

**Arts Access as an Issue of Social Justice: The Role of Arts Education and Technology in
Closing the Arts Access Gap**

by

Amanda Ditto Hernandez

**A dissertation submitted to the Faculty of Claremont Graduate University in partial
fulfillment of the requirements for the degree of Doctor of Philosophy in Education**

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ARTS ACCESS AS AN ISSUE OF SOCIAL JUSTICE

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Amanda Ditto Hernandez

Claremont Graduate University: 2018

Abstract

The purpose of this study was to apply a social justice lens to arts attendance. I utilized the data from the 2012 Survey of Public Participation in the Arts, a subsection of the Current Population Survey, to explore which variables influenced benchmark arts attendance. The research questions focused on three variable groups: demographics of socioeconomic status, arts learning, and technology. The problem is that arts attendance is in decline; however, the literature in the field supports the intrinsic and extrinsic value of the arts. Arguments for “arts for arts’ sake” and for “arts as a means to an end” stress the positive impacts of the arts. To better understand who attends the arts, how arts learning impacts arts attendance, and how technology influences arts attendance, I completed a series of statistical analyses. While the logistic and multiple regressions highlighted the importance of educational attainment and arts learning, the predictive strength of the regression models was low. The descriptive statistics revealed insight into who attends the arts. Audiences for each benchmark arts activity were mostly non-Hispanic white. Patterns in age, income, and educational attainment provided a blue print for how arts organizations can study audience composition. In addition, an evaluation of the SPPA as a research tool is provided. This study concludes with recommendations for future iterations of the SPPA.

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Chapter One

Introduction

With the variety of entertainment options available, it is no wonder that the traditional arts experience is changing. Participation in the arts reflects the available resources and social needs of the time; consequently, the arts are constantly evolving. Early art was represented by symbolic paintings on the walls of ancient civilizations. Greek theaters were built into the mountainsides, and performances were offered to the gods by masked actors. Before electricity, Shakespearean actors pounded on pieces of metal to replicate the sounds of thunder on stage. Opera performances now include superscript that translates the vocals and summarizes the content. Museums offer audio tours for the patrons to hear historical background on each object. Green screen use in theaters enables the background of the set to be limitless. Now arts audiences only need to flip up a screen or open a digital application to connect with the arts. Digitization of the arts allows universal access to a gamut of arts experiences.

The ubiquitous nature of technology has opened global lines of communication as well as possibilities for arts opportunities. Currently, many arts organizations are embracing modern technology (Novak, et al., 2014; NEA, 2010; Harlow, 2015). For example, the Los Angeles Opera hosts free performances on telescreens at the Santa Monica Pier, and movie theaters across the nation show live stream opera and ballet from Lincoln Center in New York. From performances at the Globe theater in England to tours of the Louvre Museum in France, YouTube has made the arts accessible to anyone who can connect to the Internet. Despite the modernization of arts participation and the efforts of arts organizations to incorporate

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technology, fewer people are participating in the arts as measured by traditional attendance (NEA, 2012; Stallings & Mauldin, 2016).

There are likely myriad reasons for the low arts attendance numbers. One line of research suggests that arts education influences arts attendance and participation (Catterall, Dumais, and Hampden-Thomson, 2012; McCarthy, Ondaatje, Zakaras, and Brooks, 2004; McCarthy and Jinnett, 2001; DiMaggio and Useem, 1978). Early exposure to the arts in an educational setting contributes to the decision to access the arts as an adult (Elpus, 2017; McCarthy, Ondaatje, Zakaras, and Brooks, 2004; McCarthy and Jinnett, 2001). But with the inconsistency of arts funding in education, students do not always receive stable or quality arts programs (Whitman, 2013; Seidel, Tishman, Winner, Hetland, and Palmer, 2009). In fact, high socioeconomic status (SES) schools are more likely to maintain arts programs than low SES schools (Whitman, 2013). It is no coincidence then that the high arts, like opera, classical music, and jazz, are traditionally attended by high SES patrons (Borgonovi, 2004). The way that the arts reflect the barriers of socioeconomic stratification makes arts education an issue of social justice. Low SES students are being denied an access point to high art like opera, classical music, and jazz; without arts education programs, low SES students are not equipped with cultural capital that may positively impact their future.

Statement of the Problem

According to the report *How a Nation Engages with Art* (2013) published by the National Endowment for the Arts (NEA), arts participation has fluctuated since 1982. From 2002 to 2012, there has been a decrease in arts attendance (NEA, 2013). There was also a decline in arts participation in the United States between 2008 and 2012 (NEA, 2013). Table 1 below reflects the

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percentage of U.S. adults who attended at least one type of art performance or visited a museum or gallery between 1982 and 2012. The arts attendance measured is from the results of the Survey for Public Participation in the Arts (SPPA), a national survey supplement to the United States Census Bureau's Current Population Survey (CPS). The SPPA question addressed in Table 1 includes attendance at live jazz; live Latin, Spanish, salsa; classical; opera; musical; play; ballet; dance; performance; or museum (SPPA, 2012).

Table 1

Percent of U.S. Adults who attended at least one of various types of arts performance or visited an art museum or gallery: 1982-2012

Year	Percentage %
1982	39%
1992	41%
2002	39.4%
2008	34.6%
2012	33.4%

Note. This table was reproduced from NEA (2013).

Table 1 reveals several key points. In the past thirty years, arts attendance has never exceeded 41%. During the highest year of arts attendance, only 41% of the population surveyed reported attending an arts performance or visiting a museum. The 1.2% drop from 2008 to 2012 may appear minimal until the percent is translated to individuals: if the reported population is 314.1 million, then the difference between 2008 and 2012 is approximately 38 million people (U.S. Census Bureau, 2013). What caused the decline in so many people attending arts performances? Perhaps arts audiences are replacing traditional attendance with other activities or accessing the arts online in lieu of live attendance.

The decline may be partially attributed to the limited definition of the arts in the survey and the traditional measurement of participation in surveys as live attendance. The SPPA data reflect

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a limited definition of the arts; for example, cultural arts programs and accessing arts through technology are not included in the core survey questions. In *Changing Landscapes*, a report presented to the NEA, Novak-Leonard et al. (2015) recommended that “because the term ‘arts participation’ for many people implies the consumption of Western, canonical artistic forms, capturing a broader range of cultural participation will require new terminology that includes a far broader range of activities” (p. 7). The SPPA addressed this limitation with supplemental modules that provide participants an opportunity to report on cultural and digital means of arts participation.

To develop arts attendance beyond the traditional measurement of ticket sales for the arts, the SPPA added modules with questions asking how people use technology to participate in the arts. Table 2 below reflects U.S. adults who reported using a handheld or mobile device to consume art in 2012.

Table 2

Percent of U.S. Adults Who Used a Handheld or Mobile Device to Consume Art in 2012

	Used a handheld or mobile device for any purpose	To download, watch, or listen to music	To download, watch, or listen to theater or dance performances	To download or view any visual arts such as painting, sculpture, graphic design, or photography
All Adults	53.2%	34.2%	3.4%	7.9%
Gender:				
Male	54.2%	35.1%	2.9%	7.7%
Female	52.4%	33.4%	3.9%	8.0%
Ethnicity:				
Hispanic	46.2%	31.1%	2.3%	6.2%
White	55.9%	35.7%	3.3%	8.6%
African American	46.1%	29.6%	4.3%	5.9%
Other	54.7%	34%	4.9%	8.0%

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Education:				
Grade School	11.9%	5.7%	0.2%	0.6%
Some High School	31.3%	19.9%	2.1%	3.0%
High School Graduate	40.7%	24.2%	2.3%	3.8%
Some College	59.8%	39.5%	3.1%	7.7%
College Graduate	70.1%	46.1%	5.4%	13.2%
Graduate School	74.6%	49.5%	5.9%	17.3%

Note. This table was reproduced from NEA (2013).

Table 2 provides insight into how people reported using handheld devices. There is a stark difference between using the device for any purpose (53.2%) and using the device to download, watch, or listen to theater or dance performances (3.4%). While there is a slight increase in using the handheld device to access visual arts (7.9%), the numbers remain low. The data from the SPPA were collected in 2012, and access to technology is growing exponentially. It is possible that an increase in the use of handheld devices may also increase arts access on handheld devices.

The education section of Table 2 reveals an interesting pattern. There is a steady increase in use of hand-held devices and accessing the arts with a handheld device as educational attainment increases. Of the high school graduates, 40.7% reported using a handheld device for any purpose and 3.8% used the handheld device to access visual arts. In contrast, 70.1% of the college graduates reported using a handheld device and 13.2% used the device to access visual arts. Handheld device use increased to 74.6% for those who attended graduate school, and 17.3% reported accessing visual arts on the handheld device. These data suggest that education relates to arts consumption and technology use.

Table 3 displays the percentage of U.S. adults who reported ever engaging in learning in any arts subject through any learning method.

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Table 3

Percent of U.S. Adults Who Ever Engaged in Learning in Any Arts Subject Through Any Learning Method

Demographics	2012
All Adults	56.1%
Gender:	
Male	52.7%
Female	59.3%
Ethnicity:	
Hispanic	40.0%
White	61.9%
African American	44.1%
Other	56.6%
Highest Educational Attainment:	
Grade School	21.7%
Some High School	32.5%
High School Graduate	43.3%
Some College	62.6%
College Graduate	73.7%
Graduate School	76.1%

Note. This Table was reproduced from NEA (2013).

The data in Table 3 reflect predictable results. Slightly more than half of American adults reported engaging in arts education. Americans who identified as white reported more frequent experience than others. While the NEA (2013) report does not delineate the category labeled “Other” in the ethnicity category, the ethnicity variables on the SPPA provide 25 options from the CPS questions. This may account for the large percentage of “Other” in Table 3. Arts education increases with time spent in school; for example, only 21.7% of respondents whose highest educational attainment was grade school engaged in arts learning, while 76.1% of respondents with graduate degrees reported arts education. Table 3 shows that white females with graduate education report to have the most arts education. What factors contribute to these differences? Why is there a disparity of gender, race, and education with respect to arts education?

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These data presented in Tables one through three reflect a decline in arts participation over time and across different uses and groups. Table 1 shows a 5.6% decrease in arts attendance over the last thirty years. Table 2 reflects a difference between the use of handheld devices for any purpose and the use of handheld devices to participate in the arts. Table 3 reports a gap in arts education among gender, race, and educational attainment. A more thorough explication of the data may uncover important details to understand the decline in arts participation.

Purpose

Using data from the 2012 United States Census Bureau Survey of Public Participation in the Arts, the purpose of this quantitative study is to:

1. Identify who reported accessing the arts,
2. Recognize how arts access occurred- through online participation or in-person attendance,
3. Determine the variables that predict arts participation and arts attendance,
 - a. Discover the role of arts learning/education
 - b. Ascertain the role of SES
4. Explore the influence that technology may have on different groups participating in and attending the arts.

The purpose of this study is to apply a social justice lens to the SPPA 2012 data; the objective is to determine the extent of the socioeconomic gap in arts access and examine whether technology can be the tool to close the gap.

Ordinarily, the traditional “high arts,” such as opera, classical music, and jazz, have been relegated to high SES patrons. Although arts programs are often cut from school curriculum,

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high SES schools are able to maintain the arts in their education program (Whitman, 2013; Sikes, 2009). Research suggests that people who have experience with arts education attend the arts outside of school (Eisner, 1999). If arts education programs are cut in low-SES schools, then low-SES patrons are less likely to attend the arts. The inconsistent funding of arts education programs has caused numerous arts access gaps. The 2008 National Assessment of Educational Progress (NAEP) reported a significant gap in arts access between the levels of White and Asian students compared to African-American and Hispanic students (NAEP, 2008). In addition, the NAEP (2008) found a gender gap with females reporting more arts access than males. The NAEP (2008) also exposed a socioeconomic gap with low SES students reporting lower scores in both music and visual arts access. Further, the NAEP found that some schools provide no instruction in arts subjects (NAEP, 2008). The 2016 NAEP results show very little difference from the 2008 report (NAEP, 2016). The White and Hispanic music gap decreased from 32 to 23 points, and the visual arts gap decreased from 26 to 19 points (NAEP, 2016). Overall, the scores in the published Tables revealed only a 1 to 2-point difference on most measures.

In an environment of unlimited resources for public schooling, restoring the arts would be an ideal solution. However, with funding changes and emphasis on technology to prepare 21st century learners, using technology to access the arts may be one solution to close the arts access gap. According to Prensky (2001), this generation is referred to as “digital natives” because technology is part of their lives from an early age. There is significant funding for technology used in K-12 schools in the United States (U.S. Department of Education, 2002, 2009). Furthermore, arts organizations are adapting to expand their programs using technology (Thomson, Purcell, & Raine, 2013; Bawa, Williams, & Dong, 2015). If schools use technology to access the arts with all students, several outcomes may occur: 1) both low and high SES

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students will have access to the arts, 2) arts education will be more consistent in schools, and 3) arts patrons will represent both low and high SES populations. Before this recommendation can be made, it is necessary to consider how people use technology to access the arts. With a wide range of people able to access the arts using technology, arts attendance and participation numbers are likely to improve.

Significance of the Study

This study is significant because it identifies a potential cultural shift in reported arts participation and explores relationships among variables that may predict live arts attendance. Recognition of this social change and exploration of the data may reveal opportunities to improve arts access. According to Stallings & Mauldin (2016) and Kemp (2015), arts participation has been diminishing for several decades. This is supported by the data of the SPPA 2002-2012 combined file (NEA, 2015). NEA (2015) reports that the only subgroup not to see declines in visual arts attendance since 2002 is the age group of 75 and older.

Christin (2012) proposes that the decline is a shift of cultural industries and a focus on eclecticism in cultural taste. This study builds upon the Peterson's (1992) concept of cultural omnivores and develops an argument around media and diversity. Jenkins and Bertozzi (2008) suggested that there are four factors contributing to the "new participatory culture" of arts participation: 1) low barriers to the arts and civic engagement, 2) Support for creating and sharing, 3) Transmission of knowledge through informal networks, and 4) Social currency and connectedness. The new participatory culture blurs the lines between professional and amateur (Jenkins & Bertozzi, 2008). The change in participation may explain why there is a decline in arts participation. These studies support the idea that arts participation is changing.

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The questions on the SPPA have changed to reflect the ways society is currently accessing the arts through attendance, participation, and learning. For example, the 2012 SPPA included new questions about free music performances and attendance at live book readings (NEA, 2013). Questions about arts consumption and creation using electronic media were also added in 2012 (NEA, 2013). This proposed study will build upon previous work with the SPPA to recognize how the cultural shift is reported to have occurred through arts access responses.

Many studies have utilized the 2012 SPPA data for arts research. According to the National Archive of Data on Arts and Culture (NADAC), there are 22 publications that cite the 2012 SPPA. The NADAC is an online resource for arts and culture research data; it is hosted by the University of Michigan. The NADAC is funded by the National Endowment for the Arts (NEA). Appendix A presents a summary table of the citations listed on the NADAC website. The studies in Appendix A present a range of work with the 2012 SPPA. The research reports and infographic from the NEA (2012, 2013, 2015) and Silber and Triplett (2015) provided access to the highlights and data for the SPPA. Lehrman (2013) published an online blog and Swan (2015) wrote about the SPPA highlights in an online magazine article; both provided advocacy talking points. Lambert & Williams (2016) used the SPPA to write a guide book for arts leadership. Several of the articles focused on immigrants and cultural participation (Novak, 2016; Novak-Leonard, J., O'Mally, M. Truong, E., 2015; Novak, 2015). The rest of the articles or working papers including a part of what this proposed study will cover, but they do not address all of the variables to be used in this study. For example, Elpus (2017) found that school-based music programs predicted adult art engagement. By examining arts learning in school and out of school, this study will provide a more robust predictor of arts access as an adult. The symposium

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summary from Rife, King, Thomas, & Li (2014) addressed new media and considered more than participation rates. The breadth of the SPPA allows for a plethora of arts-based research.

By exploring who reported participating in the arts, this study will establish where there is a need for outreach to potential arts audiences. This study will explore in more detail if arts education or SES has a predictive relationship to arts participation and attendance. This is important because of the social, emotional, and cultural benefits of the arts. In addition, if arts education or SES has a relationship to arts attendance, then it is solidified as an issue of social justice which could be used to secure consistent funding for the arts in schools. Further, this study may reveal that technology influences different groups toward arts participation and attendance. Technology may reveal itself as the bridge to arts access for all.

Definitions

For the purpose of this study, some definitions need to be clarified:

- Arts: Is a comprehensive term for visual and performing arts,
- Access: Is an inclusive term for the combination of arts attendance, arts participation, and arts learning,
- Attendance: Is the traditional measure for arts audiences by ticket sales; it is when people physically attend an arts event,
- Participation: Is arts engagement through creating art or using technology for the arts to view, create, edit, or share,
- Learning: Is if someone received instruction in school or out of school as a child or as an adult in a formal or informal setting.

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Research Questions

The research questions have evolved from an exploration of arts publications and previous SPPA iterations. The following research questions will be used to guide this study:

1. Who participates in the arts and how?
 - a. Who attends the arts?
 - b. How do different groups differ in their participation?
2. What influence does arts participation have on arts attendance?
 - a. What is the role of arts learning?
 - b. What is the role of SES?
3. Does technology influence different groups differently for arts participation and attendance?

Figure 1 below, the Arts Access Model, represents a diagram of the research questions.

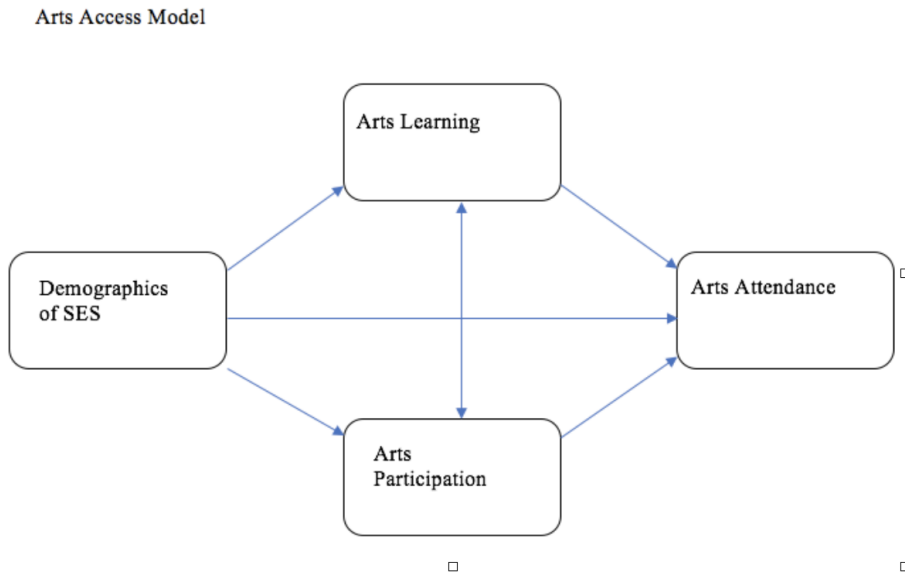


Figure 1. Conceptual Diagram of Research Questions: Arts Access Model

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The conceptual diagram is a model of arts access. The figure shows that demographics, especially SES, will likely impact arts learning, arts participation, and arts attendance. Arts learning and arts participation may reveal a relationship between them and a relationship to arts attendance.

Conclusion

The organization of this paper is as follows. Chapter 1 introduces the topic, states the problem, provides the purpose and significance of the study, defines key vocabulary, presents the research questions, and proposes a model as a diagram of the research questions. Chapter 2 presents the literature in the field, provides the conceptual framework, and identifies gaps to justify the need for this study. Chapter 3 presents the methodology and data collection procedures for this study. Chapter 4 offers data analysis and findings. Chapter 5 includes a findings summary, results discussion, summative conclusions, and implications for policy, practice, and additional research in the field. The appendices include the NEA produced summary tables for the SPPA, the survey instrument, and the public use data file user's guide.

Chapter Two

Literature Review

Introduction

The purpose of this literature review is to present the foundational research to support this study and identify gaps in the research to justify its need in the field of arts access. The organization of the review is as follows:

- Section I provides the methodology for the collection of literature.
- Section II serves to establish the importance of the arts by presenting research from the fields of creativity, human development, cultural impact, and economics.
- Section III provides a theoretical foundation for arts access.
- Section IV reveals trends in arts attendance based on the longitudinal data from the SPPA.
- Section V emphasizes the importance of arts participation in school.
- Section VI considers the role that SES plays in arts access.
- Section VII explores the influence of technology on arts participation.
- Section VIII presents the conceptual framework for this study
- Section IX concludes this chapter with a summary, limitations, and validation for this study.

Methodology

The literature in this review was collected using a snowball method. Most of the literature was introduced through coursework over the last five years. From there, I utilized the reference lists to expand my understanding of the work in the field. Arts organizations provided significant

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material from their databases and websites. Gaps in the literature were filled in by searches using EBSCO Host and various combinations of the search terms: arts education, arts participation, socioeconomic status, technology, arts' value, arts' benefit, arts economics, and arts. I limited the searches to peer reviewed journals, from 2000- 2016, and in English. A total of 79 sources were used for this review: 62 peer reviewed texts (articles, books, other published writing) and 17 reports.

Why the Arts Matter

This section of the literature review provides an overview of the benefits of the arts. This section is organized using four aspects of arts' value: creativity, human development, cultural advantage, and economic contributions.

Creativity. Though creativity and the arts are not the same, they are-at least in concept-inextricably linked. A dominant mind in the field of creativity is Mihaly Csikszentmihalyi, who is best known for his flow theory. Csikszentmihalyi (1996) reasoned why the study of creativity is useful: creativity enriches culture, improves the quality of our lives, and provides a model for living (p.11). Csikszentmihalyi (1996) developed the flow theory from responses to questions about enjoyment. Flow ensues “when someone engages so completely in a challenging activity that nothing matters except the process of accomplishing that goal” (Limb, 2015, p.22). Flow theory can be casually described as being “in the zone.”

