

Technical Appendix to “U.S. Participation in the Arts: Comprehensive Findings from 2022 and Comparison to Previous Years”

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Executive Summary

This appendix provides a broad technical overview of the 2022 Survey of Public Participation of the Arts (SPPA). This survey is the most recent administration of this survey series, which first started in 1982. This technical appendix corresponds with the 2022 SPPA Comprehensive Report, which presents findings from the 2022 survey and incorporates supplementary data from 2002, 2008, 2012, and 2017 SPPA. Earlier survey years are excluded due to the limited scope of this analysis.

The technical topics addressed in this appendix include the demographic characteristics of the respondents to this survey, how composite measures are constructed, the method of statistical testing used to measure relationships, and lessons learned from analyzing this survey. The information in this appendix can be used to understand, analyze, and improve upon this survey.

While the 2022 SPPA incorporates more questions about new and emerging art forms and various contextual factors regarding arts participation, these new features make it challenging to compare this survey with previous surveys for trend analysis. Additionally, modules within this survey could be more coherent in terms of the type of questions that are asked of respondents within each module.

Introduction to 2022 SPPA

The Survey of Public Participation in the Arts (SPPA) is designed to collect data on how Americans engage with the arts. The 2022 SPPA is comprised of responses from two sets of surveys, the Current Population Survey (CPS) and the SPPA supplement to the CPS administered in July 2022. For this report, the CPS provides respondents' demographic characteristics such as age, sex, race, and educational attainment. The 2022 SPPA supplement asked questions on public participation in the arts of one randomly selected household member aged 18 or older, and not in the armed forces, from about one-half of the sampled CPS households. The supplement contained questions about the respondents' participation in various artistic activities during the last 12 months prior to the survey being administered (July 2021 to July 2022).

The 2022 SPPA included two core components and four modules as listed in **Table A-1**. Core 1 and Core 2 asked respondents if they had attended any artistic events or live performances, and if so, how often and where. Questions were also asked about any books and other types of literature the respondent may have read. Module A asked respondents if they had used electronic devices or electronic media to watch or listen to artistic performances and, if so, how often. Questions were also asked about sharing information related to artistic performances. Module B and Module C asked if the respondents had done any artistic activities and, if so, how often. Questions were also asked about participation in non-arts hobbies, and how often the respondents participated. Module D asked if the respondents had ever taken lessons in various types of art and whether the classes had been taken in school. The respondents were then asked if they had learned the various types of art in lessons/classes within the last 12 months, and if they had learned that activity through other means not involving formal lessons or classes.

Table A-1 Components and Modules of 2022 SPPA

Section	Content	Questions
Core 1	Arts Attendance and Literary Reading	C1Q1A-C1Q17A
Core 2	Arts Attendance, Venues, and Motivations	C2Q1A-C2Q1E
Module A	Consuming Art via Electronic Media	MAQ1A-MAQ5D
Module B	Performing Art, Visual art, and Writing	MBQ1A-MBQ4A
Module C	Other Leisure Activities	MCQ1A-MCQ7
Module D	Education	MDQ1A-MDQ4H

A total number of 13,251 respondents answered the 2022 SPPA questions. These respondents were first randomly assigned to answer one core component (Core 1 or Core 2) to ensure a representative sample, then randomly assigned to one module from either Module A or B, followed by one module from either Module C or D. The numbers of respondents who answered each core and module are listed in **Table A-2** below.

Table A-2. Survey Structure of 2022 SPPA

	Module A&C	Module B&C	Module A&D	Module B&D	Module Total
Core 1	1,651	1,644	1,615	1,668	6,578
Core 2	1,629	1,691	1,655	1,698	6,673
Total	3,280	3,335	3,270	3,366	13,251

Analytical Procedures

The study team first prepared the 2022 SPPA analytical file by developing demographic variables, creating analytical variables, and identifying weight variables. Then, the study team moved on to prepare the 2002, 2008, 2012, and 2017 SPPA data following the same process of 2022 SPPA analytical file creation. The 2022 SPPA analytical file was used to calculate the percentages of U.S. adults who engaged in various arts activities, percentages of frequencies for U.S. adults to participate in these activities, and percentages of U.S. adults who reported where and why they engaged in various arts behaviors, both overall and for comparisons

between different demographic and geographic groups. The combined analytical files of 2002, 2008, 2012, 2018, and 2022 SPPA were then used to analyze the trend of arts participation over the last two decades. The detailed methodologies are described in the sections below.

