

The Least Cost Theory of Motivation: Explaining the Choice Process of the Underachieving Gifted Learner

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ABSTRACT

We analyze three cases of gifted individuals who had underachieved in their college years and who have gone on to lead successful careers. We note that available theories on educational motivation cannot fully explain the emergent patterns of their underachieving behavior. From these patterns, we propose a theory-model of the choice process: how a gifted learner evaluates his or her options to decide the best courses of action, including those concerned with his or her education. Our model, the Least Cost Theory of Motivation, explains under-achievement as a result of errors in valuing costs and benefits of alternative choices of action, or, of a willful withdrawal of resources in favor of a preferred course of action. Strategies to preventing or reversing underachievement are presented.

1. INTRODUCTION

Why do some gifted learners underachieve? Are they passive underachievers or self-determined avoiders of success? Do they lack motivation or is their “underachievement” a result of a well-defined motivation to achieve where they want to? Is there hope for academic underachievers? Is there a way out of the pattern of underachievement? This paper explores the answers to these questions through an analysis of three cases of three gifted adults on their experiences with bouts of underachievement. We will attempt to assess the applicability of certain motivational theories, and present an alternative explanation – the Least Cost Theory of Motivation – to the emerging behavioral patterns among these individuals. The Least Cost Theory of Motivation explains why even gifted students underachieve, and provides avenues to appropriate preventive and interventional measures to

solve the problem.

Underachievement has been defined by various educational specialists (Gorard and Smith, 2003; McCall et al, 2002; Reis and McCoach, 2000, and Baker, Bridger, and Evans, 1998, cited in Matthews and McBee, 2007), yet, not one is enough to define underachievement for gifted individuals, especially those whose giftedness is not evenly spread in the different domains. For the perspective of this paper, we propose the following composite operational definition of underachievement in gifted students:

“An underachieving gifted student is one who, having been classified as gifted in a domain, is at risk of failure in a subject, the achievement of which uses the domain of intelligence where the student has been identified as “gifted”. For example, one who has a superior IQ score in Quantitative Reasoning may be expected to perform very well in Mathematics, but not necessarily in History. So, if this student nearly fails History, unless he is also gifted in Verbal Reasoning and Memory, he or she is not underachieving with respect to this subject. If, on the other hand, he nearly fails Mathematics, then he would be underachieving in Math. Actual failure in a subject where no learning disability is recognized is considered underachievement.”

This definition may be faulted for using “at risk of failure” as the benchmark of poor performance, but being overly sensitive to achievement levels can run counter to the healthy emotional development of the child. Also, achievement is a result of the complex interaction of many factors, including the student’s own assessment of his or her priorities. Needlessly pressuring the student to perform to his or her peak may impair the student’s ability for self-direction. Therefore, if authorities want to raise the benchmark, then the student has to be placed in a program where difficulty of the subject matter approximates gifted expectations.

2. SUMMARY OF CASES*

Names and identifying details have been changed to protect privacy.

Tony, 45, has found success in the film industry. But things were not always easy. Entering grade school at the age of 5, he graduated at the top of his class. In high school, he was most active in extra-curricular activities, for which he got extra credit in all of his subjects. These credits masked many instances of possible dips in his grades, and in one instance, saved him from a grade of 75, (equivalent to a “C”) enabling him to get second place upon graduation. Admitted into the country’s top university at 15, he vowed to finish college at 17. At 17, he was dismissed from the university for academic delinquency.

In his freshman year, Tony had joined a theatre company where the work was demanding but fulfilling to its members. The work generally takes a toll on the academics of the more dedicated members, such that many fail or drop subjects, resulting in overstaying in or being dismissed from university. Tony had not thought much about failing subjects, believing he could make up for them in the succeeding terms. He could not, and was dismissed.

He found work in the movie industry, moving up the ranks and across different assignments: sounds, lights, production design, scriptwriting, and acting. After some years, he returned to university, taking up Film, and graduated a full nine years after his very first enrollment. He has since returned to the arts through scriptwriting and directing, and has even produced award-winning independent films.

Mike, 37, entered college at 14, having been radically accelerated due to his unusual gift in mathematics. He enrolled in mathematics and physics classes, but was not particularly interested in other subjects like the social sciences and humanities, nor in chemistry or biology. His mentor did not reprimand him for not exerting enough effort in these subjects,

possibly making allowances for his age, or the fact that many math/physics majors did not do well in other subjects. Mike was playful in class, and admitted he even flew paper airplanes while waiting for the teacher to arrive.

