Helping Students Take Control of Their Own Achievement

A Diligence–Ability Intervention Model

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Have you ever been bewildered by the mediocre performance of able students? Have you ever echoed this teacher's lament: "What can I do to get students to concentrate, to put more effort into schoolwork, and to take it more seriously?" This pertinent question, asked by teachers daily, has been largely neglected by the educational reform movement.[1]

A number of variables affect student performance. Some relate directly to teaching and learning—for example, the curriculum, textbooks, physical facilities, school climate, teaching style, learning style, and school administration. Other variables relate to psychological and personality factors like self-esteem, personality type, and identity; still others are sociological factors like income level, type of parenting, educational level of parents, and so on. Manipulating some of these variables can have positive effects on student achievement.

In a recent article titled *The Quality School Curriculum*,[2] William Glasser urged educators to make the curriculum more relevant and palatable so that students would be eager to expend more effort to learn when encouraged to do so. Obviously, schools need to make this a priority for teaching and learning. Ultimately, however, students need to be taught to accept greater responsibility for their own education.[3]

When students learn to organize themselves and set priorities for the items clamoring for their time and attention, there will be virtually no limit to the success they can achieve. The controlling factor will be their commitment to study and academic achievement.

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This article offers a practical approach to students' holistic educational development. We will use the term *diligence* to describe the effort expended by students to achieve. As the article unfolds, it will provide an operational definition for diligence and a simple procedure for predicting a student's level of competence (GPA) based on her or his diligence and ability scores.

The Effort-Ability Paradigm and Testing

Most educators and students recognize the direct causal relationship between effort and grades earned. According to a simplified version of Attribution Theory developed for classroom practice by Madeline Hunter and reported in an article titled "'If at First . . .'; Attribution Theory in the Classroom,"[4] success and failure depend on four factors:

1. Native ability
2. Effort
3. Luck
4. Task difficulty

Native ability and effort are the most dominant factors. Luck and task difficulty are regarded as not being under the student's direct control, so they will not be discussed in this article.

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Native ability and effort are internal attributes. Unlike native ability, effort is something that the student can control.

Bernard[5] found no correlation between diligence and ability. Diligence is evenly distributed among students of all ability levels. There are brilliant students who "goof off" and average students who work very diligently.

Many countries' educational systems regard success as associated more with effort than ability. For example, in Japan even very able high school students say that their success can be attributed largely to discipline and hard work, according to Holloway.[6] American high school students believe school success depends mostly on ability, that one has to be "smart" in order to succeed. Accordingly, if students do not believe that they are smart they may not try very hard in school.

However, research has shown that students can alter their performance by the quality and quantity of effort they put into their education. This suggests a sure formula for success, according to Hunter and Barker.

Of all the causal attributions, the only one completely under our control is effort: we can determine how much effort we will expend. . . [I]f students are to succeed, they must believe that when they expend effort—something they completely control—they will experience success.[7]

Glasser[8] explained the causes of success and failure through Control Theory which, like Attribution Theory, emphasizes the importance of effort in achieving success. He says that "all our behavior, simple to complex, is our best attempt to control ourselves to satisfy our needs. . . . It is how well I study that determines success."[9]

Glasser adds that it is not enough to simply try harder in order to achieve greater success. He emphasizes the need for *quality* effort.

The students are the workers of the schools. And, like workers in most service industries, the difference between the success and failure of the organization depends on the quality of their work, be it waiting on tables or learning academic subjects. . . . All the measures of school failure that are widely reported—such as dropout rates, low test scores and students' unwillingness to take "hard subjects" (e.g., math and science) are the result of students' failing to expend the effort to do high-quality work.[10]

Most report cards have a section where the teacher can comment on student effort. Frequently this consists of a scale for rating effort from low to high. Although subjective, this teacher-rated score can be regarded as an indication of many elusive aspects of effort.

However, it may be more instructive to ask students to rate their own effort. This is the rationale behind the development of a Diligence Inventory (DI).[11] This instrument allows students to gain insights about their efforts in different areas of their education.