Research using flow theory is often connected to the arts and provides support for why the arts matter. Lopez-Gonzalez and Limb (2012) found flow states were achieved in jazz musicians during improvised solo performances. When utilizing brain imaging during improvisation by musicians, Lopez-Gonzales and Limb (2012) noted the part of the brain used during self-

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monitoring shut down, moving the brain into a meditative rest. In *How Creativity Works in the Brain*, Limb (2015) argued that scientists benefit from the innovation learned from art, and innovation is linked to the adaptability of mankind. Rubenstein, Kaiser, Ayers, Chand, & O'Neal (2014) completed a study with the Changing Education through the Arts (CETA) program. The study identified benefits of the arts-integration program, such as positive attitudes toward the arts, experience of positive challenges, a belief that the arts helped in non-arts subjects, ability to apply the arts to everyday things, and resources for solving non-arts problems. O'Neal (2015) studied the enjoyment aspect of flow theory. She connected the sense of "thrill and surprise" of arts experiences with "quality of life and longevity" (*How Creativity Works in the Brain*, 2015, p.22). Creativity is an integral part of the arts as well as a benefit to daily life.

From their extensive research on the arts, Hetland, Winner, Veenema, & Sheridan (2007) created *The Studio Habits of Mind*. These Studio Habits of Mind represent the processes that an artist follows while creating. An artist will (1) Develop Craft, (2) Engage and Persist, (3) Envision, (4) Express, (5) Observe, (6) Reflect, (7) Stretch and Explore, and (8) Understand Art Worlds (Hetland, Winner, Veenema, & Sheridan, 2007). Recently, Hetland, Winner, Veenema, & Sheridan (2007) have argued that the studio habits are applicable to other academic subjects and life skills through transfer. The habits have all been linked to the process of creativity.

Human Development. Additional benefits of the arts include human development. Menzer (2015) found strong evidence that arts participation during early childhood is linked to social skills and emotion regulation. Older adults who sang in a choir reported better overall physical health, fewer doctor visits, and less medication use compared to the control group (Cohen, et al., 2006). Older adults who participated in structured theatrical intervention over four weeks improved their cognitive recall, problem-solving, verbal fluency, and delayed recall (Noice &

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Noice, 2009). Creative storytelling has been shown to improve engagement and alertness in Alzheimer's patients, in addition to improving interactions and social engagement (Fritsch, et al., 2009). For many people, the arts contribute to personal improvement.

Cultural Impact. The arts make an impact on individuals and the society. In the study, *Gifts of the Muse*, McCarthy, Ondaatje, Zakaras, and Brooks (2004) elucidated the benefits of the arts to influence policy. McCarthy, Ondaatje, Zakaras, & Brooks (2004) provided a framework for understanding the benefits of the arts. The framework for understanding the arts bridges the gap between human development and cultural benefits of the arts. On the horizontal spectrum, arts' benefits range from private to public. Private benefits include pleasure and captivation, and public benefits include social capital and creation of social bonds. On the vertical spectrum, instrumental benefits sort to intrinsic benefits. Instrumental benefits include self-efficacy and learning skills, and intrinsic benefits include capacity for empathy and cognitive growth. McCarthy, Ondaatje, Zakaras, and Brooks (2004) concluded that "greater attention should be directed to introducing more Americans to engaging in arts experiences" (p.71). In addition, McCarthy, Ondaatje, Zakaras, and Brooks (2004) continued the argument of DiMaggio and Pettit (1999) that the arts are imperative to living a quality life and improve communities.

The cultural benefits of the arts better the lives of people within communities and strengthen the community. Holden (2009) argued that culture has three related components: publicly funded, commercial, and home-made. The spheres of culture explain how the social understanding of the arts has changed. For example, in the 1970's art had two meanings. One meaning encompassed the canonical high arts (opera, ballet, poetry, literature, etc.), which were elitist because they were enjoyed by the wealthy and well-educated (Holden, 2009). The second meaning of culture came from anthropology, which was a more inclusive term for what people

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did to understand themselves. Holden (2009) contended that the modern understanding of culture must not be the high/low “oppositional binary”; instead, culture should be represented by three overlapping spheres (p.449). Publicly funded culture includes traditional high art as well as community, social, and ethnic art forms. Commercial culture relates to the economic impact of the arts; it is market driven. Home-made culture includes historic artifacts as well as YouTube uploads. Holden (2009) credited the internet with the expansion of home-made culture. The value of culture comes from intrinsic, instrumental, and institutional facets (Holden, 2009). Ultimately, Holden (2009) concluded the value of culture must become more comprehensive by incorporating a variety of perspectives.

Stern and Seifert (2009) draw on discursive theory and ecological theory to explain how the arts contribute to community. The discursive theory argument stems from the idea that the arts activity will gather people for discussion in a safe space (Stern & Seifert, 2009). Stern & Seifert (2009) also connect arts participation to ecological theory by the nature of arts activities that provide opportunity for connections which are associated with community strength and civic vitality. The NEA report, *Art-Goers in Their Communities: Patterns of Civic and Social Engagement* (2009), presented cultural benefits of the arts that emerged from the SPPA in 2008. Three findings developed from the data:

1. American citizens who attend art museums, art galleries, or live arts performances are more likely to vote, volunteer, or attend community events.
2. Even after adjusting for demographic factors, people who attend the arts are more likely to volunteer.
3. Arts participants and literary readers show a greater likelihood of community involvement.

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(Art-Goers in Their Communities: Patterns of Civic and Social Engagement, 2009, p.6)

The study showed that Americans who participate in the arts tend to be more civically minded.

Theories of social capital can also elucidate the cultural benefits of the arts. McCarthy, Ondaatje, Zakaras, and Brooks (2004) defined social capital as “the connections, including networks, among individuals that engender trust and norms of reciprocity, and the benefits that accrue to the members of a community as a result of these connections” (p. 83). The arts build social bonds. When people experience the arts as a community-be it attending a performance or viewing paintings-they establish the bonds of shared experience. By processing the emotions of an arts experience together, people may develop special ties to others.

Economic. The economic contribution of the arts is undeniable. The report *Arts and the GDP: Value Added by Selected Cultural Industries* (2011) states that performing arts, sports, and museums contributed approximately \$70 billion dollars to the United States’ economy in 2009. When revenue from motion-picture, sound-recording, and publishing are included, the arts added \$278 billion to the nation economy in 2009. In California, the OTIS College of Art and Design publishes an annual report on the creative economy. The creative economy is defined as “the businesses and individuals involved in producing cultural, artistic, and design goods and services” (OTIS College of Art and Design, 2015, p.20). In the most recent report, creative industry jobs made up nearly 12% of the workforce in California. In 2014, 1.6 million jobs were part of the creative industry. The total labor income earned by these workers was \$123.5 billion. Jobs in the arts make an impact on the economy.

Another look at the importance of the arts and economy comes from the Hewlett Foundation in San Francisco. The Hewlett Foundation has established a model for an arts

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ecosystem, which is a thriving collaborative model of arts integration in the San Francisco Bay Area (The William and Flora Hewlett Foundation, 2013). At the top of the ecosystem are foundations and government agencies that fund the programs. In the middle are schools and for-profit entertainment that use the funding for arts education. At the bottom are artists and the public who work in the schools or entertainment houses and become the paying audiences for the art performances. Through taxes, for-profit groups return money to the government. The schools produce productive members of the public, many of whom donate to the foundations and support the artists. In this model, the six agents of arts education work together for mutually beneficial results to society.

McCarthy, Ondaatje, Zakaras, and Brooks (2004) suggested that there are three types of economic benefits of the arts: direct, indirect, and public good. Direct benefits include much of what the OTIS report (2015) presented: people employed by arts organizations and spending on the arts. Indirect benefits involve locations with arts programs that attract businesses and people affiliated with the arts. Public good encompasses maintaining the arts and the contribution the arts make to a community. McCarthy, Ondaatje, Zakaras, and Brooks (2004) pointed out the difficulty arts advocates have in expressing the value of the arts with the language of economics. The value of the arts often cannot be whittled down to a quantitative cost-benefit analysis.

There are a variety of arguments against measuring the arts' economic impact. Belfiore (2015) addressed the issue of measuring the public value of the arts, noting that value is often tied to making the case for arts funding. Although Belfiore (2015) wrote about British policy, the same debate for arts funding exists in the United States (California Alliance on Arts Education, 2011). Belfiore (2015) warned against using "impact as a proxy for value" in debate around the arts' contributions; suggesting instead, that impact should be a broad, multi-faceted term with

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respect to arts' public value (p. 99). Belfiore (2015) cited Small (2013) who provided a taxonomy of the value of the humanities. One of the five levels in the taxonomy is that the humanities are valuable because they question the type of "utilitarian logic" that prioritizes economics over the humanities (p. 97). So, while there are clear economic impacts from the arts, there are arts advocates who challenge the notion that arts' value is tied to economic power.

Access to the Arts

This section establishes a theoretical support for research question 1: Who participates in the arts and how? The theories presented suggest that arts access is based on socioeconomic status, and tastes are shaped by class. Arts attendance has long been linked to socioeconomic status, evidenced anecdotally by the soaring cost of tickets to high art events like the opera. Consequently, there is a well-developed field of research supporting the relationship between socioeconomic status and the arts. Pierre Bourdieu, a French sociologist, suggested that individuals are not only defined through social class, but also through their access to forms of capital (Bourdieu, 1986). Bourdieu differentiated types of capital that are critical to social mobility. Table 4 provides a general overview of the types of capital.

Table 4

Bourdieu's Forms of Capital

Type of Capital	Capital Defined	Examples
Cultural	Social assets that enable individuals to interact within their social status; unconsciously transmitted	Language, fashion, education
Cultural (Objectified)	Cultural goods; transmission linked to economics	Artwork, musical instruments
Cultural (Institutionalized)	Academic qualifications; transmission linked to economic capital because of the cost of education and income resulting from educational attainment	Academic degrees
Social Capital	Benefits of a social network; transmission through social	Friends, family, peers, colleagues

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	experiences; can preserve social status by determining access	
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Note. Bourdieu (1986)

Bourdieu's (1986) theory of class distinction proposed that those with high levels of social and cultural capital establish tastes for society. People with low levels of capital accept the prescribed tastes because they often lack access to the forms of capital that would function as a pathway to the tastes of the higher class. Further, Bourdieu (1984) asserted that cultural capital impacts how people discuss cultural objects: low cultural capital leads to everyday life conversations and high cultural capital evolves toward abstract humanistic ideas.

Caldwell and Woodside (2003) challenged Bourdieu's (1984) predictions "that high versus low cultural capital associates with high versus low performing arts patronage" by suggesting that research focus on individual cases (Caldwell and Woodside, 2003, pp. 34-35). To support their dispute, Caldwell and Woodside (2003) built on the research of Austin and Vancouver (1996) which defined "consumption motivation" as "the internal representation of the desired state that provides focus, direction, and intensity to behaviors associated with performing arts attendance" (Caldwell and Woodside, 2003, p.40). In summary, Caldwell and Woodside (2003) argued that people will consume the arts if the program seems appealing. They recommend to arts management that developing patron relationships and designing a broad repertoire of genres will improve arts participation.

Caldwell and Woodside (2003) provided numerous examples of individual patrons who contradicted Bourdieu's theories. Theories, however, are not intended to be applied individually. They are explanations for general concepts. Bourdieu's (1984, 1986) theories of cultural capital are illustrated by the demographic attendance patterns represented by the SPPA 2008 and 2012

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data (NEA, 2015). Bruce Seaman (2005) compiled a review of empirical international literature documenting attendance and public participation in the performing arts. Seaman (2005) asserted that arts audiences across nations are “elite in terms of income, education and profession, and hence non-representative of the more general population” (p. 7). While most of Seaman’s (2005) literature was published between 1960 and 2000, the findings mirror the results of the 2008 SPPA as well as Bourdieu’s theories of capital, demonstrating consistency over time.

Bourdieu’s (1984,1986) theories of cultural capital provide a solid foundation toward understanding who attends the arts; however, class distinction, tastes, and arts participation may be changing. Peterson (1992) suggested that people with high cultural capital are moving away from “cultural exclusivity” of high art and becoming arts “omnivores,” while people with low cultural capital limit their arts consumption to popular culture and are considered “univores” (cited in Caldwell and Woodside, 2003, p. 40). The Peterson (1992) study and the Caldwell and Woodside (2003) study provide antiquated looks at cultural capital level, tastes, and arts participation. The studies are included in this report to demonstrate the evolution of how researchers perceive cultural capital over time.

Cultural capital variables of Bourdieu’s (1986) theory predict expected outcomes in the 2008 SPPA. The data confirm that socioeconomic factors influence arts participation. The survey revealed people were 48% more likely to attend an arts activity if they had a college degree (SPPA, 2008). Additionally, nearly 50% of adults who attended arts activities had household incomes at or above \$75,000 (SPPA, 2008). Of people who earned over \$150,000, 68% attended at least one arts activity; yet, only 16% of people in households that earned less than \$10,000 attended an arts activity (SPPA, 2008). However, the economic downturn in the United States from 2007-2008 may have impacted the data obtained. The most recent data collected in 2012

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may reflect a more stable economy and a more robust arts landscape. Economic stability, in addition to advances in technology, may have changed the tastes for cultural capital as well.

Tastes are an important component of cultural capital. How would Bourdieu's (1984, 1986) theory change if those with high cultural capital and tastes for high art provided experiences for those with low cultural capital and tastes for low art? Would the "univores" become "omnivores" (Peterson, 1992)? Would that threaten the exceptionality of the high tastes and high art? Monroe Beardsley, an American art philosopher, examined aesthetic wealth, referring to aesthetic objects that belong to a particular class. Similar to Bourdieu's (1984,1986) stratification of capital, Beardsley (1973) highlighted the levels of aesthetic experience. Prior to Bourdieu, Beardsley (1973) promoted the idea of aesthetic justice. Beardsley (1973) advocated that those with access to high cultural capital were obligated to provide opportunities for those with low cultural capital to experience high art in order to develop tastes for high art. Beardsley (1973) acknowledged that aesthetic justice cannot realistically be achieved through aesthetic welfare because tastes, motivation, and interests are not universal among the population. Beardsley (1973) upheld that aesthetic justice could be best achieved through education. Similarly, Bourdieu (1986) recognized the impact of educational institutions in shaping tastes.

Preferences for arts participation are based on class and tastes. Bourdieu (1984,1986) aligned high and low capital with tastes for high and low arts. Peterson (1992) suggested that high cultural capital yields taste for both high and low arts. Caldwell and Woodside (2002) proposed that rather than generalize tastes based on capital, research should attend more carefully to individual tastes. Beardsley (1973) acknowledged the differences in class tastes but advocated for aesthetic justice. If tastes are to be transmitted outside of cultural capital, then education is the likely conduit for the expansion of tastes for high and low art.

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Arts Attendance

This section establishes a history for research question 1a: Who attends the arts? To establish arts attendance trends, studies in this section have used data from the SPPA results between the years of 1982 and 2012.

In the research report, *A Decade of Arts Engagement: Findings from the Survey of Public Participation in the Arts 2002-2012*, Silber and Triplett (2015) assessed the changes in arts participation. They found that participation in benchmark events declined dramatically in 2012 (Silber and Triplett, 2015). Older Americans were the only group who increased attendance at live visual and performing arts activities in the last decade (Silber and Triplett, 2015). African-Americans and Hispanic respondents showed no decline between 2002 and 2012 attending the benchmark arts activities on the SPPA (Silber and Triplett, 2015). Silber and Triplett (2015) reported that attendance correlates with years of formal education, which is consistent with previous years' data.

In the study, *Beyond Attendance: A multi-modal understanding of arts participation*, Novak-Leonard and Brown (2011) explored the data from the SPPA between 1982-2008. The findings suggest that when the mode of arts participation is expanded to include attendance, creation, and media use, the numbers for arts attendance are much higher (Novak-Leonard and Brown, 2011). For example, 74% of the respondents participated in the arts using at least one of the modes. Yet, only 39.5% of adults reported traditional attendance to an arts event. In other research, Novak advocates for a more comprehensive calculation of who attends the arts and how arts participation occurs (Novak, 2016). While demographic variables accounted for less than 20% of the variation in attendance rates, arts education in childhood was a predictor of arts attendance and engagement (Novak-Leonard and Brown, 2011). In the research report, *Age and*

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Arts Participation: A Case against Demographic Destiny, Stern (2011) also utilized the SPPA combined file from 1982-2008. Stern (2011) found that age is a poor predictor of arts participation. Age predicted only 0.4% of the variance, and education predicted 15% (Stern, 2011). Stern (2011) referenced Peterson (1992) with “cultural omnivores” in the context of their decline.

Rabkin & Hedberg (2011) also used the combined SPPA file from 1982-2008. Their findings, reported in *Arts Education in America: What the Declines Mean for Arts Participation*, show that long-term declines in arts education will have negative implications for arts participation (Rabkin & Hedberg, 2011). Rabkin & Hedberg (2011) point out that the relationship between childhood arts education and adult arts participation has been strong throughout the history of the survey; however, in 2008, only half of all 18-year olds had arts education in childhood. To further the social justice argument, Rabkin & Hedberg (2011) found that Hispanics and African-Americans were disproportionately represented as having no arts education during childhood.

Taking a closer look at only one year of the SPPA results, Borgonovi (2004) explored only the 2002 SPPA. In *Performing art attendance: an economic approach*, Borgonovi (2004) also noted a shift in arts attendance predictors. Previously, attendance could be predicted with income and educational attainment; however, the 2002 SPPA revealed that arts education was a stronger predictor than income. Rosenstein (2005) also looked only at the 2002 SPPA. Rosenstein (2005) criticized the SPPA for not delivering a clear representation of Hispanic people and people who are not white. Further, Rosenstein (2005) condemned the SPPA for publishing biased results-evidenced by the uneven representation of race/ethnicity and the Western, canonical, high art benchmark arts events. Rosenstein (2005) cited DiMaggio and Useem (1978) who asserted that

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traditional high art institutions “actively excluded people of color” (p. 2). The 2012 SPPA questions included a range of ethnicity/race options in addition to cultural arts events. The benchmark arts activities encompassed Latin, Spanish, or salsa music; and other music, such as rock, pop, country, folk, rap or hip-hop. Based on the changes to the SPPA in 2012, it is essential to explore who reported to have attended the arts.

Arts Learning in School

This section supports research question 2a, the importance of arts learning in school. Education is responsible for expanding the tastes for art by providing access to cultural capital. The research in this field is robust. In *Champions of Change*, Fiske (1999) reported seven correlational studies that show the pattern of linkage between higher levels of arts participation and higher grades and test scores in math and reading (as cited in President’s Committee on the Arts and the Humanities, 2011). In the report, Fiske (1999) concluded that arts integration approaches were successful in producing better attendance and fewer discipline problems, increased graduation rates, and improved test scores (as cited in President’s Committee on the Arts and the Humanities, 2011). Other studies within the report suggested that students with high involvement in the arts, including minority and low-income students, performed better in school and stayed in school longer than students with low involvement, the relative advantage increasing over the years (Catterall, Dumais, & Hampden-Thompson, 2012).

John Deasy produced another synthesis report, *Critical Links: Learning in the Arts and Student Academic and Social Development*. Deasy (2002) compiled 62 studies that revealed a transfer of skills from the arts to other subjects, in addition to habits of mind, self-motivation, social skills, tolerance, empathy, and positive peer interaction (Deasy, 2002). A longitudinal

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study of low-income youth by McLaughlin (2000) found that those who participated in arts programs were more likely to be high academic achievers, be elected to class office, and participate in a math or science fair. Israel (2009) found that students who experience success in arts appreciate the results of effort and persistence and are more motivated to apply themselves to other learning tasks (Israel, 2009). Shirley Brice Heath and Elisabeth Soep (1998), education researchers and arts advocates, found that students who were involved in arts education for at least nine hours a week were four times more likely to have high academic achievement and three times more likely to have high attendance.

In his pivotal text, *Doing Well and Doing Good by Doing Art* (2009), Catterall analyzed data from the 1988 National Educational Longitudinal Survey (NELS) with a sample of 25,000 secondary students. Additionally, Catterall followed 12,000 of the students in a ten-year longitudinal study looking at the relationship between arts involvement in high school, academic achievement, and pro-social behavior. The vast sample size offers support for Catterall's point: large numbers over time show that students who have high art experiences also earn high academic scores. A provocative point about class is revealed in Catterall's (2009) study: In some cases, the low-income, high-arts students out-perform the average students.

Though many studies make claims about the benefits of arts education, there is a lack of causation. In 2010, Ellen Winner and Lois Hetland conducted a meta-analysis of over 200 studies that made claims about the benefits of arts education. In most cases, there was no causal relationship; yet, three connections surfaced from the studies where a causal relationship was established: 1) classroom drama and verbal skills, 2) listening to music and spatial reasoning, and 3) making music and spatial reasoning (Winner & Hetland, 2010). Similarly, Winner and Cooper (2000) completed five meta-analyses by looking at effect sizes in correlational and experimental

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studies. The findings conclude there is no evidence for a causal link between arts and cognitive outcomes. Winner and Cooper (2000) argue it is likely that students with high interest in the arts also have a high achievement motivation in general.

Some advocates believe that arts' value should not be measured. Eisner (1999) stated: "We do the arts no service when we try to make their case by touting their contributions to other fields" (Eisner, 1999, p.149). Eisner (1999) acknowledged that when the arts are not part of a person's life, it is difficult to recognize how the arts contribute to the lives of others. To clarify the value of the arts, Eisner (1981) explained the role of arts in cognition. Eisner's thesis was "that arts are cognitive activities, guided by human intelligence, that make unique forms of meaning possible" (Eisner, 1981, p.48). Eisner advocated for the arts for arts' sake, persuading arts education stake holders to maintain the arts in schools for the intrinsic benefits of the arts themselves.

Arts Access and SES

This section explores research question 2b: What is the role of SES? It has been established that the arts are beneficial. Some argue that arts' value to people with low SES backgrounds may even be of greater value. Neville, et al. (2008) found that 3-5-year old children from low SES-families exhibited increases in non-verbal IQ, numeracy, and spatial cognition after they received small class music training. Catterall (2009) found that arts-engaged low-income students were more likely than their non-arts-engaged peers to attend college, obtain employment, volunteer, and vote. In the research report, *When Going Gets Tough: Barriers and Motivations Affecting Arts Attendance*, Blaume-Kohout, Leonard, & Novak-Leonard (2015) point out that barriers beyond low SES or low educational attainment explain the low arts

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participation. The SPPA 2012 revealed that low SES respondents with low educational attainment chose to attend the arts to support the community, celebrate their heritage, or gain knowledge. Barriers that were more important than ticket price included not having anyone to go with- especially for non-white respondents. Time was also a reported barrier to attendance for low-SES respondents.