He wanted to play, and play he did. His grades took a dive, and he had to repeat a number of subjects. He graduated three years late, though at about the same age as his age peers.

Mike continued his carefree ways during his Masters studies, until he failed one subject, ironically his favorite. That was when he realized that this was the field he was truly interested in. He turned himself around, and is now a respected PhD and professor in the field.

Joseph, 44, is a member of MENSA, with gifts in diverse fields, but especially in mathematics. His elementary and high school studies were, according to him, “unremarkable”. He did not make the honours list, though he topped achievement tests. He says his parents never expected much, and were happy as long as he studied hard enough. A voracious reader, he started joining and winning mental game shows, combining his superior math skills and highly retentive memory.

In the University of the Philippines (UP), he became a math major, continuing his so-so performance. He failed two major subjects, which he attributed to the difficulty of Math as a discipline. He recovered, however, and continued joining and winning game shows to become the champion of one of the most demanding contests in his time.

After graduation, he taught mathematics at a science high school. He also started writing in

magazines and published books. He now does sports writing for print and television and is a consultant for game shows, while still teaching high school mathematics with a passion. He has recently enrolled in a Masters course in what he calls a “small school”.

3. ANALYSIS

Looking at their profiles, we note that Mike is a *gifted specialist* while Joseph is a *gifted generalist*. For our purposes, we define a gifted specialist as one who is especially gifted in one domain of intellectual skills: verbal reasoning, quantitative reasoning, non-verbal reasoning, or short-term memory, while scoring lower in other domains. A gifted specialist may score superior in several domains, but the expression of the gift is skewed sharply in one area.

A gifted generalist is one whose giftedness is more broadly distributed among the domains. Gifted generalists with gifted scores (at least a *Superior* rating) in all areas would tend to have much higher composite IQ scores than gifted specialists, whose high scores in one domain are dampened by relatively lower scores in the others. For example, a gifted mathematician may have extremely high scores in quantitative reasoning, yet have normal or above average verbal skills. In addition, gifted generalists are expected to be more synchronous in the development of their skills than gifted specialists.

In the absence of IQ test results, the range of Tony’s giftedness cannot be quantified, yet his interests and achievement indicate a bias for verbal and non-verbal reasoning skills. Tony, therefore, would be classified as a gifted specialist.

This classification is important, as it may impact how we view the coping strategies of the three respondents and explain their views about success, failure, and underachievement.

Let us analyze the cases first to see some commonalities, if any.

First, our respondents did not experience only one instance of failure. Tony's inability to pass the required number of units per year in his college course led to his disqualification. For this, he must have failed or dropped at least seven subjects in the year of dismissal alone! Mike failed a number of subjects and had to retake some of them, not once, but twice. Joseph had the least number of failures: two. Even then, one would think that he could have learned a lesson or two from his previous failure not to commit the same mistakes that led to a grade of 5.0. The same would be true for Tony and Mike.

Their explanation for the repeated failures may shed some light on the situation. Tony and Mike noted that immaturity had prevented them from restructuring their study habits soon enough to halt the failures before they got delayed too long from graduation. They were not able to prioritize their activities. It is, however, too pat to attribute underachievement to immaturity alone. A student let loose in the university straight from the provinces would look for models of what is acceptable and unacceptable behavior. While every new student is expected to know the academic rules and standards of the university, these can be negated by what the student actually sees, whether he is 14 or 21. The student's significant elders in school – his teachers, organization co-members, advisers – all serve to provide a composite model of behavior the student is likely to copy.

What happens when university rules have an opposite implication from the composite behavioral model formed by the student's significant school elders? For example, Tony's co-members in the theatre company may, in public, habitually prioritize the organization's activities over their academic concerns, yet do not get dismissed, because privately, they studied hard and received passing grades. Alternatively, they could have gotten dismissed from the university, but continued to work with the organization. In both instances, there is dissonance between the expected penalty of putting too much time in extracurricular

activities (failure) and the actual satisfactory academic performance of some of the members of the company. There is dissonance, too, between the accessory penalty of being excluded from the organization when one gets dismissed from the university, and the actual continued stay of dismissed individuals in the company's production projects. Moreover, there is dissonance between the view that one needs to finish his studies to get a career, and the actual employment of non-graduates in the field of theatre. According to Festinger (1957), such dissonance would create pressure on Tony to unify these dissonant pieces of knowledge to guide him in handling both academics and extracurricular activities. While Tony had earlier vowed to graduate in only three years, a vow that would demand a more focused behavior in academics, this had to give way to putting premium on pursuing his interest in theatre, since graduating on time (much less, earlier than scheduled) was not relevant to his prospective career. The value of failure in his subjects was reduced in favour of the value of gaining experience in a field he felt he was competent in, and the motivation shifted to excelling in the chosen area.

