

# **Student Interest-in-the-Arts Questionnaire: Development and Validity Studies**

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The Student Interest in the Arts Questionnaire was developed at the Program Research and Evaluation Office of Curriculum Research & Development Group (CRDG), University of Hawai‘i at Mānoa. CRDG administered it to students who were participating in the ARTS FIRST Windward Research Project (AFWRP) from January 2004 through May 2007. The project was funded by the U. S. Department of Education; CRDG participated via a subcontract with the Hawai‘i Arts Alliance (HAA). The purpose of the instrument is to collect data on Grades 3–5 students’ interest in the four arts forms that were taught in the professional development institutes and mentoring that HAA staff provided to participating project teachers. The art forms included drama, music, dance, and the visual arts (painting/drawing and sculpture/ceramics). The present document gives a description of the development of the instrument and of the validity studies of data collected with the instrument. The instrument is shown in the final pages of the document.

## **Instrument Development**

### ***Initial Development***

Project staff prepared items addressing each of the arts forms (seven items for each of drama and dance and six for each of music, drawing/painting, and sculpture/ceramics). The items asked about how much the students liked to experience the art form, participate in the art form, talk about the art form, and learn about the art form; whether they take lessons on the art form outside of school; and how happy the art form makes them. We used a three-point scale in which the student circled a face with a corresponding feeling (“enjoy,” “neutral,” and “dislike”). For pilot-testing, we administered the questionnaire to nine third-grade University Laboratory School (ULS) students and examined the results for reliability and discrimination. Based on the results, the items were revised somewhat and changed to a 4-point Likert scale (“strongly agree,” “somewhat agree,” “somewhat disagree,” and “strongly disagree”). The responses also allow a option for “Don’t know.” A follow-up pilot test was conducted on eight third-grade ELS students and additional analyses were conducted. The visual arts section initially was expanded to address both painting/drawing and sculpture/ceramics, but we eliminated the items about sculpture and ceramics after learning that the schools did not teach or have access to the equipment needed for those arts. Finally, we administered the instrument to 94 project school third-grade students in April of School Year 2003–2004 and made revisions.

### **Validity Analyses**

We used the data collected during the project to conduct validity studies, including analyses addressing content validity and analyses addressing construct validity.

### ***Content-Related Validity***

Content validity is demonstrated in part by showing that the items of an instrument adequately address the intended content. Our description of the development of the instrument above shows the procedures for developing the Interest-in-the-Arts Questionnaire. We believe that these procedures

Table 1.  
*Factor Loadings for the Student Interest in the Arts Questionnaire<sup>a</sup>, Spring 2005*

Item	Factor loadings <sup>b</sup>			
	Drama	Dance	Music	Visual arts
5. I like learning how to act in, or write, plays.	<b>0.7713</b>	0.4281	0.3574	0.2622
6. I take (or want to take) acting lessons outside of school.	<b>0.7144</b>	0.4197	0.2843	0.3054
7. Acting in or writing plays makes me happy.	<b>0.7089</b>	0.4393	0.3623	0.3418
3. I like to help write plays.	<b>0.6931</b>	0.3010	0.2501	0.3086
2. I like to act in plays.	<b>0.6828</b>	0.4167	0.3515	0.2528
4. I like talking about plays.	<b>0.6550</b>	0.2313	0.3254	0.3662
1. I like to watch plays.	<b>0.6360</b>	0.2445	0.1670	0.2867
9. I like to dance.	0.2857	<b>0.8451</b>	0.3982	0.2183
12. I like learning about dancing and how to dance.	0.4315	<b>0.8278</b>	0.3842	0.2422
14. Dancing makes me happy.	0.3977	<b>0.8266</b>	0.4934	0.3086
13. I take (or want to take) dance lessons outside of school.	0.4908	<b>0.7743</b>	0.3607	0.2845
10. I like to make up dances.	0.3656	<b>0.7492</b>	0.3323	0.2645
8. I like to watch dancing.	0.3103	<b>0.7039</b>	0.3676	0.2617
11. I like talking about dancing.	0.4850	<b>0.6976</b>	0.4329	0.3257
16. I like to play music or sing.	0.3494	0.4485	<b>0.7961</b>	0.2506
2. Listening to music, playing music, or singing makes me happy.	0.3205	0.4194	<b>0.7536</b>	0.3940
17. I like talking about music or singing.	0.4310	0.3103	<b>0.7322</b>	0.3142
18. I like learning about music or learning to play music or singing.	0.4590	0.4467	<b>0.7276</b>	0.2537
19. I take (or want to take) music lessons outside of school.	0.5361	0.3304	<b>0.5951</b>	0.3227
15. I like to listen to music.	-0.071	0.2061	<b>0.5468</b>	0.2004
26. Drawing or painting makes me happy.	0.3413	0.3232	0.3082	<b>0.8037</b>
24. I like learning about drawing or painting.	0.3810	0.1738	0.3106	<b>0.7734</b>
22. I like to draw or paint.	0.1825	0.2824	0.2843	<b>0.7614</b>
21. I like to look at drawings or paintings.	0.3157	0.2768	0.2958	<b>0.7483</b>
23. I like talking about drawing or painting.	0.5031	0.2359	0.3433	<b>0.7149</b>
25. I take (or want to take) drawing or painting lessons outside of school.	0.4124	0.2939	0.3256	<b>0.7085</b>

<sup>a</sup> Factor structure was obtained using Promax rotation. *Loadings* show the extent to which an item addresses the construct (maximum = 1.0).