Demographic Characteristics

The basic CPS questionnaire records a full array of the demographic characteristics of respondents. The study team developed a number of variables describing demographic characteristics in this report. **Table A-3** below lists how each of the demographic variables from the CPS.

Table A-3. Definition of Demographic Variables

Analytical Variable	Categories	Definition
Gender	Male	PESEX=1
	Female	PESEX==2
Age group	18-24	PRTAGE=18/24
	25-34	PRTAGE=25/34
	35-44	PRTAGE=35/44
	45-54	PRTAGE=45/54
	55-64	PRTAGE=55/64
	65-74	PRTAGE=65/74
	75+	PRTAGE=75 and above
Race and ethnicity	Hispanic	PEHSPNON=1
	Non-Hispanic White	PTDTRACE=1 & PEHSPNON=2
	Non-Hispanic Black	PTDTRACE=2& PEHSPNON=2
	Non-Hispanic Asian	PTDTRACE=4& PEHSPNON=2
	Non-Hispanic Other	PTDTRACE=3& PEHSPNON=2 Or PTDTRACE>=5 & PEHSPNON==2
Highest level of education	Grade school	PEEDUCA>=31 & PEEDUCA<=34
	Some high school	PEEDUCA>=35 & PEEDUCA<=38
	High school graduate	PEEDUCA=39
	Some college	PEEDUCA>=40 & PEEDUCA<=42
	College graduate	PEEDUCA=43
	Graduate school	PEEDUCA>=44

A description (weighted) of the 2022 SPPA sample demographic characteristics appears below in **Table A-4**.

Table A-4. Demographic Characteristics: 2022 SPPA

Demographic Characteristics	Percentage distribution of U.S. adults
Total	100.0
Sex	
Male	48.7
Female	51.4
Race/ethnicity	
Hispanic	17.2
Non-Hispanic White	61.9
Non-Hispanic Black	12.0
Non-Hispanic Asian	6.2
Non-Hispanic Other	2.7
Age	
18-24	11.5
25-34	17.3
35-44	16.8
45-54	15.7
55-64	16.5
65-74	13.3
75+	8.9
Highest level of education	
Grade School	3.6
Some high school	5.8
High school graduate	29.0
Some college/associate degree	27.0
College graduate	22.2
Graduate school	12.5

Composite Variables

The study team developed a number of composite variables to describe the arts participation of U.S. adults. Creation of composite variables prioritizes the inclusion of as much relevant and available data as possible. Therefore, the composite variables are constructed in a way that, as long as the respondents have valid information for any of the constituent variables, their data will be included. For example, to construct the variable “Consumed art via media”, the observation is not

missing if the respondent answered “yes” or “no” for any of the twelve constituent questions. The detailed definition of 2022 SPPA composite variables is demonstrated in **Table A-5**.

Table A-5. 2022 SPPA Composite Variables

Composite variable	Counts	Definition
Consumed art via media	N(Yes)= 4,723 N(No)=1,637	PEMAQ1A="yes" or PEMAQ1B="yes" or PEMAQ1C="yes" or PEMAQ1D="yes" or PEMAQ1E="yes" or PEMAQ1F="yes" or PEMAQ1G="yes" or PEMAQ1H="yes" or PEMAQ1I="yes" or PEMAQ1J="yes" or PEMAQ3A="yes" or PEMAQ4A="yes"
Read books and/or literature	N(Yes)= 3,663 N(No)=2,752	PEC1Q15A="yes" or PEC1Q15B="yes" or PEC1Q15C="yes" or PEC1Q14A="yes" or
Created or performed art	N(Yes)= 3,433 N(No)=3,099	PEMBQ1A="yes" or PEMBQ1B="yes" or PEMBQ1C="yes" or PEMBQ1D="yes" or PEMBQ1E="yes" or PEMBQ1F="yes" or PEMBQ1G="yes" or PEMBQ1H="yes" or PEMBQ1I="yes" or PEMBQ1J="yes" or PEMBQ1K="yes" or PEMBQ1L="yes" or PEMBQ1M="yes" or PEMBQ1N="yes"
Attended arts events in person	N(Yes)= 3,353 N(No)=3,216	PEC1Q1A="yes" or PEC1Q2A="yes" or PEC1Q3A="yes" or PEC1Q4A="yes" or PEC1Q5A="yes" or PEC1Q6A="yes" or PEC1Q7A="yes" or PEC1Q8A="yes" or PEC1Q9A="yes" or PEC1Q10A="yes" or PEC1Q11A="yes" or

