

**A Summary and Critique of Existing Strengths-Based Educational Research
Utilizing the *Clifton StrengthsFinder*[®]**

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A Summary and Critique of Existing Strengths-Based Educational Research Utilizing the *Clifton StrengthsFinder*[®]

Introduction

This document begins by explaining the central tenets of the strengths perspective as a venue for describing its application within educational settings. An overview of the development of the *Clifton StrengthsFinder* is provided, followed by a summary and critique of the existing research that explores the impact of the use of this inventory in secondary and postsecondary educational environments. This paper concludes with a series of suggestions for future research on strengths-based initiatives.

The Central Ideas of the Strengths Perspective

The foundational beliefs of the positive psychology movement have served as a theoretical anchor for the emergence of what has become known as the strengths philosophy or perspective (Aspinwall & Staudinger, 2003; Linley & Joseph, 2004; Rath & Clifton, 2004). A strengths-based perspective assumes that every individual has talents or resources that can be mobilized toward success in many areas of life (Anderson, 2000; Saleebey, 2001) and is characterized by “efforts to label what is right” within people and organizations (Buckingham, 2007, p. 6). The strengths philosophy explores ways to empower individuals to flourish rather than simply survive (Liesveld & Miller, 2005) and asserts that capitalizing on one’s areas of talent is likely to lead to greater success than would be possible by making a comparable investment of effort into overcoming personal weaknesses or deficiencies (Clifton & Harter, 2003). This paradigm therefore highlights the importance of intentionally choosing to focus one’s attention and energy into cultivating that which will yield the most significant growth (Shushok & Hulme, 2006), which is accomplished not by ignoring weaknesses, but by instead seeking to understand and manage areas of deficiency while optimizing effort by building on strengths (Clifton & Harter; Clifton & Nelson, 1992). Strengths-based ideology provides insight for the design of intervention programs that move individuals toward achieving positive goals and aims (Frey, Jonas, & Greitemeyer, 2003), as a strengths perspective ideally results in “the ability to flexibly apply as many different resources and skills as are necessary to solve a

problem or work toward a goal” (Aspinwall & Staudinger, 2003, p. 13) by helping people understand the personal resources they can mobilize to promote success.

At the individual level, an ideal strengths approach encompasses the identification of positive personal and interpersonal traits or talents, along with their integration into one’s view of self, resulting in behavioral changes (Clifton & Harter, 2003). A strengths-based philosophy also informs current scholarship on organizational behavior by promoting the scientific community’s attentiveness to the positive dynamics and productive practices that exist at the communal or organizational level (Cameron et al., 2003). Regardless of whether the strengths-based perspective is used to generate understanding and inform practice at the macro or micro level, its central aim is to pinpoint and amplify the promising characteristics of individuals, families, and communities (Saleebey, 2006). All applications of the strengths philosophy are founded upon the assertion that “human strengths are not secondary, derivative, illusory, epiphenomenal, parasitic upon the negative, or otherwise suspect” (Peterson & Seligman, 2004, p. 4) but that the study of strengths is legitimate in its own right as a way of invoking psychological health.

Understanding Human Strength

One approach to the understanding of strengths views them as talents that have been developed to produce levels of excellence in a particular activity (Clifton & Anderson, 2002), and this school of thought has generated an assessment to measure human talent, advancing the scientific community’s thinking about the application and optimization of positive human characteristics.

The work of researchers at Gallup, Inc. is founded upon very specific definitions of the terminology associated with the study of human strengths, and this group believes that strengths are most accurately conceptualized as well-developed talents that produce excellence. *Talents* are defined as “naturally occurring patterns of thought, feeling, or behavior that can be productively applied” (Hodges & Clifton, 2004, p. 257) and include an individual’s patterns of interacting with others, processing information, or navigating the environment. Because these talents occur naturally, individuals often use them without conscious awareness of their presence (Clifton et

al., 2006; Drucker, 2000). Clusters of similar talents form talent themes that are called *signature themes* (Clifton & Anderson, 2002), which are viewed as an individual's dominant innate abilities or tendencies. Signature themes can be developed through the addition of acquired knowledge and skill to form a *strength*, which is defined as the ability to produce "consistent, near-perfect performance in a given activity" (Clifton & Anderson, p. 8). Strengths are therefore not listed comprehensively because they are specific to a particular activity or context and can also be understood as specific energizing activities one does with excellence (Buckingham, 2007). Clifton and Nelson (1992) propose that strengths can be identified by becoming attuned to four clues that confirm their existence. Specifically, these authors note that individuals are intuitively drawn to activities that will facilitate strengths utilization, and so they advocate for people to cultivate an awareness of these types of "yearnings" (p. 43). A second signal that a strength may be at use is when an individual derives great satisfaction and energy from investment in an activity, experiencing a sense of engagement and timelessness called *flow* (Csikszentmihalyi, 1990). Rapid learning is another sign that a strength may be at work, and the fourth indicator of a strength in action is that "glimpses of excellence" (Clifton & Anderson, 2002, p. 52) are demonstrated when an individual attempts an activity that requires the use of a particular strength (Buckingham, 2007, Clifton & Anderson, 2002).

The Development and Intent of the Clifton StrengthsFinder[®]

In addition to these four clues, researchers at Gallup, Inc. embarked on a project nearly 4 decades ago that focused on highlighting the components of human strength in an empirical manner. This effort was championed by educational psychologist Don Clifton, former CEO of Gallup, Inc., who was inspired by the question, "What would happen if we studied what is *right* with people?" (Lopez, Hodges, & Harter, 2005, p. 3) and who held the unwavering conviction that human strength and excellence could be empirically scrutinized in a rigorous, widespread manner. Clifton and colleagues thereby developed semi-structured interviews designed to pinpoint talent in highly performing individuals in a variety of fields, and analysts at Gallup, Inc. subsequently conducted these interviews with more than 2 million highly successful people (Lopez et al., 2005). These interviews were systematically reviewed to reveal the anatomy of over 400 types of talent present within this large sample of highly successful individuals (Clifton & Anderson, 2002), creating over 5,000 items that were candidates for inclusion in a

comprehensive measure of positive human qualities. This information was subjected to extensive reliability and validity analyses; those items with the strongest psychometric properties were retained, providing the foundation for the 1999 launch of the earliest version of an instrument called the *StrengthsFinder*. The current version of this instrument contains 180 item-pairs designed to assess a respondent's top areas of talent from a set of 34 possible themes; it was renamed the *Clifton StrengthsFinder* following Clifton's death in 2003 (Lopez et al., 2005). Available in 17 languages, the instrument has been taken by over 2 million people (Buckingham, 2007). This online instrument was the first to provide an omnibus assessment of human talent (Lopez, 2007), and it supplies respondents a description of their top five clusters of talent (signature themes), as well as suggestions for capitalizing on each. The *Clifton StrengthsFinder* is not designed to measure psychological illness or wellness, but exists to serve as a tool for personal development (Lopez et al., 2005). A common misperception is that the *Clifton StrengthsFinder* highlights an individual's strengths, but the creators of this instrument actually assert that it is intended to instead identify areas of inherent talent that can be deliberately developed into personal strengths. Related supporting materials pertinent for a variety of settings are also available, and these resources are designed to offer strategies for developing signature talent themes into strengths within the spheres of business, education, or ministry (Buckingham & Clifton, 2000; Clifton et al., 2006; Liesveld & Miller, 2005; Rath & Clifton, 2004; Winseman, Clifton, & Liesveld, 2004).

Strengths-Based Approaches Within Educational Settings

The underlying principles of the strengths philosophy have been influential in several fields, including social work (Saleebey, 1997), organizational theory and behavior (Luthans et al., 2007), and education (Anderson, 2004). Within each of these arenas, strengths-based research and practice have inspired leaders in these fields to enlarge the sphere of their scholarship and to develop new practical approaches aimed at promoting individual and organizational success.