Traditionally, standardized tests of ability like the Scholastic Aptitude Test (SAT) and the American College Test (ACT) have been used to explain and predict high school students' scholastic abilities (as measured by grade-point average [GPA]). The scores on such tests are usually seen as a student's performance potential. There is hardly any point in expecting a student to improve his or her grades if this potential remains relatively stable.

Make no mistake, standardized ability and achievement tests do have a place in explaining or predicting student success. But they have been criticized for bias. Clearly, students should not be stereotyped as having limited capabilities based on IQ tests, their socio-economic status, family structure, race, or ethnic background. Therefore, assessing both ability and diligence would provide a more accurate analysis of student potential.

Teachers and administrators need to make important decisions regarding individual students, classrooms and schools. These decisions

should be made on the best available information. Standardized tests provide information that can be used along with other facts to aid in making many of these decisions. . . . Standardized tests should seldom, if ever, be used as the sole basis for an important decision about a student's abilities.[12]

Unlike fixed measures of ability, diligence offers some hope for positive change. Here is a measure that can be controlled by the students themselves, and which can effect dramatic changes in their achievement. In other words, by knowing more about themselves, students gain the power to take responsibility for much of their educational success.

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Questions About Diligence

Let us first examine some of the questions that may have surfaced in your mind before moving on to a definition of diligence.

- What do students do or fail to do that spells success or failure?
- Should student effort be directed solely toward studying hard to get good grades?
- Would just studying hard (i.e. increasing time on task) produce maximum benefit, or do other factors need to be included?

The answers to these questions are rooted in philosophy. To get students to accept more responsibility for their education, we must develop a working definition of education that suggests the areas in which they should accept responsibility.

Ellen G. White has given us a comprehensive definition of education to undergird Adventist philosophy.

True education . . . has to do with the whole being, and with the whole period of existence possible to man. It is the harmonious development of the physical, the mental and the spiritual powers. It prepares the student for the joy of service in this world and for the higher joy of wider service in the world to come.[13]

Implicit in this definition are the nature and purpose of education, that is, preparing the whole person for service. *Holistic* education implies the harmonious development of the mental, spiritual, physical, and social dimensions as depicted in the model for educational development portrayed in Figure 1.

This type of development was exemplified by Jesus Christ, who personified diligence in all its perfection. Of Him it was written, "And Jesus increased in wisdom in years [or *in stature*] and in divine and human favor" (Luke 2:52, NRSV).

Each side of the rectangle depicts a dimension of growth or development. Ideally, a balanced individual should possess and nurture these four attributes proportionately in order to produce "normal" growth (represented by the expanding symmetrical squares). In reality, students' development will probably be represented by rectangles, since it is unlikely that anyone will attain the ideal of perfect balance in all dimensions.

Any departure from the ideal produces a relative deficiency in one or more dimensions. The goal of education should be for the student to try to attain and maintain the ideal through the process of diligence. A diligent student may be regarded as one who strives toward balanced development in all four dimensions.

Students can do a number of things to raise their maturity level in these various dimensions. The Diligence Inventory was developed by identifying areas that would reflect growth in these four dimensions. Philosophically, the definition of diligence was based on the holistic nature of education; but conceptually, diligence was seen as relating to three broad domains: industry, citizenship and character, and cognitive skills.[15]

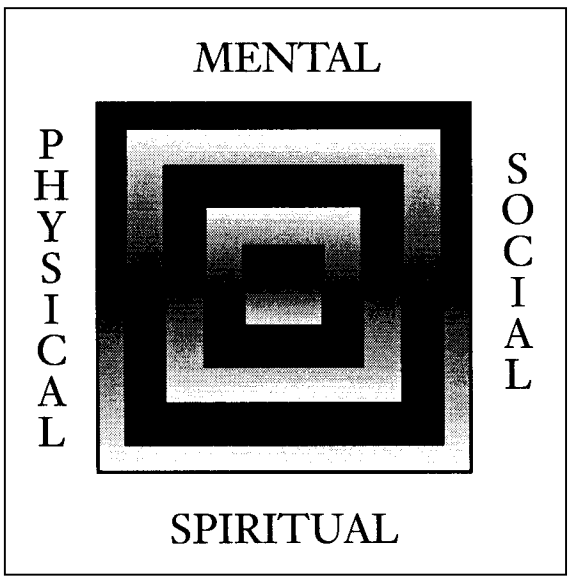

Fig. 1. An ideal model for educational development[14]

