

# What Works Clearinghouse



## Building Decision Skills

**Program description** *Building Decision Skills* aims to raise middle and high school students' awareness of ethics, help them gain practical experience in developing core values, and give them practical strategies for dealing with ethical dilemmas. *Building Decision Skills* consists of 10 lessons that can fill two consecutive weeks of daily lessons or be drawn out over a longer period. Using readings, handouts,

and overheads, the teacher covers key concepts. Students are encouraged to think about the key concepts through small-group activities, class discussions, and homework assignments. The program also includes schoolwide components (such as group discussions, seminars, and assemblies). And it can be combined with service learning.

**Research** One study of *Building Decision Skills* met the What Works Clearinghouse (WWC) evidence standards with reservations. This study included nearly 300 high school students attending a

large suburban high school in St. Louis, Missouri, and examined results on students' knowledge, attitudes, and values.<sup>1</sup>

**Effectiveness** *Building Decision Skills*, combined with service learning, was found to have potentially positive effects on students' knowledge, attitudes, and values.

	<b>Behavior</b>	<b>Knowledge, attitudes, and values</b>	<b>Academic achievement</b>
<b>Rating of effectiveness</b>	Not reported	Potentially positive effects	Not reported
<b>Improvement index<sup>2</sup></b>	Not reported	Average: +14 percentile points Range: +3 to +30 percentile points	Not reported

1. The evidence presented in this report is based on the available research. Findings and conclusions may change as new research becomes available.  
 2. These numbers show the average and the range of improvement indices, for all findings across the study.

## Additional program information

### Developer and contact

Institute for Global Ethics, 11 Main Street, PO Box 563, Camden, ME 04843. Web: [www.globalethics.org/services/edu/bds.htm](http://www.globalethics.org/services/edu/bds.htm). Email: [ethics@globalethics.org](mailto:ethics@globalethics.org). Telephone: 207-236-6658.

### Scope of use

*Building Decision Skills* was first published in 1995. Information is not available on the number or demographics of students, schools, or districts using the intervention. The curriculum may have changed since the study was conducted. The WWC recommends asking the developer for information about the most current version of this curriculum and taking into account that student demographics and school context may affect outcomes.

### Teaching

The program has packets that the teacher can choose to present over a short period or to spread out over time. Students participate through collaborative activities, group problem-solving, communication, and independent thinking. The curriculum includes a teacher's guide, lesson plans, readings, overheads, and handouts. The key concepts and core activities are designed as single class-period lessons, but many lessons can be extended beyond one class period. Alternatively, the first five lessons can be taught at one time and the last five later.

The Institute for Global Ethics offers one-day or two-day on-site professional development workshops conducted by a

Global Ethics staff trainer. In addition, the Institute offers on-site seminars and assemblies for students participating in the *Building Decision Skills* program. Lectures, group discussions, and small-group activities are used with topical sessions that include moral awareness, values definition, ethical analysis, and dilemma resolution.

In the study reviewed here, the *Building Decision Skills* curriculum was implemented in an elective service-learning class. The service-learning activities that were integrated into the curriculum involved working off campus two days a week and working on campus two days a week on such projects as providing companionship for residents of a retirement home or running a recycling program in the school.

### Cost

The *Building Decision Skills* curriculum costs \$100 and includes the teacher's guide, lesson plans with handouts and activity materials, a paperback book *How Good People Make Choices*, and an audiocassette tape with an overview of the program. The Institute for Global Ethics offers a one-day Ethical Fitness® seminar (\$2,500) for school faculties on the conceptual framework for the *Building Decision Skills* curriculum. Three-day train-the-trainer seminars (\$12,600) are available for schools and school districts to certify trainers to teach the Ethical Fitness® seminar.

## Research

One study (Leming, 2001) reviewed by the WWC investigated the effects of the *Building Decision Skills* curriculum combined with service learning. This study was a quasi-experimental design that met WWC evidence standards with reservations. It included 283 twelfth-grade students from a large school in Missouri. It compared outcomes for students participating in an elective course that combined the *Building Decision Skills* curriculum

and service learning with outcomes for students in English literature classes that did not use a character education curriculum or offer service-learning opportunities. The study focused on *Building Decision Skills* as implemented in classrooms rather than as a schoolwide intervention.