Within the domain of education, strengths-based models have begun to gain increased prominence within recent years, catalyzed by the work of pioneering educational psychologist Clifton (Anderson, 2005). A strengths-based educational approach is a departure from many of

the deficit-based models that are so prevalent in contemporary circles of practice (Anderson et al., 2001), representing a return to educational principles that emphasize the positive aspects of student effort and underscore student strengths (Lopez, Janowski, & Wells, 2005). A strengths-based education has been defined as one that “involves a process of assessing, teaching, and designing experiential learning activities to help students identify, develop, and apply their strengths and talents” (Anderson, 2004, p. 1). The objective of this approach is to aid students in applying their talents in the learning process, in intellectual development, and in academic achievement so they can reach previously unattained levels of personal excellence (Anderson, 2004). This approach has implications for the students and for those who educate them, as strengths-based instructional models are predicated upon the necessity for educators to identify, apply, and develop their own talents and strengths in the teaching process as a precursor to inviting students into an exploration of their own unique strengths (Anderson, 2004). A strengths-based model embodies a student-centered form of education that adopts the primary goal of transforming students into confident, efficacious, life-long learners whose work is infused with a sense of purpose (Anderson, 2000). This approach to teaching can be highly individualized, as efforts are made to personalize the learning experience by allowing students to set personal goals based on their areas of talent and strength and encouraging them to apply their strengths in novel ways (Cantwell, 2005). Institutions that embrace a comprehensive strengths-based approach will engage in a trio of activities that include conducting research to understand successful students on campus, creating a campus culture that facilitates students’ discovery of personal talents and strengths, and aiding students in the process of finding practical avenues for the expression of their strengths (Shushok & Hulme, 2006).

Many contemporary writers use the term *talent development* to denote a concept that essentially embodies the strengths approach to promoting student success in that it “arranges resources and learning conditions to maximize student potential” (Kuh et al., 2005, p. 77). Talent development practices are founded upon the conviction that all students are capable of learning if the educational environment adequately supports this objective by adjusting institutional policies and pedagogical practices to help students realize their potential. Based on extensive research on the elements of effective educational practice, one source advocates strongly for talent development to become a central tenet in postsecondary institutions’ operating philosophies

because “student success starts with an institutional mission that espouses the importance of talent development and then enacts this vision” (Kuh et al., 2005, p. 266).

Research on Strengths-Based Educational Approaches

Strengths-based interventions have been developed and utilized in K-12 education (Austin, 2005; Gillum, 2005; Purnell School, 2007) as well as in colleges and universities across the country (Shushok & Hulme, 2006). At the postsecondary level, strengths-based approaches have been introduced into first-year student programs (Cave, 2003; Louis, 2008; Schreiner, 2004a), subject-specific course curriculum (Cantwell, 2005), athletics (Robles, 2008), academic advising (Schreiner & Anderson, 2005), student orientation and leadership development efforts at several institutions (Pritchard, 2009; Shushok & Hulme), and other campus-based efforts to promote optimal functioning in college students (Schreiner, Hulme, Hetzel, & Lopez, 2007). Although not all of the efforts to implement strengths-based approaches have been evaluated empirically, there is a growing body of research that assesses the effectiveness of strengths-based interventions in promoting student success as indicated by several different variables.

The following section of this paper provides an account of the findings of existing research studies designed to assess the impact of the use of the *Clifton StrengthsFinder* and related strengths-based interventions within the field of education. The description of each research investigation includes information about the research design, methodology, participant sample, instrumentation, and central findings. Comments related to the appropriate interpretation of each study’s results and noteworthy limitations are also provided.

Strengths Intervention Research in K-12 Settings

While there are no published studies that examine the use of strengths-based educational approaches with students in primary school settings, several such studies have been conducted with high school student populations. Each of these investigations were conducted with high school freshmen, involved the use of the *Clifton StrengthsFinder* and the associated *StrengthsQuest* text (Clifton & Anderson, 2002) as a basis for the strengths curriculum, and utilized self-report measures to assess the dependent variables under investigation. The following

section outlines the methodology and findings of each of these research endeavors and notes contributions and limitations of these studies.

Research conducted by Gillum (2005) sought to determine whether endeavors to teach high school students who scored in the bottom quartile on measures of mathematics performance indicators about their strengths might exert a positive impact on these students' subsequent quality of effort in their mathematics courses and their intentional use of personal strengths. To examine this research question in depth, Gillum used a mixed methods strategy which employed a quasi-experimental, pretest-posttest design with a control group, paired with a phenomenological approach to gain an understanding of the experience of students who participated in the study.

The participants in Gillum's (2005) study ($n = 103$) were high school freshmen who had been assigned to four separate math classes based on their underperformance on statewide standardized mathematics tests; this researcher randomly designated each class to receive different types of strengths treatments. The first class of students ($n = 31$) was exposed to the *Clifton StrengthsFinder* and six 55-minute class sessions that provided instruction on how to utilize their strengths. The second class ($n = 25$) took the *Clifton StrengthsFinder* but received no supplementary instruction related to how to utilize the information it provided. The third group ($n = 21$) was not exposed to the *Clifton StrengthsFinder*, but the students in this group were instead given descriptions of each of the strengths measured by this inventory. These students were asked to identify the five strengths that they believed were most personally descriptive prior to receiving six 55-minute class sessions about how to utilize these strengths. The fourth class ($n = 26$) served as a control group and therefore was exposed to neither the *Clifton StrengthsFinder* nor the associated instruction. Prior to the interventions, all of the student participants were asked to complete pretest inventories that assessed quality of effort, knowledge of personal strengths, and use of strengths. The teachers of each of the four mathematics classes were also asked to complete Likert-type pretest questionnaires that asked them to assess each student's quality of effort, attendance, and homework completion. These measures were repeated after the intervention phase of the study was complete.

To complete the qualitative portion of the study, a purposeful sample of 5 students from the treatment group that received both the *Clifton StrengthsFinder* and the supplementary strengths training were selected for participation in semi-structured interviews. These individual interviews were conducted by the researcher immediately following the completion of the strengths training and again 1 month later to gain information about the students' attitudes about their strengths and whether they believed that their knowledge about their personal strengths would prompt them to improve their effort.

Gillum reported that the most favorable results occurred in the groups that received specific instruction on how to utilize their strengths, as students in these conditions expressed an increased desire to utilize their strengths within and outside the classroom. They also increased the quality of their effort in their mathematics classes (Gillum, 2005). Several limitations are relevant for this particular study, including possible interference from extraneous variables due to lack of random assignment and imbalanced support of the study by participating mathematics instructors. In addition, the researcher only asked about the experience of students in one of the treatment conditions. It may have added value to the study had he also inquired about the experiences of students in the other three conditions as well. The small sample sizes generated marginal results, and the generalizability of the findings of this research is limited. However, Gillum's study does provide preliminary evidence that effort increases in samples of underperforming high school students when these students are offered guidance related to how to utilize their strengths.

Austin (2005) conducted a controlled experimental study within the context of ninth grade health education courses at a large suburban high school designed to assess the impact of a strengths intervention on several dependent variables. Specifically, the independent variable in this study was the curriculum type (strengths-based vs. traditional health education course curriculum), and the dependent variables included academic expectancy, academic intrinsic motivation, academic extrinsic motivation, academic efficacy, and academic achievement. Those students ($n = 255$) randomly assigned to the experimental group received a 6-week strengths-based intervention that utilized the *StrengthsQuest Curriculum Guide and Learning Activities* (Anderson, 2003), while those in the control group ($n = 255$) spent an equivalent amount of time

learning traditional health education curriculum. At the end of the 6-week period, students were asked to complete an assessment that the researcher developed and validated for the purposes of his study (*The Indicators of Academic Achievement Questionnaire*, Austin, 2004). Following this 6-week time period and the completion of the assessment, the 2 groups rotated to ensure that all students were exposed to equivalent curriculum, regardless of treatment condition. Austin reported that students exposed to the strengths curriculum demonstrated higher academic intrinsic motivation and more positive academic risk-taking behaviors at levels of statistical significance. There were no significant differences between the two groups on academic expectancy and efficacy, academic extrinsic motivation, or achievement scores in mathematics and English.

There are several noteworthy limitations to Austin's (2005) study. Although the random assignment of students to condition should eliminate concerns about pre-intervention differences between the groups, the researcher was not able to demonstrate the lack of differential selection conclusively because only posttest data was collected. In addition, the researcher could not control for the diffusion of treatment; it is plausible that students in the control condition received information about the content of the experimental condition from their classmates. Finally, Austin introduced an extraneous variable by choosing specific teachers to conduct the experimental class sessions who had "positive rapport with students" (p. 39) and who were "selected due to their caring nature and ability to facilitate discussions" (p. 39), whereas the teachers leading the classes in the control condition were "not necessarily selected for their personal attributes" (p. 39), but were instead chosen based upon their credentials to teach the content of the course. Teacher style may have significantly influenced the outcome of the study, as the observed differences between groups could be accounted for by this factor alone.