Composite variable	Counts	Definition
		PEC1Q12A="yes" or PEC1Q13A="yes"
Learned an art form or subject	N(Yes)= 1,821 N(No)=4,543	PEMDQ1A="yes" or PEMDQ1B="yes" or PEMDQ1C="yes" or PEMDQ1D="yes" or PEMDQ1E="yes" or PEMDQ1F="yes" or PEMDQ1G="yes" or PEMDQ1H="yes" or PEMDQ4A="yes" or PEMDQ4B="yes" or PEMDQ4C="yes" or PEMDQ4D="yes" or PEMDQ4E="yes" or PEMDQ4F="yes" or PEMDQ4G="yes" or PEMDQ4H="yes"

The report also includes comparisons of the composite variables across different SPPA waves. The creation of these composite variables prioritizes including as many comparable constituent variables as possible. Table A-6 describes the creation of comparable composite variables between SPPA 2017 and 2022 SPPA. This task is straightforward, as the two surveys have corresponding questions in most cases. For the analysis in this report specifically, the study team found little to no difference in most of the composite variables, with the exception of the “Creating or performing art” variable, where the 2017 constituents are spread across two modules; the study team also excluded the creation of digital arts from the 2017 composite variable in order to align with the 2022 composite variable.

Table A-6. SPPA 2017 and 2022 Comparable Composite Variables

Composite variable	SPPA 2017 data		2022 SPPA data	
	Definition	Counts	Definition	Counts
Attendance at live, in-person performances	PEC1Q1A="yes" or PEC1Q2A="yes" or PEC1Q3A="yes" or PEC1Q4A="yes" or PEC1Q5A="yes" or PEC1Q6A="yes" or PEC1Q7A="yes" or PEC1Q8A="yes" or PEC1Q9A="yes"	N(Yes)= 3,297 N(No)=5,531	PEC1Q1A="yes" or PEC1Q2A="yes" or PEC1Q3A="yes" or PEC1Q4A="yes" or PEC1Q5A="yes" or PEC1Q6A="yes" or PEC1Q7A="yes" or PEC1Q8A="yes" or PEC1Q9A="yes"	N(Yes)= 2,195 N(No)=4,374
Watch/listening to performing arts via electronic devices	PEMAQ1A="yes" or PEMAQ1B="yes" or PEMAQ1C="yes" or PEMAQ1D="yes" or PEMAQ1E="yes" or PEMAQ1F="yes"	N(Yes)= 4,901 N(No)=1,880	PEMAQ1A="yes" or PEMAQ1B="yes" or PEMAQ1C="yes" or PEMAQ1D="yes" or PEMAQ1E="yes" or PEMAQ1F="yes"	N(Yes)= 4,421 N(No)=1,936
Sharing or posting about art	PEMAQ4A="yes" or PEMAQ4B="yes" or PEMAQ4C="yes" or PEMAQ4D="yes"	N(Yes)= 2,052 N(No)=4,663	PEMAQ5A="yes" " or PEMAQ5B="yes" or PEMAQ5C="yes" or PEMAQ5D="yes"	N(Yes)= 1,254 N(No)=5,020
Creating or performing art	PEMCQ1A="yes" or PEMCQ1B="yes" or PEMCQ1C="yes" or PEMCQ1D="yes" or	N(Yes)= 4,083 N(No)=7,900	PEMBQ1A="yes" or PEMBQ1B="yes" or PEMBQ1C="yes" or PEMBQ1D="yes" or	N(Yes)= 2,926 N(No)=3,606