Definition of Diligence

Diligence in education is defined as the effort a student expends to achieve a balanced or holistic development in the mental, physical, social, and spiritual dimensions. It is measured on the following scales.

- *Motivation*—The drive to begin a certain course of action with an intended result in mind.
- *Concentration and Assimilation*—The act of focusing attention on a problem, task, or impending situation through a process by which all new experience is modified and combined with previous knowledge. Also making sense of a subject and its parts.
- *Conformity and Responsibility*—Degree of maturity in relating to one's own concerns and those of significant others.
- *Discipline*—The training of the will.
- *Devotedness and Spirituality*—Practices

that contribute to good morals and self-esteem.

The items in each scale are shown at the right. (The numbers are those that appear in the actual instrument.) Students are asked to rate these items on a scale of 1 to 5, with 1 being Never or Rarely, and 5 being Almost Always.

Using Diligence to Predict Grades

To use the Diligence-Ability model, schools need both ability and DI scores for each student. Teachers can use these scores as part of informal assessment in counseling, advising, or simply understanding students.

A more precise procedure to predict student achievement was used successfully by Bernard with a group of students in Michigan.[16] He obtained ability and Diligence Inventory scores for each student, and predicted student grades.

Using ability and DI scores, a statistical program generated an equation that predicted student competence (grades). As a result Bernard[17] found that ability alone predicted 28 percent of the variance in student grades, whereas diligence and ability together predicted 37 percent of grade variance.

As an example of how this works, the Bernard study predicted that a high school student with an ACT score of 20 and below-average DI score of 100 (the DI scale range was 55-275) would have a GPA of 2.67. If the student, with the help of his teachers, improved his diligence score to 200, the predicted GPA would be 3.22.

Framework for a Curriculum on Diligence

Teaching students how to be more diligent can significantly improve their academic performance as well as their all-around educational development.

Diligence can be taught by using the Diligence Inventory items.[18] Curricula can be tailored to the needs of different schools and systems. Here are some themes that might form the basis of such curricula.

Motivation

- Goal setting
- Persistence

Conformity and Responsibility

- Attending Behavior
- Peer Pressure

Concentration and Assimilation

- Memory Techniques
- Being Testwise

Motivation

1. I want to do the best I can in school.
5. I take care to complete my assignments.
7. I am able to do my assignments without prompting.
8. I have problems with taking organized class notes.
16. I like to participate in extracurricular activities for my school.
17. I make sure that my assignments are done correctly.
19. I like to take up academic challenges.
23. I strive to do my assignments to the best of my ability.
25. I set high standards for myself in school.
32. My friends see me as very organized for school.
33. I find myself not prepared for tests as I would like.
38. I do my assignments as soon as I get them.
40. I find it difficult to complete all my assignments.
42. When a subject is too difficult, I settle for a passing grade.
43. I try to turn in my homework assignments on time.
46. Even when I'm tired I try to complete my assignments.
48. I find it difficult to sustain attention to my school work.
49. I try to do outstanding work in all my classes.
55. I work very hard to get good grades.

Conformity and Responsibility

3. I listen to everything the teacher says in class.
10. I take more advice from friends than from my parents/guardians.
20. I do homework before I spend time with friends.
22. I don't think it's necessary to inform my parents/guardians as to my whereabouts.
26. I like my assignments to look neat and tidy.
28. Some teachers think I give them a hard time.
37. I don't like my parents to interfere in my school work.
39. If I return from school later than normal, I would offer an explanation to my parents/guardians.
44. I like to obey my teachers promptly.
47. I try to keep within my budget.
50. I obey my parents/guardians promptly.
52. I help to support myself through school.