The ability to make these value choices, even subconsciously so that the active quality of the choice is not recognized later in life, is hardly a sign of immaturity. Rather, we see it as an advanced ability to see where one can easily and more effectively apply himself or herself. This, of course, carries with it certain penalties as prescribed by the academic environment, but, when models of success in the social environment abound, the value of such penalties can be diminished.

Hence, Tony underachieved academically, yet found success in the field that, ironically, caused the underachievement. It is speculative to say he might have been successful, anyway, had he not focused on theatre, and concentrated on his academics. What is a fact is that he is successful in a field that was only tangentially related to his initial choice of college course.

With the exception of one acting workshop, theatre acting was not an extracurricular activity in Tony's high school: his exposure to it started seriously only in college.

It might be easier to imagine that had Tony not focused on theatre the way he had, he would not have been as successful as he is now. This poses a question, then, on the relevance of academic underachievement in the big picture of one's future career.

There is, however, another hypothetical question: would Tony have performed better in his academics *and* done well in theatre had he been more motivated? This we shall discuss later, as these issues also apply to Mike.

Mike's model was his mentor and adviser. Being in a field that attracts gifted specialists rather than generalists, his mentor was quite understanding of Mike not doing well in areas outside the field. To top it all, some high profile personalities in this field were touted to have done poorly in academics, yet excelled to be internationally acclaimed.

But Mike would be the first to say his study habits were far from ideal. Initially, he would get good grades because the subjects, particularly mathematics, were easy. As the subject became more difficult, he did not adjust as one would expect. It is understandable that his initial successes might have increased his self-efficacy, but one would wonder why, in the face of repeated failures, he would not, or could not, recognize that he had overestimated his capabilities and change the level of effort. Beck (2004), however, has cited research that Mike's behavior is not entirely unexpected: subjects who attribute failure to lack of effort *do not* necessarily show increased effort in another task. But that is simply saying that Mike is behaving like most others. It does not tell us why.

It is clear here that Bandura's social cognition theory (1986), recognizing the ability of the

individual to learn from experience, does not fully explain the continued academic under-achievement of our respondents in the face of repeated failure. It can be assumed that our respondents, both gifted individuals, are highly cognitive, and should be able to adjust their study habits as a response to environmental cues such as a failing grade. Why then did they behave counter intuitively?

We venture an explanation outside the usual theories of motivation applied to education. From an economic view of choices and motivation (Beck, 2004; Levitt and Dubner, 2006), could it be true that the reason Mike would not increase his effort so he could succeed is that the cost of *not increasing* his effort (that is, the cost of failure) is lower than the cost of *increasing* his effort (missing out on play)? As noted earlier, his role models who had achieved supremacy in their field had histories of failure from which they recovered. In a child, play has a high emotional value, and is expected to be chosen if it means only a temporary setback. In this case, Mike's assertion that immaturity may have cost him academic success in college may be only partly true. Under the circumstances, his choice to play was justified, and in the end, adaptive. He was simply too young.

That justification, however, no longer existed after his graduation, when he was in his twenties. Yet, his attitude toward his subjects remained as cavalier as before. He thought he could handle the coursework, and did not see the need to work hard, especially since all his graduate classes dealt with his area of interest. It would appear that his sense of self-efficacy was again at its high, and only after he got a failing grade did it hit him that he had been overconfident. The failure challenged him enough to try to excel, in the face of the possibility of getting removed from the programme, which he then realized was where he wanted to be. Now, the cost-benefit economic theory applies. The reason Mike shifted gears in his studies was that the cost of *not studying* (getting removed from the program) is now greater than the

cost of *studying* – play is not as enjoyable to a twenty-plus year old as doing something that one likes as, in Mike’s case, complex mathematics. From this valuing comes a logical choice: increase effort in studying.

This is not to be mistaken for the application of Atkinson’s expectancy-value theory, which dissects motivation into success-striving and failure avoidance (Beck, 2004). Tony and Mike were not choosing tasks for their ease or difficulty with a view of succeeding in these tasks. They were simply interested in the tasks; for example, Tony was interested in theatre and Mike was interested in play.