The final study that evaluated the effect of using a strengths-based approach with high school students adopted a quasi-experimental pretest-posttest nonequivalent control group design and assessed freshman students' GPAs, their frequency of being late to class, and their involvement in disciplinary actions (Turner, 2004). Students in the experimental condition ($n = 76$) took the *Clifton StrengthsFinder* and participated in 2 semesters of weekly 45-minute class sessions that were focused on using the *StrengthsQuest Curriculum Guide and Learning*

Activities (Anderson, 2003) and the *StrengthsQuest* text (Clifton & Anderson, 2002) that asked students to participate in strengths-based learning activities in small groups of 3 to 4 students. Students in the control condition received training and instruction in computer word processing. Turner reported significant differences in GPA between the treatment and the control group, with students who had been exposed to the strengths curriculum attaining better grades than students in the control condition. In addition, students in the experimental group had significantly fewer disciplinary actions taken against them and were also less likely to be tardy for class than were their counterparts in the control group. Turner's inability to randomly assign students to conditions in this study represents the most significant limitation of this research.

Turner's research closely mirrors a study performed by researchers at Gallup, Inc. several years earlier (Harter, 1998 as cited in Clifton & Harter, 2003). The Gallup study of 1,648 students at an urban high school utilized a time series design over a 4-year period to determine whether students who had been given personal feedback on their talents as identified by the *Clifton StrengthsFinder* would demonstrate differences in GPA, tardiness, and absenteeism when compared to a control group who had not received information about their talents. In each year of this study, a group of randomly selected teachers received training from Gallup, Inc. related to how to conduct a specific talent identification interview process. Following training, these teachers then provided individual and large group feedback to ninth grade students in the experimental condition ($n = 807$) about how to use their talents. Students in the control condition ($n = 841$) did not receive the individual consultation nor the large group feedback. Students' grades, tardiness, and absenteeism were measured at the end of the semester, and students in the treatment group were found to have a significantly lower incidence of tardiness and absenteeism, and higher GPAs than students in the control group. The control of extraneous variables such as teacher training and interview treatment fidelity was not described in this study, nor were the procedures used for students assigned to the control condition; these factors may limit the reliability and generalizability of the results.

Strengths Intervention Research Within Postsecondary Educational Settings

In addition to the research conducted with high school freshmen, research on the impact of strengths-based initiatives within higher education has also begun to emerge. In most cases,

these interventions have utilized the *Clifton StrengthsFinder* as the foundation for the integration of strengths into the classroom, and the strengths-specific curriculum has been administered over the course of a limited number of class sessions as opposed to the entire semester. The most frequent type of strengths approach to receive empirical examination has been interventions that occur within the context of first-year seminars. Many of the studies reviewed in the following section represent doctoral dissertations that utilize a variety of methodologies to assess the impact of strengths-based interventions on student success variables. Several other studies have been conducted with postsecondary student samples in non-classroom settings as well.

The first study that will be reviewed is an investigation conducted by Hodges (2002, as cited in Clifton & Harter, 2003) involving 150 undergraduate business students at a public university. Students participated in one of three conditions to assess the impact of different degrees of exposure to information about personal strengths on *State Hope Scale* (Snyder et al., 1996) scores. Students in the first group were given the *Clifton StrengthsFinder* and written feedback that identified their signature themes of talent. A second group of students was given the same intervention as those in the first group but was also allowed to access an online learning program that allowed them to learn more about their talents. The third group of students was given all of the previously noted information and was also exposed to a 30-minute personal telephone consultation with a trained strengths consultant. Following a pre- and post-administration of the *State Hope Scale* (Snyder et al., 1996), the researchers determined that students in the third group reported a significantly greater increase in state hope than that of the first group. One limitation to this study is the lack of a control group.

Several studies have examined strengths approaches with first-year student populations. One example is that of Williamson (2002), who sought to assess the impact of a strengths intervention on first-year students' intent to reenroll at their institution as well as their GPA. To do so, Williamson selected a convenience sample of 80 students enrolled in first-year English courses at a private, liberal arts college and randomly assigned them to treatment ($n = 32$, after attrition) and control ($n = 40$) conditions. The treatment in the experimental condition consisted of exposing participants to the results of their *Clifton StrengthsFinder* results, two 60-minute strengths training sessions conducted in large groups, a brief individual consultation, and a small

group discussion facilitated by the researcher. The control group did not receive information about using their strengths. At the end of the semester, Williamson measured participants' intent to reenroll for the following year, the number of credit hours they earned, and their first semester GPA and found that students in the experimental condition had earned a significantly greater mean number of credit hours than had the students in the control group and that students who had been exposed to the strengths condition also demonstrated significantly higher GPAs than did those in the control condition. There were no significant differences found between the two groups with respect to their intent to reenroll, although Williamson noted that the retention rate for the treatment group was 97%, compared to 87% for the control group. The small sample size in this study limits the generalizability of the findings, but this research provides initial evidence to suggest that strengths-based approaches may positively influence academic achievement in first-year students.

In addition to this study, Swanson (2006) conducted an investigation with 156 first-year college students at a liberal arts college to assess the impact of three types of advising experiences on student retention, integrating a process of exposing students to their *Clifton StrengthsFinder* results as a part of one of the treatment conditions. In Swanson's investigation, all participants took the Myers-Briggs Type Indicator (MBTI) in alignment with the current practice of the institution at which the study was conducted, and then students were randomly assigned to one of three groups. The control group met with a faculty member to determine a class schedule for the spring semester, as was the traditionally-implemented advising method. The first treatment group was asked to meet with a faculty advisor for two 30-minute sessions to build a relationship and for the advisor to assist in the student's social integration into the campus community. The second treatment group was required to complete the *Clifton StrengthsFinder* and to meet with a strengths-trained member of the institution's student affairs staff for two 30-minute advising sessions in which the results of the *Clifton StrengthsFinder* were interpreted and discussed in relation to the student's academic plans. Attrition data was collected for the students involved in the study at two intervals: at the conclusion of their first semester of college and again following their spring registration for the following academic year, which was understood as a measure of the students' intent to reenroll at the same institution in subsequent semesters. Swanson (2006) found that students who had been randomly assigned to

the condition in which the *Clifton StrengthsFinder* was utilized in the advising process had significantly higher retention rates than the other two groups.

A noteworthy confound to Swanson's study is that two groups of participants (those in the control group and those assigned to the first treatment condition) met with faculty members, whereas the students assigned to the second treatment condition in which the *Clifton StrengthsFinder* was utilized met with members of the institution's student affairs staff. It is therefore plausible that the difference in advisor type may have produced the results observed by Swanson and not the content of the advising sessions themselves. In this study, students failed to report for their scheduled meetings with faculty advisors at a significantly higher rate than did those students who were randomly assigned to meet with student affairs staff. This observation may indicate that there were non-equivalent student groups involved in the study despite random assignment or that the faculty and student affairs advisors employed different protocol for recruiting students to the advising sessions. In addition, the faculty advisors were not given specific directions regarding the preferred content of the advising sessions, while the student affairs professionals conducted meetings that were more clearly prescribed in terms of content. These differences between treatment conditions may have influenced the results of Swanson's study and indicate that the findings should be interpreted cautiously.

Estévez's (2005) qualitative research used a phenomenological approach to investigate the impact of a strengths-based intervention on academic engagement and perceived social capital of underprepared students enrolled in a first-year seminar course at a small Midwestern college. Students in this course were exposed to the *Clifton StrengthsFinder*, and the *StrengthsQuest* text (Clifton & Anderson, 2002) was utilized to supplement the existing curriculum during four class sessions. Estévez conducted individual interviews with study participants ($n = 30$) using questions adapted from the *Self Reflection Survey* (Clifton, 1997) and invited some of these students to participate in a focus group to gain additional information. This researcher reported several themes that emerged in the course of the interviews that lend support to the possibility that strengths approaches are associated with student success. Estévez noted that "students who engaged courses on the premises of their strengths more readily engaged the academic demands of the course" (p. 72), and these students reported elevated levels of academic

motivation after learning about their personal strengths, a better understanding of how to apply their strengths to meet academic challenges, and a positive impact on their ability to form social networks. While these results suggest a link between strengths awareness and student success, they must be interpreted tentatively because of the lack of a comparison group and because Estévez's research design does not permit causal inferences to be made.