Composite variable	SPPA 2017 data		2022 SPPA data	
	Definition	Counts	Definition	Counts
	PEMCQ1F="yes" or PEMCQ1G="yes" or PEMCQ1H="yes" or PEMCQ7="yes" or PEMBQ1A="yes" or PEMBQ1B="yes" or PEMBQ1C="yes" or PEMBQ1D="yes" or PEMBQ1E="yes"		PEMBQ1E="yes" or PEMBQ1F="yes" or PEMBQ1G="yes" or PEMBQ1H="yes" or PEMBQ1I="yes" or PEMBQ1J="yes" or PEMBQ1K="yes" or PEMBQ1L="yes"	
Taking classes/ lessons in art	PEMEQ3A="yes" or PEMEQ3B="yes" or PEMEQ3C="yes" or PEMEQ3D="yes" or PEMEQ3E="yes" or PEMEQ3F="yes" or PEMEQ3G="yes" or PEMDQ3H="yes"	N(Yes)= 652 N(No)=6,246	PEMDQ3A="yes" or PEMDQ3B="yes" or PEMDQ3C="yes" or PEMDQ3D="yes" or PEMDQ3E="yes" or PEMDQ3F="yes" or PEMDQ3G="yes" or PEMEQ5="yes"	N(Yes)= 718 N(No)=5,644

When it comes to comparing the composite variables of arts participation over the last two decades, a variety of challenges make it impossible to obtain a set of reasonably satisfactory composite variables which are comparable across the five waves of SPPA. Therefore, the analysis in this report mainly focuses on the comparison of single-question variables for the long-lasting time trend. The study team managed to create a comparable composite variable for the attendance of any live, in-person performances for 2008, 2012, 2017, and 2022 SPPA. SPPA 2002 is excluded from the comparison because the survey did not ask about attendance of Latin music performances during the last 12 months for that wave, meaning that

a comparable composite variable could not be constructed. Details of the variable for the other four waves are presented in **Table A-7**.

Table A-7. SPPA 2002, 2008, 2012, 2017, 2022 Comparable Composite Variables

Composite variable	SPPA 2002	SPPA 2008	SPPA 2012	SPPA 2017	2022 SPPA
Attendance of any live, in-person art performance	NA*	PEQ1A="yes" or PEQ2A="yes" or PEQ3A="yes" or PEQ4A="yes" or PEQ5A="yes" or PEQ6A="yes" or PEQ7A="yes" or PEQ8A="yes"	PEC1Q1A="yes" or PEC1Q2A="yes" or PEC1Q3A="yes" or PEC1Q4A="yes" or PEC1Q5A="yes" or PEC1Q6A="yes" or PEC1Q7A="yes" or PEC1Q8A="yes"	PEC1Q1A="yes" or PEC1Q2A="yes" or PEC1Q3A="yes" or PEC1Q4A="yes" or PEC1Q5A="yes" or PEC1Q6A="yes" or PEC1Q7A="yes" or PEC1Q8A="yes"	PEC1Q1A="yes" or PEC1Q2A="yes" or PEC1Q3A="yes" or PEC1Q4A="yes" or PEC1Q5A="yes" or PEC1Q6A="yes" or PEC1Q7A="yes" or PEC1Q8A="yes"
Counts	NA*	N(Yes)= 5,634 N(No)=12,791	N(Yes)= 3,727 N(No)=8,539	N(Yes)= 2,745 N(No)=6,083	N(Yes)= 1,464 N(No)=5,104

Method of Statistical Testing

To test the statistical significance differences between years or subgroups in the analysis in the report, the study team calculated the 90 percent confidence interval (CI) of the estimate in each year or subgroup.

In contrast to a single point estimation for the population parameter of interest θ (e.g. population mean), a CI provides an interval estimate for θ that incorporates the precision of the single estimate. Specifically, a 90% CI for θ is formed as an interval $[ll(x), ul(x)]$ such that $\Pr\{ll(x) \leq \theta \leq ul(x) | \theta\} \geq 90\%$, where $ll(x)$ and $ul(x)$ are lower and upper confidence limits obtained post-estimation from Stata's *svy: proportion* command.

The study team then compared the confidence intervals of each year or subgroup and determined whether they overlap. If confidence intervals overlap, the study team reports that the estimate is not significant with at least 90 percent confidence. This method is in accordance with the technical guidance of the 2008 SPPA user guide and previous studies using SPPA data.

