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Roads Less Traveled: Exploring New Possibilities in String Research

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Abstract

This paper, presented upon receiving the Outstanding Long-Term Achievement in String Research Award at the 2025 American String Teachers Association (ASTA) National Conference in Atlanta, Georgia, explores how faculty at non-doctoral institutions overcame challenges related to limited time and institutional support in developing a body of research worthy of national recognition. Through reflections on the author's personal journey in music and research, the paper suggests that embracing uncharted research topics and innovative research methods, while maintaining rigorous scientific inquiry, led to new discoveries and creative rejuvenation. Ultimately, the author highlights the importance of inspiring the next generation of musicians and scholars to explore their own unique research paths, thereby contributing to the development of string research as a distinct field within music education.

Keywords

research in strings, award acceptance speech, alternative research practices in music education

I began attending the American String Teachers Association (ASTA) National Conference regularly in 2011, after my appointment as an assistant professor at Pacific University. Since then, I have made it a priority to attend the String Research Award ceremonies—not only to support the recipients but also to be inspired by and learn

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from their experiences. I hope that my speech today offers similar inspiration while providing fresh insights into the possibilities of research in strings.

Sitting in those ceremonies over the years, I often thought, "I would never receive such an award." This was not due to a lack of confidence, but because my research path was different. I do not teach at a Research I university, my research spans multiple areas rather than a single specialized focus, and as a non-native English speaker, writing posed additional challenges. In some ways, receiving this award seemed as improbable as aspiring to become the U.S. president—an aspiration beyond someone not born in the United States. Yet, here I am, humbled to have my name alongside icons in string research whom I greatly admire: Donald Hamann (2011), David Sogin (2013), Margaret Schmidt (2015), Margaret Berg (2017), Gail Barnes (2019), and John Geringer (2023).

In preparing for this speech, I reviewed the speeches of past recipients in the *String Research Journal* (SRJ) and noticed a clear pattern: each expressed gratitude to those who shaped their careers, reflected on their musical upbringing, shared insights into their research, and offered suggestions for future inquiry. Following this tradition, I will begin by thanking those who have contributed to my journey, reflect on my musical background, and discuss my research. I will conclude my speech with my vision for the future of research in strings as a distinct branch of research within music education.

Expressions of Gratitude

First, I sincerely thank the ASTA Board of Directors and current President, Dr. Karin Hendricks for their ongoing dedication to advancing our vibrant professional organization. I also appreciate the members of ASTA's Research Committee for their work in this year's award-selection process. In addition, I am especially grateful to those who wrote letters of support for my nomination.

While I did not have a single mentor in my journey as a scholar in strings, I have been fortunate to learn from many of you—through your studies, books, research posters, conference presentations, and informal conversations. From established scholars such as Robert Gillespie, David Sogin, Gail Barnes, and Margaret Berg to early influences such as Camille Smith, and mid-career voices including Rebecca McLeod, Kristen Pelegrino, and Karen Hendricks, your work has shaped my view of research as the most intellectually exciting aspect of music education. It would be remiss not to mention the engaging conversations I have had with emerging researchers like David Miller, with whom I have discussed research on several occasions.

I especially want to thank Dr. Donald Hamann, the first recipient of this award, for recognizing my interest in research during my graduate studies at the University of Arizona in the early 2000s. He guided me through publishing my first study in the *Journal of String Research* (Ihas, 2006). I am also deeply grateful to Margaret Schmidt for her inspiring conference presentations, which have shaped my approach to presenting—from her session on orchestra job strategies in the early 2000s to her most recent presentation on cognition and music. I particularly value the meaningful conversations

we have had over the years, especially those related to research and the String Project. I also wish to thank John Geringer, a true legend in the field. His research and dedication to excellence have motivated me and many others, and I am deeply grateful for his support.

Last but not least, I am deeply grateful to my incredible co-authors of the book, Miranda Wilson (cellist) and Gaelen McCormick (double bassist). When I first approached them about contributing to the book I had envisioned two decades ago, they immediately recognized the significance of the project and joined me with full commitment. For 3 years, we worked passionately, often late into the night, driven by a shared sense of purpose and the motto: "If not us, then who; if not now, then when."