<sup>b</sup> Loadings in bold type represent the largest value for the item.

demonstrate that the instrument addresses the intended content.

Content validity is also addressed by establishing that data collected with an instrument are reliable. We used two methods to examine reliability. The first was the test-retest method. This method yields results showing the consistency of responses to an instrument on two occasions. We administered the instrument twice in the spring of 2005 to 37 ULS students in Grades 2–5, with the weekend between administrations. The correlation between total scores for the two occasions was .93, suggesting high test-retest reliability. We also conducted a generalizability theory analysis, in which we examined the variation due to students, items, and occasions. This analysis showed that none of the variance was due to occasion, again suggesting high test-retest reliability. In addition, we calculated the coefficient alpha for the data we collected from the project students in the Fall of 2004 and the Spring of 2005; it was .90 for the Fall pretest and .87 for the Spring posttest. All these analyses support of the validity of the data collected with the instrument.

### ***Construct Validity***

The second aspect of validity that we addressed had to do with the extent to which our instrument reflects the constructs that they are intended to address—that is, construct validity. We conducted factor analyses (using SAS PROC FACTOR with the promax rotation method) in Year 2 of the project to see the extent to which data collected with the instrument could be grouped empirically into the four art forms ( $N = 514$ ). The results, as seen in Table 1, clearly show a factor for each of the four arts forms, strongly supporting the conclusion that the instrument has construct validity.

### **Further Revisions**

Students who responded to the Interest in the Arts Questionnaire tended to report high levels of interest, resulting in little variation among student scores. We conducted Item Response Theory (IRT) analyses to identify the items that accounted for most of the variation among the scores. By identifying these items and comparing project and treatment groups on the mean total scores for the items, we hoped to have data more well-suited for our study.

We conducted an IRT analysis for each of the four factors and with all students who completed the instrument in either the Fall or Spring of 2005 and 2006 ( $N = 996$ ). We examined the results on the IRT discrimination parameter ( $a$ ) and found that for each of the four factors, the three items measuring how much they liked to do the art form, how much they liked to learn about the art form, and how happy the art form made them discriminated the most among students. To check grade level differences, we ran two additional IRT analyses for only the students who took both pre and post questionnaires in Year 2 (Grade 4 students,  $N = 238$ ) and Year 3 (Grade 5 students,  $N = 250$ ). The results of these two analyses showed the same three items discriminated the best for the four art forms, supporting the initial IRT analysis. This remarkable degree of consistency left us confident that the total scores for these three items for each of the arts forms were the appropriate indicators to use when examining project-control differences in student interest in the arts. Coefficient alpha for the three items .76 for the music items, .81 for the visual arts items, .82 for the drama items, and .86 for the dance items, thus demonstrating high internal consistency.

## Student Interest-in-the-Arts Questionnaire

**Instructions:** For each statement below, please *fill in one number* that best gives your opinion. If you *strongly agree* with the statement on the left, fill in ④; if you *somewhat agree* with the statement, fill in ③; if you *somewhat disagree* with the statement, fill in ②; and if you *strongly disagree* with the statement, fill in ①. Remember only fill in *one* number per line.

**Please fill in circles like this:** ● Not like this: ~~⊗~~ ⊙ ~~⊙~~

Statement	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
1. I like to watch plays. .....	④	③	②	①
2. I like to act in plays. .....	④	③	②	①
3. I like to help write plays. .....	④	③	②	①
4. I like talking about plays. .....	④	③	②	①
5. I like learning how to act in, or write, plays. .....	④	③	②	①
6. I take (or want to take) acting lessons outside of school. .....	④	③	②	①
7. Acting in or writing plays makes me happy. .....	④	③	②	①
8. I like to watch dancing. .....	④	③	②	①
9. I like to dance. .....	④	③	②	①
10. I like to make up dances. .....	④	③	②	①
11. I like talking about dancing. .....	④	③	②	①
12. I like learning about dancing and how to dance. .....	④	③	②	①
13. I take (or want to take) dance lessons outside of school. .....	④	③	②	①

Statement	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree
14. Dancing makes me happy. .....	④	③	②	①
15. I like to listen to music. .....	④	③	②	①
16. I like to play music or sing. .....	④	③	②	①
17. I like talking about music or singing. .....	④	③	②	①
18. I like learning about music or learning to play music or singing. .....	④	③	②	①
19. I take (or want to take) music lessons outside of school. .....	④	③	②	①
20. Listening to music, playing music, or singing makes me happy. .....	④	③	②	①
21. I like to look at drawings or paintings. .....	④	③	②	①
22. I like to draw or paint. .....	④	③	②	①
23. I like talking about drawing or painting. .....	④	③	②	①
24. I like learning about drawing or painting. .....	④	③	②	①
25. I take (or want to take) drawing or painting lessons outside of school. .....	④	③	②	①
26. Drawing or painting makes me happy.	④	③	②	①

*–Thank you for your time–*