Anderson, Schreiner, & Shahbaz (2003, 2004) conducted two studies to examine the impact of strengths-based approaches with students enrolled in a first-year seminar course at a private, liberal arts college on the West coast. The 2003 study used a one-group pretest-posttest design and exposed the student participants ($n = 611$) to the *Clifton StrengthsFinder* and related materials over the course of six 1-hour class sessions. Prior to this intervention and after its completion, students were asked to complete the *Self-Reflection Scale* (Clifton, 1997), and the data were subjected to a paired samples t test to analyze pretest-posttest gains. The results of this analysis revealed significant increases in optimism, personal strengths awareness, self-acceptance, goal directedness, self-confidence, awareness of others' strengths, and realistic expectations (Anderson et al., 2003). However, this study is limited by the lack of a control group, as the observed pretest-posttest differences may be attributed to maturation effects within the students instead of the strengths intervention.

The second study conducted by this team of researchers utilized a quasi-experimental pretest-posttest waiting list control group design and assigned incoming students enrolled in a required first-year seminar course to either a treatment group ($n = 588$) who received a strengths intervention that included the *Clifton StrengthsFinder* and the use of the *StrengthsQuest Curriculum Guide and Learning Activities* (Anderson, 2003) or a control group ($n = 261$) that was not exposed to the strengths activities until the last 4 weeks of the course, after the completion of the posttests (Anderson et al., 2004). The strengths intervention consisted of four class sessions designed to help students identify and capitalize on their strengths, small group meetings with a peer leader for strengths-based discussions, and an individual strengths coaching session with a trained faculty or staff member. These researchers used the *Self-Reflection Scale* (Clifton, 1997) to measure academic self-confidence, strengths awareness, ability to see others according to their strengths, and perception of personal ability to apply strengths to academic

tasks and relationships. They found that students in the strengths treatment condition scored significantly higher on all of these variables than did students in the control group (Anderson et al., 2004). These results should be interpreted with a full consideration of the design of the study, as it is unclear whether students in the control group received the equivalent experience of meeting with a peer leader in a small group or having individual sessions with a faculty or staff member. It is possible that the mere presence of these experiences within the curriculum, and not the strengths-based content specifically, contributed to the observed results.

An additional study that informs the current body of knowledge related to the effect of strengths-based approaches with first-year college students is that of Cave (2003), who used a quasi-experimental pretest-posttest treatment design with a non-equivalent control group to assess the impact of a brief strengths-based intervention on academic motivation within the context of a first-year seminar course. Cave's study was conducted at a private, liberal-arts college and involved 220 first-year students who were randomly assigned to first-year seminar groups consisting of approximately 12 to 15 students each. Six of these groups were non-randomly selected to be a part of the treatment condition ($n = 111$) based on the availability of faculty volunteers to lead these experimental groups, and the remaining six groups ($n = 109$) were designated as the control group. Students in the control condition utilized the college's existing first-year seminar curriculum, whereas those in the experimental condition were exposed to the *Clifton StrengthsFinder* and related materials (Clifton & Anderson, 2002) during three 50-minute class sessions in lieu of some of the traditional first-year seminar curriculum. The three class periods that utilized the strengths curriculum were conducted as large group plenary sessions instead of individual classroom sections. As this researcher hypothesized that exposing students to information about their strengths would increase their academic motivation, the *Academic Motivation Scale* (AMS; Vallerand et al., 1992) was administered at pre- and post-intervention intervals. However, after controlling for gender, degree aspirations, and pretest performance, Cave found no significant impact of the intervention on AMS scores.

The results of Cave's (2003) research should be interpreted with a full consideration of the limitations inherent to the methodology of this study. First among these is an issue of insufficient validation of the instrumentation used in Cave's research, as the original version of

the *Academic Motivation Scale*, the *Eschelle de Motivation en Education (EME)* (Vallerand, Blais, Briere, & Pelletier, 1989) was originally presented in French and was validated using a sample of Canadian college students. A team of researchers seeking to validate the AMS for use in the United States reported concerns about the construct validity of this instrument (Cokley, Benard, & Cunningham, 2001). As the AMS was initially developed to measure Canadian high school students' motivation for attending college (Vallerand et al., 1992), it is plausible that this instrument was inadequate to capture academic motivation as Cave operationally defined it in the study. This researcher readily acknowledged this limitation by stating that the AMS "failed to measure motivation to remain in college in general, and it failed to measure academic motivation specifically" (Cave, p. 111). In addition, Cave's research design did not sufficiently control for some extraneous variables that may have influenced the results of this study. Specifically, faculty who volunteered to participate in the experimental condition may have been qualitatively different on some relevant dimensions than those who refused this opportunity. In addition, the treatment condition was administered in large group settings of more than 100 students, whereas the sessions for students assigned to the control condition were conducted in groups consisting of 12 to 15 students. Finally, Cave's study was limited because institutional dynamics caused this researcher to modify the original research design before the posttest data was collected, which meant that students in the experimental condition were not exposed to the segment of the strengths curriculum that was designed to link strengths to academic motivation, and the power of Cave's intervention was thereby reduced.

In a study comparing a strengths-based approach to a traditional method of teaching an introductory college-level public speaking course, Cantwell (2005) sought to discover whether these two teaching methodologies would result in different levels of academic engagement and proficiency in desired course-specific learning outcomes. To do so, Cantwell used a quasi-experimental, pretest-posttest nonequivalent control group design and randomly designated those students enrolled in one section of a public speaking course ($n = 29$) as the treatment condition, while students enrolled in another section of the same course ($n = 26$) served as the control group. In the experimental condition, four class sessions were devoted to a strengths-based intervention that involved exposing students to the *Clifton StrengthsFinder* and the use of the *StrengthsQuest* text (Clifton & Anderson, 2002). In addition, the instructor of this section

employed a strengths-based approach to offering feedback to student coursework, emphasizing what students were doing well and encouraging them to consider how to capitalize on their strengths in completing the assignments associated with the course. The students in the control group were not exposed to any of the strengths materials, but instead were taught according to a traditional public speaking curriculum that had been used in previous semesters. To assess academic engagement at pre- and post-intervention stages, Cantwell used the *Academic Engagement Index* (Schreiner, 2004). Attainment of desired learning outcomes was measured by objective in-class examination scores as well as independent raters' use of *The Competent Speaker Speech Evaluation Form* (Morreale, Moore, Taylor, Surges-Tatum, & Hulbert-Johnson, 1993) to assess public speech delivery skills. Students' previous knowledge of course content, pre-existing public speaking skill level, and academic engagement were measured during the first week of the course as a pretest so that this information would enable the researcher to use these variables as covariates in the data analysis. As Cantwell taught both sections of the public speaking course used in this study, this researcher took extensive measures to control for extraneous variables in the research design by videotaping the class sessions and asking a blind independent rater to assess the uniformity of demonstrated classroom behaviors and attitudes using an instrument drawn from a resource designed to evaluate faculty work (Braskamp & Ory, 1994). A multivariate analysis of covariance (MANCOVA) revealed that students in the experimental condition reported significantly higher levels of academic engagement at the end of the semester than did their counterparts in the control condition, and students exposed to the strengths materials also attained higher levels of proficiency in course-relevant outcomes, as evidenced by significantly higher scores on objective examinations and evaluations of public speaking skill.

While the findings of Cantwell's (2005) research lend initial support to the notion that there is a link between the use of strengths-based interventions and subsequently elevated levels of academic engagement, care should be taken to interpret these results appropriately, given the nature of the research. Specifically, one potential limitation to this study is that the instrument used to measure academic engagement in this research had received limited use at the time it was utilized in this study, and there was no test-retest reliability information available for this instrument at the time Cantwell's study was conducted. The main limitations of this research

include a small sample size and limited generalizability. These concerns indicate that additional research should be conducted to confirm whether academic engagement is bolstered by a strengths approach in other settings with larger samples of students, and with various faculty teaching the strengths-based course content.

