

# Goal Setting and Decision Making by At-Risk Youth

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Adolescence is a time in which typical individuals begin to make consequential, life-framing decisions. Among these decisions are educational, career, relationship, spiritual, health, and lifestyle choices that may launch the adolescent down a particular path from which it becomes increasingly difficult to veer. Much of the decision-making literature focuses on high-risk decisions, such as the use of drugs, alcohol, cigarettes, or the decision to have sex or gamble (Chambers & Potenza, 2003; Jacobs & Johnston, 2005; Nygaard, Waiters, Grube, & Keefe, 2003; Zwane, Mngadi, & Nxumalo, 2004). Much less is known about how adolescents make positive decisions, for example, regarding their education or careers. Moreover, much of the literature describes a "typical" adolescent—a teen attending middle or high school. Again, much less is known about atypical adolescents, particularly those at risk for delinquency. This article will explore an understudied topic—how at-risk youth make positive, life-framing decisions, and coordinate their decision making with their overall goals or values.

Making important decisions can be a formidable cognitive challenge. Fortunately, adolescents are developing many of the relevant cognitive abilities necessary to face these challenges.

Textbooks on adolescent cognitive development (e.g., Moshman, 2005; Muuss, 1995) paint an optimistic view of the gains a typical adolescent acquires: adolescents are able to think hypothetically and to see reality as only one possibility (Keating, 1990; Kuhn 2006). As they mature, typical adolescents gain more conscious control over the inferences they make and the ways in which they coordinate hypothetical possibilities and their implications. Adolescents are also thought to be more adept at reasoning from abstract principles, as opposed to concrete rules, than are younger children. This flexibility and power in their thinking and imagination allows adolescents greater control and direction, which in turn enables more systematic generation of possibilities along with the capacity to think ahead, plan, and anticipate consequences. Thus, it seems reasonable to conclude, and some empirical evidence supports, that adolescents show increased decision-making competence relative to younger children and may even approach adult-like levels of performance in some circumstances (Byrnes, 2005; Klaczynski, 2005; Quadrel, Fischhoff, & Davis, 1993; Reyna & Farley, 2006).

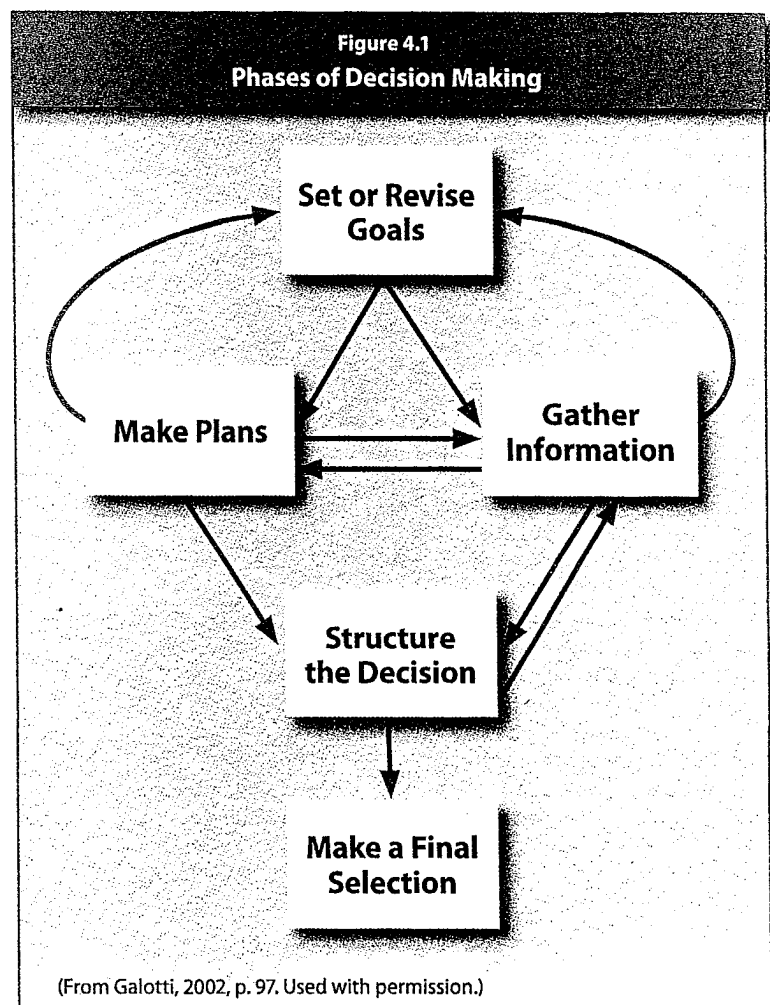
Of course, not all adolescents are typical ones. Many of the statements above may not apply to certain sub-groups of adolescents, in particular, adolescents at risk for serious behavioral problems: adolescents who are truant, delinquent, and/or who abuse substances in particular may lack many of the cognitive abilities described above. Indeed, it may well be that their lack of these cognitive skills directly contributes to their decisions to take irrational risks with their health, to fail to plan for their careers, and/or to choose to drop out of school. Our research examined decision making and goal setting for positive, life-framing decisions in an atypical, at-risk group of adolescents, whom we will describe below in more detail.