Influence of Technology on Arts Participation

This section supports research question 2: What influence does arts participation have on arts attendance? Arts organizations have embraced the use of technology. Thomson, Purcell, and Rainie (2013) reported that most arts organizations have their own website and use social media to reach out to new audiences. While it is important that arts organizations have their own website, the percentage of the staff who use social media to promote the arts may be essential because they may reach local, likely audience members. The staff are able to access their localized sphere of influence.

Several studies have been published highlighting the process of arts organizations' implementation of technology. Harlow (2015) published a four-year long case study, *Extending Reach with Technology*, in which the Seattle Opera's implementation of technology was presented. The Seattle Opera began by exploring audience research and then surveyed the audiences. In each subsequent season the Opera implemented an engagement tool. Year one focused on storytelling through technology that included an interactive website, backstage video, and blogging. Year two emphasized community connections through technology, incorporating podcasts and interactive online experiences. In years three and four, the opera began to focus on experiencing place through technology by presenting free simulcasts. The results show that most

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of the technology outreach strengthened the experience of regular patrons; however, it was the free opera simulcast that brought in new audience members.

A similar study looking at national data revealed parallel results. *Audience 2.0*, a research report published by the National Endowment for the Arts, found that people who access art through technology are more likely to attend a live performance (NEA, 2010). The NEA analyzed the data from the 2008 SPPA which presented the importance of the role of electronic media in arts participation. The findings revealed that slightly more than half of adults who used media to engage in the arts had household income below \$50,000 (NEA, 2010). This point harkens back to the socioeconomic arts gap in schools. If low SES schools are cutting arts programs, then it is imperative for arts participation to occur using technology. The report also noted that both rural and metropolitan residents accessed the arts through media (NEA, 2010). Technology is a tool to bridge the rural and metropolitan audiences. In conclusion, the report found that access to the arts with technology encouraged attendance at live performances (NEA, 2010). It is vital that modern audiences have access to the arts with technology.

There is increasing evidence for the key role of technology in building arts audiences. Thomson, Purcell, and Rainie (2013) published the study *Arts Organizations and Digital Technologies* with funding from the Pew Research Center. The study consisted of 1,244 arts organizations that completed an online survey between May and July of 2012. Of those surveyed, more than half of the respondents agreed that technology is important for audience engagement (Thomson, Purcell, & Rainie, 2013). This finding foreshadows Harlow's (2015) results and supports the findings from *Audience 2.0* (NEA, 2010). Nearly all arts organizations surveyed had presence on social media and post photos about the organization (Harlow, 2015).

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In an increasingly visual society, it is surprising that some arts organizations do not post photographs online.

While the numbers for arts organizations' use of technology are very high, the numbers demonstrating arts organizations' outreach using technology are lower. Many arts organizations sell tickets online, but fewer than half of the arts organizations surveyed offer online discounts, host podcasts, webinars, or educational content (Harlow, 2015). By not selling tickets online, arts organizations are excluding potential audiences. Offering discounts online is an attractive option to increase attendance, particularly if the goal is to build audiences outside of the traditional socioeconomic level. Podcasts, webinars, and online instructional content provide outreach opportunities that may ignite the interest of new audience members who are digitally inclined. Though many organizations stream their live content, it was not explicit in the report if there was a cost required to access the online content (Harlow, 2015). In contrast to the findings of *Audience 2.0*, Harlow (2015) reported that a small percentage of arts organizations found that digital media had an adverse effect on live audience attendance. Perhaps some arts organizations have seen a decline they attribute to technology. However, the data from *Audience 2.0* indicated that people are more likely to attend live events when they access arts through technology (NEA, 2010). Overall, there is evidence that arts organizations are utilizing technology to extend their reach to new audiences, but how are potential audience members using technology to access the arts?

Conceptual Framework

The proposed study is conceptually framed by the participation model presented in McCarthy and Jinnett's (2001) report *A New Framework for Building Participation in the Arts*.

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This section will begin with an explanation of the origin and purpose of the participation model. Each part of the model will then be described with support from the literature in the field. In addition, I will establish the connections between the research questions for this study and the section of the participation model.

The participation model.

The participation model evolved from a study that used the SPPA in 1997 and surveys of over 100 arts organizations. The purpose of creating this model was to illustrate motivations for arts participation (McCarthy & Jinnett, 2001). The participation model provides an advantage for arts advocacy because it provides a simplification of the decision-making process to access the arts. A key assumption in the model is “an individual’s attitudes toward the arts can predispose him or her either toward or against participation” (McCarthy & Jinnett, 2001, p. 37). The participation model contains two models: behavioral and motivation. The behavioral model represents the process that leads to arts attendance and is divided into four sections: background, perceptual, practical, and experience. The motivation model is the small chart that drops from the participation box in the behavioral model. The motivation model presents the two reasons people will participate in the arts: entertainment and fulfillment. The motivation model includes attendance through media, which aligns with the new technology questions on the 2012 SPPA. Together, the behavioral model and the motivation model become the participation model.

Figure 2 provides a visual of the conceptual model.

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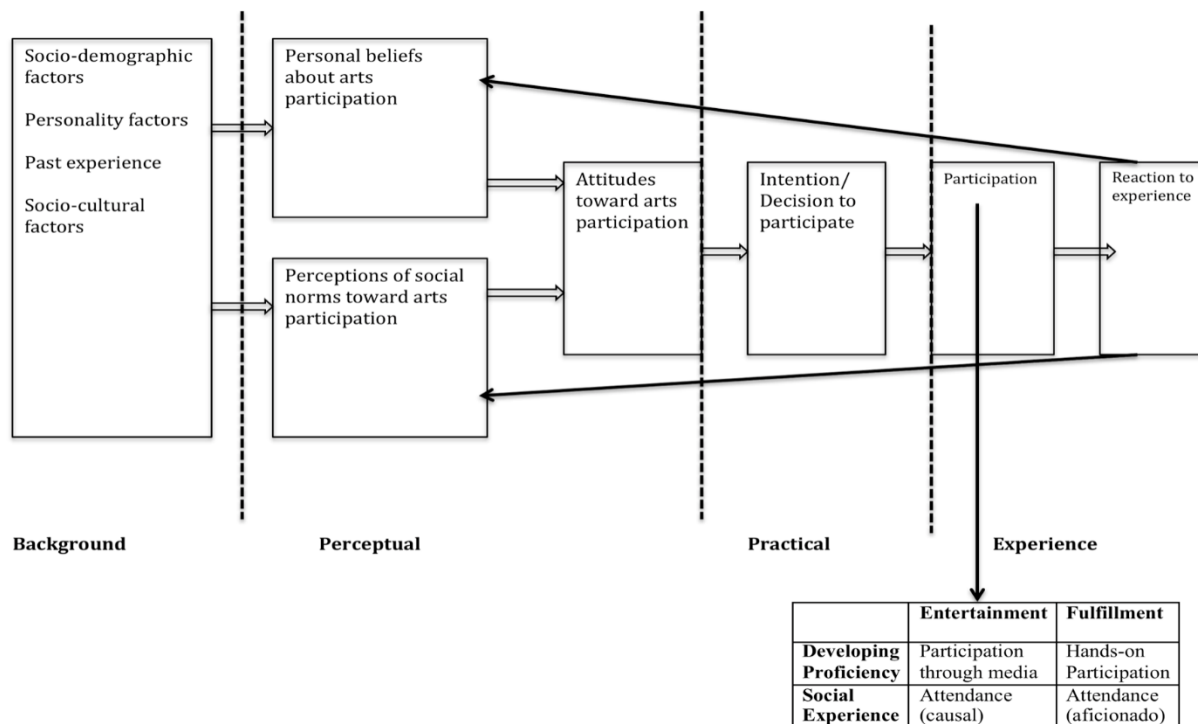


Figure 2. Participation Model (McCarthy & Jinnett, 2001, p. 28, p.35). This figure was reproduced, and a copyright request has been approved by The RAND Corporation.

The behavioral model.

Background. The first section of the model, background, addresses the social justice basis of this research. In question 1, I am looking to see who participates in the arts. Previous research suggests that background variables can predict arts attendance (SPPA, 2008). This is supported by Bourdieu's (1986) cultural capital theory. Background variables that I will use for this study from the CPS include: income, age, sex, educational attainment, and race. The background variables support components of all three research questions.

Personality factors are defined by the unique tastes of the individual. Personal tastes about how people spend their leisure time create a selection bias that is prevalent throughout arts education research and is also why arts education research cannot typically claim a causal

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relationship between background variables and arts experiences. Socio-cultural factors describe an individual's group affiliations and social identity. Bourdieu (1986) would argue that these socio-cultural factors are developed through access to forms of capital.

Perceptual. The perceptual section of the model addresses the way people perceive the arts. Though this section of the model is not explicitly connected to a research question for this study, the results may indicate the underlying perceptions and beliefs of the SPPA 2012 respondents about the arts. If people have positive perceptions of the arts, then it is more likely people will attend the arts. Attitudes toward participation in the arts are shaped by experiences in the arts. Orend and Keegan (1996) note that early exposure to the arts relates to frequency of arts participation as adults. McCarthy, Ondaatje, Zakaras, and Brooks (2004) state that if early experiences with the arts are positive, the early experiences will become a gateway for future arts experiences. This section of the model implicitly addresses question 2: What variables predict arts attendance/participation? The SPPA 2012 respondents' perception of the arts will be evident from their choices toward arts attendance, participation, and learning based on the questions in Module C.

Practical. The practical section of the model provides the gateway for peoples' decision to participate in the arts. This section of the model will support (though not directly answer) the second part of research question 1: How do people participate in the arts? There is a cost-benefit analysis for arts access (McCarthy & Jinnat, 2001). The obstacles of time and money will be evident in the responses of the SPPA 2012 participants. For example, if the cost of an arts event ticket is too high, will the respondent utilize technology to participate in the arts event or not go at all? Once the decision has been made to participate in the arts, a closer look at how people

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participate is in the next part of the model. The 2012 SPPA questions from Core 1 and Module B will reveal how arts participation occurred.

Experience. The experience section of the model includes both the arts experience and the reaction to the arts experience. The first part of the experience, participation, is addressed in two ways: attendance and media. The reaction of the participant will determine if future arts experiences will occur. Bourdieu's (1986) work would reason that both the experience and the established cultural capital would influence future attendance. The experience section of the model illustrates the social justice lens for this study: If people do not have access to the arts, then they will not have the choice to participate. To address the new questions added to the 2012 SPPA, the motivation model has been added to the behavior model. The motivation model is included to expand the way people may participate in the arts.

The motivation model.

Entertainment and Fulfillment. The entertainment column of the model includes developing proficiency by participating in the arts through media and a casual social experience attending the arts. Modules C questions ask about the use of technology to participate in the arts. The fulfillment column relates to Module E because arts learning is a mode of hands-on participation. Both entertainment and fulfillment expand the traditional participation model to reflect a modern approach to arts access.

The Participation Model with Research Questions

In figure 3 below, the focus of each research question is identified within the conceptual framework. Research question 1 looks to determine the demographic variables reflected in arts attendance (socio-demographic factors to arts attendance). Research question 2 seeks to

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understand the influence of arts participation and arts learning on arts attendance (participation to arts attendance). Research question 3 intends to uncover how technology influences groups' arts participation and attendance (socio-demographic factors to arts through media). The perception and practical sections of the model are not directly tied to a research question for this study because the SPPA questions do not relate to these concepts. The SPPA questions are limited to yes or no attendance questions, reporting number of times attended, and stating habits of technology use and classes taken for arts learning.

Figure 3 provides a visual of the conceptual model with the research questions identified

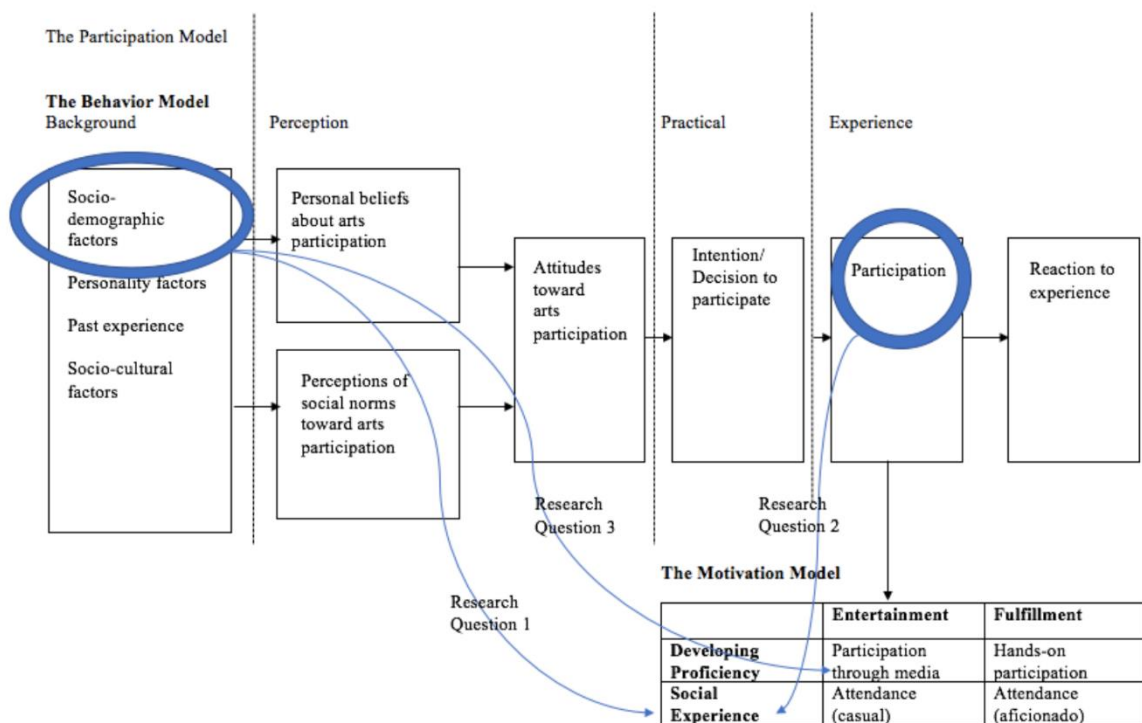


Figure 3. Participation Model (McCarthy & Jinnett, 2001, p. 28, p.35). This figure was reproduced, and a copyright request has been approved by The RAND Corporation.

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Summary

The arts provide numerous benefits. Creativity, a byproduct of the arts, allows people to find enjoyment and focus in flow (Csikszentmihalyi, 1996). Developmental benefits of physical health and social engagement are results of arts-based programs (Cohen, et al., 2006; Fritsch, et al., 2009). The cultural benefits of the arts include people who vote and volunteer (Stern & Seifert, 2009; NEA, 2009). The arts contribute to the economy (NEA, 2011; OTIS, 2015; Hewlett Foundation, 2013). Despite the range of benefits, arts access is defined by class. Bourdieu (1986) aligns class levels to cultural capital; those with high cultural capital establish tastes for the society. Beardsley (1973) advocated that those with high cultural capital were obligated to provide access points for those without. Both Bourdieu (1986) and Beardsley (1973) advised that education be the channel for cultural capital. It is especially interesting then, that the literature from arts attendance point to arts education as a dominant predictor of arts participation (Silber and Triplett, 2015; Novak-Leonard and Brown; Stern, 2011; Rabkin & Hedberg, 2011; Borgonovi, 2004). Further, the data showing that people of color report unduly low arts education opportunities reiterate that arts access is an issue of social justice (Rabkin & Hedberg, 2011). There are a multitude of studies espousing the benefits of arts education- both tied to academic outcomes and arts' fundamental benefit. Low SES respondents reported that not having someone to attend with and time were more important factors than ticket price (Blaume-Kohout, Leonard, & Novak-Leonard, 2015). Arts organizations are using technology to reach out to new audience members (Thomson, Purcell, and Rainie, 2013; Harlow, 2015; NEA, 2010). The Participation Model, provided by McCarthy & Jinnett (2001), offers a conceptual framework for arts attendance. The Participation Model was used in conjunction with the literature collected for this study to develop a more comprehensive understanding of arts attendance.

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A broad look at who participates in the arts and how reveals the changing demographics of the United States and increasing importance of technology for arts participation. An exploration of influences related to arts participation and attendance reveal variations in demographic and SES variables but emphasize the importance of arts education on arts attendance. The studies in this review demonstrate that arts organizations are implementing technology to improve arts attendance, but none of the SPPA studies considered the influence of technology on arts participation and attendance.

Limitations of the Literature

This literature review was limited by the fact that I chose to focus on studies that used previous iterations of the SPPA. Each of the sub-topics, like creativity, has a tremendous amount of established research. It was a challenge to pull studies that were a) notable representations of the work in the field, and b) particularly relevant to this study. The decision of what to include resulted in myriad studies not brought in to the conversation. The SPPA concentrated literature is limited because the research presented for each survey administration represents only one year of self-reported arts experiences for a sample that is used to make assumptions about the entire population. In addition, the research reports are interpreted through the unique lens of the researcher.

Contributions of this Study

The focus on literature that used previous iterations of the SPPA helped to establish a space for this study within the field. The studies show the changing demographics of the United States' population. This implies the importance of looking at research question 1: Who participates in the arts and how? 1a: Who attends the arts? 1b: How do different groups differ in

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their participation? The answers from the most recent SPPA will provide data to analyze the differences in arts participation and attendance. Significant social changes occurred in the United States since the previous administration of the SPPA in 2008. Research question 1 may be impacted by the economic differences. The 2008 SPPA was administered during an economic recession, and the most recent SPPA may reflect a stronger economy. Consider the research question 2a: What is the role of arts learning? In 2009, Common Core State Standards were launched, and schools began to shift from the pedagogy of No Child Left Behind testing to a focus on skills of 21st Century learning. One of the Four C's touted as tenets of the Common Core State Standards is creativity. Certainly, arts learning can be a vessel for creativity. The 2012 SPPA may show indications of changes in availability of arts education. Since previous studies of the SPPA revealed the importance of arts learning on arts attendance, the 2012 data will be imperative in assessing research question 2a: What is the role of arts learning? The 2012 SPPA administration is the first-time questions about media and arts were included. The literature provides evidence of how arts agencies are using technology, but there is a gap in the available studies showing how people use media to access the arts. This gap presents a space for research question 3: Does technology influence different groups differently for arts participation and attendance? Overall, this study will shed light on how changing demographics in an increasingly technological world impact arts attendance.

Chapter Three

Methods

This section provides an overview of the data and methods utilized for this study. I used secondary data from the Survey of Public Participation in the Arts from 2012, which is part of the Census Bureau's Current Population Survey (CPS). The survey, data, and supplemental materials were obtained from the public use file from the National Endowment for the Arts Office of Research and Analysis. The dataset download of the SPSS file was obtained from the National Archive of Data on Arts and Culture (NADAC).

Research Questions

1. Who participates in the arts and how?
 - a. Who attends the arts?
 - b. How do different groups differ in their participation?
2. What influence does arts participation have on arts attendance?
 - a. What is the role of arts learning?
 - b. What is the role of SES?
3. Does technology influence different groups differently for arts participation and attendance?

Participants

Participants in this study were randomly chosen, non-institutionalized adults aged 18 and older who completed the United States' Census Bureau's Current Population Survey for 2012. The overall sample size for the administration is 35,735. The sample size for each section of the survey varies and is explained later in this chapter.

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Survey Design

The survey administration occurred between July 1, 2011 and July 1, 2012. The data were collected through personal assisted telephone interview and personal assisted computer interview. The response rate was 74.8% (Shewfelt, 2013; Triplett, 2014). The study was funded by the National Endowment for the Arts.

The SPPA survey includes three sections: CPS questions, core questions, and module questions. The CPS questions cover demographic variables from the general census. The core questions ask about arts attendance. There are two sets of core questions: Core 1 contains 14 questions about type and frequency of arts attendance over the previous year, and core 2 includes additional experimental arts attendance questions. Participants were asked either core 1 or core 2 questions. In addition, participants were asked to complete two modules of questions. There are five modules in total. There are between 8 and 29 questions in the modules, and each module focuses on one arts topic.

- Module A: Other Arts Attendance & Music Preferences
- Module B: Accessing Art through Media
- Module C: Creating Arts through Media
- Module D: Creating, Performing, and Other Activities
- Module E: Arts Learning

Survey Sections for this Study

This study used only certain sections of the SPPA to address the research questions. For research question 1, I used the CPS variables, the Core 1 questions, and the Module B questions. The CPS variables provided the demographic answers to questions about who participates and

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attends the arts. The Core 1 questions revealed which art forms were attended. The Module B questions showed how arts participation occurred. I addressed research question 2 using the CPS variables for SES, Core 1, and Modules B, C, and E. The modules reflected arts access: how arts participation occurs and how respondents reported arts learning. Core 1 showed arts attendance. The CPS variables revealed the role of SES with respect to arts attendance. To answer research question 3, I used the CPS variables to determine the different demographic groups. Modules B and C were used to establish technology use for arts participation. Core 1 was used for arts attendance.

For this study, I excluded several sections of the SPPA because they do not support the research questions. Core 2 included the experimental arts attendance questions which would prevent comparisons to previous administrations of the SPPA in future studies. Module A provided responses about attendance to leisure activities like sporting events, which are not addressed in this study. Module D focused on questions about outdoor activities like sports, hunting, and gardening; these topics are not relevant to this study. Further, Core 1 and Module A both included proxy responses. In these questions, the respondent was asked questions on behalf of the spouse or partner. The proxy responses were excluded from this study for accuracy of responses.

Since different respondents answered the core and module questions, there may be concern about accuracy of overlap. The 2012 SPPA Public-Use Data File User's Guide stated that: "The modules were randomly assigned so that the questions within each module were asked of a representative national sample of adults" (Triplett, 2014, p. 9). Triplett (2014) also noted that "the modules' respondents randomly overlapped with each other so that module question responses could be linked across modules with sample sizes that would be sufficient for most

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analyses” (p. 9). The survey weights coded for each section and the random assignment of the questionnaire modules allow a researcher to “combine variables from different modules with questions asked in either core 1 or core 2 section of the survey” (Triplett, 2014, p. 17). A researcher cannot use more than two modules in the same analysis and cannot use both core 1 and core 2 (Triplett, 2014). I followed these guidelines. The samples sizes for each section of the survey are reported below.