Handling of Missing Data and Analytical Weights

The SPPA, like all other survey data, has missing data due to survey design, refusal to answer questions, and other issues. Following the guidance in the technical document for the CPS supplements, the study team assumed that missing data was missing completely at random (MCAR). Based on this assumption, all cases with missing data were excluded from the analysis.

However, the exclusion of missing data affected population estimates. To address this issue, the study team applied the adjustment factor provided in the CPS technical documentation, including the user guides of the SPPA data from each year. These adjustments ensured that population estimates remain representative despite the removal of incomplete cases.

The 2022 SPPA estimates in this report are weighed using person level supplement weight “PWSUPWGT”. This use of weight allows the data to be generalized to the population of interest. That is, after applying the weights, the data reflect the population of U.S. adults.

The 2017 SPPA estimates in the report are also weighted using personal level supplement weight under the same variable name “PWSUPWGT”.

The 2012 SPPA data have five survey weight variables (PWOWGT, PWTWGT, PWSWGT, PPAWGT, PPNWGT, PPSWGT) attached to each data record. “PWOWGT” is used for Core 1 questions about arts participation trends. “PWTWGT” is used for Core 2 questions on experimental arts participation questions. “PWSWGT” is used to weight other arts activities questions. “PPAWGT” is used for music preference questions. For accessing art through media, creating art through media, and arts learning, “PPNWGT” is used to weight questions. “PPSWGT” is used to weight questions about creating, performing, and other arts activities.

There are two weight variables, “CWGT” and “MWGT,” in the 2008 SPPA. “CWGT” is used for the Core questions and Module C (other leisure activities) questions which are asked of the respondents and their spouses/partners. “MWGT” is used for all other modules that were not asked of spouses/partners, including reading and music preference questions, participation via internet and other media questions, and arts learning questions.

The 2002 estimates are weighted using the final weight variable “WEIGHT”.

Replicate Weights

The study team calculated the standard errors and confidence intervals of the estimates in this report using the replicate weights “REPWGT1-REPWGT160”. The replicate weights were created with the balanced repeated replication (BRR) technique, allowing researchers to generate more informed standard error estimates that mimic the theoretical basis of standard errors—that is, to use the single sample of SPPA data to simulate a range of possible alternative samples by dividing surveyed strata into multiple balanced half-samples without compromising the identity of respondents. In the CPS, there are 160 separate weights at the household and person levels. The Stata code used to set up the weight for SPPA 2008-2022 is:

```
svyset [pweight = weight], brrweight(REPWGT1-REPWGT160) fay(0.5) vce(brr) mse
```

One challenge that the study team faced was that the replicate weights are only available for 2005 onward, and this study also covers 2002 SPPA, where there are no replicate weights available for use. To mitigate this issue, the study team obtained two variables (“VARSTRAT” and “VARUNIT”) that were created to facilitate the estimation of the survey design effect from the combined SPPA data file for 2002 SPPA only. The study team then used the two variables to calculate the standard errors using a Taylor series linearization approach. The Stata code used to set up the weight for 2002 SPPA is:

```
svyset VARUNIT [pweight=weight], strata(VARSTRAT)
```

Lessons Learned

Core 1 – Arts Attendance and Literary Reading

Summary

Core 1 includes the primary survey questions on arts attendance and literary reading. This is also the longest appearing section in the SPPA, representing many of the measures commonly tracked over time. This core focuses primarily on arts activities occurring in public, including attendance at a variety of performances and events at arts venues.

Module Content

- Attendance and frequency of attendance at live jazz performances (C1Q1A & C1Q1B)

- Attendance and frequency of attendance at a live Latin, Spanish, or salsa music performance (C1Q2A & C1Q2B)
- Attendance and frequency of attendance at a live classical music performance (C1A3A & C1Q3B)
- Attendance and frequency of attendance at a live opera (C1Q4A & C1Q4B)
- Attendance and frequency of attendance at a musical stage play (C1Q5A & C1A5B)
- Attendance and frequency of attendance at a stage play other than a musical (C1Q6A & C1Q6B)
- Attendance and frequency of attendance at a live ballet performance (C1Q7A & C1Q7B)
- Attendance and frequency of attendance at a live dance performance (C1Q8A & C1Q8B)
- Attendance at any live music, dance, or theater performance (C1QA)
- Attendance and frequency of attendance at art museum or gallery (C1Q10A & C1A10B)
- Attendance at craft fairs or visual arts festivals (C1Q11A)
- Attendance at an outdoor festival featuring performing arts (C1Q12A)
- Attendance at a place known for its historical, architectural, or design value (C1Q13A)
- Reading habits, including the number of books read, the type of books read, and the format of books (C1Q14A – C1Q17A)

