

## Chapter 8

# Motivational outcomes of arts education

*In this chapter we review the effects of arts education on academic motivation. The notion that arts education strengthens students' academic motivation is a common assumption. We review studies showing that when students are in arts classes they show high motivation, and showing that students who study the arts tend to have higher academic aspirations than those who do not. However, these are correlational findings and we cannot conclude from these that the arts training causes academic aspirations to rise. It is equally possible that students with high aspirations choose to study the arts. Experimental research on this question is needed.*

**E**ducators are always in search of the means to make students *want* to learn. The motivation to learn is key. Without the desire to learn, students will not try to learn. This has become even more important in a society driven by innovation in which “creative destruction” requires people to engage in different forms of lifelong learning. Persistence, resilience and energy are increasingly acknowledged as important behavioural skills that relate to people’s subsequent success (Tough, 2012). One possible indirect mechanism that could underlie any causal relationship between arts education and academic achievement might be improved academic motivation due to the engaging nature of the arts. Students who study the arts may become excited by learning for the first time, and might as

a result become more curious, engaged, and motivated in their academic classes. Of course this hypothesis depends on students actually becoming excited and engaged in arts classes; then this excitement would need to spill over into other kinds of classes.

Hetland, Winner, Veenema and Sheridan (2013) analysed the discourse of visual arts teachers (described in Box 4.1) and reported that these teachers were continually pushing their students to stick to tasks for sustained periods of time. They coded this kind of teacher discourse as asking students to “engage and persist.” If this kind of discourse is common in arts classes, then one might expect students to learn to focus and develop inner directedness as a function of studying the arts – and this kind of skill is certainly related to academic motivation.

What is the state of the evidence regarding the hypothesis that learning in the arts leads to improved motivation to work hard in school and to become engaged in academic learning?

## Multi-arts education and academic motivation

### ***REAP meta-analyses of multi-arts education and academic motivation studies***

Winner and Cooper (2000) located a number of correlational studies yielding 23 results comparing students high and low on arts education on one of the following outcomes related to academic motivation: academic self-concept, attendance, aspiration, and engagement (as summarised in Table 8.1). These concepts are related to motivation as follows: a high academic self-concept is likely to be either a precondition or a consequence of academic motivation; school attendance, high aspirations for what one can become, and engagement in school are all part of being academically motivated.

In a typical correlational study, students involved in arts were compared to students not involved in arts on one of these motivational outcomes. In the few quasi-experimental studies we found, a comparison was made on an outcome pre- and post- the introduction of the arts in the school. None of the studies were experimental and thus no causal conclusions can be drawn. One of these studies is described below in Box 8.1.

A meta-analysis could not be performed on these studies because most of the studies did not provide sufficient quantitative information to make this possible. As shown in Table 8.1, twenty-one of the 23 studies identified yielded positive

associations; two reported no association, one for the outcome of attendance, and one for dropping out of college. Thus the strong majority of studies examining the correlation between arts education and these indirect academic effects are positive. None of the studies also examined academic outcomes, unfortunately, and these motivational outcomes have not yet been demonstrated to be causally associated with academic improvement.

**Box 8.1. Does arts education help prevent high school dropout?  
No evidence yet**

Does participation in the arts lead to lower high school dropout rates? Mahoney and Cairns (1997) followed 392 students from 7th to 12th grade and interviewed them yearly about extra-curricular activities. Students were classified as having had any vs. no involvement in arts, sports, or vocational extracurricular activity. They were also monitored for early school dropout, defined as failure to complete the 11th grade.

Sixty-one students (16%) were early school dropouts. These students had participated in significantly fewer extracurricular activities at all grades than the rest of the students. At the middle school level, it was only athletic participation that differentiated drop outs from non-dropouts: Those who did not drop out had been significantly more involved in athletics than those who dropped out. Thus participation in the arts was unrelated to dropout at the middle school level.

At the high school level, 27% of those with no involvement in the arts dropped out, while only 7% of those with some level of involvement dropped out. However this difference only approached statistical significance ( $p = .08$ ). Involvement in the athletic and vocational domains were both statistically significantly related to lower dropout rates at the high school level.

The number of students involved in some extra-curricular activity who were at risk for dropout was small, and the difference between the results for the arts vs. other extra-curricular activities in predicting dropout were caused by just one student involved in the arts dropping out, and none in the other groups dropping out.