Table 5 shows the sample sizes for each section of the SPPA used in this study. The rows and columns reflect the overlap of the core and module questions. For example, the respondents who answered core 1 and module B questions total 4,885. The total respondents who answered module B questions is 9,671. This includes respondents who were asked core 1 and core 2 questions. Since respondents were asked two sets of module questions, the cells where module rows and columns meet reflect the overlap. For example, the respondents who answered both modules B and C totals 2,409. Some questions in core 1 included proxy responses when the respondent answered the question on behalf of the spouse or partner; I excluded the proxy responses.

Table 5

SPPA 2012 sample sizes for each section of the survey used in this study

	Core 1	Module B	Module C	Module E
Core 1: <i>Arts attendance</i>	18,051			
Module B: <i>Accessing Art through Media</i>	4,885	9,671		
Module C: <i>Creating Arts through Media</i>	5,024	2,409	9,835	
Module E: <i>Arts learning</i>	4,923	2,436	2,488	9,798

Note. (SPPA, 2012)

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Variables

A total of 110 variables were analyzed in this study. Appendix B provides a complete list of the variables I used. The Current Population Survey (CPS) variables come from the general census and were combined with the SPPA file. The CPS variables included demographic responses for family income, age, sex, educational attainment, and race/ethnicity.

Core 1 asked the respondents questions about arts attendance. Core 1 included 20 variables: 10 dichotomous and 10 numerical discrete. The questions in Core 1 asked respondents if they attended an arts event; the question was followed by asking how many times the arts event was attended in the last 12 months. For example, “With the exception of elementary or high school performances, did you go to a live jazz performance during the last twelve months?” (NEA, 2013, Appendix A, p. 1). The follow up question was, “How many times did you do this during the last 12 months?” (NEA, 2013, Appendix A, p. 2). The instruction in the survey for frequency of attendance is to “record exact number” (NEA, 2013, Appendix A, p. 2). Each pair of questions was repeated for the spouse or partner of the respondent; I excluded the proxy responses from this study.

The module questions asked respondents how the arts were accessed. Module B asked the respondents questions about accessing art through technology. Module B included 31 variables: 29 dichotomous and 2 numerical discrete. The questions in module B asked respondents if they used specific pieces of technology to access the arts. For example, “During the last 12 months, did you use a DVD or CD player or record or tape player to watch or listen to music or programs about theater, dance, visual arts, or literature?” (NEA, 2013, Appendix A, p. 25). There were two questions that embedded numerous options.

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For example:

“During the last 12 months, did you use a TV or radio to watch or listen to any: a) jazz, b) Latin, Spanish, or salsa music, c) Classical music, d) Opera, e) Other music, such as rock, pop, country, folk, rap or hip-hop, f) Theater productions, such as a musical or stage play, g) Ballet, modern, or contemporary dance, h) Other dance programs or shows, i) Programs or information about the visual arts, such as painting, sculpture, graphic design or photography, j) Programs or information about books or writers, and k) Books, short stories, or poetry read aloud.” (NEA, 2013, Appendix A, p. 25).

I separated this question to reflect each sub question independently. For example, “During the last 12 months, did you use a TV or radio to watch or listen to any jazz?” became one question- rather than 11 sub-questions embedded into one. The next question was “During the last 12 months, did you use a TV or radio to watch or listen to any Latin, Spanish, or salsa music?” The variable count above reflects these individual questions. Module C asked the respondents questions about creating arts through technology. Module C included 26 dichotomous variables. The questions asked respondents to report if, in the last 12 months, they created or performed various art forms.

Module E asked respondents questions about arts learning that occurred at any time in their lives. Classes taken online were included. Module E included 44 variables: 26 dichotomous, 10 nominal categorical, and 8 ordinal. The questions in this module followed a pattern about learning a variety of art types: Has the respondent taken lessons or classes in an art form? Were they taken in school or outside of school? Did respondent take them under 18, over 18, or both? Were they taken in the last year? Has respondent ever learned this art form through any other

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means? At the end of Module E, there were 6 demographic questions about respondents' parents' educational attainment and respondents' children. I included the two questions about parents' educational attainment as a measure of SES. According to the *2102 Public-Use Data File User's Guide*: "the mother's education level is an additional demographic question asked at the end of the arts learning (Module E) section of the survey" (Triplett, 2014, p.18). The father's education level is also asked at the end of the module. It was not noted in the User's Guide why these variables were not included in the public-use CPS data file.

Although all the CPS, core 1, and modules combined provided 121 variables, I excluded questions about creative writing, outdoor experiences, and reading novels or poetry because they were not benchmark arts activities. There were 106 variables left in the SPSS data set from the original variables provided by the NEA. In addition, I created four composite variables to use in this study. The composite variables were named: binary attendance, attendance frequency, arts learning, and technology.

Composite variables. The binary attendance variable was created using the transform feature in SPSS. From the option to "compute variable," I used the statistical feature MEAN outside the parenthesis with each survey question about benchmark arts attendance within the parentheses. The survey question asked respondents if they had attended a specified arts event between July of 2011 and July of 2012. The survey included ten arts events. The original survey results were coded with 1 = Did attend and 2 = Did NOT attend. After transforming the original variable, the new variable resulted in a range of 1-2: 1, 1.10, 1.20, 1.30, 1.33...1.9, 2.0. The range reflects the fact that some respondents only attended one arts event and other respondents attended several. Since the purpose of this variable is to identify those who attended at least one arts event, I combined all of the responses between 1 and 1.9. I did this using the following

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options in SPSS: Transform, Recode in different variable, Old and New Values. The range 1-1.9 became 1, which means the respondent DID attend at least one arts event. The value 2 means the respondent did NOT attend at least one arts event. I then cross referenced the percentages of the values 1 and 2 with the original variables in a frequency table in SPSS. For consistency with the other variables in the paper, I went through the “recode into different variable” process again to change 2= did NOT attend to the value 0. The value of 1 stayed the same: DID attend an arts event. The N=12267.

The attendance frequency variable was created using the transform feature in SPSS. From the option to “compute variable,” I used the statistical feature SUM outside the parenthesis with each survey question about benchmark arts attendance frequency within the parentheses. The survey question asked the respondent how many times she or he had attended an arts events between July of 2011 and July of 2012. The number was recorded by the interviewer. This survey question was contingent on the respondent answering yes to attendance question. The survey included 9 questions. The arts attendance question for “other music or dance performance” did not include a follow-up frequency question. The resulting variable, attendance frequency, has an N=4544 and a range of 1-87. I then utilized the “recode into different variable” feature to decrease the range. I kept values 1-12 the same, and I combined values 13-87 into the value of 13 for a more manageable range. The value of 13 includes attendance frequencies 13-87. This value is 10% of the responses (valid percent). The attendance frequency variable will have a smaller sample size because the attendance frequency question was contingent upon a “yes” answer to the binary attendance question.

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The arts learning variable was created using the transform feature in SPSS. From the option to “compute variable,” I used the statistical feature MEAN outside of the parenthesis with each survey question about taking arts lessons within the parentheses. The survey question asked respondents if they had ever taken classes in a specific arts subject: music, photography, visual arts, acting, dance, art appreciation, or music appreciation. The survey included 7 arts-related class subjects. The original survey results were coded with 1 = Did attend and 2 = Did NOT attend. After transforming the original variable, the new variable resulted in a range of 1-2: 1, 1.14, 1.17, 1.20, 1.25...1.86, 2.0. The range reflects the fact that some respondents only attended one arts class and other respondents attended several. Since the purpose of this variable is to identify those who attended at least one arts class, I combined all of the responses between 1 and 1.86. I did this using the following options in SPSS: Transform, Recode in different variable, Old and New Values. The range 1-1.86 became 1, which means the respondent DID attend at least one arts event. The value 2 means the respondent did NOT attend at least one arts event. I then cross referenced the percentages of the values 1 and 2 with the original variables in a frequency table in SPSS. For consistency with the other variables in the paper, I went through the “recode into different variable” process again to change 2= did NOT attend to the value 0. The value of 1 stayed the same: DID attend an arts class. The N=9427.

The technology variable was created using the transform feature in SPSS. From the option to “compute variable,” I used the statistical feature MEAN outside of the parenthesis with each survey question about using technology to access the arts within the parentheses. The survey question asked respondents if they used technology to access the arts. The questions were grouped in three categories: TV or radio, Internet, Handheld device. The survey included 7 arts-related class subjects. The original survey results were coded with 1 = Did attend and 2 = Did

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NOT attend. After transforming the original variable, the new variable resulted in a range of 1-2: 1, 1.14, 1.17, 1.20, 1.25...1.86, 2.0. The range reflects the fact that some respondents only attended one arts class and other respondents attended several. Since the purpose of this variable is to identify those who attended at least one arts class, I combined all of the responses between 1 and 1.86. I did this using the following options in SPSS: Transform, Recode in different variable, Old and New Values. The range 1-1.86 became 1, which means the respondent DID attend at least one arts event. The value 2 means the respondent did NOT attend at least one arts event. I then cross referenced the percentages of the values 1 and 2 with the original variables in a frequency table in SPSS. For consistency with the other variables in the paper, I went through the “recode into different variable” process again to change 2- did NOT attend to the value 0. The value of 1 stayed the same: DID attend an arts class. The N=9427.

Table 6 illustrates the composite variables.

Table 6

Composite variables

Composite Variables	Coding
Binary Attendance	0= Did NOT Attend 1= Did Attend
Attendance Frequency	1-13 = Number of times attended
Arts Learning	0= Did NOT Take Lessons 1= Did Take Lessons
Technology	0= Did NOT Use Technology 1= Did Use Technology

Survey Weights

I used the survey weights from the SPPA for the general population information in this study. I used both the weighted and unweighted numbers from the responses in the core 1 and module questions to present the data with two lenses. The population representation and the

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respondent representation are labeled in each table. Where not specified, the numbers represent the unweighted sample. Triplett (2014) created a table in the 2012 SPPA Public-Use Data File User's Guide that I used as a guide. Triplett (2014) recommended using the survey weights to "provide approximately unbiased aggregate" estimates (p. 14). The survey weights were coded, and the codes were included in the survey responses that appear in SPSS. Survey weights were provided for each section of the SPPA in addition to weights for core and module combinations (Triplett, 2014, p.14-17). Triplett (2014) provided examples of correct and incorrect methods for using the survey weights. I cross-referenced my process with Triplett's (2014) steps for correct survey weight use. The NEA has published highlights from the 2012 SPPA and reports that utilize specific variables; I checked that my work matches and builds upon the previously published reports. The demographic data were checked against Appendix A in the *2012 SPPA Public-Use Data Dictionary* (Triplett, 2014). In addition, I confirmed that similar statistical sets matched the NEA report: "A Decade of Arts Engagement: Findings from the Survey of Public Participation in the Arts, 2002-2012" (Shewfelt, 2013). The studies listed by NADAC that used the SPPA data are difficult to compare with this study. The research topics reflect a broad range and the variables utilized to answer the research questions are not combined in the same ways. The studies are summarized in Appendix A.

Descriptive Statistics

The following section provides frequency tables for the variables in this study. I accessed the public use file on the NADAC website to open using SPSS. I used SPSS to create the frequency tables. The variables came from the 2012 CPS. The frequency tables below reflect the unweighted CPS variables used in this study. The demographic variables from the CPS used in this study were chosen based on the generally accepted measures of SES: family income, age,

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sex, educational attainment, race, and parents' educational attainment. Except for the sex variable, the categories were collapsed into a smaller set of groups.

Demographic Variables

The demographic variables include: income, age, sex, educational attainment, race/ethnicity, father's educational attainment, and mother's educational attainment. The data are described in Tables 7 through 13.

Table 7

CPS Variables, Family Income

Income Category	Frequency	Valid Percent
<5,000-9,999	2208	6.2
10,000-19,999	3647	10.2
20,000-34,999	6338	17.7
35,000-59,000	8322	23.3
60,000-99,999	8076	22.6
100,000-149,999	4266	11.9
150,000 +	2878	8.1
Total	35,735	100.0

Note. (SPPA, 2012)

The family income question in the CPS had a range from less than \$5,000 to \$150,000 or more in approximately \$5,000 increments on the lower end and \$15,000 increments on the higher end. There were 16 total categories on the original survey; I collapsed the variable into 7 categories. The majority of the respondents reported an income of between \$35,000-\$59,000. The lowest income category, less than \$10,000, makes up 6.2% of the sample. The highest income category, over \$150,000, makes up 8.1% of the sample.

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Table 8

CPS Variables, Person's age as of the end of the survey week

Age Category	Frequency	Valid Percent
18-25	3492	9.8
26-35	5968	16.7
36-45	6076	17.0
46-55	6850	19.2
56-65	6401	17.9
66-75	3940	11.0
76-85	3008	8.4
Total	35,735	100.0

Note. (SPPA, 2012)

While the CPS included responses from participants aged 15 and older, the SPPA only included responses from adults aged 18 and over. The highest percentage of respondents was the 46-55 group (19.2%), and the lowest percentage of respondents was the 76-85 group (8.4%). The mean age of the respondent was 49 years old.

Table 9

CPS Variables, Sex

Sex Category	Frequency	Valid Percent
Male	16,813	47.0
Female	18,922	53.0
Total	35,735	100.0

Note. (SPPA, 2012)

The sex category is relatively even: 47% male and 53% female.

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Table 10

CPS Variables, Highest level of school completed, or degree received

Educational Attainment Category	Frequency	Valid Percent
<1 st -6 th	655	1.8
7 th -8 th	620	1.7
9 th -12 th , no diploma	2559	7.2
High school graduate	10673	29.9
Some college	6769	18.9
Associate's degree	3498	9.8
Bachelor's degree	7011	19.6
Master's degree	2833	7.9
Doctorate or professional degree	1117	3.1
Total	35735	100.0

Note. (SPPA, 2012)

The education variable reflects a range of attainment. A small percentage (10.7%) of the sample did not have a high school diploma, and a similarly small percentage (11%) of the sample had a graduate degree. The largest percentage of the sample (29.9%) had a high school diploma. The percentage for some college (18.9%) and bachelor's degree (19.6%) is comparable.

Table 11

CPS Variables, Race and ethnicity

Race and Ethnicity Category	Frequency	Valid Percent
Non-Hispanic White	26474	74.1
Black	3108	8.7
Indian/Alaskan Native	367	1.0
Asian	1548	4.3
Hawaiian/Pacific Islander	155	0.4
Combination	526	1.5
Hispanic	3557	10.0
Total	35735	100.0

Note. (SPPA, 2012)

The race/ethnicity variable is a combined variable. In the CPS, race and ethnicity were separate questions. I re-coded the variables from the 19 original race categories into six

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categories that included all of the combinations of race as one category: combination. All possible race combinations were previously listed separately. Hispanic was not an option on the race variable; instead, the CPS asked if the respondent was Hispanic later in the survey in a different ethnicity question. After looking at the race and ethnicity data in SPSS, it became apparent that some respondents who identified as white in the race question also identified as Hispanic in the ethnicity question. I was able to combine the race and ethnicity questions in SPSS. Anyone who identified as both non-Hispanic white and Hispanic was removed from the non-Hispanic white category and included in the Hispanic category, which was coded as 7.

The race/ethnicity variable is predominantly non-Hispanic white (74.1%). The next highest representations are Hispanic (10%) and black (8.7%). The 2010 Census reported non-Hispanic white as 61.3%, Hispanic as 17.8%, and black as 13.3% (U.S. Census Bureau, 2011). The Asian variable in this study is reported as 4.3%, while the 2010 Census reports Asian comprising 5.7% of the population (U.S. Census Bureau, 2011). The data collected for the CPS in 2012 reflect slightly different numbers than the 2010 Census collection. The 2012 CPS data show slightly higher non-Hispanic white representation and lower representation for Hispanic, black, and Asian populations than was reported in the 2010 Census.

Table 12

Module E Variables, Father's educational attainment

Educational Attainment Category	Frequency	Percent
High school	5482	15.3
College	1992	5.6
Graduate degree	606	1.7
Missing	27655	77.4
Total	35735	100.0

Note. (SPPA, 2012)

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Table 13

Module E Variables, Mother's educational attainment

Educational Attainment Category	Frequency	Valid Percent
High school	5720	16.0
College	2161	6.0
Graduate degree	392	1.1
Missing	27462	76.8
Total	35735	100.0

Note. (SPPA, 2012)

With both parent education variables, there is a significant amount of missing data. This is because the question was at the end of module E in the SPPA. The sample size for module E is 4,923. The variable for father's education reflected 0.7% no response, 0.8% refused to respond, 3.3% does not know, and 72.6% of the sample for the SPPA were not asked this question or this module. The variable for mother's education reflected the same no response and refused to respond, and 2.8% of the respondents did not know.

These variables are unweighted frequencies for the sample provided by the SPPA data download. I moved these questions into the demographic variables because parents' educational attainment can be a variable that contributes to socioeconomic status. In both cases above, the parents' educational attainment decreases after high school.

Data Analysis

The data analysis of this quantitative study was conducted using SPSS software.

Demographics. Descriptive statistics are presented in chapter 3 to identify the characteristics of the SPPA respondents. Variables presented included: income, age, sex, educational attainment, race/ethnicity, and parents' educational attainment. The variables came

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from the CPS, apart from parents' educational attainment, which came from module E.

Demographic variables enabled a more detailed understanding of who attends the arts.

Arts attendance. I utilized Core 1, Module E, and the CPS variables to answer the first research question about arts attendance. For research question 1a, I ran frequency tables with both sample attendance and population attendance to benchmark arts activities. This resulted in two tables: binary attendance and attendance frequency. The binary attendance table included respondent attendance using the unweighted data, population attendance using the weighted data, and the distribution of attendees based on the respondents' unweighted data.

For research question 1b, I ran additional frequency tables for each demographic variable with the binary attendance variables for each benchmark arts activity. The demographic variables included age, income, educational attainment, race/ethnicity, and sex. The 10 benchmark activities were: live jazz; live Latin, Spanish, or salsa music; live classical music; live opera; live musical; live non-musical play; live ballet; live dance (other than ballet); other music or dance performance; visit to an art museum. To determine if there were any statistically significant differences in the means of the groups of people who attended benchmark arts activities, I conducted a one-way analysis of variance (ANOVA). For this analysis, I used the attendance frequency composite variable as the dependent variable and income, age, educational attainment, mother's educational attainment, and father's educational attainment as independent variables. I then ran correlations among the demographic variables and the attendance frequency composite variable to determine if the variable relationships were significant.

Influence of arts learning and SES on arts attendance. To answer research question 2, I re-coded the variables in module E. Location of lessons were re-coded as: 1= in school, 2= out of

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school, 3= both in school and out of school. Age during lessons were re-coded as: 1= under 18, 2= 18 or over, and 3= both as a child and as an adult. Informal education was included as attending a gallery or performance; these variables were re-coded from 1= yes, 2= no to 0= no, 1= yes. Questions about lessons during the last year and learning from family member were excluded from this study.

Initially, I ran frequency tables to determine how the sample experienced arts learning. I included variables for formal and informal arts learning, location of arts learning, and age during arts learning.

To understand the role of arts learning on arts attendance, I ran a logistic regression using the composite binary attendance as the outcome, regressed on all the arts learning variables. I then ran a series of logistic regressions of the composite binary benchmark arts attendance variable on each of the arts learning variable groups separated. The logistic regressions were: binary attendance on (1) informal arts learning, (2) location of arts learning, and (3) the age during arts learning.

The arts learning variables, location and age, have an implicit intensity. For location of arts learning, students are often required to take lessons in school from mandatory scheduling, parental pressure, or peer influence. Out of school lessons, however, indicate a personal interest or desire to learn about the art. The out of school lessons may indicate a component of choice. For a person to take classes both in school and out of school, there must be a strong desire to learn more about the topic. Therefore, the intensity develops from in school to out of school to both. Similarly, students under 18 are often scheduled into arts learning by school administration, parental choice, or peer influence. Whereas, people over 18 are generally making the choice to

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attend arts learning classes. This demonstrates a desire to learn the topic. People who take lessons both under and over 18 reveal an ambition to learn about the topic. The intensity grows from lessons being mandated to lessons being a choice. The levels of progression allow for these variables to be included in the regressions.

To answer research question 2b, I ran an additional logistic regression of the binary attendance variable on the demographic variables.

To better understand the relationships among the variables, I ran a series of multiple regressions. The dependent variable was the composite attendance frequency. The first regression included the demographic variables and arts learning. The second regression included only arts learning variables. The third regression included formal and informal arts learning.

Influence of technology on arts participation and attendance. To answer research question 3, I grouped the technology variables from modules B and C. The module B groups questions asked respondents if they had: used a television or radio to watch or listen to a benchmark arts activity, use the internet to watch, listen, or download a benchmark arts activity, used a handheld/mobile device to read, listen to, or download a benchmark arts activity. The responses were re-coded from 1= yes, 2= no to 0= no, 1= yes. Only the questions about benchmark arts activities were used in this study. The three module C groups included questions that asked respondents if they had: used a computer, a handheld/mobile device, or the internet to create a benchmark arts activity. In addition, questions about creating a benchmark arts activity were included.

Initially, I ran descriptive statistics for the technology variables. Then I looked at the frequency tables with technology and benchmark arts activities. To understand variable

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relationships, I ran correlations with television hours, internet frequency, and the demographic variables. Next, I conducted a series of regressions. In the first logistic regression, I regressed the composite binary attendance on internet used to watch benchmark arts. The second logistic regression included the composite binary attendance on using television to watch benchmark arts. The third logistic regression contained the composite binary attendance on using a handheld device to watch or access benchmark arts.

Finally, I ran a multiple regression to study how the technology variables may relate to the arts learning variables and how they both impact the dependent variable, attendance frequency.

The methods used in this study utilize the SPPA to better understand how the key variables provide clarity for the research questions. After developing an understanding of the variables, I ran a series of statistical analyses to explore relationships among variables with respect to benchmark arts attendance.

Chapter 4: Results

Data were accessed from the National Archive of Data on Arts and Culture (NADAC) from a public-user file. The file was uploaded using SPSS software. The file included data from the Current Population Survey (CPS) and the Survey of Public Participation in the Arts (SPPA) for 2012. The CPS data were used for demographic variables: age, income, sex, educational attainment, race/ethnicity. Parents' educational attainment, a common measure of socio-economic status, were questions in the SPPA Module E and incorporated into the demographic variables. The SPPA provided information on arts attendance between July of 2011 and July of 2012. Only five sections of the SPPA were used for this study: CPS, Core 1, Module B, Module C, and Module E. Core 2, Module A, and Module D were excluded, as described above.