Strengths

Consistent wording for each question over time makes comparisons across survey years relatively easy to analyze. This module also measures the most common forms of arts participation with additional details regarding the frequencies of these activities.

Weaknesses

The question about any other live music, dance, or theater performance (C1Q9A) appears to be too vague. Respondents may be referring to many types of performances in answering this question, including those not specifically mentioned. Given that the percentage of adults answering yes to this question has increased over time, it would be helpful to give this question more definition.

Like many questions on the SPPA, these questions do not ask about the motivations for attending these types of performances and events. Including

questions about motivations for attendance may provide explanations regarding changes in participation rates in these types of arts involvement over time.

Core 2: Arts Attendance, Venues, and Motivations

Summary

Core 2 focuses on contextual factors related to attendance at certain art performances including live, music, or dance performances; book reading events; and arts exhibits. These contextual factors include the venue type and the source of information about the event. This module also asks respondents about film viewing activities.

Module Content

- Attendance at a live music or dance performance (C2Q1A)
- Attendance at a live book reading or poetry or storytelling event (C2Q1B)
- Attendance at an art exhibit (C2Q1C)
- Type of venue for performance at live music or dance performance; live book reading or poetry or storytelling events; and arts exhibits (C2Q3A-C2Q3F)
- Source of information for the event (C2Q3AA – C2Q3GG)
- Attendance at a film viewing, including documentaries and film festivals (C2Q1D – C2Q1D3)
- Attendance at a place known for its historical, architectural, or design value (C2Q1E)

Strengths

This module provides more information regarding respondents' attendance at certain arts events, which builds upon the previous module. This information may be utilized to better explain the arts participation habits of respondents and some of the contextual factors behind these activities.

Weaknesses

The questions on venue type and source of information have a limited number of responses. For example, for venue type, there are six possible responses (college or university campus; elementary, middle, or high school; church, synagogue, or place of worship; restaurant, bar, nightclub, or coffee shop; open air facility such as a park; and community center or library). Including an "other" category would help determine how these categories are meeting respondents' experiences.

Additionally, the placement of viewing films within this module does not necessarily logistically fit with the other lines of questioning. Perhaps these questions could be moved to a more appropriate module such as Module A, which is about consuming art via media.

Module A: Consuming Art via Electronic Media

Summary

Module A is devoted to consumption of art via electronic media devices. The type of art consumed includes various forms of music, theater productions, dance performances, and programming regarding different types of art. In most instances, this module asks whether and how often respondents engaged in electronic consumption of these art forms. Finally, this module asks respondents whether they posted or shared any information about the various art forms.

Module Content

- Use of device and frequency of use to watch or listen to jazz (MAQ1A & MAQ2A)
- Use of device and frequency of use to watch or listen to Latin, Spanish, or salsa music (MAQ1B & MAQ2B)
- Use of device and frequency of use to watch or listen to classical music or opera (MAQ1C & MAQ2C)
- Use of device and frequency of use to watch or listen to other kinds of music, including rock, pop, country, and rap or hip hop (MAQ1D & MAQ2D)
- Use of device and frequency of use to watch or listen to theater productions (MAQ1E & MAQ2E)
- Use of device and frequency of use to watch dance performances (MAQ1F & MAQ2F)
- Use of device and frequency of use to watch or listen to programs, podcasts, or other video or audio content about music, dance, or theater (MAQ1G & MAQ2G)
- Use of device and frequency of use to watch or listen to programs, podcasts, or other video or audio content about the visual arts (MAQ1H & MAQ2H)
- Use of device and frequency of use to watch or listen to programs, podcasts, or other video or audio content about books or writers (MAQ1I & MAQ2I)
- Use of device and frequency of use to watch or listen to documentaries (MAQ1J & MAQ2J)
- Use of device and frequency of use to look at visual art such as painting and sculpture (MAQ3A & MAQ3B)