The authors wisely conclude that school dropout is associated with multiple causes and they do not make any claims about single causes. They also note that their results are entirely correlational. We cannot determine whether participation in extracurricular activities protects against dropout or whether it appeals to students who are less likely to drop out to begin with.

Table 8.1. Correlational studies assessing relationship between arts and motivational indicators of academic achievement

Study	Motivational indicator	Positive relation	No relation	Confounds/limitations	Outlet
Burton, Horowitz and Abeles (2000)	Academic Self-Concept	41% of high arts students scored in top quartile of academic self-concept, compared to 18% in low arts groups, no p value reported.			Technical report
Heath (1998a,b)	Academic Self-Concept	High arts students more likely to feel they can do things as well as others than do students in a national sample (89% vs. 76%).		Self-selected sample (i.e., students self-selected into arts) Self-report	Non-peer reviewed journal
Aschbacher and Herman (1991)	Attendance	Arts involved students (in Humanities curriculum linking social studies, literature, and arts) had higher attendance than control group, $p=.07$ .		Self-selected sample	Technical report
Glissman (1967)	Attendance		9th grade slow learners did not improve attendance when given arts classes, $p=n.s.$		Doctoral dissertation
Fowler (1979b)	Attendance	Attendance rose at Mosswood Mimi School, Oakland, Calif, after school incorporated arts.		No data given	Secondary source
Heath (1998a,b)	Attendance	High arts students 3 times more likely to win award for attendance, compared to national sample.		Self-selected sample Self-report	Non-peer reviewed journal
Kantrowitz (1997)	Attendance	Attendance rose at Charles R. Bugg Elementary School after school incorporated arts.		No data given	Secondary source
Murfee (1993)	Attendance	Attendance rose at Guggenheim Elementary School, Chicago, after school incorporated arts.		No data given	Secondary Source
Spike (1991)	Attendance	Attendance rose at Roosevelt Middle School for the Arts, Milwaukee, after school incorporated arts.		No data given	Secondary Source
Aschbacher and Herman (1991)	Aspirations	Humanitas students more likely to plan to attend 4 year college than control group (71% vs. 55%), and less likely to plan to attend 2 year college (17% vs. 25%) or no college (7% vs. 16%), $p<.05$ .		Self-selected sample Self-report	Technical report
Heath (1998a,b)	Aspirations	Students in afterschool arts organisations more likely to plan to go to college compared to national sample (86% vs. 65%)		Self-selected sample Self-report	Nonpeer-reviewed journal

Table 8.1. Correlational studies assessing relationship between arts and motivational indicators of academic achievement (continued)

Study	Motivational indicator	Positive relation	No relation	Confounds/limitations	Outlet
Spady (1971)	Aspirations	Boys with high school arts 9.4% more likely to have college aspirations than those without arts.		Self-selected sample. Self-report. Arts group included students involved in student newspaper or yearbook. Any advantage of arts group could be due to members also involved in publications.	Peer-reviewed journal
Catterall (1998)	Engagement	48.9% low arts 8th graders (all SES) reported being bored in school over half or most of the time, compared to 42.2% high arts 8th graders. For lowers SES 8th graders, 46% low arts vs. 41% high arts reported boredom.		Self-selected ample Self-report	Nonpeer-reviewed journal
Catterall (1998)	Engagement	Among average 10 <sup>th</sup> graders, 65.2% of high arts students rarely performed community service, vs. 86% low arts. Among low SES 8th graders, 74.5% high arts rarely/never served, vs. 83.2% low arts. Among low SES 10 <sup>th</sup> graders, 65.2% of high arts 10 <sup>th</sup> graders rarely served, vs. 86% low arts.		Self-selected sample Self-report	Nonpeer-reviewed journal
Heath (1998a,b)	Engagement	Students in afterschool arts organisations more likely perform community service than students in a national sample. (30% vs. 6%).		Self-selected sample Self-report After-school arts organisation attended by high arts students all stressed community service.	Nonpeer-reviewed journal
Aschbacher and Herman (1991)	Engagement	Academically at-risk students in Humanitas program less likely to drop out than those not involved, 1% vs. 7%, $p < .05$ .		Self-selected sample	Technical report
Center for Music Research, Florida Dept. of Education (1990)	Engagement	30 out of 36 academically at risk students said arts courses affected their decision to stay in school.			Technical report