Based upon the observation that strengths-based approaches to education have largely focused on the process of helping students identify their talents and strengths while lacking sufficient emphasis on intentionally assisting students in the process of developing these unique strengths to their full potential, Louis (2008) conducted research to examine the relative impact of two separate strengths-based educational approaches on several variables associated with student success. The first approach is a *talent identification intervention*, which focuses on the identification and affirmation of students' existing talents as innate tendencies which will flourish under the right conditions, and is representative of the way in which most postsecondary institutions currently conduct strengths oriented approaches with their students. In contrast, the second approach Louis studied is called a *strengths development intervention* because it emphasizes the application and further nurturing of identified talents by investing time and energy to add the skills and knowledge needed for strengths to develop. This latter approach highlights students' capacity to develop their talents through intentional effort and prompts students to consider specific opportunities on campus that may allow them to fully capitalize on their strengths in college.

Louis utilized an experimental pretest-posttest waiting list control group design to compare the relative impact of the two strengths-based curriculum types to each other and to a traditionally-implemented curriculum in a first-year seminar course, which served as the control condition. The dependent variables in Louis' research included academic engagement, hope, perceived academic control, achievement goal orientation, and mindset. The study included data from 388 first-year students at a private liberal arts institution, and assignment to curriculum type was randomly determined. Faculty assignment to condition was also randomized and all instructors were required to attend an eight hour training session that corresponded to their designated treatment condition. This training was conducted by an independent presenter to

control for experimenter bias, and all faculty and student participants were blind to their condition and to the purposes of the research.

Data for Louis' study were collected through written pretests and posttests, which consisted of existing instruments with demonstrated reliability and validity in assessing the dependent variables. These assessments were administered to all consenting participants during their first-year seminar class sessions two weeks before the commencement of the strengths interventions and again one week after their conclusion. To encourage treatment fidelity in curriculum implementation, Louis gave each instructor a detailed manual outlining the exact activities to be conducted in each of four 50-minute strengths-based class sessions, including necessary materials for teaching the curriculum such as lesson plans, lecture notes, slide presentations, and handouts for students. The curriculum used in the two strengths-based interventions was designed by Louis for use in the study, and participants in both strengths-based conditions took the *Clifton StrengthsFinder* preceding their engagement with the curriculum. To ensure that any observed group differences could be attributed to the content of the intervention and not to pedagogical variations, activity types in the interventions were matched.

A one-way multivariate analysis of covariance (MANCOVA) was conducted to examine the effect of the two strengths-based approaches on academic engagement, hope, and perceived academic control indicated that these variables differed significantly across treatment condition such that the strengths development group had the highest adjusted posttest mean scores across all of these variables. Univariate analyses of covariance (ANCOVAs) conducted on each dependent measure to determine the locus of the statistically significant multivariate effect found that treatment condition significantly affected perceived academic control but not academic engagement or hope.

A significant finding of Louis' research is related to the impact of strengths-based approaches on students' perceived academic control, a construct which refers to students' perceived influence over and responsibility for their academic performance and is predictive of students' tendencies to work harder on academic tasks, obtain better grades, and remain enrolled in their classes (Hall, Perry, Ruthig et al., 2006; Perry et al., 2001). The data in Louis' study

revealed that the students in the waiting list control group ($n = 126$) reported significantly declining levels of perceived academic control during the early weeks of college, as measured by the *Motivation and Achievement Perceived Academic Control Scale* (Perry, Hladkyj, Pekrun, & Pelletier, 2001). However, students in the talent identification ($n = 129$) and strengths development ($n = 133$) groups maintained stable levels of perceived academic control during this same time period. Consequently, students who had been exposed to either strengths approach had significantly higher levels of perceived academic control at the posttest than did students who had not yet received strengths oriented training. After the students in the waiting list control group were exposed to the strengths curriculum, their levels of perceived academic control increased significantly, reversing what had previously been a marked decline in this variable.

Louis (2008) found that strengths development approaches produce more favorable student outcomes than do talent identification interventions because of the differential impact of these two approaches on the variables of mindset (implicit self-theory) and achievement goal orientation. Implicit self-theories, or beliefs about the degree to which personal abilities are malleable, exert profound effects on behavior within educational environments (Dweck & Molden, 2005). Students who espouse a growth mindset, or the belief that personal attributes are malleable, often view the exertion of effort as a prerequisite for developing their abilities and therefore as something to be embraced. In contrast, students who adopt a fixed mindset, or the attitude that personal attributes are trait-like qualities that are not amenable to change efforts, frequently believe that hard work reveals a lack of innate ability and therefore are more likely to eschew tasks that require prolonged effort (Blackwell, Trzesniewski, & Dweck, 2007). Students with a growth mindset persist longer in challenging situations and report higher levels of self-esteem across their college experience than do their peers with fixed mindsets (Robins & Pals, 2002). Participants in Louis' study who were exposed to the talent identification curriculum reported a significant shift toward a fixed mindset as measured by the *Domain-General Measure of Implicit Theory* (Dweck & Levy, as cited in Levy et al., 1998) at the posttest while students in the control and strengths development conditions did not experience a significant change in mindset as a result of exposure to their respective curricula.

Louis (2008) also examined impact of various strengths-based approaches on achievement goal orientation, as this variable is predictive of students' long-term success in academic settings (Covington, 2000). Performance goals are aimed at demonstrating competence within a given domain or avoiding negative judgments from others, whereas learning goals focus on increasing existing levels of ability or learning new skills (Dweck & Leggett, 1988; Elliott & Dweck, 1988), and while both types of goals can be useful and adaptive, students with learning goals tend to more actively pursue opportunities for learning and personal growth (Elliott & Dweck, 1988; Hong et al., 1995) and to demonstrate a greater tendency to adopt the self-regulatory learning strategies associated with academic success (Elliott et al., 1999). Louis' chi-square analysis revealed that the strengths development condition had more students with a learning goal orientation at posttest, while the talent identification condition had more students with a performance goal orientation at the posttest than could be attributed to chance alone. Achievement goal orientation remained stable for the control group. These results suggest that when students experience a traditional first-year seminar curriculum, their achievement goal orientation is largely unaltered during the early weeks of their collegiate experience. However, the students in this study reported that exposure to strengths curricula influenced their subsequent achievement goal orientations such that those who experienced a talent identification curriculum demonstrated a greater likelihood of subsequently adopting a performance goal orientation. More of those who received a strengths development intervention reported a tendency to pursue learning goals.

These findings indicate that while strengths-based approaches can help first-year students maintain a sense of academic control, merely teaching students about their talents without providing instruction related to how to develop them may be unintentionally promoting a fixed mindset and the cultivation of a performance goal orientation. This research suggests the importance of including a developmental component in strengths-based initiatives.

A limitation of Louis' (2008) investigation is that it was conducted at a single private liberal arts institution. Therefore, the research findings reported here cannot be generalized to undergraduate students at other types of institutions, as the literature reports that college outcomes are determined in part by institutional type (Pascarella & Terenzini, 2005).

Furthermore, the student population at the institution at which this research was performed is not broadly representative of the American undergraduate population, as it contains a less diverse student demographic than that which is present at many other institutions across the country. This limitation also applies to the faculty participants in this study, who were primarily Caucasian. Finally, as this research was conducted within the context of a first-year seminar with a traditionally-aged first-year student population, its results should not be applied to students of different age groups nor to those enrolled in other types of academic courses.