The respondents for the SPPA were randomly selected from their participation in the monthly CPS. Respondents were randomly assigned either core 1 or core 2 questions as well as two of the five SPPA modules. The interview format included spouse or proxy responses for some questions, and those were excluded for this study. The total sample size for the 2012 SPPA was 35,735; however, the sample size for each module varied and was presented in Table 5 of chapter 3. The response rate was 74.8% (NEA, 2013). The data collection took place through computer-assisted personal or telephone interviews.

Data were analyzed to uncover answers to the research questions:

1. Who participates in the arts and how?
 - a. Who attends the arts?
 - b. How do different groups differ in their participation?
2. What influence does arts participation have on arts attendance?

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- a. What is the role of arts learning?
 - b. What is the role of SES?
3. Does technology influence different groups differently for arts participation and attendance?

Statistical tests were run to determine how the research questions for this study could be answered by the CPS and SPPA data. The 2012 SPPA Public-Use Data File User's Guide provided guidelines for data analysis (Triplett, 2014). Survey weights were used for some questions in this study with careful attention to the research manual. Weighted and unweighted data are noted.

Research Question 1

Understanding arts audiences. The purpose of the first research question is to understand who attends the arts. For this study, attendance is the traditional measure for arts audiences: ticket sales. It is the measurement of people physically attending an arts event. Participation is arts engagement through creating art or using technology for the arts to view, create, edit, or share.

The SPPA provided information about attendance to ten benchmark arts activities:

- Live jazz
- Live Latin, Spanish, or salsa music
- Live classical music
- Live opera
- Live musical
- Live non-musical play
- Live ballet
- Live dance (other than ballet)
- Other music or dance performance
- Visit to an art museum

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Frequency tables. Descriptive statistics were run to determine attendance at each benchmark arts activity both as the population and by each demographic group in this study. The sample responses were weighted with SPPA sampling weights to represent the population. The demographic variables included: age, income, educational attainment, race/ethnicity, and sex. For each of the questions in this section of the study, the respondents were asked if they attended one of the benchmark activities within the last year. This is a binary, yes or no, statistic.

Attendance for benchmark arts activities is low. Table 14 reports these data. The respondents in the sample (unweighted) and the population estimates (weighted) demonstrate similar patterns.

Table 14

Attendance for benchmark arts activities

Benchmark Arts Activity	Respondent Attendance (at least one time between July 2011 and July 2012)	Population Attendance	Distribution of Attendees (data is unweighted for respondents)
Live jazz	3.1%	5.9%	8.9%
Live Latin, Spanish, or salsa music	1.6%	3.7%	4.7%
Live classical music	3.4%	6.0%	9.9%
Live opera	0.8%	1.5%	2.3%
Live musical	5.5%	10.3%	16.2%
Live non-musical play	3.2%	5.7%	9.5%
Live ballet	1.1%	1.9%	3.1%
Live dance (other than ballet)	2.1%	3.9%	6.2%
Other music or dance performance	4.1%	8.0%	12.2%
Visit to a museum	7.7%	14.4%	22.7%
Mean	3.26%	5.23%	

Museums were attended by more people than the other benchmark arts activities. Of the respondents, 7.7% had attended a museum at least one time. The population estimate reveals

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14.4% of the population attended a museum at least one time. Museum visits account for 22.7% of benchmark arts attendance. Musicals were the second-most attended benchmark arts activity. Of the respondents, 5.5% had attended a live musical at least one time. The population estimate reveals 10.3% had attended a live musical. Live musical attendance accounts for 16.2% of benchmark arts attendance.

Other music or dance performance is a broad category that includes everything from pop music concerts to cultural arts performances. The respondents reported 5.5% had attended a music or dance performance; the population reported 8.0%. The other music or dance attendance makes up 12.2% of total benchmark arts attendance. Attendance at a classical music performance was reported by 3.4% of the respondents and 6.0% of the population. Classical music attendance accounts for 9.9% of benchmark arts attendance. The mean percentage of benchmark arts attendance for the respondents is 3.26% and for the population is 5.23%. The benchmark arts attendance above the mean for respondents include museum visits, attendance to a live musical, other music or dance performance, and a live classical performance. The benchmark arts attendance above the mean for the population include all of the above, in addition to attendance to a live non-musical play and a live jazz performance.

The binary attendance question was followed by an inquiry of how many times the benchmark activity was attended. The attendance frequency is conditional on having answered affirmatively to the yes or no benchmark attendance question they had been previously asked. The sample size for these responses is lower than for the binary benchmark attendance question. The sample size for each question is reported in Tables 14 and 15. The frequency range in both tables is 1-12. Both tables report sample size, percent, valid percent, and total for benchmark arts attendance frequencies. Table 15 shows the data for respondents' frequency of attendance to

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each benchmark arts activity. The percent column is frequency divided into sample size total.

The valid percent is the frequency divided into the total responses. The total column is the total percent of the sample who attended a benchmark arts activity and can be cross referenced with the Respondent Attendance column in Table 14. Table 16 shows the data for the population estimate frequency of attendance to each benchmark arts activity. The percent column is the frequency divided into the population total. The valid percent is the frequency divided into the total responses. The total column is the total percent of the population who attended the benchmark arts activity and can be cross referenced with the Population Attendance column of Table 14.

Table 15

Frequency of visits for unweighted respondent sample to benchmark arts activities

		1	2	3	4	5	6	7	8	9	10	11	12	Total
Jazz n=1068	% Valid %	1.1 38.1	0.8 25.8	0.4 13.5	0.2 7.9	0.1 3.7	0.1 3.4	0.0 0.2	0.0 1.1	X 1.3	0.0 1.3	X 5.1	0.2 5.1	3.0 100
Latin n=568	% Valid %	0.7 45.8	0.4 27.8	0.2 10	0.1 4.2	0.1 3.2	0.0 2.3	0.0 0.4	0.0 1.4	X 1.4	0.0 1.8	X 3.2	0.1 3.2	1.6 100
Classical n=1186	% Valid %	1.5 44.9	0.8 25.1	0.4 10.9	0.2 6.1	0.1 2.3	0.1 3.7	0.0 0.3	0.1 1.5	0.0 0.1	0.0 1.2	0.0 0.1	0.1 3.9	3.3 100
Opera n=277	% Valid %	0.4 53.1	0.2 24.2	0.1 10.1	0 4.3	0 2.2	0 2.2	0 1.1	X 1.1	0 2.9	X 2.9	X 2.9	X 2.9	0.8 100
Musicals n=1958	% Valid %	2.7 48.9	1.5 27.4	0.6 10.9	0.3 5.3	0.1 2.4	0.1 2.0	0.2 3.1	X 3.1	X 3.1	X 3.1	X 3.1	X 3.1	5.5 100
Play n=1140	% Valid %	1.6 49.9	0.8 24.2	0.3 10.3	0.2 5.4	0.1 2.9	0.1 2.7	0.0 0.8	0.1 3.9	X 3.9	X 3.9	X 3.9	X 3.9	3.2 100
Ballet n=373	% Valid %	0.8 72.4	0.2 14.5	0.1 6.2	0.0 2.7	0.0 4.3	X 4.3	X 4.3	X 4.3	X 4.3	X 4.3	X 4.3	X 4.3	1.0 100
Dance n=739	% Valid %	1.2 57	0.5 21.9	0.1 6.9	0.1 4.5	0.1 3.0	0.0 1.6	0 0.7	0 0.8	0 0.1	0.1 3.5	X 3.5	X 3.5	2.1 100
Museum n=2728	% Valid %	3.0 39.2	1.8 23.8	1.1 13.9	0.6 7.3	0.3 4.0	0.3 3.7	0 0.4	0.1 1.0	0 0.1	0.2 2.1	0 0.3	0.3 4.2	7.6 100

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Table 16

Frequency of visits for weighted population to benchmark arts activities

		1	2	3	4	5	6	7	8	9	10	11	12	Total
Jazz n=13447543	% Valid %	2.1 37.3	1.5 26	0.8 14	0.5 8.7	0.2 4	0.2 2.9	0 0.1	0.1 1.3	X 1.2	0.1 1.2	X 1.2	0.3 4.5	5.7 100
Latin n=8575161	% Valid %	1.6 44.2	1.1 30.7	0.4 9.9	0.1 3.6	0.1 3.0	0.1 2.1	0 0.1	0 1.3	X 2.0	0.1 2.0	X 2.0	0.1 3.0	3.6 100
Classical n=13932149	% Valid %	2.8 47.3	1.4 22.9	0.6 10.8	0.4 6.1	0.1 2.3	0.2 3.1	0 0.4	0.1 1.2	0 0.1	0.1 1.4	0 0.1	0.3 4.3	5.9 100
Opera n=3360786	% Valid %	0.8 54.2	0.3 22.2	0.2 11.2	0.1 4.4	0.0 2.7	0 2.1	0 0.5	X 2.6	0 2.6	X 2.6	X 2.6	X 2.6	1.4 100
Musicals n=23994308	% Valid %	5.1 49.5	2.8 27.5	1.0 10.2	0.5 4.7	0.3 2.6	0.2 2.0	0.4 3.5	X 3.5	X 3.5	X 3.5	X 3.5	X 3.5	10.2 100
Play n=13122363	% Valid %	2.8 49.6	1.4 24.6	0.6 10.6	0.3 5.1	0.2 3.3	0.1 2.2	0.0 0.6	0.2 4.0	X 4.0	X 4.0	X 4.0	X 4.0	5.6 100
Ballet n=4342331	% Valid %	1.3 71.7	0.3 15.1	0.1 6.2	0.1 2.7	0.1 4.2	X 4.2	X 4.2	X 4.2	X 4.2	X 4.2	X 4.2	X 4.2	1.8 100
Dance n=9103276	% Valid %	2.1 55.2	0.9 22.3	0.3 7.3	0.2 5.0	0.1 3.0	0.1 1.8	0 0.7	0 0.7	0.0 0.2	0.1 3.7	X 3.7	X 3.7	3.9 100
Museum n=33272230	% Valid %	5.8 40.8	3.3 23.6	2.0 14.5	1.0 6.9	0.5 3.8	0.5 3.3	0.1 0.4	0.1 0.8	0 0.1	0.3 2.0	0 0.3	0.5 3.6	14.2 100

Tables 15 and 16 show the frequency of visits to benchmark arts activities. Table 15 reports unweighted data for the respondents. The attendance frequency range is 1-12. Only live jazz, live Latin, live classical, and museum attendance reported a full range of frequency. The highest frequency for live opera was 9 visits; for live musicals, 7 visits; for a live non-musical play, 8 visits; and for ballet, 5 visits. In each benchmark arts activity category, there are substantial decreases between the first and second attendance. Museum visits, live classical music attendance, and live jazz attendance reflect strong valid percentages to the fourth visit. Table 16 reports weighted data for the population estimate. The weighted data show similar patterns and similar percentages across the table.

To better understand who attends the arts, I wanted to look at each of the demographic groups in the sample attending a benchmark arts activity. Tables 17-21 report responses to the binary attendance questions. This question asked if respondents had attended each benchmark

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activity at least one time between July of 2011 and July of 2012. The demographic variables included are: age, income, educational attainment, race/ethnicity, and sex. The demographic variables from the CPS section of the SPPA were originally listed individually. For example, when respondents were asked about age, the interviewer wrote down the exact number. For this study, I grouped the demographic variables to identify patterns and trends among groups with respect to the same outcome, arts attendance. I utilized cross tabs in descriptive statistics in SPSS to determine these data. These data are unweighted.

The first demographic variable I explored was age. Age was grouped as 18-25, 26-35, 36-45, 46-55, 56-65, 66-75, and 76-85. The Total column in Table 17 can be cross-referenced with the Distribution of Attendees column in Table 14. The Total column in Table 17 shows the distribution of attendees of benchmark arts activities. The other columns in Table 16 show the percentage each age group accounts for of the total attendees of each specific benchmark activity. For example, live jazz accounts for 8.9% of the total benchmark arts attendance. Of those who attended live jazz, the age group 18-25 accounts for 1.1%. The 26-35 age group represents 1.5% of those who attended live jazz. The 46-55 and the 56-65 age groups each represents 1.9% of those who attend live jazz. The 26-35 age group represents 1.1% of those who attend live Latin music. The age group 56-65 represents 2.1% of those who attend live classical music, followed by the 46-55 (1.9 %). The age group 26-35 and the age group 56-65 each represents 0.5% of those who attended live opera. The age groups 46-55 and 56-65 each represents 3.3% of those who attended a live musical. The same age groups report the highest percentages in live non-musical play attendees (1.9%, 1.7%).

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Table 17

Benchmark arts activities attendance represented by age groups

	18-25	26-35	36-45	46-55	56-65	66-75	76-85	Total
Live jazz	1.1%	1.5%	1.3%	1.9%	1.9%	0.8%	0.4%	8.9%
Live Latin, Spanish, or salsa music	0.9%	1.1%	0.8%	0.9%	0.8%	0.3%	0.1%	4.7%
Live classical music	0.9%	1.4%	1.1%	1.9%	2.1%	1.5%	0.9%	9.9%
Live opera	0.2%	0.5%	0.2%	0.4%	0.5%	0.3%	0.2%	2.3%
Live musical	1.6%	2.7%	2.4%	3.3%	3.3%	1.9%	1.1%	16.2%
Live non-musical play	1.0%	1.6%	1.4%	1.9%	1.7%	1.3%	0.7%	9.5%
Live ballet	0.3%	0.6%	0.5%	0.5%	0.6%	0.4%	0.2%	3.1%
Live dance (other than ballet)	0.8%	1.2%	0.9%	1.2%	1.2%	0.6%	0.3%	6.2%
Other music or dance performance	1.9%	2.3%	1.9%	2.5%	2.0%	1.0%	0.6%	12.2%
Visit to an art museum	2.5%	4.2%	3.6%	4.4%	4.1%	2.5%	1.4%	22.7%

The second demographic variable I considered was income. Income was grouped as below 5,000-9,999; 10,000-19,999; 20,000-34,999; 35,000-59,999; 60,000-99,999; 100,000-149,999; 150,000 and above. Table 18 reports these unweighted data and can be interpreted in the same way as Table 16. Of those who attended live jazz, the group 60,000-99,999 accounts for 2.2%. Of the 4.7% of respondents who attended live Latin, income groups 35,000-59,999 and 60,000-99,999 each account for 1.1%. Of the live classical music attendees, the income group 60,000-99,999 accounts for 2.5%, and the income group 35,000-59,999 accounts for 2.0%. The opera attendees in the group 60,000-99,999 account for 0.6%. Three relatively high-income group percentages reflect those who attend live musicals. The 35,000-59,999 group accounts for 3.4%; the 60,000-99,999 group accounts for 4.5%; and the 100,000-149,999 group accounts for 2.7%. In the remaining benchmark arts categories, of those who attended each benchmark

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activity, income group 60,000-99,999 accounts for the highest percentage. Of those who visited a museum, 5.8% can be accounted for by those in the 60,000-99,999 income group; however, the income groups account for higher percentages compared to the other benchmark arts activities in all categories of income.

Table 18

Benchmark arts activities attendance represented by income

	<5,000-9,999	10,000-19,999	20,000-34,999	35,000-59,999	60,000-99,999	100,000-149,999	150,000 +	Total
Live jazz	0.5%	0.6%	1.1%	1.8%	2.2%	1.5%	1.3%	8.9%
Live Latin, Spanish, or salsa music	0.3%	0.5%	0.7%	1.1%	1.1%	0.6%	0.4%	4.7%
Live classical music	0.3%	0.5%	1.2%	2.0%	2.5%	1.8%	1.5%	9.9%
Live opera	0.1%	0.1%	0.3%	0.4%	0.6%	0.4%	0.5%	2.3%
Live musical	0.5%	0.9%	1.8%	3.4%	4.5%	2.7%	2.4%	16.2%
Live non-musical play	0.3%	0.6%	1.1%	2.0%	2.3%	1.7%	1.4%	9.5%
Live ballet	0.1%	0.2%	0.3%	0.6%	0.8%	0.5%	0.5%	3.1%
Live dance (other than ballet)	0.3%	0.6%	0.8%	1.3%	1.6%	0.9%	0.8%	6.2%
Other music or dance performance	0.5%	0.7%	1.6%	2.9%	3.1%	1.9%	1.4%	12.2%
Visit to an art museum	0.9%	1.4%	2.7%	4.8%	5.8%	3.8%	3.3%	22.7%

The third demographic variable I looked at was educational attainment. Educational attainment was grouped as: below 6th grade, 7th and 8th grade, 9th-12th grade no diploma, high school graduate, some college, Associate's degree, Bachelor's degree, Master's degree, Doctorate/Professional degree. Table 19 reports these unweighted data. The educational attainment variables reveal compelling patterns. Those with an elementary or middle school education represent 0.0% of the benchmark arts attendees, with the exception of live Latin music and visiting an art museum. Of the live Latin music and museum attendees, those with an

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elementary or middle school education account for 0.1%. All of the benchmark arts activities have the highest percentage of attendance by those who have earned a bachelor's degree. Of the museum attendees, the education group bachelor's degree accounts for 7.3%. Of the live musical attendees, the education group bachelor's degree accounts for 5.3%. These are the highest percentages across the table. Between educational attainment groups some college and associate degree, all of the percentages decrease. Between the educational attainment groups associate degree and bachelor's degree, all of the percentages increase. After Bachelor's degree, the percentages decrease in every benchmark arts category across both master's degree and Doctorate/Professional degree groups. This indicates that within the respondent group who attended benchmark arts activities, those with the highest levels of educational attainment were not as well represented as those who had earned a Bachelor's degree. However, this is probably because they represent a smaller fraction of the respondent group.

Table 19

Benchmark arts activities attendance represented by education

	< 6th grade	7th-8th grade	9th-12th, no diploma	High school graduate	Some college	Associate's degree	Bachelor's degree	Master's degree	Doctorate/Professional	Total
Live jazz	0.0%	0.0%	0.1%	1.4%	1.6%	0.9%	2.7%	1.5%	0.6%	8.9%
Live Latin, Spanish, or salsa music	0.1%	0.1%	0.4%	0.9%	0.9%	0.4%	1.2%	0.6%	0.2%	4.7%
Live classical music	0.0%	0.0%	0.1%	1.0%	1.6%	0.9%	3.3%	1.9%	1.1%	9.9%
Live opera	0.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.8%	0.6%	0.3%	2.3%
Live musical	0.0%	0.0%	0.2%	2.7%	3.0%	1.5%	5.3%	2.5%	1.0%	16.2%
Live non-musical play	0.0%	0.0%	0.1%	1.4%	1.7%	0.8%	3.0%	1.7%	0.7%	9.5%
Live ballet	0.0%	0.0%	0.0%	0.3%	0.6%	0.3%	1.0%	0.6%	0.3%	3.1%
Live dance (other than ballet)	0.0%	0.0%	0.1%	1.0%	1.2%	0.6%	1.7%	1.1%	0.4%	6.2%
Other music or dance performance	0.0%	0.0%	0.3%	2.6%	2.4%	1.2%	3.3%	1.6%	0.7%	12.2%

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Visit to an art museum	0.1%	0.1%	0.4%	3.2%	4.3%	1.9%	7.3%	3.8%	1.7%	22.7%
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The fourth demographic variable I examined was race/ethnicity. Race/ethnicity was grouped as: White, Black, Indian/Alaska Native, Asian, Hawaiian/Pacific Islander, Hispanic, and Combination. Table 20 reports these data. Of all of the benchmark arts activities, the non-Hispanic white demographic represents the largest percentage of the audience. Of those who attend live musicals, 13.5% is represented by the non-Hispanic white demographic. The next highest audience representation is the Black demographic with 1.0%. Of those who attend live jazz music, the non-Hispanic white demographic accounts for 6.5% of the audience and the Black demographic accounts for 1.2% of the audience. Of those who visit museums, 18.1% identify as the non-Hispanic white demographic, 1.6% identify as Hispanic, 1.3% identify as Black, and 1.1% identify as Asian. These data are reflective of the sample demographics in Table 11. Of the 35,735-respondent sample, 26,474 identified as non-Hispanic white.

Table 20

Benchmark arts activities attendance represented by race

	White	Black	Indian/ Alaska Native	Asian	Hawaiian /Pacific Islander	Combination	Hispanic	Total
Live jazz	6.5%	1.2%	0.1%	0.3%	0.0%	0.2%	0.6%	8.9%
Live Latin, Spanish, or salsa music	2.2%	0.4%	0.0%	0.1%	0.0%	0.1%	1.8%	4.7%
Live classical music	8.4%	0.5%	0.1%	0.4%	0.0%	0.1%	0.4%	9.9%
Live opera	1.9%	0.1%	0.0%	0.2%	0.0%	0.0%	0.2%	2.3%
Live musical	13.5%	1.0%	0.1%	0.5%	0.1%	0.2%	0.8%	16.2%
Live non- musical play	8.0%	0.7%	0.1%	0.2%	0.0%	0.1%	0.4%	9.5%
Live ballet	2.6%	0.2%	0.0%	0.1%	0.0%	0.0%	0.2%	3.1%
Live dance (other than ballet)	4.6%	0.6%	0.1%	0.3%	0.0%	0.1%	0.5%	6.2%

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Other music or dance performance	10.3%	0.6%	0.1%	0.3%	0.0%	0.2%	0.7%	12.2%
Visit to an art museum	18.1%	1.3%	0.2%	1.1%	0.1%	0.4%	1.6%	22.7%

The fifth demographic variable I studied was sex. Table 21 reports these data. In every benchmark arts category, females account for more of the audience. Of those who attend live opera, men account for 0.8% of the audience; whereas, women account for 1.5% of the audience. Of those who attend live musicals, men account for 5.8% of the audience; women, 10.4%. Of museum visitors among the respondents, men account for 9% and women account for 13.7%.