Table 8.1. Correlational studies assessing relationship between arts and motivational indicators of academic achievement (continued)

Study	Motivational indicator	Positive relation	No relation	Confounds/limitations	Outlet
Mahoney and Cairns (1997)	Engagement	Academically and SES at-risk middle school students more likely to drop out if no involvement in arts (40% vs. 35%, $p > .10$ , n.s.). Academically and SES at-risk high school students more likely to drop out if no involvement in arts (27% vs. 7%, $p = .08$ ).		Self-selected sample. Involvement in athletics or vocational training far more predictive of school retention than involvement in arts.	Peer-reviewed journal
Spady (1971)	Engagement		Average students involved in arts in high school 9% less likely to remain in college over a year than students without high school arts. When college aspirations controlled, arts involved students 4.3% less likely to remain in college over a year than students without high school arts.	Self-selected sample	Peer-reviewed journal
Heath (1998a,b)	Engagement	Students in afterschool arts organisations 3 times more likely to win election to class office than students in national sample.		Self-selected sample	Nonpeer-reviewed journal
Heath (1998a,b)	Engagement	Students in afterschool arts organisations four times more likely to participate in a math/science fair compared to a national sample.		Self-selected sample	Nonpeer-reviewed journal
Heath (1998a,b)	Engagement	Students in afterschool arts organisations more likely to read for pleasure than national sample (57% vs. 35%).		Self-selected sample	Nonpeer-reviewed journal
Catterall (1998)	Engagement	Among 10 <sup>th</sup> graders, 28.2% high arts students watch 1 hr or less TV per day vs. 15.5% low arts students, who watch more. Among low SES 10 <sup>th</sup> graders, 16.4% high arts students watch 1 hr or less, vs. 13.3% low arts students.		Self-selected sample	Nonpeer-reviewed journal

## Post REAP studies of arts education and academic motivation: Correlational and quasi-experimental combined

We located 11 findings since REAP (two from the same study) examining the relation between arts education and academic motivation, summarised in Table 8.2. We have combined here studies examining multi-arts education with those examining specific art forms. Six of these studies report positive effects; four report no effects.

Table 8.2. **Twelve correlational and quasi-experimental studies since REAP examining multi-arts learning and academic motivation**

Study	Outcome	Positive relationship	Negative/inconclusive relationship
Barry, Taylor and Walls (1990)	Engagement	X	
Baum and Owen (1997)	Engagement	X	
Csikszentmihalyi, Rathunde and Whalen (1993)	Engagement	X	
Csikszentmihalyi and Schneider (2000)	Engagement	X	
Scott (1992)*	Persistence	X	
Cokadar and Yilmaz (2010)	Attitude		X
Fleming, Merrell and Tymms (2004)*	Attitude		X
Herber, Astleiter and Faulhammer (1999)	Attitude	X	
Kim (2007)*	Attitude	X	
Smithrim and Upitis (2005)*	Attitude		X
Werner (2001)	Attitude		X
Barry, Taylor and Walls (1990)	Dropout	X	
Catterall, Chapleau and Iwanaga (1999)	Dropout	X	

Note: The quasi-experimental studies are asterisked.

### Engagement

We found four correlational studies that assessed whether arts education is associated with heightened student engagement in their arts class.

Barry, Taylor and Walls (1990) observed 11 high school students at risk for dropping out while in their arts and their academic classes. They reported the correlational finding that these students were “on-task” in their arts classes 84 percent of the time, but were on-task only 73 percent of the time in their academic classes. This is a very small sample and no statistical test was computed. Thus this study allows no conclusions about whether students are in general more engaged when in arts classes than in academic ones.

Baum and Owen (1997) observed more self regulatory behaviour in classes that integrated the arts (as measured by paying attention, persevering, problem solving, self-initiating, asking question, taking risks, cooperating, using feedback, and being prepared).

Csikszentmihalyi, Rathunde and Whalen (1993) studied adolescents talented in the arts (music or visual art), athletics, and science. They assessed how involved these students felt when in classes in their domain of talent. They reported the following correlational finding: adolescents talented in either music or art felt more open, excited and involved in their arts classes than did talented science students in their science classes.

In another correlational study, Csikszentmihalyi and Schneider (2000) found that students reported higher levels of flow (a form of engagement and optimal experience in which one experiences enjoyment because challenge and skill levels are balanced) when in art than in academic classes.