Brodersen (2008) conducted a study with a correlational design to assess whether certain characteristics of peer leaders who were functioning in a strengths counselor role were predictive of their effectiveness in providing strengths counseling for students enrolled in a first-year seminar course. Participants in Brodersen's research included first-year students at a private liberal arts institution in the western United States ($n = 472$) enrolled in a 10-week first-year seminar course and the upperclass peer leaders ($n = 68$) who volunteered to assist in the course with strengths-based counseling related to the *Clifton StrengthsFinder* had attended training for this role. First-year students in the study took the *Clifton StrengthsFinder* and were subsequently exposed to four class sessions designed to help them understand their assessment results and consider how to mobilize their identified talents to achieve academic success. Brodersen indicated that students met with an assigned peer leader in small group and individual settings throughout the semester as a requirement of the course, but did not provide details on the nature or the frequency of these meetings other than to note that this individual's purpose was to help the first-year students better understand their strengths. This researcher asked the peer leaders to complete self-report surveys at the conclusion of their pre-course training session inquiring about their academic and career self-efficacy, perception of the adequacy of their preparation to serve as strengths counselors, and their personal level of awareness of strengths awareness, as these were the predictor variables in the study. The four criterion variables included first-year students' cumulative grade point average at the end of the academic year, self-reported strengths awareness and academic self-confidence, and their subjective ratings of the effectiveness of their peer leader. Data collection occurred via the use of pretest and posttest surveys, and hierarchical multiple regression analyses were conducted to determine which predictor variables were associated with each of the outcomes identified as important in the study.

Brodersen (2008) found that the effect size of each regression analysis was small, indicating that only a small portion of the variation in the first-year student outcomes measured in this study could be explained by the combination of predictor variables. In addition, the only characteristic of peer leaders that was a significant positive predictor of their effectiveness was their self-reported comfort with their level of preparation to be strengths counselors. While this characteristic was not predictive of first-year students' academic confidence or cumulative GPA after two semesters, it did positively predict changes in first year students' strengths awareness. Contrary to what this researcher hypothesized, peer leaders' strengths awareness was a negative predictor of changes in first-year students' strengths awareness, meaning that when peer leaders had higher levels of self-reported strengths awareness, first-year students reported less change in strengths awareness between the pretest and posttest measures of this variable.

The results of Brodersen's (2008) research underscore the importance of peer leaders' comfort in conducting strengths counseling if students are to grow in their own understanding of personal strengths and would seem to suggest that it is imperative to provide adequate training for strengths counselors to encourage these outcomes, but the design of the study does not allow for this assertion. This conclusion cannot be made based upon the data because Brodersen did not measure the impact of the peer leader training sessions on peer leaders' comfort with their level of preparation to conduct strengths counseling, and so an empirically-based link cannot be made between strengths training and peer leaders' comfort in providing strengths counseling. A limitation of the correlational design type is that it does not permit conclusions related to causation, and the lack of a control group in this study means that any observed change between the pretest and the posttest measures given to the first-year students could be due to factors other than the strengths-based course content. Brodersen noted that there was a lack of variation in the students' ratings of the effectiveness of their peer leaders and also emphasized that peer leaders' self-ratings of several of the predictor variables were consistently high. This type of data trend is commonly observed with the use of self-report scales, and indicates that the data in this study may be biased by a social desirability effect.

Janowski (2006) sought to gain an understanding of the process by which students move from identifying their strengths with the *Clifton StrengthsFinder* to intentionally applying them,

a process this researcher termed *capitalizing on personal strengths*. Janowski asked the directors of strengths-based programs at three universities to nominate students ($n = 8$) who fit three specific criteria for participation in the study; these criteria included participation in strengths-based programming at the institution at which the student is currently enrolled, the ability to recall and identify personal signature themes of talent as indicated by the *Clifton StrengthsFinder*, and identification of one area in which personal strengths are actively applied (social, academic, or occupational). The researcher then conducted a one-on-one semi-structured telephone interview with each participant to solicit demographic information, a description of the strengths-based program in which each student had participated, students' signature themes as identified by the *Clifton StrengthsFinder*, details about how students had applied and capitalized on their strengths, and the benefits they perceived from doing so. Following the interview, participants completed the *Five Factor Online Personality Inventory* (Buchanon, Johnson, & Goldberg, 2005) to assess personality along five dimensions, including extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Transcribed interviews were reviewed by the researcher and an external auditor to increase the trustworthiness of the findings. Janowski noted that theoretical sampling, the process of returning to participants following the conclusion of the interview to clarify and probe more deeply about selected topics, did not occur through follow-up interviews but was instead solicited via an email inquiry to participants to determine whether they had any additional comments or questions.

Janowski concluded that the participants reported that an ability to capitalize on their strengths depended on three elements: perceived social support, previous experiences of success, and the reinforcement of the benefits of their strengths. This study provides some description of factors that play a role in prompting students to mobilize their strengths in various settings. However, because the researcher interviewed only 7 undergraduate participants and 1 graduate student, it is possible that this small sample size was not sufficient to ensure the attainment of informational redundancy recommended for qualitative research of this type (Lincoln & Guba, 1985) or to make determinations of which findings are rare versus which are more representative of the group being studied. In addition, Janowski's sample included only one non-Caucasian student, and was largely comprised of individuals who reported adherence to the Christian faith, a cumulative grade point average of 3.5 or greater, high levels of certain personality traits

(extraversion, agreeableness, and conscientiousness, as measured by the *Five Factor Online Personality Inventory*), and who came from intact families. The sample was not representative of the demographic diversity present in the undergraduate population across the country, and this factor limits the transferability, or potential application of one set of research findings to another context, of the reported results. The interview protocols used by Janowski in this study were not specified in the research report, making it difficult to assess the extent to which the findings result from a thorough investigation of the strengths capitalization process. While basic descriptions of the data coding process and the measures taken to promote trustworthiness of the findings are provided, these components of the research are not described in sufficient detail to address questions about these important elements inherent to the grounded theory method.

Robles' (2008) qualitative study used a phenomenological approach to explore elite athletes' reactions to their exposure to the *Clifton StrengthsFinder* and to gain an understanding of these athletes' perceptions of how they personally utilize their signature themes of talent. The purposeful sampling procedures used by this researcher to obtain participants for the study included extreme case, criterion, and snowball sampling procedures, and resulted in a group of female athletes who resided in southern California and who also had elite athlete status in the sport of women's fastpitch softball ($n = 16$). For the purpose of the study, elite status was defined as identifying an athlete eligible for competition at the national, international, or Olympic level, or who is a professional sports person. Although this research was not conducted in a postsecondary setting exclusively, the majority ($n = 10$) of the participants in the study were categorized as current collegiate players. The athletes in Robles' study represented a variety of player positions, ranging in age from 18 to 46 years.

Participants began by taking the *Clifton StrengthsFinder* and reviewing their signature theme descriptions as identified by the inventory. Robles (2008) then asked participants a series of 28 open-ended questions over the course of two individual interview sessions to gain an understanding of their perceptions regarding their *Clifton StrengthsFinder* results, the strengths philosophy, and to further explore each participant's view of herself as an elite athlete. During the interview process, the researcher guided participants through activities designed to increase their understanding of their signature themes of talent, to establish a ranking of the personal

relevance of each theme, and to articulate the meaning of these themes in their own words. In addition to these exercises, Robles asked a series of questions that prompted each participant to articulate whether her signature themes of talent have been relevant in her role as an athlete in the past and present, and to share her thoughts on whether the strengths philosophy could be useful in collegiate athletic settings or used to influence athletic team dynamics. The researcher also sought the opinion of an expert reader in her study and triangulated data from multiple sources to increase the trustworthiness of the research findings.

Robles (2008) highlighted six predominant themes that emerged from the analysis of the various data sources. These include the observations that elite athletes tend to use achieving and/or relational strengths in their pursuit of athletic excellence, associate their high performance with one central theme of talent, intentionally mobilize their strengths to overcome various types of obstacles, and adopt an optimistic stance. In addition, Robles noted that the athletes found unique ways to capitalize on their signature talent themes to cultivate team/coach relationships, assume various leadership roles, and set personal goals. Finally, the elite athletes in Robles' study perceived the strengths philosophy as having a positive impact on women's athletic teams through providing a means for increasing team cohesion, developing greater understanding of individuals, and establishing respect among teammates and coaches.

As Robles' research was phenomenological in nature, its most significant limitation is the lack of transferability of its findings. The results of this research are descriptive of the experience of the participants in this particular study and are not applicable to other populations, such as athletes in general, female athletes, elite athletes, or athletes in other sports. Additional research with other types of athletes should be conducted to gain a more detailed understanding of impact of the *Clifton StrengthsFinder* and the strengths philosophy for the diverse groups of athletes. In addition, it is possible that participants' responses to Robles' questions may have been influenced by their perceptions that the researcher was hoping for a certain type of response to the questions posed in the study.