Table 21

Benchmark arts activities attendance represented by males and females

	Male	Female	Total
Live jazz	3.7%	5.2%	8.9%
Live Latin, Spanish, or salsa music	2.0%	2.8%	4.7%
Live classical music	3.9%	6.0%	9.9%
Live opera	0.8%	1.5%	2.3%
Live musical	5.8%	10.4%	16.2%
Live non-musical play	3.6%	5.8%	9.5%
Live ballet	1.0%	2.1%	3.1%
Live dance (other than ballet)	2.2%	4.0%	6.2%
Other music or dance performance	5.5%	6.7%	12.2%
Visit to an art museum	9%	13.7%	22.7%

Analysis of variance (ANOVA). To answer research question 1b, I conducted one-way ANOVA. I wanted to see if there were any statistically significant differences in the means of the groups of people who attended benchmark arts events. For the nominal independent variables, I used income, age, educational attainment, mother's educational attainment, and father's educational attainment, and race/ethnicity. For the race/ethnicity variable, I re-coded the

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categorical race/ethnicity variable in separate dichotomous variables. Each race/ethnicity was re-coded separately as 0 = Does NOT identify as race/ethnicity and 1= Does identify as race/ethnicity. I used the composite attendance frequency as the dependent variable. Table 22 reports the only the significant results of the ANOVA.

Table 22

ANOVA between demographic variables and composite attendance frequency

	Sum of Squares	df	Mean Square	F	Sig
Education					
Between Groups	185.27	12	15.44	7.11	.001
Within Groups	1934.06	890	2.17		
Total	2119.33	902			
Father's Educational Attainment					
Between Groups	21.18	12	1.77	3.05	.001
Within Groups	515.32	890	.579		
Total	536.51	902			
Mother's Educational Attainment					
Between Groups	23.29	12	1.94	4.11	.001
Within Groups	420.27	890	.472		
Total	443.56	902			
Indian/Alaska Native					
Between Groups	.129	12	.011	1.976	.024
Within Groups	4.84	890	.005		
Total	4.97	902			
Hawaiian					
Between Groups	.122	12	.010	2.35	.006
Within Groups	3.86	890	.004		
Total	3.98	901			

There was a significant effect of educational attainment, parental educational attainment, and two race/ethnicity categories: Indian/Alaska Native and Hawaiian. These were significant at the $p < .05$ level. The ANOVA results highlight the importance of education in relation to attendance frequency to benchmark arts events.

Correlations. To further explore relationships among the variables, I ran correlations with the demographic variables. I used the composite attendance frequency variable as well as the demographic variables age, income, educational attainment, father's educational attainment,

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and mother's educational attainment. Sex and race/ethnicity were excluded from this test. Table 23 shows the correlations.

Table 23

Demographic variables and composite attendance frequency correlations

		Attendance Frequency	Age	Income	Educational Attainment	Father's Education	Mother's Education
Attendance Frequency	Pearson Correlation	1					
	Sig.						
Age	Pearson Correlation	.008	1				
	Sig.	.819					
Income	Pearson Correlation	.036	.023	1			
	Sig.	.275	.487				
Educational Attainment	Pearson Correlation	.258**	.058	.314**	1		
	Sig.	.001	.082	.001			
Father's Education	Pearson Correlation	.156**	-.153**	.127**	.316**	1	
	Sig.	.001	.001	.001	.001		
Mother's Education	Pearson Correlation	.198**	-.270**	.098**	.201**	.573**	1
	Sig.	.001	.001	.003	.001	.001	

*Correlation is significant at the 0.001 level (2-tailed)

Listwise N=903

The education variables have significant and positive correlations with attendance frequency, reported at the $p < .01$ level. The Pearson correlation range is 0 to 1, the closer to 1, the stronger the correlation. Educational attainment is about twice as large as parents' educational attainment.

Summary for research question 1. Research question 1 provided a foundation for understanding benchmark arts attendance. Overall benchmark attendance reveals museum visits and live musical attendance are the most attended. The attendance frequency reports that

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attendance to jazz music, Latin music, classical music, and museums reported 12 visits. This may highlight niche interests. People who enjoy jazz, Latin, or classical music may be likely to attend these concerts frequently. Museum visits and live musical attendance reported the highest levels of frequency. Of those who attended a benchmark arts event, the highest representation for each age group is in live musical attendance and museum visits. Looking at income and education, the percentages decrease at the higher levels; however, this does not mean that higher educational attainment or more income accounts for lower attendance. Instead, it highlights the point that fewer people who responded to the survey identify within the higher-level categories of income and education. The higher levels of income and education reflect a smaller sample size.

Observing race/ethnicity indicates that audiences for each benchmark arts activity are mostly non-Hispanic white. This echoes the survey sample (74.1% non-Hispanic white). The sex variable shows that women report higher attendance in each benchmark arts activity.

Research Question 2

Influence of arts learning and demographic variables on arts attendance. The second research question considers possible relationships with arts participation through arts learning, demographics, and arts attendance. Arts participation in research question 2 focuses on engagement through arts learning; the technology component of arts participation will be addressed in research question 3.

Arts learning variables were collected from SPPA questions that asked participants about their arts learning experience. These questions are part of module E. The first block of questions asked participants if they had ever taken lessons or classes in a benchmark arts activity. The follow-up question asked if the lessons were taken in school, out of school, or both in school and out of school. Participants were then asked if the lessons were taken when the participant was a

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child under 18, an adult 18 or older, or both as an adult and child. Next participants were asked if any of the lessons had occurred in the past year. The final question in the block asked if the participant had done any learning for this benchmark arts activity through any other means such as being taught by family or friends. At the end of the module, participants were asked if they attended a museum or gallery when they were a child and if they attended a live music, theater, or dance performance when they were a child.

The questions used for this study were recoded. Taking lessons in a benchmark arts activity was recoded 0= no and 1 = yes. The location of lessons was recoded 1= in school, 2= outside of school, and 3= both in school and outside of school. The age during the lessons was recoded as 1= under 18, 2= 18 and over, 3= both. The age and location variables have an implicit intensity, as described in chapter 3. Questions about lessons occurring the previous year and lessons taught by a family member were excluded from this study. The questions about gallery and performance attendance were recoded 0= no and 1= yes.

To answer research question 2, I began with logistic regression. The dependent variable was binary attendance (0= no, 1= yes). The predictor variables were the arts learning variables and the demographic variables. Arts learning variables included benchmark arts lessons, location of the lessons, age lessons were taken, and gallery or live performance attendance as a child. Demographic variables included income, age, sex, educational attainment, race/ethnicity, mother's educational attainment, and father's educational attainment.

Frequency tables for arts learning variables. Before completing logistic regression to look for relationships, I was interested in the frequencies of the variables for arts learning. The arts learning variables are presented below in frequency tables. These data use the unweighted

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variables and report responses for the respondents in the sample. The valid percent reflects only the respondents who answered the question; missing data has been removed.

The dependent variable, binary attendance, reflects that 65.7% of the respondents did not attend a benchmark arts activity, and 34.3% of the respondents did attend at least one activity. This variable is an amalgamation of the benchmark arts activities listed in the SPPA questions. Table 23 reports these data.

Arts learning includes both formal education, which occurs in a traditional classroom setting, as well as informal education, which occurs in an arts space like a museum gallery or theatrical stage. General informal education data reflects that 13.9% of the respondents attended a gallery or museum as a child, and 14.3% of the respondents attended a live music, theater, or dance performance as a child. Table 24 shows respondents' attendance to benchmark arts composite and informal education.

Table 24

Respondents' attendance to benchmark arts composite and informal education

	Yes	No
Benchmark Arts Composite	34.3%	65.7%
Informal education- Gallery	13.9%	86.1%
Informal education- Performance	14.3%	85.7%

When asked broadly if the respondent had taken lessons in the benchmark activities, music lessons were the most attended (9.9%), followed by visual arts (5.2%), art appreciation (4.8%), and dance (4.7%). Table 25 shows percentages of lesson types attended.

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Table 25

Lesson type attendance

Lesson type	Percent Attended
Music	9.9%
Photography/Film	2.7%
Visual Arts	5.2%
Acting	2.0%
Dance	4.7%
Art Appreciation	4.8%
Music Appreciation	3.7%

More specifically, formal and informal education opportunities were reflected in the location: in school, out of school, or both. The highest participation for in school arts learning was for music class (4.2%) followed by art appreciation (4.0%), music appreciation (2.9%), and visual arts (2.7%). The only category that showed an increase from in school lessons to out of school lessons was dance, which increased from 1.0% in school to 2.6% out of school. Music and visual arts were reported both in school and out of school by 3.5% and 1.5% of the population, respectively. Table 26 shows where arts learning occurred.

Table 26

Lesson location: in school, out of school, both

Lesson location	Percent Attended
Music	
In school	4.2%
Out of school	2.1%
Both	3.5%
Photography/Film	
In school	1.6%
Out of school	0.6%
Both	0.5%
Visual Arts	
In school	2.7%
Out of school	1.1%
Both	1.5%
Acting	
In school	1.4%

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Out of school	0.2%
Both	0.4%
Dance	
In school	1.0%
Out of school	2.6%
Both	1.1%
Art Appreciation	
In school	4.0%
Out of school	0.1%
Both	0.6%
Music Appreciation	
In school	2.9%
Out of school	0.2%
Both	0.6%

The age range during which the lessons occurred reflects a range of arts learning opportunities. Music (6.7%) and dance (2.0%) were the most attended lessons if the participant was under 18. Participants 18 and over reported lessons in art appreciation (2.4%), visual arts (1.5%), and music appreciation (1.3%). Music (2.4%) and visual arts (1.8%) were the highest reported lessons to have occurred as both a child and an adult. Table 27 reports the age when people took benchmark arts lessons.

Table 27

Age during lessons: under 18, 18 and over, and both

Lesson Age	Percent Attended
Music	
Under 18	6.7%
18 and over	0.7%
Both	2.4%
Photography/Film	
Under 18	0.8%
18 and over	1.3%
Both	0.6%
Visual Arts	
Under 18	1.9%
18 and over	1.5%
Both	1.8%
Acting	

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Under 18	1.2%
18 and over	0.3%
Both	0.5%
Dance	
Under 18	2.0%
18 and over	1.4%
Both	1.2%
Art Appreciation	
Under 18	1.1%
18 and over	2.4%
Both	1.2%
Music Appreciation	
Under 18	1.4%
18 and over	1.3%
Both	1.0%

Logistic regression for arts learning and benchmark arts attendance. Logistic regression was utilized to determine if relationships existed between arts learning variables and benchmark arts attendance. The logistic regression was run using the enter method.

The first logistic regression included all the arts learning variables and composite binary attendance as the dependent variable. I used seven separate independent variables. The arts learning variables came from the questions in module E that asked respondents if they had ever taken lessons or classes in:

- Music
- Photograph or filmmaking
- Visual arts
- Acting or theater
- Dance
- Art appreciation or art history
- Music appreciation.

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The results of the logistic regression are presented in Table 28.

Table 28

Logistic regression of arts attendance composite on arts learning variables

	B	S.E.	Wald	Sig.	Exp (B)
Lessons in Music	.730	.075	94.77	.001	2.08
Lessons in Photo/Film	.937	.130	52.15	.001	2.55
Lessons in Visual Arts	.530	.097	29.69	.001	1.70
Lessons Dance	.772	.097	63.59	.001	2.16
Lessons Art App.	.674	.106	40.13	.001	1.96
Lessons Music App.	.417	.115	13.12	.001	1.52

The arts learning logistic regression revealed minor predictive capability. The Block 0 classification table showed the null hypothesis model had a predictive capacity of 57.5%. More than half of the variables would be correctly sorted into group membership without a predictive model. The Block 1 classification table revealed a slightly higher predictive capacity of 70.9%. The Model Summary shows the Nagelkerke R Square to be 0.247, so 24.7% of the variability in the dependent variable, binary attendance, was accounted for by the independent variables: lessons in music, photo/film, visual arts, dance, art appreciation, and music appreciation. All of the lessons in the table have a positive relationship with binary attendance. The Wald statistic was highest for lessons in music, and the Exp (B) values are all relatively close (between 1.52 and 2.55). The Exp (B) value indicates for each unit increase in lessons, the respondent would be the Exp (B) as a percentage as likely to attend a benchmark arts event. For example, the Exp (B) for lessons in music is 2.08, indicating that for each increase in music lessons taken, the

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respondent is 2.1% as likely to attend a benchmark arts event. The model was significant at the 0.05 level ($p=0.001$). While the total $N=35,735$ for the SPPA, there was a significant amount of missing data. For this model, $N=4650$.

To answer research question 2b, regarding the role of SES for arts learning, I conducted a logistic regression of arts learning variables on the demographic variables related to SES. I wanted to understand the influence of SES on arts learning to uncover patterns of arts learning and arts attendance. This logistic regression serves as a foundation tool to build SES into the arts learning and arts attendance relationship. To do this, I utilized the arts learning composite variable as the dependent variable. The independent variables were the demographic variables: age, income, educational attainment, race/ethnicity, sex, mother's educational attainment, and father's educational attainment. The results of this regression are shown in Table 29.

Table 29

Logistic regression of arts learning on demographic SES variables

	B	S.E.	Wald	Sig.	Exp (B)
Age	.059	.023	6.74	.009	1.06
Sex (F)	.688	.073	89.62	.001	1.99
Educational Attainment	-.331	.026	161.73	.001	0.72
Father's Education	-.309	.067	21.16	.001	0.73
Mother's Education	-.492	.076	42.22	.001	0.61
Non-Hispanic white	.354	.179	3.94	.047	1.43

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The regression of arts learning composite on demographic SES variables revealed good predictive capability. The Block 0 classification table showed the null hypothesis model had a predictive capacity of 52.2%; slightly more than half of the variables would be correctly sorted into group membership without a predictive model. The Block 1 classification table revealed a slightly higher predictive capacity of 68.1%. The Model Summary shows the Nagelkerke R Square to be 0.219, so 21.9% of the variability in the dependent variable, arts learning, is accounted for by the independent variables, demographics of SES. The variables that were significant in the regression equation included age, sex (female), educational attainment, father's educational attainment, and mother's educational attainment. For educational attainment, the Exp (B) value of 0.72 means that for each unit increase in level of educational attainment, the participant would be 0.72 times as likely to participate in arts learning. The non-Hispanic white respondents had an Exp (B) value of 1.43, meaning if the respondent identified as non-white Hispanic, she or he would be 1.43 times as likely to participate in arts learning. Respondents who identified as female would be 1.99 times as likely to participate in arts learning. These data reveal non-Hispanic white, educated, mature females are likely to participate in arts learning.

The B values for demographics, age, race/ethnic, and sex (female), indicate a positive relationship with arts learning. The educational attainment variables have negative B values, which indicates an inverse relationship between education and arts learning. This could be a result of myriad reasons beyond disinterest. More education takes time away from leisure. More education may lead to jobs that require more hours- also diminishing leisure time. More education may be specialized, which eliminates the option for arts learning. The model was significant at the 0.01 level ($p=0.001$). The $N=3754$.

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Summary of logistic regressions. The logistic regressions demonstrated the impact of arts learning and demographics on benchmark arts attendance. Lessons in the arts showed significant and positive relationships with binary attendance. This makes sense. If people take lessons in an art form, they may have an interest in attending events in an art form. This could be a consequence of intrinsic interest in the arts. The demographic variables age, sex (female), and non-Hispanic white show positive and significant relationships with arts learning. The educational attainment variables had negative and significant relationships with arts learning.

Multiple regressions. To better understand the variable relationships among arts learning, demographics, and attendance frequency, I conducted a series of multiple regressions. All of the multiple regressions were run using the stepwise method. To manage missing data, I utilized the listwise feature of SPSS. The dependent variable was the composite attendance frequency. The independent variables were:

- Regression 1: Demographics and Arts Learning
- Regression 2: Lessons for Benchmark Arts
- Regression 3: Formal and Informal Arts Learning

The first regression included all the demographic variables as independent variables. I created separate dichotomous variables for each race/ethnicity category. I confirmed the percentages for each one by running a frequency table after each new variable was created and coded. The dependent variable was benchmark attendance frequency. The results are reported in Table 30.

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Table 30

Multiple regression of attendance frequency on demographic and arts learning variables

Independent Variables NOT Excluded	Beta	t	Sig t
Education	.190	5.81	.001
Lessons Acting	.103	3.03	.003
Mother's Educational Attainment	.120	3.54	.001
Lessons Photo/Film	.086	2.60	.010
Lessons Art Appreciation	.071	2.10	.036
Age	.071	2.14	.032
Lessons Music	.070	2.05	.041

N=895

Adjusted R²= .124

Sig F= .041

The demographic variables from the first regression that entered the equation were: educational attainment, mother's educational attainment, and age. The arts learning variables that entered the equation were acting, photo/film, art appreciation, and music. The model adjusted R² is 0.124; the model accounts for 12.4% of the variance in attendance frequency. The Beta levels show that educational attainment is the strongest predictor among these variables. All of the variables reported in Table 29 were significant at the $p < .05$ level and positively correlated with attendance frequency.

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The second regression included the arts lessons variables as independent variables and the attendance frequency composite as the dependent variable. The independent variables that entered the equation were lessons in art appreciation, dance, acting, photo/film, music, visual arts, and music appreciation. The model adjusted R^2 is .090, so the model accounts for only 9.0% of the variance in attendance frequency. The Beta levels are all low. Lessons in art appreciation is the strongest predictor with a Beta of 0.095. All of the variables reported in Table 31 were significant at the $p < .05$ level and positively correlated with attendance frequency.

Table 31

Multiple regression of attendance frequency on arts lessons variables

Independent Variables NOT Excluded	Beta	t	Sig t
Lessons Art Appreciation	.095	3.49	.001
Lessons Dance	.079	3.19	.001
Lessons Acting	.075	3.07	.002
Lessons Photo/Film	.073	3.04	.002
Lessons Music	.060	2.36	.019
Lessons Visual Arts	.059	2.28	.023
Lessons Music Appreciation	.058	2.18	.029

N=1792

Adjusted $R^2 = .090$

Sig F= .029

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The third regression included the independent variables for formal and informal learning with the dependent variable attendance frequency composite. The formal arts learning independent variable was the arts learning composite. The informal arts learning independent variables included gallery or performance space learning. Arts learning in a performance space did not enter the equation. The model adjusted R^2 is .073; the model accounts for 7.3% of the variance in attendance frequency. The Beta levels show an inverse relationship for arts learning and arts attendance frequency and a positive relationship for gallery attendance and arts attendance frequency. The inverse relationship of the arts learning variable and arts attendance frequency could be explained by the fact that if someone is taking lessons, there is less time to attend art events. Since arts learning is a composite variable, it may not account for the niche attendance categories like jazz. When the lessons were run as separate independent variables, not one of them entered the equation. When I used the composite arts learning variable, it became significant. Table 32 reports these data.

Table 32

Multiple regression of attendance frequency on arts learning and gallery or performance attendance (formal and informal learning)

Independent Variables NOT Excluded	Beta	t	Sig t
Arts Learning	-.218	-9.11	.001
Gallery Attendance	.113	4.72	.001

N= 1753

Adjusted R^2 = .073

Sig F= .001

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Summary for multiple regressions. The series of regressions highlighted the variables that consistently emerge as predictors of attendance frequency. In the first regression, education had the strongest Beta (.190). The model demonstrated 12.4% of the variance in attendance frequency. All of the Betas were positive. The second regression revealed lessons in art appreciation had the strongest Beta of 0.095. The model only explained 9.0% of the variance in attendance frequency. All of the Betas were positive. The third regression explained even less of the variance of attendance frequency (7.3%). The arts learning variable reported a negative Beta (-.218), and the gallery attendance variable reported a positive Beta (.113).

Summary for research question 2. The purpose of research question 2 was to explore possible relationships among arts learning, demographic variables, and benchmark arts attendance. The role of arts learning emerged through the descriptive statistics, the logistic regressions, and the multiple regressions.

The descriptive statistics exhibited that informal education had low reported attendance percentages. In formal education, music and visual arts lessons were most attended. Lessons taken in school were most reported to be music and art appreciation. Dance lessons were the highest for out of school lessons. Music had high attendance for both in school and out of school lessons. When looking at age when lessons occurred, music and visual arts showed higher percentages in all categories (under 18, 18 and over, both). Dance lessons mostly occurred when the respondents were under 18. Art appreciation and photography/film show higher attendance when respondents were 18 and over. This is logical because both art appreciation and photography/film have required abilities such as reading or fine motor skills required for participation.

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The logistic regressions highlighted the importance of arts lessons. Lessons in the arts showed significant and positive relationships with binary attendance. The demographic variables age, sex (female), and non-Hispanic white showed significant and positive relationships with arts learning. The educational attainment variables had negative and significant relationships with arts learning.

The multiple regressions reiterated the importance of education as a predictor of attendance frequency. While the logistic regressions demonstrated that lessons in the arts were important, the multiple regression highlighted the strength of art appreciation lessons as a predictor of attendance frequency. Arts learning for respondents under 18 was a significant predictor of attendance frequency. This emphasizes the value of education as a predictor of attendance frequency because lessons for people under 18 often occur in school.

Arts participation is not only defined by formal and informal arts learning, but it also includes the use of technology. Research question 3 further explores the nuances of arts participation using technology to access benchmark arts activities.

Research Question 3

Research question 3 seeks to explore how technology influences arts learning and arts attendance.

The technology questions came from Modules B and C in the SPPA. In Module B, I grouped the questions based on three topics: used television or radio to watch or listen to a benchmark arts activity; used the internet to watch, listen, or download a benchmark arts activity; used a handheld/mobile device to read, listen to, or download a benchmark arts activity. The responses were originally coded 1= yes and 2 = no. They were recoded as 0=no and 1 = yes.

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Some of the questions included additional arts activities in the response options; only the benchmark related activities were included in this study. For example, some questions asked respondents about reading novels or creative writing; those were excluded from this study. In addition, some of the questions asked if respondents used technology devices and how frequently; those questions were included in the descriptive statistics for this section.

Module C of the SPPA asked questions about how respondents create arts through media. The questions in this module were separated into two categories: used a computer, a handheld mobile device, or the internet to create a benchmark arts activity; and creating or performing a benchmark arts activity. Similar to the other questions in the survey, they were originally coded as 1 = yes and 2 = no. I recoded them as 0 = no and 1 = yes.

Descriptive statistics. Initially, I ran descriptive statistics for the technology variables. The survey question asked respondents how many hours of television they watched in a day; the answers ranged from 1-10 hours. The mean of television watching per day was 3.19 hours.

Internet use ranged from 1 to 6:

- 1- several times per day
- 2- once per day
- 3-3-5 times per week
- 4-1-2 times per week
- 5- every few weeks
- 6-less often

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Table 33 shows the consumption of television and internet as reported by the SPPA.

