to the control group. A more recent study by Lin and Mai (2016) investigated the effects of incorporating guided meditation into the morning routines of study group of students. Participants who experienced the mindfulness meditation archived higher scores than the control group on a short-term academic performance assessment. Additionally, most of the participants in the treatment group reported that they personally enjoyed the new mindfulness techniques.

While there has been a recent increase in research being conducted on the benefits of meditation and other mindfulness practices, there is very little research being conducted on how it could benefit musicians and music students specifically. As a music educator, this is something that interests me greatly and could potentially help my guide my future music students on their path to success.

Lin, J. W., & Mai, L. J. (2016). Impact of mindfulness meditation intervention on academic performance. *Innovations in Education and Teaching International*, 55(3), 366–375. doi: 10.1080/14703297.2016.1231617

RESEARCH REFERENCES/CITATIONS

List any references/citations that you researched based on your study purpose and rationale for your project. If there are no references or citations used for your project, please explain why.

Lin, J. W., & Mai, L. J. (2016). Impact of mindfulness meditation intervention on academic performance. *Innovations in Education and Teaching International*, 55(3), 366–375. doi: 10.1080/14703297.2016.1231617

Valentine, E. R., & Sweet, P. L. G. (1999). Meditation and attention: A comparison of the effects of concentrative and mindfulness meditation on sustained attention. *Mental Health, Religion & Culture*, 2(1), 59–70. doi:

METHODS AND PROCEDURES

Describe the study and design in detail and all procedures in which the subject will be asked to participate. If surveys and questionnaires are used for the study, how will they be returned to the researcher? If the research involves more than one visit to the research location, specify the procedures to take place at each session, the amount of time for each session, the amount of time between sessions, and the total duration of the sessions. If multiple researchers will be involved in the project, identify who

I will recruit undergraduate music students enrolled in instrumental methods courses at Ball State University. I will then randomly assign each participant to one of three groups. Each group will be assigned a different mindfulness treatment: group one will be asked to use the first two minutes of each of their daily practice sessions to think through their practice session, group two will be asked to use the first two minutes of each of their daily practice sessions to complete a series of breathing exercises, and group three will be asked to use the first two minutes of each of their daily practice sessions to complete a two-minute guided meditation. Prior to the beginning of the study, I will meet with each group in a conference room at the BSU

will conduct which procedure(s).

presented at this introductory meeting, as well as a secondary informed consent document relating to the post-study interview. These documents will be collected at the end of the introductory meeting, scanned onto a password protected computer, and paper copies will be destroyed. Group one will receive written instructions for "thinking through" their practice sessions (see attached). Group two will receive written instructions that will guide them through the breathing exercises (see attached), and group three will receive an audio recording that will guide them through a mindfulness meditation exercise (see attached). Participants will be also be asked to choose a pseudonym to ensure confidentiality and to facilitate data management. For the two practice sessions, the participants will be asked to practice normally and to log each practice session, via a Qualtrics link. They will be asked to indicate the length of the practice session (in minutes) and to rate (on a 10-point scale where 1 = very ineffective and 10 = very effective) how effective they believed that practice session to have been. An open response item will prompt them to provide a few sentences explaining why they assigned themselves that rating. After these preliminary practice sessions, the participants will be asked to begin using their assigned mindfulness techniques during the first two minutes of each daily practice session. After each practice session they will again use a Qualtrics link to record the length of their practice session (in minutes) and to rate the overall effectiveness of their practice session. An open response item will prompt them to provide a few sentences explaining why they assigned themselves that rating. The study will last for two weeks. At the end of the study, I will download all responses from Qualtrics and organize the data by pseudonym. After a preliminary analysis of that data, I will also conduct interviews with participants to ask them to elaborate on any effects that they observed, and to ask for questions about their practice logs as needed. I will then transcribe the interviews and code them for themes. The Qualtrics data collection

INFORMED CONSENT

Please indicate what type(s) of Informed Consent (IC) will be used for this study? (Check all that

- apply) Adult (18 years or older)
- Parental Permission (Minors: 0-17 years old)
- Child Assent (Minors: 0-17 years old- This must be written in age appropriate language)

Informed Consent Process/Signature Waiver

Are you applying for an alteration of the Informed Consent process or a waiver of the Informed Consent signature requirement?

Yes

No

PLEASE NOTE: If English is NOT the primary language of the participants, then the Informed Consent must be also be translated in the participant's native language. Include the translated Informed Consent with your package and a statement as to how (or by whom) the Informed Consent was translated.

PROJECT DOCUMENTS

Check the box(es) of ALL the documents you submitted for your project on IRBNet:

- Application and Protocol
- Form Adult Informed Consent(s)
- Parental Permission Consent (for Minors) Child Assent (for Minors)
- Recruitment Letter(s)
- Survey/Questionnaire/Interview Questions
- Data Collection Forms
- HIPAA/FERA Documents
- Media Permission Form(s)

- Letters of Support
- Debriefing Letter(s)
- CITI Training
- Certificates Other

(Explain):

Written instructions for each group are attached.

IRBNET ELECTRONIC SIGNATURE:

The new package created for submission for your project must be electronically signed in IRBNet by you, the Principal Investigator (and Faculty Advisor, if you are a student). Your signature indicates your certification that the information provided in this document is accurate and current.