At the time of this review, preliminary results are available from a qualitative study that utilized a constructivist approach and a grounded theory methodology to explore the personal experiences of students following an encounter with a strengths-based intervention (Pritchard,

2009). Pritchard's research was conducted with a sample of student mentors ($n = 12$) at a public research university in the United Kingdom who attended two days (approximately 10 total hours) of strengths-based training. Participants in the study completed the *Clifton StrengthsFinder*, received their results, and then attended educational sessions over the course of two consecutive days designed to help them understand and apply their signature themes of talent. In the days immediately following the intervention, Pritchard conducted a semi-structured interview with each participant, inquiring about students' reactions to their signature talent themes, the nature of their educational experiences, and the impact of the strengths intervention. Following the initial interview, participants were asked to engage in online journaling over a period of approximately 4 months, responding to three discussion prompts posted by the researcher at approximately evenly dispersed intervals throughout this time period. These online journaling prompts were intended to elicit students' ongoing written reactions to the strengths intervention and to inquire about the degree to which they were reflecting upon and utilizing the information presented during the strengths intervention. Sixteen weeks after the completion of the two-day strengths training, the researcher conducted a second interview with each participant to inquire about any remaining impact of the initial intervention and to ask students to elaborate on several themes that emerged from the online journals. Data from the interviews, the online journals, and the researcher's field notes were analyzed using Strauss and Corbin's (1990) model of engaging in open, axial, and selective coding processes to develop an emerging theory.

Participants in Pritchard's study (2009) noted that they perceived that exposure to the strengths-based training produced immediate, short-term positive personal and relational effects such as increased confidence and self-efficacy, learning epiphanies, and heightened appreciation for the strengths of others. The intensity of these effects was positively mediated by factors such as the participant's degree of resonance with the signature themes noted on his or her *Clifton StrengthsFinder* report, the level of psychological reframing from a negative association with a particular talent theme to a positive association, and the projection of the use of personal strengths in the future. Negative mediators of the initial intervention effect included previous exposure to a deficit-based approach to education and skepticism of the accuracy of a Web based instrument in assessing individual uniqueness and talent. While nearly all students in Pritchard's study reported that the initial impact of the intervention had diminished at the four-month

interval, this strength of effect was varied, as some participants asserted that the strengths-based training and perspective had been of sustained value and relevance in their lives, while a portion of the participants noted that the long-term impact of the strengths training was negligible or nonexistent. Pritchard noted that several factors were associated with students retaining a significant effect from a strengths intervention after four months, including continued reframing of innate traits from perceived weaknesses to strengths, effort to progress from talent identification to strengths development, and regular use of terminology associated with the *Clifton StrengthsFinder* in personal vocabulary. Finally, the factors that were negative mediators of the long-term intervention effect include lack of ongoing curricular follow-up or training beyond the initial intervention, and personal factors such as distraction or lack of persistent interest in sustained engagement with the results generated by the *Clifton StrengthsFinder*.

Pritchard's findings provide insight into the dynamics of students' reactions to a strengths-oriented educational program and note several factors that may contribute to either a sustained or a depreciating strengths intervention effect. The researcher cautions that the student interviews focused on gaining information about the personal impact of a strengths-based educational intervention and did not explore the influence of extraneous factors such as gender, race, and socioeconomic status in shaping the reported results. Pritchard's study was conducted with paid student mentors of middle-class standing, and with the exception of one student, all participants in Pritchard's study were Caucasian. This type of selection bias could result in missing themes or concepts in the data and therefore has limited transferability to other populations. It is also notable that only a portion of the participants in Pritchard's research engaged in the online journaling portion of the study, creating the possibility that the written thoughts of this subgroup of participants were not representative of the perceptions of the entire group under investigation.

Directions for Future Research

As strengths-based approaches gain prominence in the educational settings, it will be increasingly important to build upon existing knowledge by conducting investigations aimed at addressing the multitude of questions that have yet to be answered regarding strengths-based approaches in education. In the broadest sense, continued research is needed to develop a more

fully articulated theory of strengths-based education that connects it to existing theories of teaching and learning while highlighting the distinctive principles and methodologies inherent to the strengths-based approach. Much of the existing research focuses on the overall impact of strengths-based interventions, but it is imperative to also pursue a detailed investigation of which components of these approaches are most powerful in producing desired outcomes and the mechanisms by which they exert their effect. Research findings within this arena could guide those who design curriculum in their efforts to determine the optimal content and structure of strengths-based interventions.

Several methodological considerations should inform future research. Controlled intervention studies with experimental or quasi-experimental designs utilizing instruments with demonstrated reliability and validity could be particularly helpful in assessing the impact of strengths-based programs, as some of the existing research is correlational in nature, lacks a control group for comparison, or has been conducted using instruments that have not been well-established. There is a need for more intervention studies that are skillfully designed with a careful consideration of the outcomes or goals of the program informing the creation of each component of the strengths-based intervention. There is also a dearth of research designed to assess the long-term impact of exposure to strengths-based curriculum; thus, longitudinal studies could be useful in adding to the current understanding of whether these approaches influence student success in an enduring way. Finally, as the majority of the existing research employs quantitative methodologies, research utilizing qualitative or mixed-methods approaches may generate valuable insights related to how students respond to distinct components of strengths-based curricula or which specific cognitions or emotional reactions are elicited by the messages inherent to various strengths-based programs.

It is also important to learn more about the role that assessments such as the *Clifton StrengthsFinder* play in helping students understand and apply the overarching strengths philosophy to their personal lives. Specifically, future research should seek to differentiate the impact of exposure to the *Clifton StrengthsFinder* from the impact of associated strength-based programs or curricula to determine the relevance of each of these components of a strengths

intervention prompting desired outcomes in students and whether they produce an additive effect.

Pascarella (2006) asserts that the ever-expanding diversity of the American population compels educational researchers to devote heightened attention to routinely examining the conditional effects in addition to the general effects of interventions, as it is possible that the same intervention may differ in the magnitude or direction of its impact for students with different characteristics or traits. This assertion means that further research should be conducted to examine the impact of strengths-based approaches on more diverse student populations enrolled in varying types of secondary and postsecondary institutions. Much of the existing research involves traditionally-aged first-year college students and lacks racial and ethnic diversity. Another area ripe for investigation is how other constituents within the educational system, such as faculty, administrators, or external groups such as employers could best utilize strengths-based approaches in their work.

In addition, future investigations should assess the ideal timing of exposure to strengths-based interventions based upon the desired outcomes of such programs. This type of research should consider the ways in which the students' developmental levels during each phase of their educational career may shape their response to strengths-based approaches. Researchers could also consider designing and assessing strengths interventions tailored to strategically target critical issues faced by students as they progress along a developmental course.

Finally, it would also be useful to consider initiating investigations that assess the impact of strengths interventions beyond the individual student's perceptions of himself or herself by examining whether students' exposure to strengths oriented training produces any measurable impact on their relationships, their ability to engage in perspective-taking, their capacity for effective leadership, their appreciation for diverse backgrounds and perspectives, and their contribution to community, among other outcomes. Researchers could also consider conducting studies that do not use the student as the primary unit of analysis, but that instead examine the more broad-based impact of strengths interventions at the campus or community level.

References

- Anderson, E. C. (2000, February). *Affirming students' strengths in the critical years*. Paper presented at the National Conference on the First Year Experience, Columbia, SC.
- Anderson, E. C. (2003). *StrengthsQuest: Curriculum outline and learning activities*. Princeton, NJ: Gallup, Inc.
- Anderson, E. C. (2004). *What is strengths-based education?: A tentative answer by someone who strives to be a strengths-based educator*. Unpublished manuscript.
- Anderson, E. C. (2005). Strengths-based educating: A concrete way to bring out the best in students—and yourself. *Educational Horizons*, 83(3), 180-189.
- Anderson, E. C., Cave, S., & McDowell, S. (2001, October). *Why become strengths-based? An academic and theological context for strengths programming*. Paper presented at Eastern College, National Conference on Identifying and Developing Student Strengths, St. Davids, PA.
- Anderson, E. C., Schreiner, L. A., & Shahbaz, P. (2003). *Research and evaluation of strengths counselors in a New Beginnings course*. Unpublished raw data, Azusa Pacific University, Azusa, CA.
- Anderson, E. C., Schreiner, L. A., & Shahbaz, P. (2004). *Research and evaluation of strengths counselors in a New Beginnings course*. Unpublished raw data, Azusa Pacific University, Azusa, CA.
- Aspinwall, L. G., & Staudinger, U. M. (2003). A psychology of human strengths: Some central issues of an emerging field. In L. G. Aspinwall & U. M. Staudinger (Eds.), *A psychology of human strengths: Fundamental questions and future directions for a positive psychology* (pp. 9-22). Washington, D.C.: American Psychological Association.