While the four studies listed above show that students are more engaged in art than non-art classes, none of these studies demonstrates transfer of engagement from the arts to academics. If students are in fact more engaged in arts classes, it remains to be determined whether this engagement becomes a habit of mind that then carries over to academic classes.

### **Persistence**

We found one quasi-experimental study that assessed whether arts education is associated with heightened student persistence. Scott (1992) found that preschoolers receiving music lessons performed better than those receiving creative movement lessons on an attention task requiring vigilance. The musically trained children showed greater persistence as measured by working longer on a block design copying task. This is a small bit of evidence that suggests that music training leads children to work longer on non-musical tasks.

### **Attitude towards academics**

We found three correlational and three quasi-experimental studies examining whether students in an arts integrated class have a more positive attitude toward the academic subject being taught or towards school in general than do students who were introduced to this same subject without arts integration.

Werner (2001) compared attitudes towards maths in elementary school students in a dance-maths integrated class vs. those in a traditional maths class. In the dance-maths class, dance was used specifically to support maths concepts. Students in the dance integrated classes scored somewhat higher in attitudes towards maths than did students in the traditional classes, but the differences were not significant.

In a study conducted in Turkey, Cokadar and Yilmaz (2010) compared 12-13-year-olds' attitudes towards science after receiving science lessons integrated with dance (in which students used movement to understand scientific concepts) vs. science lessons taught alone. Again, no attitudinal benefit was found from integrating science with drama.



Herber, Astleiter and Faulhammer (1999) assessed “need for achievement” in 66 children in Austria between 9 and 13 years who were enrolled in music classes three hours a week outside of school, and compared them to 70 children who were not receiving such lessons. The children in the music group scored significantly higher on need for achievement.

Fleming, Merrell and Tymms (2004) conducted a quasi-experimental study assessing whether the opportunity to take drama classes integrated with writing study improved school attitude in elementary school age children. No beneficial effect on attitude toward school was found.

Smithrim and Upitis (2005) found in a quasi-experimental study that 6th grade students (ages 10-12) involved in a Canadian arts integration programme (Learning Through the Arts) reported being significantly happier coming to school than their peers in the other kinds of schools. This difference was not seen three years earlier when children about to enter Learning Through the Arts were compared to a control group. However, it must be noted that this finding did not occur for boys; nor did it occur for the children in the five other age groups tested.

In another quasi-experimental study, Kim (2007) assessed the impact of two dance pedagogies on academic motivation among high school female students: the experimental group, who was taught with a self-directed dance pedagogy, improved self-reported academic motivation and motivation to continue school more than the control group that received a traditional teacher-directed dance instruction. While the study does not tell us anything about the impact of dance education on academic motivation, it highlights the fact that different pedagogies in arts education have different effects.

### **School dropout**

We found two correlational study assessing the relationship between arts instruction and school dropout.

Taylor and Walls (1990) asked 40 students at risk for high school dropout about why they had decided to stay in school. Of the 22 students who responded that they had considered dropping out of school, six (27%) said they stayed on because they liked the arts or music offerings in their school, and three (14%) said they stayed because they wanted to go on in an arts field. Thus nine out of 22 (41%) said that something about the arts kept them in school. When asked directly whether participation in an arts course affected their decision to remain in school, 30 out of 36 (83%) said yes. When asked how the arts course influenced them, seven (23%) cited possible job opportunities. This study did not actually measure dropout rates but rather asked students who did not drop out about their reasons for remaining. Moreover, it is based on a small, non-representative sample.

Catterall, Chapleau and Iwanaga (1999) reported that high school students involved in the arts were less likely to dropout of school by grade 10 than those not involved in the arts (1.4% vs. 3.7%, respectively). For low socio-economic status (SES) students, the difference was larger: 3.5% of those involved in the arts dropped out, while 6.5% of those not involved in the arts dropped out.

## Motivational outcomes: Conclusions

There is a small amount of evidence based on correlational studies suggesting that learning in the arts is associated with higher academic aspirations as well as above average levels of engagement/motivation while students are in the arts classes. Because these are non-experimental studies, we cannot draw causal conclusions. We need experimental studies on this question. These studies should include measures of academic achievement as well as academic motivation in order to test the hypothesis that greater motivation is associated with greater achievement.

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