Table 33

Television and internet consumption

Television Hours	Television Frequency N=8370	Percent	Valid Percent	Internet Use	Internet Frequency N=9296	Percent	Valid Percent
1	1558	4.4%	17.2%	1	3924	11%	61.4%
2	2460	6.9%	27.2%	2	1332	3.7%	20.9%
3	1552	4.3%	17.1%	3	600	1.7%	9.4%
4	1193	3.3%	13.2%	4	331	0.9%	5.2%
5	572	1.6%	6.3%	5	115	0.3%	1.8%
6	437	1.2%	4.8%	6	84	0.2%	1.3%
7	89	0.2%	1.0%				
8	212	0.6%	2.3%				
9	15	0.0%	0.2%				
10	282	0.8%	3.1%				

Table 34 shows technology use. When asked about internet use, 18.0% of respondents reported yes to using the internet. Handheld device use was reported to be 8.4%. One question asked respondents about use of a DVD to watch benchmark arts activities; no other questions included use of a DVD. Respondents reported 6.9% had used a DVD to watch a benchmark activity.

Table 34

Technology use

	Internet		Handheld Device		DVD Benchmark Arts	
	Percent	Valid Percent	Percent	Valid Percent	Percent	Valid Percent
No	8.0%	30.7%	12.6%	48.7%	19.0%	73.3%
Yes	18.0%	69.3%	13.3%	51.3%	6.9%	26.7%

Frequency tables. Then I looked at how the technology variables combined with the benchmark arts variables using frequency tables. Respondents reported watching television to access other

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music (10.6%) or none of the benchmark arts (11.6%). Internet use showed the highest percentage (9.7%) for none of the benchmark arts; next highest was 6.3% for other music. Only two benchmark arts options were available for handheld devices. Respondents reported 2.1% used the handheld device to watch visual arts and 0.8% to watch theater. Table 35 shows the technology use for respondents, and Table 36 shows the technology use for the population.

Table 35

Technology use to access benchmark arts for respondents

	Television		Internet		Handheld Device	
	No	Yes	No	Yes	No	Yes
Jazz	23.1%	2.6%	16.3%	1.4%	N/A	N/A
Latin	23.3%	2.4%	16.4%	1.3%	N/A	N/A
Classical	22.4%	3.3%	16.2%	1.6%	N/A	N/A
Opera	24.7%	1.1%	17.3%	0.4%	N/A	N/A
Other Music	15.2%	10.6%	11.4%	6.3%	4.9%	8.4%
Theater	24.0%	1.8%	17.2%	0.6%	12.4%	0.8%
Ballet	24.7%	1.1%	17.4%	0.4%	N/A	N/A
Other Dance	23.5%	2.2%	17.1%	0.6%	N/A	N/A
Visual Arts	23.7%	2.1%	16.6%	1.1%	11.2%	2.1%
None	14.1%	11.6%	8.1%	9.7%	N/A	N/A

Table 36

Technology use to access benchmark arts for the population

	Television		Internet		Handheld Device	
	No	Yes	No	Yes	No	Yes
Jazz	89.8%	10.2%	92.1%	7.9%	N/A	N/A
Latin	90.5%	9.5%	92.7%	7.3%	N/A	N/A
Classical	87.0%	13.0%	91.1%	8.9%	N/A	N/A
Opera	95.9%	4.1%	97.5%	2.5%	N/A	N/A
Other Music	58.9%	41.1%	64.5%	35.5%	36.8%	63.2%
Theater	93.2%	6.8%	96.7%	3.3%	93.7%	6.3%
Ballet	95.7%	4.3%	97.9%	2.1%	N/A	N/A
Other Dance	91.4%	8.6%	96.5%	3.5%	N/A	N/A
Visual Arts	91.9%	8.1%	93.7%	6.3%	84.5%	15.5%
None	54.8%	45.2%	45.4%	54.6%	N/A	N/A

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To further explore the relationships between technology and benchmark arts, I created composite variables. To do this, I used the compute variable function in SPSS. I combined all the questions that asked: Did the respondent use the internet to watch, listen or download any: jazz, Latin music, classical music, opera, other music, theater, ballet, other dance, programs about visual arts? I followed the same format to combine the variables for the internet, television/radio, and handheld device. Since the research question is looking to explore all facets of arts participation, I included a composite variable that combines the questions that asked: Did the respondent use a computer, a handheld or mobile device, or the internet to create each specific benchmark activity? This variable was named, create technology. In addition, I created a composite variable for all the questions that asked respondents if they created or performed any of the benchmark arts activities.

Table 37 shows the percentage of respondents who reported using technology to access or create benchmark arts. The highest percentage of respondents reported using the television or radio to access benchmark arts (13.8%); the lowest percentage of respondents reported creating arts using technology (1.0%). Table 37 includes a large number of missing data. For this question, missing data includes those who were not asked this question, those who refused to answer, and those who chose the response, “I don’t know.”

Table 37

Technology use to access or create benchmark arts

	Respondents No	Yes	Missing Data
Internet to access benchmark arts	10.2%	7.6%	82.3%
Television to access benchmark arts	11.9%	13.8%	74.2%
Handheld device to access benchmark arts	4.7%	8.6%	86.7%

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Create arts using technology	1.6%	1.0%	97.4%
Create benchmark arts	23.6%	3.1%	73.3%

Correlations. To fully comprehend the variable relationships, I looked at the correlations among the technology, demographic, and arts learning variables. Table 38 presents the correlations.

Table 38

Correlations among technology, demographic, and arts learning variables

		Internet Use	TV Hours	Income	Age	Educational Attainment	Father's Education	Mother's Education	Arts Learning
Internet Use	Pearson Correl. Sig N	1 6386							
TV Hours	Pearson Correl. Sig N	.069 .001 5773	1 8370						
Income	Pearson Correl. Sig N	-.169 .001 6386		1 35735					
Age	Pearson Correl. Sig N	.163 .001 6386	.213** .001 8370	-.055** .001 35735	1 35735				
Educational Attainment	Pearson Correl. Sig N	-.209** .001 6286	-.257** .001 8370	.428** .001 35735	-.047** .001 35735	1 35735			
Father's Education	Pearson Correl. Sig N	-.175** .001 941	-.181** .001 1036	.194** .001 4751	-.133** .001 4751	.310** .001 4751	1 4751		
Mother's Education	Pearson Correl. Sig N	-.188** .001 1003	-.146** .001 1122	.166** .001 5027	-.228** .001 5037	.310** .001 5037	.632** .001 3757	1 5037	
Arts Learning	Pearson Correl. Sig N	-.138** .001 1599	-.114** .001 2048	.195** .001 9257	-.072** .001 9257	.349** .001 9257	.236** .001 4707	.228** .001 4989	1 9257

*Correlation is significant at the 0.001 level (2-tailed)

I began by running correlations between the demographic variables and the frequency of televisions watching and internet use. Each of the demographic variables revealed significant correlation with both television hours watched and internet use. All the variables below

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correlated at the .01 level. Television hours and internet use revealed an inverse relationship to both income and education. For example, the higher the income, the lower the time spent watching television. However, the way the internet variable is coded, a lower number indicates more use of the internet. For the correlations, this means that the higher the income, the more the internet was used.

- Television Hours: income (-.276), age (.213), father's education (-.181), mother's education (-.146), education (-.257), internet frequency (0.69).
- Internet Frequency: income (-.169), age (.163), father's education (-.175), mother's education (-.188), education (-.209), television hours (.069).

Summary of descriptive statistics. The descriptive statistics exhibit that people use both television and the internet to access music more than other benchmark arts. Television is the most popular technological means to access benchmark arts. Television hours and internet frequency both have inverse correlations to income and education.

Regressions. Research question 3 includes three key variable groups: technology, arts learning, and demographics. To better understand how these variables interact with respect to arts attendance, I ran a series of three regressions.

Since the responses about using technology to access benchmark arts activities are conditional on having technology in the home, I ran a logistic regression to examine how having technology in the home relates to benchmark arts attendance. The dependent variable was the binary attendance composite. The independent variables were television hours watched, use of the internet, use of a handheld electronic device. None of the independent variables were significant.

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Technology and arts attendance. The first model for research question 3 represents how technology impacts arts attendance. For this model, I ran a logistic regression. The dependent variable was the binary attendance composite. The independent variables included: used a tv/radio to access benchmark activities, used the internet to access benchmark activities, used a handheld device to access benchmark activities. For each of the independent variables, I used the individual questions for each benchmark activity. For example:

- “Did you use a television or radio to watch or listen to any jazz?”
- “Did you use the internet to watch, listen or download any classical music?”

I used the enter method for the logistic regression. Table 39 presents the results of the regression.

Table 39

Logistic regression of binary attendance on internet use for benchmark arts

	B	S.E.	Wald	Sig	Exp (B)
Internet Jazz	-.927	.206	20.30	.001	.396
Internet Classical	-.673	.193	12.10	.001	.510
Internet Other Music	-.606	.082	55.19	.001	.546

The logistic regression of binary attendance on internet use for benchmark arts revealed good predictive capability. The Block 0 classification table showed the null hypothesis model had a predictive capability of 50.7%. The Block 1 classification table reveals a slightly higher predictive capacity of 62.4%. The Model Summary shows the Nagelkerke R Square to be .127, indicating that 12.7% of the variability in binary attendance was accounted for by internet use to access the arts. The variables that were significant in the regression equation were using the internet to listen to jazz, classical, and other music. All of the Betas are negative; using the

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internet to listen to jazz, classical, and other music has an inverse relationship with binary attendance. This may suggest that people who use the internet to listen to jazz, classical, and other music are substituting the technology experience for the live experience. The respondents may also listen to this music at work and do not necessarily have an interest in attending a concert in these genres. Another possibility is that the respondents lack the time or money to attend a concert in these genres. The largest Exp (B) value is .546 for using the internet to listen to other music. This suggests that people are using the internet to listen to music but perhaps not for the benchmark music categories. The model was significant at the 0.01 level ($p=0.001$). The $N= 3206$.

I was curious to see if respondents used television to access benchmark arts. I ran a logistic regression using the binary attendance composite as the dependent variable. The independent variables mirrored the variables for internet use above. Each benchmark arts activity was asked within the context of: “Did you use a television or radio to watch or listen to [each benchmark arts activity]?” The results are reported in Table 40.

Table 40

Logistic regression of binary attendance on television use for benchmark arts

	B	S.E.	Wald	Sig	Exp (B)
Television Jazz	-.581	.129	20.22	.001	.559
Television Classical	-.884	.123	51.91	.001	.413
Television Other Music	-.578	.066	75.89	.001	.561
Television Theater	-.829	.162	26.12	.001	.437
Television Other Dance	-.247	.124	3.99	.046	.781
Television Visual Arts	-.482	.143	11.32	.001	.617

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The television and benchmark arts logistic regression revealed slightly stronger predictive capability than the internet model. The Block 0 classification table showed the null hypothesis model had a predictive capability of 58.4%. The Block 1 classification table reveals a slightly higher predictive capacity of 67.4%. The Model Summary shows the Nagelkerke R Square to be .152, indicating that 15.2% of the variability in binary attendance was accounted for by television use to access the arts. The variables that were significant in the regression equation were using the television to watch jazz, classical, other music, theater, other dance, and visual arts. All of the Betas are negative. Similar to the results for using the internet to access benchmark arts, this may suggest that people who use the television for benchmark arts are substituting the technology experience for the live experience. The respondents may also lack the time or money to attend a concert in these genres. The largest Exp (B) value is 0.781 for using the television to watch other types of dance. The strength of this predictive value indicates that people who watch dance on television may not attend a dance performance. This may speak to the popularity of dance competition shows, or it may reflect a substitution of technology for live performance. The model was significant at the 0.01 level ($p=0.001$). The $N= 4663$.

I was interested in finding a pattern with the technology variables as they related to arts attendance. I ran a logistic regression using the binary attendance composite as the dependent variable. The independent variables mirrored the variables for internet use above. Each benchmark arts activity was asked within the context of: “Did you use a handheld device to watch or listen to [each benchmark arts activity]?” The results are reported in Table 41.

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Table 41

Logistic regression of binary attendance on television use for benchmark arts

	B	S.E.	Wald	Sig	Exp (B)
Handheld Music	-.515	.090	33.06	.001	.597
Handheld Theater or Dance	-.780	.232	11.29	.001	.261

The regression demonstrated that the only significant variables were using handheld device to access music, or theatre/dance. The Block 0 classification table showed the null hypothesis model had a predictive capacity of 55.2%; About half of the variables would be correctly sorted into group membership without a predictive model. The Block 1 classification table revealed a slightly higher predictive capacity of 61.4%. The Model Summary shows the Nagelkerke R Square to be 0.115. So, 11.5% of the variability in the dependent variable, binary attendance, is accounted for by the use of a handheld device to access music or theater/dance. The Betas are negative. This reflects a similar pattern with internet and television use to access benchmark arts. The inverse relationship indicates that as arts handheld device use to access music or theater/dance increases, attendance at benchmark events decreases. The Exp (B) for the handheld music variable is more than twice as large as the Exp (B) for the handheld theatre or dance variable. This model is significant at the $p < .05$ level. The $N=2412$.

Each of the technology variables reported a negative relationship to benchmark arts attendance. Considering the influence of arts learning on benchmark arts attendance, I wondered if a model with both arts learning and technology would reveal a different relationship to benchmark arts attendance. The importance of arts learning is evident; yet, the technology

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variables may reveal a substitution for attendance. I wondered if arts learning might be a bridge between technology and arts learning. This addresses the arts participation aspect of research question 3.

I ran a stepwise multiple regression. The dependent variable was attendance frequency. The independent variables were the arts learning and technology composite variables. To manage missing data, I used the listwise option. The results of the multiple regression are displayed in Table 42.

Table 42

Multiple regression of attendance frequency on arts learning and technology

Independent Variables NOT excluded	Beta	t	Sig t
Arts Learning	-.244	-10.56	.001

N= 1770

Adjusted R²= .059

Sig F= .001

The regression revealed that only arts learning entered the model at the $p < .05$ level. The negative Beta (-.244) reveals an inverse relationship with arts learning and arts frequency. The strength of the Beta is not especially relevant because there is not another variable in the model for comparison. The adjusted R² of .059 indicates that 5.9% of variance in the model can be attributed to arts learning. The lower sample size for attendance frequency is the result of the attendance frequency question being contingent upon a “yes” answer to the binary attendance question.

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Summary of the regressions. The logistic regressions revealed a pattern of inverse relationships. As the use of technology to access benchmark arts increases, attendance to benchmark activities decreases. The multiple regression emphasized the importance of arts learning; however, the inverse relationship suggests as arts learning increases, attendance frequency decreases.

Summary

The aim of this chapter was to explore the research questions using a variety of statistical techniques. I was interested in how demographic variables, arts learning variables, and technology variables impacted benchmark arts attendance. Each research question addressed one area of this study.

Research question 1 established who participates in the arts and how. The percentages for income and education decrease at the higher levels; however, this does not mean that higher educational attainment or more income accounts for lower attendance. Instead, it highlights the point that fewer people who responded to the survey identify within the higher-level categories of income and education. The higher levels of income and education reflect a smaller sample size. The race/ethnicity variable indicates that audiences for each benchmark arts activity are mostly non-Hispanic white. This reflects the survey sample (74.1% non-Hispanic white). The sex variable shows that women report higher attendance in each benchmark arts activity.

Museum visits and live musical attendance are the most attended. The attendance frequency reports that attendance to jazz music, Latin music, classical music, and museums reported 12 visits. Museum visits and live musical attendance reported the highest numbers of

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early visits. Of those who attended a benchmark arts event, the highest representation for each age group is in live musical attendance and museum visits.

Research question 2 explored the influence of arts participation through arts learning on benchmark arts attendance. The significant role of arts learning emerged through the descriptive statistics, the logistic regressions, and the multiple regressions.

The descriptive statistics displayed the importance of formal education over informal education. In formal education, music and visual arts lessons were most attended. The most attended in school lessons were music and art appreciation. The most attended out of school lessons was dance. Dance was also taken mostly when respondents were under 18. Music reported high attendance for both. Music and visual arts lessons showed high levels of attendance across all age groups for taking lessons. Art appreciation and photography/film show higher attendance when respondents were 18 and over.

The logistic regressions highlighted the importance of arts lessons. Lessons in the arts showed significant and positive relationships with binary attendance. The demographic variables age, sex (female), and non-Hispanic white showed significant and positive relationships with arts learning. The educational attainment variables had negative and significant relationships with arts learning.

The multiple regressions reiterated the importance of education as a predictor of attendance frequency. Arts learning for respondents under 18 was a significant predictor of attendance frequency. The listwise model signifies the importance of visual arts lessons, and the mean substitution model indicates the importance of lessons in music, dance, and photography.

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Research question 3 established trends in the use of technology to access benchmark arts. The descriptive statistics showed that many people use technology, and few use technology to access benchmark arts. Television is the most popular technological means to access benchmark arts. Television hours and internet frequency both have inverse correlations to income and education.

The logistic regressions continued the pattern of inverse relationships. As the use of technology to access benchmark arts increases, attendance to benchmark activities decreases. The multiple regression emphasized the importance of arts learning; however, the inverse relationship suggests as arts learning increases, attendance frequency decreases.

Chapter Five

Summary, Conclusions, Discussion, and Recommendations

This chapter will summarize the findings from the SPPA 2012 data as they relate to the research questions for this study. The chapter begins with a general summary of the study, presents a review of salient findings, provides a discussion of the results, makes suggestions for implications, offers recommendations for future research, and proposes concluding thoughts about this study.

Summary

Since 1982, the National Endowment for the Arts has published results from the Survey of Public Participation in the Arts. The reports indicate how arts attendance has fluctuated over time. There was a decrease in arts attendance overall from 2002 to 2012; however, after small increases between 1982 and 2002, there was a decline between 2008 and 2012. The SPPA measures arts attendance by self-reported responses to attendance at ten benchmark arts activities. The purpose of this study is to apply a social justice lens to arts attendance by looking at demographic variables in relation to arts learning, use of technology, arts participation, and overall benchmark arts attendance. A variety of statistical techniques were implemented to uncover relationships among the variables. The relationships among the variables are presented and explained; in addition, implications and recommendations are provided to better understand benchmark arts attendance.

Findings. The purpose of this study was to use the SPPA data to explore the intersections of demographics, arts learning, technology, and arts attendance. Analysis of the data focused on the research questions driving this study. The findings follow the topic of each research question:

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understanding arts audiences, the influence of arts learning on arts attendance, and the role of technology in arts participation and attendance.

After looking closely at the descriptive statistics, I ran a series of regressions to understand how the variables related to arts attendance. Museum visits and attending live musicals reflected the highest attendance from the respondents. Educational attainment and parents' educational attainment were significant predictors of arts attendance. Between formal and informal education, informal education was not well attended. Within the realm of formal education, music and visual arts classes were taken the most. All of the technology variables were negatively correlated with arts attendance. Between arts learning and technology, only arts learning was a significant predictor of arts attendance frequency. This study reiterates the importance of education as a significant predictor for arts attendance. The arts learning variables echo the attendance patterns. High reporting of music and visual arts classes align to high attendance rates at musicals and museums. The technology variables showed negative relationships with arts attendance, suggesting perhaps technology is used as a substitute for attendance or a disinterest in technology as a tool to access the arts. To address the social justice lens in this study, the responsibility to the arts falls on education.

Discussion

This study resulted in a variety of findings that may provide a helpful foundation for future studies in the field of arts education. To explore the research questions, I began with descriptive statistics, then correlations and ANOVA, and I concluded with a series of logistic and multiple regressions. The regressions did not provide the information about benchmark arts attendance that I anticipated.

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The logistic regressions revealed limited insight. While both logistic regressions for research question 2 had a predictive capacity of about 70%, only about 23% of the variability in binary attendance was accounted for by the independent variables. For research question 3, the logistic regressions had a predictive capacity of about 63%. Only 13% of the variability in binary attendance was accounted for by the independent variables. These results show that the independent variables did not contribute much to the decision to attend a benchmark arts activity.

The multiple regressions disclosed limited information as well. For research question 2, educational attainment was a weak, yet significant, predictor for attendance frequency. However, it was the strongest predictor with a very low Beta of .190. The Beta ranges from 0 to 1, so a .190 is not very strong. In addition, there were seven variables that entered the equation as significant predictors. All of these variables combined only account for 12.4% of the variance in attendance frequency. The remaining 87.6% is unknown. In the other multiple regressions for research question 2, the independent variables accounted for fewer than 10% of attendance frequency. This is likely due to the sizeable amount of missing data. Missing data influenced the regressions, despite utilizing a variety of tools to manage the large amount of missing information. For research question 3, the multiple regression model only accounted for 5.9% of the variance in attendance frequency. The only variable to enter the equation, arts learning, had a small and negative Beta. With only one variable entering the equation, the strength of the variable is not valuable information because there are no other variables for comparison. While the regressions demonstrated that educational attainment and arts learning are significant predictors of arts attendance, the regressions also show low and weak predictive value.

There are numerous motivating factors for someone to attend the arts. Many of these factors may not have been considered within the SPPA questionnaire. These data show

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correlation, but they do not show causation. In many of the regressions, the significant variables represent such a small part of the equation that the regression models highlight how much is unknown about the variables that predict arts attendance. If arts learning only represents 5.9% of the variance in the model, what variables make-up the remaining 94.1%?

The data that may be the most valuable for arts institutions and future research are the descriptive statistics. The results for research question 1 show that arts attendance is low overall; however, within the respondent group who attended a benchmark arts event, 7.7% visited a museum and 5.5% attended a live musical. This is important information within the field of arts attendance because it shows how people are attending the arts. The regressions were unable to provide predictive power to independent variables in this study, but the descriptive statistics show what type of arts events people are attending. Comparing how the demographic variables attend the arts is also informative.

Patterns in age group, income levels, and educational attainment show trends that may influence arts programming. For example, of the respondents who attended 4.4% were in the 46-55 age group. This may be helpful for marketing museum events or membership drives. Arts attendance dropped in every category at the income level of 100,000-149,999. While this is a smaller size group in the sample, the pattern of a drop in every activity may reflect a change in how leisure time is spent, tastes in cultural preferences, or shifts in spending. A similar pattern occurs in the educational attainment groups. Attendance to all benchmark arts events drops at the group Master's Degree and again at the Doctorate/Professional Degree group. This is a smaller portion of the sample, but the pattern is interesting. For both income and education, the percentage decrease at the higher levels does not mean that higher educational attainment or more income accounts for lower attendance. It highlights the point that fewer people who

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responded to the survey identify within the higher-level categories of income and education. The higher levels of income and education reflect a smaller sample size.