My Life in Music

A key goal of the Introduction to Music Education course is to help future educators develop their philosophical perspectives on questions like "What is music?" and "Why teach music?" In teaching this course, I explore these questions through three main music education philosophies: Bennett Reimer's (2003) "aesthetic view," which focuses on musical expression and aesthetic responses; David Elliott's (2005) "praxial" philosophy, which emphasizes active music-making; and Estelle Jorgensen's (1997) view of music as a social experience. I frame the "my life in music" story within these frameworks to provide a lens through which one can understand my experiences.

I was born and raised in Sarajevo, Bosnia and Herzegovina (hereafter referred to as Bosnia), where education is highly valued. Beyond compulsory schooling, students have access to high-quality, government-funded educational opportunities. For example, until age 14, elementary and middle school students attend two schools simultaneously, studying subjects like music, ballet, or foreign languages at an alternate school on a rotating schedule.

At the age of seven, my mother enrolled me in elementary music school, where the principal assessed my aural skills, hand size, and finger shape, ultimately determining that I would play the violin. The curriculum was rigorous, with two weekly 45-minute violin lessons, solfège classes, and monthly performances. In the fourth year, music theory and orchestra were added.

Building on this foundation, I continued my musical education at a specialized high school, where I studied counterpoint, conducting, and sight-reading Bach's chorales on the piano, in addition to violin, chamber music, and orchestra. In my final year, I switched to viola and continued my studies at a music conservatory. Upon graduation, I began my professional career as a viola player in the Sarajevo Philharmonic and as the section leader in the Opera Orchestra.

The music education I received in Bosnia resonates with the philosophies of Reimer and Elliott, as it emphasized both aesthetic engagement (Reimer) and active music-making (Elliott). However, my experiences during the Bosnian War (1992–1996) reshaped my understanding of music's role, aligning more with Jorgensen's view of music as a force deeply intertwined with social and political contexts.



Figure 1. Sarajevo String Quartet: Dževad Šabanagić (First Violin), Hrvoje Tisler (Second Violin), Dijana Ihas (Viola), and Miron Strutinski (Cello).
Note. This is a photo of the Sarajevo String Quartet taken in the ruins of the National Library in Sarajevo in February 1994.

For many, the Bosnian War may be a distant memory, but for the people of Bosnia, it marked the end of the world they knew and the beginning of enduring challenges. While historical events in Bosnia have had global impacts before—such as the assassination of Archduke Franz Ferdinand, which sparked World War I—this war introduced a new chapter, defined by the brutal 1,425-day siege of Sarajevo, the longest siege in human history. During this time, the city faced severe shortages and constant threats, resulting in 13,000 deaths, 50,000 injuries, and 100,000 displaced people.

One might wonder how Sarajevo and its people survived against unimaginable odds. While there are many answers, I interpret mine through Albert Einstein's quote, "Life without music is inconceivable," because it resonates with my wartime experience. In a besieged city with scarce resources, music became more than an expression—it was a lifeline, a constant that sustained the city's spirit, offering hope, continuity, and resilience amid destruction.

The Sarajevo String Quartet (see Figure 1), of which I was the viola player, became a powerful symbol of endurance. Despite losing our first and second violinists early in the war, we continued performing. Over the next 4 years, we gave 206 concerts in unlikely venues—from broken schools to the frontlines. Each performance offered solace, affirmed Sarajevans' resilience, and instilled faith in a better future. Our efforts to preserve human dignity and hope were immortalized in articles, books, and the documentary *Sarajevo Strings* and were recognized with the Plaque of Sarajevo, the highest civilian honor from the Bosnian government. Through music, Sarajevo's soul

endured, as Einstein's words ring true: without music, life would have been inconceivable.

My "life in music" story reflects the persistence and resilience that define my work as an educator, musician, and scholar. As a war refugee in the United States, I earned multiple graduate degrees: a Master's in Viola Performance from the University of California, Irvine; a Master's in Music Education from the University of Arizona; a PhD in Music Education from the University of Oregon; and postgraduate certificates from Messiah University and the University of Chichester (United Kingdom). Before my university role, I taught music and strings in underprivileged schools for 7 years, witnessing firsthand the transformative power of music, much as I did during the Bosnian war.

My Life in Research

Although this paper is not structured as a traditional research paper, I will begin by presenting a problem statement and outlining a relevant research question to guide the discussion. I will also draw on several conceptual frameworks and frequently reference existing literature. In doing so, I aim to strike a balance between scholarly depth and narrative engagement, making the paper both academic and accessible.