## Effectiveness Findings

The WWC review of character education addresses student outcomes in three domains: behavior; knowledge, attitudes, and values; and academic achievement.

*Knowledge, attitudes, and values.* Leming reported findings for seven measures for this outcome domain: ethical awareness, ethical responsibility, ethical perspective, self-esteem, social responsibility (general), social responsibility (school), and anticipated future community participation. Leming reported statistically significant differences favoring the *Building Decision Skills* group on four student outcomes (ethical awareness, ethical responsibility, ethical perspective, and social responsibility-school), and one of these outcomes, ethical perspective, was found to be statistically significant (as calculated by the WWC).<sup>3</sup> However, Leming found no statistically significant impact on self-esteem, social responsi-

### The WWC found *Building Decision Skills* to have potentially positive effects on knowledge, attitudes, and values

#### Improvement index

For each outcome domain, the WWC computed an improvement index based on the average effect size (see the [Technical Details of WWC-Conducted Computations](#)). The improvement index represents the difference between the percentile rank of the average student in the intervention condition versus the percentile rank of the average student in the comparison condition. Unlike the rating of effectiveness, the improvement index is entirely based on the size of the effect, regardless of the statistical significance of the effect, study design, or analysis. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results. The average improvement index for the knowledge, attitudes, and values domain in the study reviewed is +14 percentile points, with a range of +3 to +30 percentile points across findings.

bility (general), and anticipated future community participation. The average effect across all seven outcomes was large enough to be considered substantively important, using WWC criteria, although it was not statistically significant.

#### Rating of effectiveness

The WWC rates interventions as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative. The rating of effectiveness takes into account four factors: the quality of the research design, the statistical significance of the findings (as calculated by the WWC), the size of the difference between participants in the intervention and the comparison conditions, and the consistency in findings across studies (see the [WWC Intervention Rating Scheme](#)).

#### Summary

The WWC reviewed one study on *Building Decision Skills* combined with service learning. One outcome in the knowledge, attitudes, and values domain was found to be statistically significant (as calculated by the WWC). When the WWC aggregated all seven outcomes the average effect size was substantively important (greater than 0.25). So the WWC rated the program as having potentially positive effects in the knowledge, attitudes, and values domain. Character education, an evolving field, is beginning to establish a research base. The evidence presented in this report is limited and may change as new research emerges.

3. The level of statistical significance was calculated by the WWC and where necessary, corrects for clustering within classrooms or schools, and for multiple comparisons. For an explanation see the [WWC Tutorial on Mismatch](#). See the [Technical Details of WWC-Conducted Computations](#) for the formulas the WWC used to calculate statistical significance. In the case of the *Building Decision Skills* report, corrections for clustering and multiple comparisons were needed.

**References** **Met WWC evidence standards with reservations**

Leming, J. S. (2001). Integrating a structured ethical reflection curriculum into high school community service experiences:

Impact on students' socio-moral development. *Adolescence*, 36(141), 33–45.

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**For more information about specific studies and WWC calculations, please see the [WWC Building Decision Skills Technical Appendices](#).**

# Appendix

## Appendix A1 Study characteristics: Leming, 2001 (quasi-experimental design)

Characteristic	Description
<b>Study citation</b>	Leming, J. S. (2001). Integrating a structured ethical reflection curriculum into high school community service experiences: Impact on students' sociomoral development. <i>Adolescence</i> , 36, 33–45.
<b>Participants</b>	The study involved 283 twelfth-grade students in one high school. The school district was described as serving middle-class communities with a mainly white population. Students were described as college preparatory, and the sample was 75% female and 25% male.
<b>Setting</b>	A suburban high school in St. Louis, Missouri.
<b>Intervention</b>	The intervention group participated in a community service elective course that implemented the <i>Building Decision Skills</i> curriculum. Class instruction had the students working in large and small groups with homework assigned after each of 10 lessons. The lessons were taught during the first two weeks of the semester. The community service component, integrated with the <i>Building Decision Skills</i> curriculum, involved two days a week off-campus and two days on-campus participating in school and community service activities, such as providing companionship to residents of a retirement home or running a recycling center on campus.
<b>Comparison</b>	The comparison group was drawn from senior English literature classes at the same high school as the intervention group. Comparison group students did not participate in <i>Building Decision Skills</i> or the community service course.
<b>Primary outcomes and measurement</b>	Students responded to a study-specific questionnaire that included three ethical dilemmas for which their responses were scored on ethical awareness, ethical responsibility, and ethical perspective. Additional measures were used to assess students' self-esteem in social settings (Janis-Field Feelings of Inadequacy Scale), their sense of social responsibility in school and in society, and their anticipation of future community participation (Newmann and Rutter's Moral-Political Awareness Scale). (See Appendix A2 for more detailed descriptions of the outcome measures.)
<b>Teacher training</b>	No information on teacher training was provided.