The arts learning variables in research question 2 revealed predictably low percentages. With the inconsistency of arts funding and the lack of accountability for compulsory in-school arts courses, it is no wonder that 9.9% of the respondents attended a music lesson. Despite the low percentages across the arts learning variables, music and visual arts tend to reflect the most attendance. This parallels the findings throughout this study.

The descriptive statistics for technology in research question 3 only show a moment in time. Technology has advanced, and society has embraced many of the revolutions since 2012. The pattern evident from the descriptive statistics is that people use technology to access the arts, but the highest numbers are for Other Music or Other Dance variables. This may reflect the need to broaden the benchmark arts categories. It may also point to a recommendation to include additional questions on the SPPA about what Other Music and Other Dance mean to the respondents. Comparing the “Yes” and “No” columns for how people use technology to access the arts reveals that most of the respondents do not use technology to access the arts. This leads to an important question: Why not? Further, when 16.3% of the respondents do not use the internet to access jazz music (and 1.4% do), what can music organizations or schools do to increase the number of people who use the internet to access jazz? Initially, the data may appear disappointing for an arts advocate or an arts educator. However, using the numbers to drive more questions and more research may result in improved arts access, arts education, and arts attendance over time.

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Implications

Implications for arts organizations and advocacy. Arts organizations could assess the demographic variables within the benchmark attendance to strategically address age groups, levels of educational attainment, income groups, and a range of racial/ethnic identities.

Live musicals were popular across numerous demographic variables. What is it about live musicals that make them universally popular? Between 2011 and 2012, *Shrek*, *The Lion King*, *Jersey Boys*, and *The Color Purple* produced national tours. The range of touring productions reflects broad audience interest. Caldwell and Woodside (2003) suggested that programming may be more important than demographic variables when assessing arts attendance. Diversity of programming may be important considering that museums were attended most frequently. Museums often have changing exhibitions, which could inspire more visits. In addition, museum entrance fees are generally lower than tickets to a live musical.

While education was a significant variable in many of the analyses, benchmark arts attendance decreased after participants earned a bachelor's degree, though this is only reflective of the small group represented. This may be an important note for arts organizations as they market to audiences. Numerous arts organizations have networking evenings for young professionals, but perhaps they ought to consider evenings for college students. In addition, it may be possible to align a seasonal arts program with courses at the local college or required courses for specific majors.

The role of arts learning was a prominent variable in many of the predictive models. The model from the Hewlett Foundation (2013) may provide a framework for arts organizations to become involved with schools. With the inconsistency of arts education in classrooms, how can

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local arts organizations provide outreach to enable all students access to the arts? Funding is always a barrier in both arts and education. Consider, however, that the highest-level income earners who may not attend the arts, could be inclined to donate to the arts.

The technology presented in this study is antiquated. The survey data from this study were collected between July of 2011 and July of 2012. A few years after the SPPA, Harlow (2015) found that many arts organizations used technology to expand their outreach. The prominent social media applications were available between 2011 and 2012. Instagram started in 2010, Twitter began in 2006, and Facebook came out in 2004. The first iPhone launched in 2007; during the time frame for this survey, people had access to the iPhone 5. Despite the availability of technology, the numbers remained low for how people used technology to access the arts. Anecdotally, the prevalence of technology as an appendage has grown exponentially over the previous six years. The next iteration of the SPPA will likely produce much higher numbers of technology use. Implications for arts organizations regarding the technology variables in this study may be just to note them as base level to show growth over time.

Implications for future iterations of the SPPA. The SPPA is a complicated data set. While it may be convenient to dovetail the SPPA to the CPS, it presents a variety of limitations. By the time the respondents get to the SPPA after the CPS questions, they may have survey fatigue. The questions for both the CPS and the SPPA are plentiful and exhaustive. Since the SPPA has been distributed since 1982, it may have enough traction to be distributed independently.

The SPPA questionnaire could be streamlined. The current survey contained two core sections and five modules. One of the core sections contained experimental questions. Why not add the experimental questions to the end of one core set? In addition, the survey includes mostly

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binary questions. For example, “Have you attended...?” or “Did you ever...?” Binary questions collect limited data. More detailed questions about attendance would provide a robust data set. For example, “What type of arts activity did you attend?” or “In what type of location are the arts events you attend?” The frequency follow-up questions are of great benefit and ought to be included after more questions. The modules need to be updated to reflect specific and modern use of technology. For example, in the arts learning module, online courses and flipped model courses should be added to the location of arts learning questions. In the technology module, specific technology should be added to the options. Currently, the survey asks if the respondents use television, internet, a DVD player, or a handheld device to access benchmark arts. An updated survey needs to include streaming services like Netflix or Hulu. A clarification of “computer use” is important: Is it laptop? An ipad or tablet? A desktop? Further, asking about social media with specific questions to clarify which social media platforms are utilized will shed light on how people may be accessing the arts. These specific and modern questions will allow the SPPA to be more relevant to the arts organizations who are researching audience attendance and retention.

The SPPA is funded by the NEA, so the presumed purpose of the survey includes some level of arts advocacy. The convoluted nature of the data set may be preventing its broad dissemination. An efficient survey would have coding that is set-up for analysis. Coding the dichotomous variables as 1= yes and 2= no does not make sense for analysis. A larger number would make more sense as the affirmative response. In addition, for binary analysis, it would have been easier for the responses to be coded 0= no and 1 = yes. In general, providing the data that is packaged for common analysis would enable more researchers to access the SPPA with ease.

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Over time, the SPPA has addressed the feedback of researchers and the respondents with an evolving survey. It will be critical for the SPPA to continue to address the evolving social norms, as well. In the demographic section, the sex question currently only includes males and females. It needs to include a non-binary option. Consideration of asking a gender identity question may also be helpful for research in the arts. The race and ethnicity questions are currently separate; they should be combined. At minimum, the race categories should include non-Hispanic white and Hispanic in one question. In the benchmark arts section, the options need to include non-white canonical forms of art. Cultural arts experiences like tribal dance or cultural traditions like creating an altar for Día de los Muertos could be included.

While the SPPA is a useful tool to understand trends in arts attendance, there are specific areas to consider changing that would strengthen the survey and how it is accessed.

Implications for future research and theory. Gaps in this study open up research possibilities that focus on technology, demographics, and attendance. Since technology is evolving at such a rapid pace, data from 2012 can be really only be used as a baseline for technology today.

Another consideration for future research includes how arts organizations are creating access opportunities for audiences of varying needs. In considering the limitations of this study, creating a broad definition of arts attendance may provide a different lens for what it means to participate in the arts. Arts organizations are developing outreach that includes technology and non-traditional forms of arts attendance to allow more people to experience the arts.

Much of the arts education theory is rooted in class-systems of both economics and taste. While it is difficult to deny the relevance of either, the current economy is shifting. The social landscape is shifting. Theory about arts education would be remiss not to look at how cultural

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traditions are impacting arts attendance. At what point will the traditional canon of what we accept as the arts reflect the population? As the middle class is minimized, how does that impact arts consumption? Will people rely on technology to access the arts, and will that become the prevalent taste?

The arts reflect the people, their values, and the society in which they live. There will always be room for more research on the arts. As technology evolves, so do artistic endeavors. As society changes, theories will be developed to determine predictive behaviors for arts consumption.

Limitations of the Study

Using secondary data has limitations. The survey was given in July, so the accuracy of the responses may be inconsistent since the questions reflect annual arts participation. The summer months also make contacting respondents more difficult because of travel. Moreover, the sample population is unavailable for follow-up questions or interviews. The respondents were asked to report attending benchmark arts events over the past year, and they may not accurately remember which events or how many they attended. Though not included in this study, the survey does include proxy responses on behalf of a spouse or partner. This may meddle with the accuracy of responses overall. Another challenge was the amount of missing data.

I was also limited to the survey responses in the public use file. From the standpoint of the researcher, challenges arise in exploring questions composed by other people. Prior to data analysis, it was necessary to understand the intent behind the wording of the survey questions to align my objectives with those of the original researchers. To address these concerns, the public use file included a User's Guide with explanations and examples. In addition, the staff in the

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Office of Research and Analysis at the National Endowment of the Arts was available through email to answer questions about the survey. The age of the data was also a limitation. At the time of this study, it is the most recent data from the SPPA; however, with the changes in the economy, education, and technology, it will likely serve as a study used to compare to the next set of SPPA data. After exploring the data, I was not able to make causal claims about the relationships between independent and dependent variables.

Conclusions

The SPPA provides years of data on arts attendance. Based on these data, benchmark arts attendance is in decline. Despite a wealth of research validating the extensive benefits of the arts, people are not attending arts programming demonstrated by traditional measures of ticket sales. This study highlights the range of variables that impact arts attendance. The variables that represent the relationships with arts attendance indicate changes in both the world we live and the literature in the field. The traditional arts experience is changing. For arts to thrive, artists, advocates, educators, and change-makers must continually reflect on how the arts are meeting the needs of an ever-evolving society. The changes in arts programming must address inclusive practices from demographics to technology. Arts access ought to be measured by a variety of means from attendance to technology. From the Greeks performing in the outdoor theaters, to the Shakespearean actors pounding on metal to replicate the sound of thunder, to the advanced super script at the opera, and the ability of the internet to provide museum tours in multiple-languages at any moment in time- the arts must evolve to stay relevant. Novak-Leonard (2015) suggested that arts participation should include a wider range of cultural participation. In addition, the way arts attendance is measured must also evolve. We need to move away from traditional measurement of ticket sales and toward a broad arts consumption model. Like the arts

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themselves, the data should reflect the society in which we live. It is my hope that the SPPA will continue to progress so that data can be collected over time that reflects how society engages with the arts.

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Appendices

Appendix A:

Summary table of the 22 publications NADAC lists as citing SPPA 2012.

Author (year)	Type of Publication	Summary
Lambert, P.D. and Williams, R. (2017)	book	This is a theory-based guidebook for executive leadership of performing arts centers.
Elpus, K. (2017)	article	The purpose of the study was to determine if school-based music programs affected adult engagement with the arts. The results suggest that school-based music programs positively influence adult arts engagement.
Christian, A., Coulangeon, P., and Donnat, O. (2016)	article	The study argues that age, period, and cohort effects should be examined to understand the temporal change in cultural participation. The paper compares American and French culture with respect to cultural participation.
Novak, J.L. (2016)	dissertation	This dissertation provides four empirical studies exploring arts participation as a means for immigrants to engage in U.S. culture. Study 1 is a consideration of how arts participation changes among current immigrant generations. Study 2 questions if the length of time immigrants are in the U.S. impacts their cultural integration. Study 3 examines arts participation by non-citizens. Study 4 assesses how well the SPPA measures arts participation.
Kemp, E., Poole, S.M. (2016)	article	This article asserts that demand for “mainline cultural art forms” (opera, symphonies, jazz) is in decline and provides insight for arts administrators to build audiences.
Polzella, D.J., Forbis, J.S. (2016)	poster	This study used logistic regression to analyze data from 3008 households to determine if pro-social behavior was affected by electronic or live music. The results found that both electronic and live music exposure increased the likelihood for civic engagement.
Ateca-Amestoy, V., Castiglione, C. (2016)	working paper	This paper explains the variables that determine cultural participation through electronic media for highbrow and lowbrow cultural

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		activities. The findings show age and education are different determinants for the divide in cultural activities.
Stallings, S., Mauldin, B. (2016)	report/literature review	The purpose of the literature review is to present the conversation over the past decade about what counts as arts participation. The report concludes that educational attainment is the best predictor of arts participation, and race and ethnicity are weak predictors of arts participation.
Kaimal, G., Rattigan, M., Miller, G., and Haddy, J. (2016)	article	This paper relates the national trends in visual art making to art therapy practice. The findings support the increase in the use of digital media for art therapists for their own art and the need to research more practices of digital media.
Mauri, C.A., Wolf, A. (2016)	working paper	This paper explores the difference in preference on decision making in multi-person households. The study finds that more powerful men attend opera less frequently than less powerful men. Hours worked was the control to determine the rank of powerful men.
Novak-Leonard, J.L., O'Mally, M.K., Truong, E. (2015)	article	This study used the questions from the SPPA to run a pilot test on Chinese immigrants to the USA. The findings show that the respondents attended a range of culturally and non-culturally specific arts activities that were not reported on the SPPA.
Novak-Leonard, J.L. (2015)	working paper	This study examines the differences between U.S. residents and U.S. immigrants in arts participation. The data show that being an immigrant has predictive power over special kinds of arts and cultural participation.
Silber, B., Triplett, T. (2015)	NEA research report	This report presents descriptive statistics of the SPPA.
Novak-Leonard, J.L., Wong, J., English, N. (2015)	NORC report	The purpose of this report is to understand what California residents do to participate in the arts and how it varies across the diverse population. The results break down by ethnicity and income which arts events were reported to have occurred.

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Novak-Leonard, J., Reynolds, M., English, N., and Bradburn, N. (2015)	Technical manual	This is the technical report for the California Survey of Arts and Cultural Participation. (Catterall, 2012)
Swan, J. (2015)	article in a quarterly online magazine	This article summarizes three NEA reports for an arts advocacy online magazine. An interview with NEA chairman, Jane Chu, concludes the article noting that art for art's sake is changing to art for business's sake.
National Endowment for the Arts (2015)	infographic	This is an infographic summarizing salient data points for arts advocacy.
O'Hagan, J.W. (2014)	article	This article investigates educational attainment and arts attendance. The study finds uneven patterns of attendance.
Rife, M.L., King, D., Thomas, S., Li, R. (2014)	summary of a research symposium	This summary provides an outline of a research symposium. The participating cultural institutions included the NEA, the Cultural Value Project (CVP), and the United Kingdom's Arts & Humanities Research Council (AHRC). The five sessions covered: 1. Measurement of cultural participation, 2. Define cultural participation, 3. Encompassing new media, 4. New ways of knowing, 5. Looking beyond participation rates.
National Endowment for the Arts, Office of Research and Analysis (2013)	research report	This report presents highlights from the SPPA.
Lehrman, M. (2013)	arts journal blog	This blog argues that the SPPA should be required reading for leadership in cultural institutions. The author provides a rhetorical analysis of the word choice used to discuss the findings of the SPPA.
National Endowment for the Arts, Office of Research and Analysis (2012)	research report, appendices, questionnaire, instruction manual for research	This report includes material required to understand the data provided by the SPPA.

(NADAC, 2016)

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Appendix B:

Table of original CPS and SPPA variables used in this study

CPS Variables			
Code	Topic	Type of Variable	Notes
HEFAMINC	Family Income	Continuous numerical	
PRTAGE	Age	Numerical discrete	
PEMARITL	Marital Status	Nominal categorical	
PESEX	Sex	Nominal categorical/ Dichotomous/Binary	Recode as: Female- 1, Male- 0
PEEDUCA	Educational Attainment	Ordinal	Recode and group: no hs diploma, high school diploma, bachelor's degree, graduate degree
PTDRACE	Race	Nominal categorical	
Core 1 Variables			
Code	Topic	Type of Variable	Notes
C1Q1A	Live jazz	Dichotomous/Binary	"Did you go to..."
C1Q1B	How many times?	Numerical discrete	"How many times did you attend...?"
C1Q2A	Live Latin, Spanish, salsa	Dichotomous/Binary	
C1Q2B	How many times?	Numerical discrete	
C1Q3A	Classical	Dichotomous/Binary	
C1Q3B	How many times?	Numerical discrete	
C1Q4A	Opera	Dichotomous/Binary	
C1Q4B	How many times?	Numerical discrete	
C1Q5A	Musical	Dichotomous/Binary	
C1Q5B	How many times?	Numerical discrete	
C1Q6A	Play	Dichotomous/Binary	
C1Q6B	How many times?	Numerical discrete	
C1Q7A	Ballet	Dichotomous/Binary	
C1Q7B	How many times?	Numerical discrete	
C1Q8A	Dance	Dichotomous/Binary	
C1Q8B	How many times?	Numerical discrete	
C1Q9A	Performance	Dichotomous/Binary	
C1Q9B	How many times?	Numerical discrete	

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C1Q10A	Museum	Dichotomous/Binary	
C1Q10B	How many times?	Numerical discrete	
Module B Variables			
Code	Topic	Type of Variable	Notes
B1	Hours of television	Numerical discrete	“How many hours do you watch in an average day?”
B2	Use television to access a) jazz b) Latin, Spanish, or salsa c) Classical music d) Opera e) Other music f) Theatre productions g) Ballet, modern, or contemporary dance h) Other dance i) Programs about the arts j) Programs about books k) Books, short stories	Dichotomous/Binary	Recode: each of these is a separate question.
B3	Use a CD or DVD to watch or listen to music or programs about theatre, dance, visual arts, or literature?	Dichotomous/Binary	
B4	Use the internet (at all)	Dichotomous/Binary	
B4A	How often	Numerical discrete	Choices: Several times a day to less often (scale 1-6)
B5	Use the internet to access (variables a-k for each benchmark arts activity)	Dichotomous/Binary	
B6	Mobile device (at all)	Dichotomous/Binary	
B7	Mobile device to download literature	Dichotomous/Binary	
B8	Mobile device to download music	Dichotomous/Binary	
B9	Mobile device to download theatre or dance	Dichotomous/Binary	
B10	Mobile device to download visual arts	Dichotomous/Binary	
Module C Variables			
Code	Topic	Type of Variable	Notes
C1	Did you use tech to email, post, or share: a) Music b) Dance c) Films or videos d) Photography e) Other visual arts	Dichotomous/Binary	

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	f) Poetry, short stories, novels, plays		
C2	Create or perform music	Dichotomous/Binary	
C2A	Use tech to create music	Dichotomous/Binary	
C2B	Use tech to record, edit, or remix music	Dichotomous/Binary	
C2C	Use tech to share the music you created, performed, recorded, edited, or remixed	Dichotomous/Binary	
C3	Create or perform dance	Dichotomous/Binary	
C3B	Record, edit, or remix dance performances	Dichotomous/Binary	*C3A is not in the questionnaire in the public use file
C3C	Use tech to share the dance you created, performed, recorded, edited, or remixed	Dichotomous/Binary	
C4	Create any film or video as artistic activity	Dichotomous/Binary	
C4A	Edit or remix any films or videos	Dichotomous/Binary	
C4B	Use tech to share the films or videos you created, performed, recorded, edited, or remixed	Dichotomous/Binary	
C5	Photography as art	Dichotomous/Binary	
C5A	Photo editing	Dichotomous/Binary	
C5B	Use tech to share the photographs you took or edited	Dichotomous/Binary	
C6	Create visual art	Dichotomous/Binary	
C6A	Use tech to create visual art	Dichotomous/Binary	
C6B	Use tech to share any of your visual art	Dichotomous/Binary	
C7	Do any scrapbooking	Dichotomous/Binary	
C7A	Use tech to share scrapbooking	Dichotomous/Binary	
C8	Do any creative writing	Dichotomous/Binary	
C8A	Use tech to share your creative writing	Dichotomous/Binary	
Module E Variables			
Code	Topic	Type of Variable	Notes

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E1A	Lessons or classes in music- voice or instrument	Dichotomous/Binary	
E1B	Were the lessons: 1) in school 2) outside of school 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E1C	Did you take these classes when you were: 1) under 18 2) 18 or older 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E1D	Did you take any of these lessons in the past year?	Dichotomous/Binary	
E1E	Have you EVER learned music through other means?	Dichotomous/Binary	
E2A	Have you taken lessons in photography or film making?	Dichotomous/Binary	
E2B	Were these taken: 1) in school 2) outside of school 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E2C	Did you take these lessons when you were: 1) under 18 2) 18 or older 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E2D	Did you take any of these classes in the past year?	Dichotomous/Binary	
E2E	Have you EVER learned photography or filmmaking through other means?	Dichotomous/Binary	
E3A	Have you ever taken lessons in visual arts?	Dichotomous/Binary	
E3B	Were these taken: 1) in school 2) outside of school 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E3C	Did you take these lessons when you were: 1) under 18	Categorical/ Ordinal	

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	2) 18 or older 3) both 4) don't know 5) refused		
E3D	Did you take any of these classes in the past year?	Dichotomous/Binary	
E3E	Have you EVER learned visual arts through other means?	Dichotomous/Binary	
E4A	Have you ever taken acting classes?	Dichotomous/Binary	
E4B	Were these taken: 1) in school 2) outside of school 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E4C	Did you take these lessons when you were: 1) under 18 2) 18 or older 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E4D	Did you take any of these classes in the past year?	Dichotomous/Binary	
E4E	Have you EVER learned acting through other means?	Dichotomous/Binary	
E5A	Have you ever take classes in dance?	Dichotomous/Binary	
E5B	Were these taken: 1) in school 2) outside of school 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E5C	Did you take these lessons when you were: 1) under 18 2) 18 or older 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E5D	Did you take any of these classes in the past year?	Dichotomous/Binary	
E5E	Have you EVER learned dance through other means?	Dichotomous/Binary	
E6A	Have you ever taken classes in creative writing?	Dichotomous/Binary	
E6B	Were these taken: 1) in school	Categorical/ Ordinal	

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	2) outside of school 3) both 4) don't know 5) refused		
E6C	Did you take these lessons when you were: 1) under 18 2) 18 or older 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E6D	Did you take any of these classes in the past year?	Dichotomous/Binary	
E6E	Have you EVER learned creative writing through other means?	Dichotomous/Binary	
E7A	Have you taken classes in art appreciation?	Dichotomous/Binary	
E7B	Were these taken: 1) in school 2) outside of school 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E7C	Did you take these lessons when you were: 1) under 18 2) 18 or older 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E7D	Did you take any of these classes in the past year?	Dichotomous/Binary	
E7E	Have you EVER learned art appreciation through other means?	Dichotomous/Binary	
E8A	Have you ever taken lessons in music appreciation?	Dichotomous/Binary	
E8B	Were these taken: 1) in school 2) outside of school 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E8C	Did you take these lessons when you were: 1) under 18 2) 18 or older 3) both 4) don't know 5) refused	Categorical/ Ordinal	
E8D	Did you take any of these classes in the past year?	Dichotomous/Binary	

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E8E	Have you EVER learned music appreciation through other means?	Dichotomous/Binary	
E9	When you were a child under 18, did you go to an art museum or gallery?	Dichotomous/Binary	
E10	When you were a child under 18, did you attend live music, theatre, ore dance performance?	Dichotomous/Binary	