Problem Statement

Faculty at non-doctoral universities are primarily focused on teaching and service, with limited time and resources for research (Boyer, 1990). These constraints may impede their ability to achieve national recognition for their research. Given these challenges, I pose the following question: "How do faculty at non-doctoral institutions navigate the barriers of limited time and institutional support to develop a body of research that can achieve national recognition?" This paper examines broader concepts of research and scholarship to explore alternative pathways to research success outside top-tier institutions.

Expanding Perspectives in String Research: Applying the Boyer Commission's Framework

In *Scholarship Reconsidered: Priorities of the Professoriate*, Ernest Boyer (1990), an American educator and former U.S. Commissioner of Education, argued that, before the 1870s, research was viewed as a broad, creative activity that fostered critical thinking, communication, and lifelong learning. Boyer, however, noted that today, research is often narrowly defined and disconnected from teaching and service. As he put it, "Theory surely leads to practice. But practice also leads to theory. And teaching, at its best, shapes both research and practice" (Boyer, 1990, p. 16). To expand this limited view of scholarship, Boyer proposed a framework that includes four overlapping types of scholarship: discovery, integration, application, and teaching. Although published over 30 years ago, Boyer's scholarship framework remains relevant and respected, particularly for its impact on research assessment, tenure, and academic priorities.

Scholarship of Discovery. The Scholarship of Discovery involves traditional research, beginning with identifying a problem and framing it through a review of relevant studies. The researcher then selects a research design—quantitative, qualitative, or mixed methods—collects and analyzes data, and disseminates the results.

Content analysis studies offer valuable insights into trends in string research by tracking the evolution of topics and methods over time. For example, Kantorski's (1995) analysis of doctoral dissertations from 1936 to 1992 identified techniques, skills, performance practices, and resources as the most researched topics, with a strong focus on the violin. This trend continued in Zabanal et al.'s (2022) study of articles published in American String Teacher (AST) from 2000 to 2019. More recently, Sciaroni et al. (2023) analyzed the content of string research studies from 1990 to 2021 across leading journals, confirming that "musical training and skills" remained central, while bow techniques, sight-reading, and non-violin instruments—particularly the double bass—remained under-researched. These findings suggest that, despite decades of research, string studies have stagnated with respect to topic diversity.

Similarly, the research methods used in string research appear to have remained narrow. Despite the growing variety of research methods in other fields, string research predominantly relies on quantitative and qualitative approaches, with a notable absence of mixed-methods studies. In the following section, I will discuss how I became acquainted with mixed-methods design and explain its potential to enrich research findings.

In 2014, I was elected Orchestra Chair of the Oregon Music Educators Association (OMEA) and conducted a quantitative study on Oregon's school orchestra programs. A key finding was the significant disparity in string offerings among the state's three largest districts: Portland Unified School District (PUSD), Beaverton School District (BSD), and Salem-Keizer School District (SKSD). Despite similar student populations, PUSD and BSD offered strings in only one high school, while SKSD provided multiple orchestra classes across 65 schools. This prompted me to further investigate the factors behind this phenomenon using qualitative methods and interviews with district music supervisors. These interviews revealed that policy changes in the early 1990s led to the reduction of string programs in PUSD and BSD. However, the qualitative results left me wondering how SKSD was able to maintain its high-quality offerings despite these changes.

To better understand the disparity in string offerings across districts, I sought a research design that integrates both quantitative and qualitative data, discovering that mixed methods would be the right approach. Unfamiliar with this method, I attended a workshop by John Creswell at the University of Michigan (UM), where I nervously presented my project among medical researchers. This experience led to an invitation from Creswell to present at the International Conference on Mixed Methods in Vienna in 2018, where I was the only music and arts participant.

Equipped with the knowledge gained from these workshops, I completed my mixed-methods study on Oregon's orchestra programs, which was published in SRJ (Ihas, 2019)—to my knowledge, it was the only mixed-methods study in string research. This journey highlights the importance of stepping outside one's comfort zone and learning from diverse research communities.