Concentration and Assimilation

9. I stop periodically while reading and review the information.
11. I proofread assignments before turning them in.
14. I review my notes before the next class.
15. When I am studying a topic, I try to make all the ideas fit logically.
21. When preparing for an exam, I create questions that I think might be included and study them.
27. I try to see the relationships between what I'm studying and what I already know.
29. I do not turn in an assignment until I'm sure that it is correct.
34. I seek feedback from my teachers and/or counselors concerning the progress I am making in school.

Devotedness and Spirituality

2. I make constructive use of my leisure time.
4. I wish I didn't have to do chores at home.
12. I take time to admire the things of nature.
36. Personally, I like to take a little time out to pray or meditate.
41. I enjoy attending church or religious services.
53. I have difficulty in settling down to my studies at home.
54. I like to have quiet moments to plan my strategies for success in school.

Discipline

6. I feel I am not getting enough rest.
13. I do not find time to do extra credit assignments.
18. I think I don't get enough exercise.
24. I have irregular eating habits.
30. I forget to drink adequate water.
31. I get upset over the amount of school work I have to do.
35. I start projects well, but I have problems with completing them.
45. I try to keep my weight under control.
51. I tend to fall asleep when I'm studying.

Devotedness and Spirituality

- Morals, Ethics, Values
- Appreciation of Nature

Discipline

- Stress Management
- Physical and Emotional Toning

This article cannot provide all the details. However, it does highlight the potential impact on student performance of implementing such a curriculum. If students, regardless of their innate ability, understand that the main reason why their "smart" friends do so well is "diligence" as defined in this article, then they can be encouraged to realize their potential, too.

Without a formal curriculum for teaching diligence, teachers may want to use the individual items of the DI to sensitize students to neglected areas in their personal development. By simply reading the items of the DI, the average student may be able to glean some ideas for self-improvement.

For example, a student's reaction to the item in the Motivation scale "I want to do the best I can in school" can have implications for his or her overall educational experiences. A positive response can indicate a student's level of diligence and potential to succeed, while a neutral or negative response should alert teachers to the need to encourage the student to do his or her best.

Many of the items of the Diligence Inventory imply much more than they actually measure. For example, the item in the Devotedness and Spirituality scale "I take time to admire the things of nature" could suggest qualities of patience, keenness, wonder, concentration, reflection, analysis, inspiration, and above all, worship of the Creator of nature. Some activities implied are hiking in the outdoors (providing proper exercise and rest), conservation of the environment, reading to satisfy one's curiosity, and so on.

Each of the items can be used to develop activities that will help to mold students holistically. These activities can be made culture and situation specific. Teachers can choose the approach that will work best for them and their students.

By using the Diligence Inventory, educators can help young people to fully realize their potential.

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NOTES AND REFERENCES

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13. Ellen G. White, *Education* (Mountain View, Calif.: Pacific Press Publishing Association, 1903).

14. Hinsdale Bernard, Dissertation, 1991, p. 57.

15. The dual frameworks were necessary to formulate practical questions that would make it possible to measure diligence. Five scales finally emerged as representing the three domains and four dimensions. Items were constructed to define each of the scales, which themselves had to be defined.

16. Ibid., pp. 180, 181.

17. Ibid., pp. 153, 160.

18. For questions concerning the administration and scoring of the Diligence Inventory, contact either Dr. Hinsdale Bernard, Rhodes Tower, Room 1305, Department of Counseling, Administration, Supervision, and Adult Learning, Cleveland State University, Euclid Avenue at E 24th St., Cleveland, OH 44115 U.S.A. (Phone 216-687-9209, Fax 216-687-9366 or 5415); or Dr. Jerome D. Thayer, Assistant Dean, College of Education, Andrews University, Berrien Springs, MI 49104 U.S.A. (Phone 616-471-6214, Fax 616-471-6374).