## Appendix A2 Outcome measures in the knowledge, attitudes, and values domain

Outcome measure	Description
<b>Ethical awareness</b>	One of three measures developed by the researcher based on student responses to three scenarios presenting ethical dilemmas. This measure assesses the respondent's recognition of an ethical dimension in the scenarios. For this measure the WWC averaged scores over the three scenarios used by the researcher (as cited in Leming, 2001).
<b>Ethical responsibility</b>	One of three measures developed by the researcher based on student responses to three scenarios presenting ethical dilemmas. This measure assesses the respondent's views on who has responsibility for different decisions (self or others). For this measure the WWC averaged scores over the three scenarios used by the researcher (as cited in Leming, 2001).
<b>Ethical perspective</b>	One of three measures developed by the researcher based on student responses to three scenarios presenting ethical dilemmas. This measure assesses the extent to which the respondent frames issues from perspectives consistent with the <i>Building Decision Skills</i> curriculum (truth versus loyalty). For this measure the WWC averaged scores over the three scenarios used by the researcher (as cited in Leming, 2001).
<b>Janis-Field Feelings of Inadequacy scale</b>	The Janis-Field Feelings of Inadequacy scale assessed students' sense of self-esteem in social settings after doing community service (as cited in Leming, 2001).
<b>Newmann and Rutter's Moral-Political Awareness scale, Social responsibility (general) subscale</b>	A seven-item subscale ranging from 7 to 35, originally developed by Newmann and Rutter, measuring sense of responsibility and concern for the welfare of others regarding society at large (as cited in Leming, 2001).
<b>Newmann and Rutter's Moral-Political Awareness scale, Social responsibility (school) subscale</b>	A three-item subscale ranging from 3 to 15, originally developed by Newmann and Rutter, measuring sense of responsibility and concern for the welfare of others in school (as cited in Leming, 2001).
<b>Newmann and Rutter's Moral-Political Awareness scale, Anticipated community participation subscale</b>	An adapted version of a subscale developed by Newmann and Rutter to measure the disposition of students toward greater community involvement (as cited in Leming, 2001).

## Appendix A3 Summary of study findings included in the rating for the knowledge, attitudes, and values domain<sup>1</sup>

Outcome measure <sup>4</sup>	Study sample	Sample size <sup>5</sup> (classrooms/ students)	Author's findings from the study		WWC calculations				
			Mean outcome <sup>2</sup> (standard deviation <sup>3</sup> )		Mean difference <sup>6</sup> (column 1– column 2)	Effect size <sup>7</sup>	Statistical significance <sup>8</sup> (at $\alpha = 0.05$ )	Improvement index <sup>9</sup>	
			<i>Building Decision Skills</i> group (column 1)	Comparison group (column 2)					
<i>Leming, 2001 (quasi-experimental design)</i>									
Ethical awareness <sup>10</sup>	Grade 12	6/283	2.25 (na)	1.85 (na)	0.40	0.56	ns	+21	
Ethical responsibility <sup>10</sup>	Grade 12	6/283	2.22 (na)	1.97 (na)	0.25	0.33	ns	+13	
Ethical perspective <sup>10</sup>	Grade 12	6/283	1.84 (na)	1.31 (na)	0.53	0.84	Statistically significant	+30	
Self-esteem	Grade 12	6/279	35.03 (5.76)	34.57 (6.44)	0.46	0.07	ns	+3	
Social responsibility (general)	Grade 12	6/282	26.52 (3.18)	26.16 (4.13)	0.36	0.09	ns	+4	
Social responsibility (school)	Grade 12	6/282	10.89 (2.13)	9.70 (3.06)	1.19	0.42	ns	+17	
Anticipated community participation	Grade 12	6/278	16.19 (2.76)	15.52 (3.16)	0.67	0.22	ns	+9	
<b>Domain average<sup>11</sup> for behavior</b>						0.36	ns	+14	