In addition to the gap in mixed-methods studies in string research, there is also a need for more quantitative experimental research conducted directly in string classrooms. While earlier scholars such as Gillespie (1993), Smith (1995), and Bergonzi (1997) explored string teaching through experimental designs, recent experimental studies in this area have been limited. In 2019, I conducted an experimental study within our String Project, examining the effectiveness of Rolland's left-hand pizzicato exercises and the Geminiani Chord in developing proper left-hand shape in beginner string classes. This experience reinforced my belief in the value of experimental research in string education. For string teachers, especially those involved in String Projects, the ability to sample participants from these programs can simplify the institutional review board (IRB) process, making experimental studies in string classrooms more feasible.

Scholarship of Integration. Boyer (1990) discussed the Scholarship of Integration, also known as interdisciplinary research, as the practice of making connections across disciplines, placing specialized knowledge in a broader context, and presenting data in a way that educates both specialists and non-specialists. This approach is increasingly valued because it offers a more comprehensive understanding than traditional discovery research. In string research, collaborative studies, such as the long-term vibrato research by Geringer et al. (2005) and MacLeod's and Napoles' (2014) study on music teachers' perceptions of teaching effectiveness, which included participants from both string and choir settings, exemplify this approach.

Through my experience with interdisciplinary scholarship, I have come to appreciate the value of crossing disciplinary boundaries, as suggested by Boyer (1990), who emphasized that today's researchers often discover patterns by collaborating across fields. In 2013, I joined a 3-year research project at Elon University's Center for the Advancement of Teaching and Learning, which focused on mentoring undergraduate research (UR). As the only arts participant among 30 scholars from psychology, social sciences, and natural sciences, I initially felt out of place, similar to my experience at the UM mixed-methods workshop. I worked with a team from psychology and English literature to explore the challenges and benefits of faculty mentoring UR.

Over 3 years, our team published three interdisciplinary studies (Baker et al., 2015, 2016, 2017) and contributed to the edited volume *Excellence in Mentoring Undergraduate Research* (Baker et al., 2018), in which I authored an essay on mentoring in the arts. Inspired by this work, I began to explore exemplary mentors in the field of strings, identifying Miss Dorothy DeLay (Ihas, 2022) as a key figure. This exploration led to my qualitative study on her mentoring practices (Ihas, 2017).

Beyond the publications, this experience opened my eyes to the potential of cross-disciplinary research. I encourage my colleagues, particularly those at smaller universities, to pursue similar opportunities.

Scholarship of Application. Boyer's (1990) Scholarship of Application focuses on how knowledge can be applied to real-world problems. Many string research studies, particularly those published in AST, fit this category, including Jacob Dakon's (2014)

work on applying string pedagogy in various teaching settings and the *Teaching Music Through Performance in Orchestra* four-volume series, which offers practical guidance for school orchestra teachers.

I have contributed to the scholarship of application through multiple AST articles (Ihas, 2015, 2017, 2021a, 2023) and two essays in the Teaching Music Through Performance in Orchestra series (Ihas, 2021b, 2021c). However, my most significant contribution to the scholarship of application is my recently published book, *Teaching Violin, Viola, Cello, and Double Bass: Historical and Modern Pedagogical Practices* (Ihas et al., 2023).

My interest in string pedagogy began in the early 2000s at a workshop led by Mimi Zweig and Brenda Brenner. This inspired me to study nearly all major string pedagogy approaches over the past 25 years, both in the United States and internationally. I have studied methods by Bornoff, Havas, Rolland, Sassmannshaus, Suzuki, and Zweig and have also conducted content analyses of pedagogical works by figures such as Geminiani, Ševčik, and Flesch. I have translated previously untranslated works and studied methods by Fischer and Ozim, even interviewing them directly. So far, this book is the most comprehensive, research-based resource on string pedagogy, covering 250 years of pedagogy across all four bowed string instruments. It has been hailed as a "must-have" for string educators and players in reviews by several string magazines, including *The Strad* (Bunting, 2024).

Although often viewed as "soft" research, the scholarship of application in music education can have a profound impact on the profession. It is essential for us to continue contributing to platforms such as AST to support this vital work in the field of strings.

Scholarship of Teaching. Finally, Boyer (1990) defined the Scholarship of Teaching as research that "educates and entices future scholars" (p. 23). This concept has since evolved into the distinct methodology of the Scholarship of Teaching and Learning (SoTL), in which researchers treat their classrooms as research labs to investigate questions about student learning and collect data to find answers (Bishop-Clark & Dietz-Uhler, 2012).