Does the economic viewpoint also apply to Joseph’s motivation? Let us analyze his case. Joseph’s underachievement is two-faceted. One, he may be classified as an underachiever in elementary school, when he was not in the honours list, but he scored the highest in the school’s IQ test. We note that under our definition, his situation, strictly speaking, cannot be considered a case of underachievement. However, a significant difference in ranks of IQ and achievement could be indicative of underachievement. This trend in Joseph’s academic performance may be more revealing than its classification. The other facet of his underachievement is clearer: his two failures in his major subject, mathematics, are an acute sign of underachievement.

Let us take note of Joseph’s attributions for his failures. He says he failed college mathematics because *math is difficult*. This, however, does not explain why he failed only two math subjects. He claims that he was an average student, though he also claims that he expends enough effort on his studies. This again is difficult to explain, since he also knows that his intelligence level exceeds those of his peers. One would expect this dissonance of known high potential versus average achievement to cause unease in Joseph. But that is not

the case. He appears comfortable discussing his past.

It is convenient to say that Joseph lacks motivation to excel. However, this is not necessarily so. His achievement as early as high school as a champion in mental games, especially one that dealt with a broad range of knowledge, including general information, could not have been achieved with ability alone. He had been an avid reader since he was young, and he drew from this habit the knowledge that he used to excel in such contests.

What could be truer is that Joseph was motivated to study things beyond what is normally required in the classroom. In a finite universe of resources, especially time, such preoccupation with matters outside academics would necessarily reduce time for studying. Since there was no pressure, nor obvious benefit to getting high grades (his parents accepted his grades for as long as he spent enough effort on his studies), the cost of not studying too hard (average grades) is outweighed by the cost of studying too hard, or the cost of not reading other things (pleasure). The lower cost option becomes very attractive, and is then chosen, which is why Joseph chose to study other things and spend less time on his academics. As far as his academic objectives were concerned, Joseph chose to be satisficing.

When he started winning at game shows, the benefit of supplementary learning increased in terms of financial benefits and increased self-esteem. Therefore, the cost of effort related to *not getting supplementary learning*, that is, spending more time on academics, also increased. Because the benefit of high grades was not increasing, the cost of effort for supplementary learning remained the same. This being the case, it was easy to choose more supplementary learning. The effect of this might not be immediate, and feedback can be slow. It takes a semester to realize a failing grade; people with high sense of efficacy would not take failure in a single examination as insurmountable. A lag in the response to reduce the cost of getting

more supplementary learning, that is, increase study time, would only reinforce the failure, leading to a failing grade.

Why would it take Joseph two failing grades before he adjusted? Self-efficacy can be task directed. Since different math subjects have different content, learning that one subject was too difficult for him without enough effort need not translate to lowered self-efficacy in another subject. We do not forget that Joseph's standard for assigning effort was sacrificing for results. Therefore, for as long as a grade of 3.0 or a pass was possible, Joseph would think that he could still handle the subject and succeed.

Once Joseph realized that he could fail, and that failure was an unacceptable cost of increased supplementary learning, he adjusted his study habits so he would pass his other subjects and graduate on time.

This economic model using cost of a choice as the basis of one's action can also explain why Joseph studies in a school that he does not even want to identify. Some may try to use expectancy theory (Atkinson, in Beck, 2004), citing the relative ease he would experience to earn a graduate degree in this unknown school as against a top university, but it would not apply. The reason he studies in an unknown school is not because it would be easy for him to succeed there. He simply does not want to take time away from his numerous work engagements that, incidentally, provide him both financial stability and unique value. What this means is that the cost of *getting a graduate degree* in a top university is very much higher than the cost of getting a graduate degree *in a small school*. Because all he needs is a graduate degree to get his coming promotion, there is no benefit to getting that degree in a top university. Because the graduate degree is just a step towards the promotion, the implied quality of the graduate degree does not constitute a satisfaction of any need, not even that of

self-actualization, and therefore is of little, if any, value.

Here, we see the same principle applied to the cases of our three respondents, with two different patterns of success. One for Tony and Mike, who have found success in specialization, and another for Joseph who has found success in a variety of avenues, some of which require a combination of talents. We have seen how Joseph is able to assess the costs of each choice and manage to excel in different fields. This brings us back to the question of whether Tony and Mike could have succeeded in the subjects they failed had they been more motivated.