## A MODEL OF DECISION MAKING

To focus our discussion, it will help to begin with a general model of decision making (Galotti, 2002). This model has five distinct phases and is depicted in Figure 4.1. The term, phases of decision making, is used to convey the ideas that there may or may not be a set order to the tasks, that the performance of one task can overlap with the performance of another, that some tasks can be skipped, and that tasks can be done in different orders. Here, we will briefly describe each of the five phases.

When we try to understand why a person makes one decision rather than another, it often turns out that the reasons have to do with the decision maker's goals for the decision (Bandura, 2001; Galotti, 2005). The idea in setting goals is that the decision maker takes stock of his or her plans for the future, principles and values, and priorities. We'll examine goal setting in more detail below.

Information gathering refers to the processes by which a decision maker constructs both lists of options and a set of criteria to use in making their choice. They may informally survey friends or experts in casual conversation, or may engage in explicit search processes, such as examining published reports or surfing the Internet.



For complex decisions, decision makers need a way of organizing all this information. This is especially true when there are a great number of options, and when there are lots of considerations to be used in making the decision. This phase of decision making, wherein the decision maker finds ways of organizing and comparing information, is known as decision structuring.

After gathering all the information he or she is going to gather, the decision maker needs to make a selection from among the final set of options. This may involve a procedure as simple as flipping a coin or it may be considerably more complex. This process may involve other decisions—such as deciding when to cease the “information gathering” phase or prioritizing the relevance of information gathered.

### THE ROLE OF GOAL SETTING IN MAKING IMPORTANT DECISIONS

As we hint at above, setting goals plays a crucial role in decision making. Many theoretical models of decision making evaluate the quality of a decision-making process with the degree to which the chosen option fulfills the decision maker's objectives or goals (Baron, 2000; Beach, 1993, 1998; Byrnes, 1998; Galotti, 2002). In assessing the goodness or rationality of a decision, we cannot use the outcome of the decision as the yardstick. Too often, outcomes are influenced by luck, unforeseen and unforeseeable factors, and/or uncontrollable elements such as parental divorce, illness, hurricanes, or serendipitous meetings.

Moreover, the choice that is best for one person may not be best for someone else. One individual's choice of a diet and exercise program might be great for her, but bad for another, due to differences in temperaments, work styles, or values for different activities. In other words, for many real-life decisions, the outcomes cannot be objectively ranked on an overall scale of goodness that will hold true for every decision maker. Any set of choices must be considered relative to something about the individual decision maker. That elusive “something” is likely to be a person's overall goals.

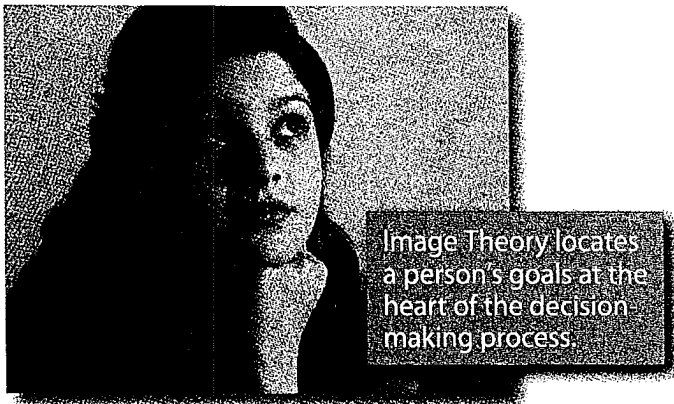


Image Theory locates a person's goals at the heart of the decision-making process.