- Use of device in a museum, theater, or concert hall to learn about or interact with an art exhibit or as part of a performance (MAQ4A)
- Publicly sharing or posting any information or content in relation to: 1) music, dance, theater; 2) movies or films; 3) visual art; or 4) books and literature (MAQ5A – MAQ5D)

Strengths

This module is comprehensive in the types of art forms consumed via the use of devices. Including programming and podcasts also ensures that this module covers how adults interact with the arts using devices. Measuring how often these activities occur also provides additional information about how devices are used to consume art.

Weaknesses

Several questions in this module may be improved with additional context. For instance, the question regarding using a device at a museum, theater, or concert hall to learn about or interact with an art exhibit or as part of a performance appears vague. Redesigning a question to capture this type of activity may be more effective in eliciting the proper responses.

Module B: Performing Art, Visual Art, and Writing

Summary

Module B addresses respondent's own art making and performances. The list of arts activities included in this module has increased over time. This module also asks respondents about the intended audience for their creation and performance of art and whether they used the internet to share information about their art performances or creations.

Module Content

- Working with pottery, ceramics, or jewelry (MBQ1A)
- Working with leather, metal, or wood (MBQ1B)
- Working with weaving, crocheting, quilting, needlepoint, knitting, or sewing (MBQ1C)
- Singing either by yourself, in a social gathering, or in a group or choir (MBQ1D)
- Singing as a performance or practice for other people (MBQ2D)
- Playing a musical instrument (MBQ1E)
- Playing a musical instrument with one or more partners, a band, orchestra, or other musical group (MBQ2E)

- Performing any acting (MBQ1F)
- Social dancing, including dancing at weddings, clubs, or other social settings (MBQ1G)
- Dancing as a performance or practice, such as for an audience or as a form of expression (MBQ1H)
- Creating films or videos as an artistic activity (MBQ1I)
- Taking photographs as an artistic activity (MBQ1J)
- Creating visual art such as painting, sculpture, graphic design, or digital art (MBQ1K)
- Creative writing such as fiction, nonfiction, poems, or plays (MBQ1L)
- Designing, coding, or creating games, software, or tools for computers, mobile devices, or other platforms for artistic purposes (MBQ1M)
- Creating any performance or work of visual art using a computer or mobile device (MBQ1N)
- Intended audience for the above art creation or performance activities (MBQ3A)
- Use of the internet to share performances, artwork, or creative writing (MBQ4A)

Strengths

This module encompasses a wide range of art creation and performance activities likely relevant to respondents. Moreover, this list of activities has increased to include more forms of art creation and performance, particularly related to technology and/or the intentions behind these activities. This module is also cohesive in terms of the topics that are addressed.

Weaknesses

Given the addition of new categories of art creation and performances over time, it is difficult to construct a composite measure of art creation or performance over time that is comprehensive in nature. Trend analysis can only include those measures that are consistently asked using the same approximate language. These challenges were also noted in the 2022 SPPA Comprehensive Report.

Module C: Participation in Other Leisure Activities

Summary

Module C measures respondents' involvement in other leisure activities outside of the arts. Numerous leisure activities are included in this module. In many cases, this module also asks respondents about their frequency of engaging in these leisure

activities. Some of these activities also involve community engagement such as participation in community activities. This module provides an opportunity to measure adult participation in other areas beyond arts participation.