Earlier on, we mentioned the concept of a finite universe of resources. Each student has only so much time, energy, and attention capacity to use for all the activities he or she performs at any given time. The capability to excel in most, if not all, areas is limited by these resources. We hasten to add a more important resource: ability or, in the sense of learning, intelligence. Note that both Tony and Mike are early college entrants, starting college at 14. A two- to three-year difference in age against regular students, who are, however, in the top five to 10% of the batch can be a disadvantage, especially among gifted specialists. It is assumed that the higher the mental age, the higher is the ability. If so, a gifted 14-year old may have the ability of an 18-year old, but that is not a big advantage over a 17-year old classmate who has the ability of a 19-year old. That is especially if the 19-year old has a more diffused type of intelligence and can cope well in a variety of subjects while the 17-year old has a deficit in one or two domains.

Under conditions of finite resources, more resources expended in one area will necessarily reduce the resources available to other options. So, increased motivation to succeed will result in increased level of success *if* resources used are not yet optimized. If resource use

is already maximized, increase in motivation will only realign success, not necessarily increase it. For example, if Tony were motivated to study, he may have received excellent grades, even if he did not make true his dream of graduating at 17, but he might have been less successful in theatre, or his success in theatre would have come later. As it is, we can only assume that Tony was using all his resources for his endeavours, and not aimlessly gallivanting or wasting time. Therefore, any increase in study time would have been taken away from theater practice. In Mike's case, play would be justified in the earlier years, but this could not be so in the later teenage years and beyond. His efforts were not optimized, and could have been used to improve his grades, had he been more motivated. Still, we surmise that ability would still have been a limiting factor in some of his subjects, but if the aim was just a passing grade, the objective of passing would have been attainable. It is, however, doubtful if that would add to his current status in his very exclusive field of study.

In Joseph's case, had he focused his resources on his teaching career, he would have become a PhD by now and become a principal, but it is doubtful if he could be writing scripts for Olympic coverage.

4. THE LEAST COST THEORY OF MOTIVATION

We note that available theories are unable to explain the decision processes that lead to achievement among gifted learners. Yet, the patterns emerge that choices are made based on some economic valuing of success and failure. We therefore propose the following explanation:

“Assuming mutually exclusive options, choices between or among several options are made on the basis of the perceived cost of each option, where the option or combination

of options with the least cost becomes the most attractive and is eventually taken. Costs are subjectively determined, and depend on the individual's valuing of the risks and consequences of failure in the tasks involved in each option.

Mutual exclusivity in this sense *does not* mean that choosing to do one task precludes choosing to do another. It means that, with finite resources, choosing to do one task very well would preclude doing another task at the same level of quality and success. Hence, two or more tasks can be performed simultaneously, but at least one would not be pursued to the same level as the primary task so chosen.”

As corollary, different individuals will value costs differently. Therefore, the right decision is unique to the individual.

4.1. THE DEFINITION AND VALUE OF COST

The cost of an option, let us call it A, to an individual is the amount of total resources he would have to expend should he choose A *plus* the opportunity losses that would be realized from *not taking the other choice*, B, in case of a two-option problem. Actual resources to be spent include, but are not limited to, time, effort, ability, and material resources. The cost of lost opportunity is the benefit one would have realized less the cost of resources that would have been expended had B been chosen instead. This benefit conceptually includes the “pleasure or fulfillment” factor of doing something one wants to do.

In multiple-option problems, the “other choice” would be that option with the highest potential opportunity loss among the other choices. This is because of the assumption of mutual exclusivity; that is, taking one other option would have prevented choosing the rest of the options. The choice with the “highest potential opportunity loss” may also mean the most at

tractive of the other choices, either because it exacts the least amount of resources, or provides the greatest amount of benefit.

In general terms:

Cost of A = Resources expended for A + Opportunity Loss for not taking B

$$\text{Cost}_A = \text{Resource}_A + [\text{Benefit}_B - \text{Resource}_B]$$

Note that under this general formula, there is an assumption that one would have an equal probability of success, and equal will to pursue each option. However, this may not hold true for most situations. The difficulty of the task and chances of success of an option, should it be chosen, may compound the choice process. We can therefore input the differential factor, chances of success, in this manner:

$$\text{(Equation 1) } \text{Cost}_A = \text{Resource}_A + \beta[\text{Benefit}_B] - \text{Resource}_B$$

where β is the probability of success assigned to the alternative option B.

Note that we did not place Resource_B inside the parenthesis, because the probability of success does not impact on the amount of resources to be expended had B been chosen.

Similarly, the cost of choosing option B would be (Equation 2) $\text{Cost}_B = \text{Resource}_B + \alpha[\text{Benefit}_A] - \text{Resource}_A$ where α is the probability of success assigned to the alternative option A.