For example, imagine a teen deciding whether or not to join the military. If the teen's only goal is to leave his family home and obtain food and shelter without paying board and rent, then this decision might be considered a very rational one. However, if the teen has other goals—for example, to see his close friends every day, to avoid rigid schedules, or to have lots of free time for hobbies and relaxation, then joining the military might not be such a good decision for him. And, if the teen is an individual who hates taking orders, then this choice might be quite irrational and counter-productive. The point is that the overall goodness of a decision can only be evaluated with respect to a person's major goals.

A recent and influential descriptive theory of people's real-life decision making, Image Theory, locates a person's goals at the heart of the decision-making process. Image Theory posits that

most of the work of decision making is done during a phase known as the pre-choice screening of options, during which decision makers typically winnow down the options under active consideration to a small number, sometimes one or two (Beach, 1993). They do this by asking themselves (usually but not always explicitly) whether a new goal, plan, or alternative is compatible with three images, roughly described as mental representations of three knowledge structures. These are:

- the value image (containing the decision maker's values, morals, and principles),
- the trajectory image (containing the decision maker's goals and aspirations for the future), and
- the strategic image (the ways in which the decision maker plans to attain her or his goals).

Options judged incompatible with one or more of these three images are screened out and given no further consideration.

### The overall goodness of a decision can only be evaluated with respect to a person's major goals.

Going back to the example of the teen considering the military, we can illustrate some tenets of Image Theory. Presumably, a teen who holds a pacifist philosophy will immediately rule out the option of military service without exploring it too deeply. The option of the military violates the teen's value image and thus, it is immediately discarded as an option. Another teen might rule out military service not on principle or ethical grounds, but because she sees military service as delaying her entrance to college. She also discards the option of military service, but this time, because it violates her trajectory image. A third teen might be equally interested in attending college, and might see military background as a way of providing funding for tuition—in this case, the teen is comparing the option to his strategic image. The take-home message of Image Theory is that decision makers quickly screen options from further consideration, helping a decision maker focus energies on viable options. To the degree that the images contain a person's goals and aspirations, the theory describes how goals can direct decision making.

### ADOLESCENT GOAL SETTING AND DECISION MAKING

Many general studies of adolescent decision making suggest that adolescents may show deficits (relative to adults) in some but not all aspects of decision making. Specifically, some studies show adolescents performing less well than adults in such aspects as setting goals, seeking advice, and evaluating the process, but not in such aspects as knowledge of options in familiar areas or making choices (see Reyna & Farley, 2006).

Studies of decision making by at-risk adolescents, while even scarcer than studies of general adolescent decision making, suggest that at-risk adolescents show deficits more widely in one or more aspects of decision making (Okwumabua, 1999). For example, Byrnes (2002) argues that less successful students (those with relatively low grade point averages) are less likely to coordinate multiple goals than are their more successful peers.

However, much of the existing work relies on adolescents making hypothetical rather than actual decisions. Thus, whether or not at-risk adolescents show specific deficits in real-life decision making awaits more studies of actual episodes of decision making that the adolescents in question regard as important. Moreover, most studies of decision making have not examined the goals of the decision makers as they make decisions.

**Box 4.1**

**Requirements for Admission to the Wisconsin ChalleNGe Academy**

- 16 years 9 months through 18 years old (not yet 19 upon start date)
- High school drop-out, habitual truant who will not graduate, expelled
- Not currently on parole or probation for other than juvenile status offenses, not awaiting sentencing, and not under indictment, charged, or convicted of a felony
- Cannot be court ordered
- Must be drug free (testing is done)
- Must be tobacco free
- Voluntary – Applicant must want to change for the better
- Interview is required and is scheduled at Fort McCoy

(Source: <http://challengeacademy.org/admissionsapp.html> retrieved Jan 18, 2009)

**A STUDY OF REAL-LIFE GOAL SETTING AND DECISION MAKING**

To help fill this gap in the literature, we conducted a study with a sample of at-risk adolescents from the Wisconsin ChalleNGe Academy. ChalleNGe Academy is a voluntary, residential National Guard sponsored program, which seeks to help habitual high school truants earn a diploma and positively change their lives. Twenty-four states and Puerto Rico offer the ChalleNGe Academy, and each branch of the program is locally run with stringent admission criteria (see Box 4.1). Although the participants in the program (the “cadets”) have all dropped out from their local high school, over 70% of them achieve their GED while in ChalleNGe (National Guard Youth ChalleNGe Program, 2005).