ns = not statistically significant

1. This appendix reports summary findings considered for the effectiveness rating and the improvement index. The WWC averaged individual items to provide the scales reported here for three outcomes (ethical awareness, ethical responsibility, and ethical perspective). Findings on the individual item level are presented in Appendix A4.
2. The study author adjusted the means for pretest differences between groups.
3. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes. The standard deviations for all outcomes were requested by the WWC and submitted by the study author.
4. Leming (2001) also examined effects on students' rankings of social values, but this outcome was not included in the WWC review because the report did not specify which of the social values the curriculum was expected to change relative to other values. Without that information, no determination could be made about whether the results reported were favorable or unfavorable. In addition, severe attrition of respondents between time of pretest and time of posttest for this measure prevents the WWC from making valid conclusions about this outcome. The study also included a comparison between the *Building Decision Skills* curriculum combined with service-learning and another condition involving service-learning only. In that comparison, differences favoring the curriculum plus service-learning were reported for ethical awareness and ethical perspective in comparison with service-learning alone. Differences were not found for acceptance of ethical responsibility, social responsibility within the school, social responsibility in society, self-esteem, or anticipated future community participation. The WWC Character Education review looks at effects of character education programs compared to "business as usual," or no program. The analysis that compares BDS (with service-learning) to another condition (service-learning alone) does not have a "business as usual" condition and so is not within the focus of this review.
5. The six classrooms that participated in this study represent three cohorts of students (two classes per semester for three consecutive semesters).
6. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group.
7. For an explanation of the effect size calculation, please see the [Technical Details of WWC-Conducted Computations](#).
8. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between groups. The level of statistical significance was calculated by the WWC and where necessary, corrects for clustering within classrooms or schools, and for multiple comparisons. For an explanation, see the [WWC Tutorial on Mismatch](#). See the [Technical Details of WWC-Conducted Computations](#) for the formulas the WWC used to calculate the statistical significance. In the case of the *Building Decision Skills* report, a correction for clustering and multiple comparisons was needed, so the significance levels differ from those reported in the original study.
9. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between –50 and +50, with positive numbers denoting favorable results.
10. This outcome measure is the average of three items reported by the study author. Means were computed as simple averages of the item means reported by the study author. Standard deviations across the three items could not be computed. Effect sizes were computed at the item level and then averaged. Table A4 presents summary characteristics on the item level.
11. This row provides the study average, which is also the domain average in this case. The WWC-computed domain average effect size is a simple average rounded to two decimal places. The domain improvement index is calculated from the average effect size.

## Appendix A4 Summary of detailed study findings in the knowledge, attitudes, and values domain<sup>1</sup>

Outcome measure: Item level	Study sample	Sample size (classrooms/ students)	Author's findings from the study		Mean difference <sup>4</sup> (column 1– column 2)	WWC calculations		
			Mean outcome <sup>2</sup> (standard deviation <sup>3</sup> )			WWC-computed effect size <sup>5</sup>	Statistical significance <sup>6</sup> (at $\alpha = 0.05$ )	Improvement index <sup>7</sup>
			<i>Building Decision Skills</i> group (column 1)	Comparison group (column 2)				
<i>Leming, 2001 (quasi-experimental design)</i>								
<b><i>Ethical Awareness</i></b>								
Dilemma 1	Grade 12	6/283	2.52 (0.62)	2.09 (0.81)	0.43	0.58	ns	+22
Dilemma 2	Grade 12	6/283	2.13 (0.73)	1.75 (0.72)	0.38	0.52	ns	+20
Dilemma 3	Grade 12	6/279	2.10 (0.58)	1.72 (0.71)	0.39	0.58	Statistically significant	+22
<b><i>Ethical Responsibility</i></b>								
Dilemma 1	Grade 12	6/283	2.39 (0.63)	2.15 (0.82)	0.24	0.32	ns	+12
Dilemma 2	Grade 12	6/283	1.89 (0.79)	1.65 (1.64)	0.24	0.34	ns	+13
Dilemma 3	Grade 12	6/283	2.38 (0.62)	2.11 (0.91)	0.27	0.34	ns	+13
<b><i>Ethical Perspective</i></b>								
Dilemma 1	Grade 12	6/283	2.17 (0.76)	1.41 (0.57)	0.75	1.16	Statistically significant	+38
Dilemma 2	Grade 12	6/283	1.64 (0.65)	1.33 (0.51)	0.31	0.54	ns	+21
Dilemma 3	Grade 12	6/283	1.71 (0.77)	1.19 (0.54)	0.52	0.82	Statistically significant	+29