Module Content

- Attendance at amateur or professional sports events (MCQ1A)
- Exercise or participation in any sports activities (MCQ1B)
- Hunting or fishing (MCQ1C)
- Participation in outdoor activities such as hiking, camping, or canoeing (MCQ1D)
- Working with indoor plants or gardening for pleasure (MCQ1E)
- Interior design, architecture work, fashion work, landscaping as a pastime or hobby, and the frequency of these activities (MCQ1F & MCQ2F)
- Restoring, rebuilding, or customizing something like a historic home, classic vehicle, or furniture, and the frequency of these activities (MCQ1G & MCQ2G)
- Playing video games or computer games and the frequency of these activities (MCQ1H & MCQ2H)
- Participation in book clubs or reading groups and the frequency of these activities (MCQ1I & MCQ2I)
- Preparing or cooking any food as an artistic activity or taking part in a cooking class and the frequency of these activities (MCQ1J & MCQ2J)
- Visiting a public library and the frequency of this activity (MCQ1K & MCQ2K)
- Volunteering or charity work (MCQ3A)
- Volunteering for an arts organization, group, or project (MCQ3B)
- Subscribing to season tickets to an arts event or membership in an arts organization (MCQ4)
- Donating money, goods, or services to an arts organization, group, or project (MCQ5)
- Purchasing or acquiring any pieces of art (MCQ6)
- Participating in community activities, meetings, or events (MCQ7)

Strengths

This module asks respondents about a common list of leisure activities and, as a result, provides a helpful reference point for participation in arts activities. Moreover, this line of questioning also includes questions about the frequency of these activities, which allows for more one-on-one comparisons to arts participation.

Weaknesses

It is not clear why the frequency of these leisure activities is asked about regarding some areas and not others. For many leisure activities, the frequency is not asked about. Some of the listed leisure activities are also vague. For example, participation in community activities, meetings, or events could take additional forms. Creating separate questions to specify these activities would add more precision to this module. Finally, future versions of this module may consider how comprehensive this current list of leisure activities is and add new categories accordingly.

Module D: Arts Learning

Summary

Module D measures various types of learning by art form. Additionally, it measures this learning in different ways, including lessons or classes among one's lifetime or over the last 12 months as well as through other means such as through family or friends or by teaching oneself.

Module Content

- Lessons or classes in music—either voice-training or playing an instrument over one's lifetime and the past 12 months, and the location of lessons (MDQ1A – MDQ3A)
- Learning music through other means, including from family and friends, as a family tradition, or by teaching yourself (MDQ4A)
- Lessons or classes in photography or filmmaking over one's lifetime and the past 12 months, and the location of lessons (MDQ1B-MDQ3B)
- Learning photography or filming through other means, including from family and friends, as a family tradition, or by teaching yourself (MDQ4B)
- Lessons or classes in visual arts such as drawing, painting, pottery, weaving, graphic design, or fashion design over one's lifetime and the past 12 months, and the location of lessons (MDQ1C-MDQ3C)
- Learning visual arts through other means, including from family and friends, as a family tradition, or by teaching yourself (MDQ4C)
- Lessons or classes in acting or theater over one's lifetime and the past 12 months, and the location of lessons (MDQ1D-MDQ3D)
- Learning acting and theater through other means, including from family and friends, as a family tradition, or by teaching yourself (MDQ4D)
- Lessons or classes in dance over one's lifetime and the past 12 months, and the location of lessons (MDQ1E-MDQ3E)
- Learning dance through other means, including from family and friends, as a family tradition, or by teaching yourself (MDQ4E)

- Lessons or classes in creative writing over one's lifetime and the past 12 months, and the location of lessons (MDQ1F-MDQ3F)
- Learning creative writing through other means, including from family and friends, as a family tradition, or by teaching yourself (MDQ4F)
- Lessons or classes in art history or music appreciation over one's lifetime and the past 12 months, and the location of lessons (MDQ1G-MDQ3G)
- Learning art history or music appreciation through other means, including from family and friends, as a family tradition, or by teaching yourself (MDQ4G)
- Lessons or classes in creative coding or computer animation over one's lifetime and the past 12 months, and the location of lessons (MDQ1H-MDQ3H)
- Learning creative coding or computer animation through other means, including from family and friends, as a family tradition, or by teaching yourself (MDQ4H)

Strengths

This module has been designed to capture considerable information about arts learning using an economy of survey questions. This module also enables the measurement of different types of learning. The number of art forms included in this module has also increased over time to encompass more and more types of art forms.

Weaknesses

Given the addition of new categories of arts learning over time, it is difficult to construct a composite measure of art creation or performance over time that is comprehensive in nature. Trend analysis can only include those measures that are asked consistently over time. These challenges were noted in the 2022 SPPA Comprehensive Report. Future iterations of the survey could continue to ask items asked in the 2022 SPPA (many of which are comparable to 2017 as well) to facilitate better trend analysis.