The program consists of a 22-week residential program, split into a 2-week Pre-ChalleNGe Phase and a 20-week ChalleNGe Residential Phase. These are followed by a 12-month post-residential phase aimed at helping cadets develop life skills to succeed as adults. To do so, ChalleNGe instills the following eight core components into the curriculum:

- Leadership/Followership
- Responsible Citizenship
- Community Service
- Life-Coping Skills
- Physical Fitness
- Health/Hygiene
- Job Skills
- Academic Excellence

Given the specific focus of the ChalleNGe program on developing life skills and planning, the cadets enrolled constitute an especially interesting group in which to study goal setting and decision making. The central questions of this study concerned the degree to which this intensive residential program, aimed at improving goal setting and decision making, would show effects on objective measures of decision-making and goal-setting performance. A main focus of the study was to examine the characteristics of setting goals and making decisions that at-risk adolescents have at the beginning and the end of the intervention program.

**Methodology**

One hundred and twenty-two cadets (98 male, 24 female; 81% White, not of Hispanic origin), ages 16 to 18, completed the first phase of this study (during weeks 3–5 of the residential program). About three-quarters of the cadets (69 male, 21 female) completed

the second phase, during weeks 20–22. The remaining 32 cadets either dropped out voluntarily or were dismissed. We report on data here from the 90 cadets who remained in the program for the entire duration.

We asked cadets to fill out a number of survey instruments, only some of which will be described here:

- 1) The *Program Decision* instrument, asked cadets to think about their decision to enter the ChalleNGe program and to list the factors or considerations that went into the decision.
- 2) The *Reaction to Decision Survey* measured participants’ affective responses and approaches to making the decision to come to ChalleNGe.
- 3) The *Goal Listing* instrument asked cadets to list each of their goals.

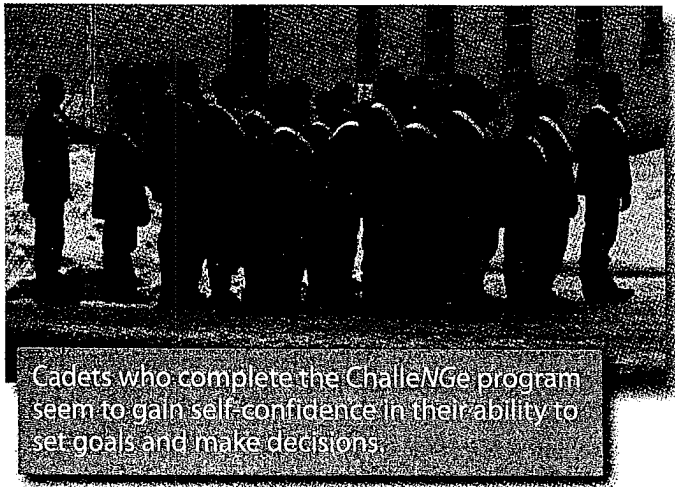
In the second phase of the study, conducted in the last two weeks (weeks 21–22) of the residential program, participants were again asked to list their goals and fill out the following measures:

- 1) *Post-Program Decision*: Participants were asked to list their post-program options currently under active consideration and any options they had previously considered. They were also asked to list the factors or considerations used in deciding among the options.
- 2) *Reactions to Decision Survey*: As in phase one, participants were asked to rate their feelings concerning the specific decision at hand. The 15 statements to which participants rated their level of agreement were the same as in session one, with slight modifications to relate to the post-program decision rather than the decision to go to ChalleNGe (which was the decision they rated their reactions to in phase one).