A few years ago, at the ASTA conference, my research poster was displayed next to that of a young scholar from Canada. Noticing that she seemed a bit shy, I struck up a friendly conversation. During our chat, she expressed surprise that there were no other posters on the SoTL at the ASTA research session. I shared her sentiment, as I had also observed the underrepresentation of SoTL in U.S. music education research, despite its widespread use in broader educational research and the availability of peer-reviewed journals, such as the *Journal of Excellence in College Teaching*.

I first encountered SoTL through my connections at Elon University, when I began reading relevant literature and attending international SoTL conferences. Recognizing its value, I conducted several mini-studies in my lecture courses, although I never had the opportunity to publish the findings. In one study, I compared two reading summary forms—one based on Bloom's Taxonomy and the other on the SPUNKI model (Surprising, Puzzling, Useful, New, Knew, Interesting). The results showed that

students produced more cognitively organized summaries using the Bloom's Taxonomy-based form. I believe SoTL is an underexplored research area in string education, offering significant value for faculty at institutions where teaching is prioritized over traditional research.

Mentoring UR

In recent years, I have been pleased to see more undergraduates presenting research at ASTA's Research Poster Session. This trend aligns with Boyer's (1998) report Reinventing Undergraduate Education, which emphasized the integration of research into the undergraduate experience and the importance of faculty mentorship. Inspired by this, I have become more intentional about offering research opportunities to my undergraduate students. This includes incorporating short-term projects in my classes, mentoring summer research, and facilitating the National String Project Consortium (NSPC) Research Session at ASTA since 2016.

One example of an UR project I mentored involved Anastasiya, a third-year student, who conducted an experimental study comparing the effects of Rolland's versus Suzuki's early bow hold on developing a "professional" bow hold. I guided her through the IRB approval process, certification, and crowdfunding for independent observers, while also supporting her with data collection, analysis, and presentation at ASTA and OMEA conferences. Anastasiya later credited this experience as key to her successful master's thesis and continues to apply her study's results in teaching early bow hold. I remain committed to mentoring UR, with my students presenting their research on learning secondary instruments at this year's NSPC Research Session.

"Artistic Practice as Research in Music"

In addition to traditional research, I have explored "artistic practice as research," an approach gaining global attention but underrepresented in U.S. music and arts fields. This method is particularly relevant in string pedagogy, where performance, teaching, and scholarship are closely intertwined. At the 2018 Reflective Conservatoire Conference in London, I was inspired by the emotional intensity and diversity of international practice-as-research projects, although U.S. representation was limited, with only two other attendees, including David Elliott. There, I was introduced to literature on artistic practice as research (Borgdoff, 2007), which bridges intellectual knowledge and creative practice to deepen our understanding of the world through artistic expression.

Afterward, I encountered David Wallace's (1970/2018) work on interactive performances, which inspired me to experiment with choreographed movements during an orchestra concert of Ravel's *Pavane*. Since then, I have conducted similar projects with both orchestra and String Project students. Although I have not published these projects, I presented one at the 2019 ASTA Conference. Despite the significant effort required, the joy my students and I find in moving beyond traditional performances has made this a regular part of our concert season for the past 7 years.

Summary

As the recipient of ASTA's 2025 Outstanding Long-Term Achievement in String Research Award, I wrote this speech to express my gratitude to those who contributed to this humbling recognition and to share my journey in string research—one that has been both challenging and rewarding. In addressing the question, "How do faculty at non-doctoral institutions overcome barriers related to limited time and institutional support, which may hinder their ability to develop a body of work worthy of national recognition?" I aim to share the experiences that have shaped my path as a scholar with a non-traditional background, alongside other recipients of this award.

Vision for Future

Educators and researchers have a unique opportunity to push boundaries and explore the "roads less traveled." By venturing into uncharted territories while maintaining the rigor of scientific inquiry as our guiding principle, we can reignite our creativity and open new fields of possibility in research. More importantly, we can inspire the next generation of musicians and scholars to dare to explore their own untraveled paths, shaping the future of research in strings as a distinct branch of music education.

Thank you for your time and attention. I look forward to seeing you at the research poster session!

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