*ns* = not statistically significant

1. This appendix presents item-level findings for three scales in the knowledge, attitudes, and values domain: ethical awareness, ethical responsibility, and ethical perspective. Aggregated scale scores used for rating purposes are presented in Appendix A3.
2. The study author adjusted the means for pretest differences between groups.
3. The standard deviation across all students in each group shows how dispersed the participants' outcomes are: a smaller standard deviation on a given measure would indicate that participants had more similar outcomes.
4. Positive differences and effect sizes favor the intervention group.
5. For an explanation of the effect size calculation, please see the [Technical Details of WWC-Conducted Computations](#).
6. Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between groups. The level of statistical significance was calculated by the WWC and where necessary, corrects for clustering within classrooms or schools. For an explanation, see the [WWC Tutorial on Mismatch](#). See the [Technical Details of WWC-Conducted Computations](#) for the formulas the WWC used to calculate the statistical significance. In the case of the *Building Decision Skills* report, a correction for clustering was needed, so the significance levels differ from those reported in the original study.
7. The improvement index represents the difference between the percentile rank of the average student in the intervention condition and that of the average student in the comparison condition. The improvement index can take on values between -50 and +50, with positive numbers denoting favorable results.



## Appendix A5 Rating for the knowledge, attitudes, and values domain

The WWC rates an intervention's effects for a given outcome domain as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative.<sup>1</sup>

For the outcome domain of knowledge, attitudes, and values, the WWC rated *Building Decision Skills* combined with service learning as having potentially positive effects. It did not meet the criteria for positive effects, because it only had one study. The remaining ratings (mixed effects, no discernible effects, potentially negative effects, negative effects) were not considered because *Building Decision Skills* was assigned the highest applicable rating.

### Rating received

**Potentially positive effects:** Evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: At least one study showing a statistically significant or substantively important *positive* effect, thus qualifying as a *positive* effect.

**Met.** In the one study on *Building Decision Skills* that examined student knowledge, attitudes, and values outcomes, the average effect size was positive and substantively important. Further, the effect on one student outcome was positive and statistically significant.

- Criterion 2: No studies showing a statistically significant or substantively important *negative* effect. Fewer or the same number of studies showing *indeterminate* effects than showing statistically significant or substantively important *positive* effects.

**Met.** No studies showed a statistically significant or substantively important negative effect. Because one study showed statistically significant positive effects and no studies showed indeterminate effects, *Building Decision Skills* met this criterion.

### Other ratings considered

**Positive effects:** Strong evidence of a positive effect with no overriding contrary evidence.

- Criterion 1: Two or more studies showing statistically significant *positive* effects, at least one of which met WWC evidence standards for a strong design.

**Not met.** *Building Decision Skills* had only one evaluation study meeting WWC evidence standards that reported findings on knowledge, attitudes, and values, and so did not meet this criterion. Further, that study did not meet WWC evidence standards for a strong design, because it used a QED rather than an RCT design.

- Criterion 2: No studies showing statistically significant or substantively important *negative* effects.

**Met.** The WWC analysis found no statistically significant or substantively important negative effects in this domain.

1. For rating purposes, the WWC considers the statistical significance of individual outcomes and the domain level effect. The WWC also considers the size of the domain level effect for ratings of potentially positive effects. See the [WWC Intervention Rating Scheme](#) for a complete description.