**Table 4.1  
Phase One and Phase Two Goals**

	Means	
	Phase One	Phase Two
Number of Goals	8.27 <sup>a</sup>	5.67 <sup>b</sup>
Goal Categories		
Education	29.43 <sup>a</sup>	21.69 <sup>b</sup>
Work	21.88 <sup>b</sup>	34.96 <sup>a</sup>
Possessions/Finances	14.17 <sup>c,d</sup>	17.21 <sup>b,c</sup>
Spiritual/Philosophical	9.97 <sup>d,e,f</sup>	5.81 <sup>e,f,g</sup>
Health/Fitness	3.06 <sup>f,g</sup>	2.60 <sup>g</sup>
Recreation	3.48 <sup>f,g</sup>	3.08 <sup>f,g</sup>
Family	16.12 <sup>b,c,d</sup>	10.69 <sup>c,d,e</sup>
Friends	0.85 <sup>g</sup>	1.28 <sup>g</sup>
Community	1.64 <sup>g</sup>	0.67 <sup>g</sup>
Chores/Errands	1.76 <sup>g</sup>	2.83 <sup>g</sup>
Goal Time Horizons		
Short-Term	3.14 <sup>c</sup>	9.84 <sup>c</sup>
Medium-Term	32.71 <sup>b</sup>	28.57 <sup>b</sup>
Long-Term	42.31 <sup>a</sup>	46.58 <sup>a</sup>

Means are significantly different if the superscripts share no letters in common.



Cadets who complete the ChalleNGe program seem to gain self-confidence in their ability to set goals and make decisions.

### Results and Discussion

Because of the number of cadets who dropped out of the program or were dismissed (and thus for whom second phase data were unavailable), we restricted our focus to cadets who completed the program, comparing different measures of goal setting and decision making at both points of data collection. Table 4.1 presents some measures of goal setting. First, we see that cadets listed significantly fewer goals in the second round of data collection than in the first (8.27 versus 5.67). Three independent raters coded each goal into categories. As can be seen in Table 4.1, the kinds of goals listed changed slightly as well, with proportionately fewer concerning education and proportionately more concerning work. Raters also categorized goals with respect to "time horizon" of the goal—short term (day, week, or month), medium term (about a year), long term (years or decades). In general, the pattern of time horizons did not show significant differences across the two rounds.

We next turn to the decision-making measures. Recall that in the first phase, cadets described their decision to come to the ChalleNGe program, and that in the second phase, cadets described their post-program placement decision. Each time, they described the criteria that they used to make the decision. By criteria, we mean the considerations the cadet thought of while making the decision. Commonly cited criteria included the chance to earn a diploma, the length of the program, and the chance to get in physical shape. The mean number of criteria cadets listed for their decisions declined significantly, from 3.03 in session 1 to 2.27 in session 2.

To analyze cadets' decision making further, we factor analyzed their responses to the Reactions to Decision instrument. The factor analysis indicated that two factors could be extracted from each round of responses with a very similar pattern of factor loadings. We called these factors "Positive Response to Decision" and "Negative Response to Decision." We found that the Positive Response to the Decision became stronger over time, while the Negative Response to the Decision did not change appreciably over time.

To summarize, we found that over time, cadets list fewer goals but use the same range of content and same distribution of time horizons. Decision-making measures show that cadets use fewer criteria in making what are arguably similar decisions but develop a more positive response to the process of making a choice.

In terms of theoretical models of decision making, it appears that the effects of sustained participation in the ChalleNGe program primarily affects the way cadets think about goals and decisions. The interventions the program offers cadets appear to change their overall approach to goal setting. Specifically, what changes for the cadets is not necessarily the kind of information they seek or consider, but the way they restrict their energy to fewer goals, and in their growing positive feelings toward the process of making specific decisions about their future plans. Put another way, cadets who complete the ChalleNGe program seem to gain self-confidence in their ability to set goals and make decisions.

These results suggest that at least certain aspects of adolescent goal setting and decision making are amenable to intervention. That is, even atypical, at-risk adolescents can be shown, at least in the circumstances of the ChalleNGe program, to show the more general pattern of developing greater control and direction over their thinking that is found for typical adolescents. It remains for future research to assess the breadth and the longevity of the gains made in goal setting and decision making as ChalleNGe cadets leave the program and reenter the broader community.

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