If all resources available are expected to be spent on either option, then the Resource component cancels out, and the cost of an option is the benefit that can be derived from the

alternative that is foregone due its not having been chosen.

$$\text{(Equation 3) } \text{Cost}_B = \alpha[\text{Benefit}_A]$$

$$\text{(Equation 4) } \text{Cost}_A = \beta[\text{Benefit}_B]$$

In these equations, we assume that the individual predicts success in whichever option he chooses, if he chooses to focus on it. Therefore, we assign no opportunity lost for the probability of not succeeding in the chosen task.

Theoretically, an individual can assign a probability of success that is less than certain (1.0).

In this case, the value $(1 - \alpha)(\text{Benefits}_A)$, the expected value of not succeeding in A and $(1 - \beta)(\text{Benefits}_B)$, the expected value of not succeeding in B shall be added to the cost, hence, the general equations:

$$\text{Cost}_A = \text{Resource}_A + \beta[\text{Benefit}_B] - \text{Resource}_B + (1 - \alpha)(\text{Benefits}_A)$$

$$\text{Cost}_B = \text{Resource}_B + \alpha[\text{Benefit}_A] - \text{Resource}_A + (1 - \beta)(\text{Benefits}_B)$$

In high efficacy individuals like gifted students, the last term, representing the expected value of failure in the option chosen, is minimized. We assume that any choice is made with high hopes of success.

4.2. COMPARISON WITH EXPECTANCY-VALUE THEORIES

Expectancy-Value Theories like those of Atkinson and Eccles (Elliott, et al, 2005; Eccles, 2005) cite expectations of success as inputs to their models. This might not be enough to

explain the valuing process among gifted students. Tony failed subjects in which he had the requisite mastery, and Joseph failed math. In fact, the reason they probably abandoned (or assigned less resources to) these subjects is because they were easy for them, and that passing them would not have a high benefit value in terms of marginal increase in knowledge or self-esteem. In other words, *when a gifted learner feels that he or she has peaked in a subject or task, he or she would be better off trying something else, where success will add value to him or her, increasing his or her self-worth and broadening the scope of his or her self-efficacy. This value, if not achieved, becomes an opportunity cost to the choice of achieving in areas where he would likely succeed.* Note that our erstwhile underachievers Tony and Joseph underachieved in academics in favor of areas outside of their studies, where the probability of success is low, but the benefit of success is high. This kind of valuing is not uncommon among the gifted, and is why educational programs seek to provide them with enough challenges. The Least Cost Theory accommodates this difference in valuing between gifted and normal individuals and explains the dynamics of conscious or subconscious thought that goes into the decision-making process.

5. CAUSES, PREVENTION, AND REVERSAL OF UNDERACHIEVEMENT

Once the individual has valued the costs in terms of projected resources to be used and potential opportunity losses, he or she can make a decision that makes sense to him or her, which is to choose the least total cost. Hence, one can choose option A, B, or do both, depending on how he or she finds the relative values of costs of the three options. The one important factor to making the right decision is the information on the relative values of the factors of the equation.

However, young learners may not be able to assess the potential cost of each choice, due to their lack of experience in previous failures, resulting in high self-efficacy and less effort

expended, and to their inability to value the consequences of failure in a subject or work due to lack of models or examples. Hence, they may, as our cases have shown, assign more and more resources to the choices whose perceived benefits (tangential or not) are high, and which therefore are major potential opportunity loss, resulting in underachievement in the areas of their gifts. This is particularly evident when the area they choose to focus on lies outside the academic sphere. Then, we get gifted students who grossly underachieve, and no amount of the usual intervention like tutorials or other remediation works.

In the Least Cost Theory, prevention of underachievement means that young learners need to be trained at valuing the consequences of their choices by providing models of these consequences. Also, instances of failure should be an opportunity for self-examination and an evaluation of how resources can be reallocated to reverse a failing trend. Similarly, too much sheltering of these learners from failure, such as what happens when extracurricular success is integrated into academic ratings, lulls them into thinking they could not fail. Guidance efforts should be geared towards full information on choices and consequences, and allowing the child to make his informed decision. As befits the high intelligence of the gifted learner, such information should include long-term goals.

When learners start young to make informed decisions, significant adults can trust that this system of valuing and deciding will be carried over into adulthood. Bandura's theory is not entirely inapplicable: informed decisions can easily be evaluated to be wrong or right, and the learner can react fast to the experience of underachievement by reversing it, or accepting that it is an acceptable cost to achieving in another field, now or in the future.

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