Austin, D. B. (2004). *Indicators of Academic Achievement Questionnaire*. Unpublished instrument.

Austin, D. B. (2005). The effects of a strengths development intervention program upon the self-perceptions of students' academic abilities. *Dissertation Abstracts International*, 66(05A), 1631-1772. (UMI No. AAT3175080)

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, 78(1), 246-263.

Braskamp, L. A., & Ory, J. C. (1994). *Assessing faculty work: Enhancing individual and institutional performance*. San Francisco: Jossey-Bass.

Brodersen, D. (2008). Predictors of peer leader success as strengths counselors in a first-year seminar. *Dissertation Abstracts International*, 69(03A), 890-1131. (UMI No. AAT3308536).

Buchanon, T., Johnson, J. A., & Goldberg, L. R. (2005). Implementing a five-factor personality inventory for use on the internet. *European Journal of Psychological Assessment*, 21(2), 115-127.

Buckingham, M. (2007). *Go Put Your Strengths to Work*. New York: The Free Press.

Buckingham, M., & Clifton, D. O. (2001). *Now, Discover Your Strengths*. New York: The Free Press.

Cameron, K. S., Dutton, J. E., & Quinn, R. E. (Eds.). (2003). *Positive organizational scholarship: Foundations of a new discipline*. San Francisco: Berrett-Koehler.

Cantwell, L. (2005). A comparative analysis of strengths-based versus traditional teaching methods in a freshman public speaking course: Impacts on student learning and engagement. *Dissertation Abstracts International*, 67(02A), 478-700. (UMI No. AAT3207574)

Cave, S. L. R. (2003). The effects of strengths education on the academic motivation of first-year college students. *Dissertation Abstracts International*, 64(02A), 417-570. (UMI No. AAT3082036)

Clifton, D. O. (1997). *The Self-Reflection Scale*. Princeton, NJ: Gallup, Inc.

Clifton, D. O., & Anderson, C. E. (2002). *StrengthsQuest*. Washington, D.C.: Gallup, Inc.

Clifton, D. O., Anderson, C. E., & Schreiner, L. A. (2006). *StrengthsQuest* (2nd ed.). New York: Gallup Press.

Clifton, D. O., & Harter, J. K. (2003). Investing in strengths. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 111-121). San Francisco: Berrett-Koehler.

Clifton, D. O., & Nelson, P. (1992). *Soar With Your Strengths*. New York, NY: Dell.

Cokley, K. O., Bernard, N., & Cunningham, D. (2001, July). A psychometric investigation of the AMS using a United States sample. *Measurement and Evaluation in Counseling Development*, 34(2), 109-119.

Covington, M. V. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology*, 51, 171-200.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: HarperCollins.

Drucker, P. (2000). Managing knowledge means managing oneself. *Leader to Leader*, 16, 8-10.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95(2), 256-273.

Dweck, C. S., & Molden, D. C. (2005). Self-theories: Their impact on competence motivation and acquisition. In A. J. Elliott & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 122-140). New York: Guilford.

Elliot, A. J., McGregor, H. A., & Gable, S. L. (1999). Achievement goals, study strategies, and exam performance: A mediational analysis. *Journal of Educational Psychology*, 91(3), 549-563.

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, 54, 5-12.

Estévez, E. F. (2005). The role of strengths-based case management strategies in the promotion of social capital and academic success of underprepared students. *Dissertation Abstracts International*, 66(08A), 2852-2975. (UMI No. AAT3185052)

Frey, D., Jonas, E., & Greitemeyer, T. (2003). Intervention as a major tool of a psychology of human strengths: Examples from organizational change and innovation. In L. G. Aspinwall & U. M. Staudinger (Eds.), *A psychology of human strengths: Fundamental questions and future directions for a positive psychology* (pp. 149-164). Washington, D.C.: American Psychological Association.

Gallup, Inc. (1999). *Clifton StrengthsFinder*. Washington, D.C.

Gallup, Inc. (2003). Teaching and leading with individualization. Retrieved June 26, 2007, from <http://media.gallup.com/EDUCATION/pdf/TeachingAndLeadingWithIndividualization20030508.pdf>

Gillum, W. M. (2005). The effects of strengths instruction on under-performing high school students in mathematics. *Dissertation Abstracts International*, 66(01A), 86-238. (UMI No. AAT3185052)

Hall, N. C., Perry, R. P., Ruthig, J. C., Hladkyj, S., & Chipperfield, J. G. (2006). Primary and secondary control in achievement settings: A longitudinal field study of academic motivation, emotions, and performance. *Journal of Applied Social Psychology*, 36, 1430-1470.

Hodges, T. D., & Clifton, D. O. (2004). Strengths-based development in practice. In P. A. Linley & S. Joseph (Eds.), *International handbook of positive psychology in practice: From research to application* (pp. 256-268). New York: Wiley.

Hong, Y., Chiu, C., & Dweck, C. S. (1995). Implicit theories of intelligence: Reconsidering the role of confidence in achievement motivation. In M. H. Kernis (Ed.), *Efficacy, agency, and self-esteem* (pp. 197-216). New York: Plenum.

Janowski, K. (2006). A theory of capitalizing on personal strengths. *Dissertation Abstracts International*, 67(04A). (UMI No. AAT3215161).

Kuh, G.D. , Kinzie, J., Schuh, J. H., Whitt, E. J., & Associates. (2005). *Student success in college: Creating conditions that matter*. San Francisco, CA: Jossey-Bass.

Levy, S. R., Stroessner, S. J., & Dweck, C. S. (1998). Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology*, 74, 1421-1436.

Liesveld, R., & Miller, J. A. (2005). *Teach With Your Strengths*. New York, NY: Gallup Press.

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Linley, P. A., & Joseph, S. (Eds.). (2004). *Positive psychology in practice*. Hoboken, NJ: Wiley.

Lopez, S. J., Hodges, T., & Harter, J. (2005). *The Clifton StrengthsFinder technical report: Development and validation*. Princeton, NJ: Gallup, Inc.

Lopez, S. J., Janowski, K. M., & Wells, K. J. (2005). *Developing strengths in college students: Exploring programs, context, theories, and research*. Lawrence: University of Kansas.

Louis, M. C. (2008). A comparative analysis of the effectiveness of strengths-based curricula in promoting first-year college student success. *Dissertation Abstracts International*, 69(06A). (UMI No. AAT 3321378).

Morreale, S. P., Moore, M. R., Taylor, K. P., Surges-Tatum, D., & Hulbert-Johnson, R. (1993). *The competent speaker speech evaluation form*. Annandale, VA: Speech Communication Association.

Pascarella, E. T. (2006). How college affects students: Ten directions for future research. *Journal of College Student Development*, 47, 508-520.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research* (Vol. 2). San Francisco: Jossey-Bass.

Perry, R. P., Hladkyj, S., Pekrun, R., & Pelletier, S. (2001). Academic control and action control in the achievement of college students: A longitudinal field study. *Journal of Educational Psychology*, 93, 776-789.

Peterson, C., & Seligman, M. (2004). *Character strengths and virtues: A handbook and classification*. New York: Oxford University Press; Washington, D.C.: American Psychological Association.

Pritchard, G. M. (2009). *A grounded theory of the factors that mediate the effect of a strengths-based educational intervention over a four month period*. Unpublished doctoral dissertation, Azusa Pacific University, Azusa, CA.

Purnell School. (2007). *The Affinities Program: Discovering strengths in girls for whom success has been elusive*. Retrieved April 16, 2007, from http://www.purnell.org/page/why_purnell/affinities_program

Rath, T., & Clifton, D. O. (2004). *How Full Is Your Bucket?* New York, NY: Gallup Press.

Robins, R. W., & Pals, J. L. (2002). Implicit self-theories in the academic domain: Implications for goal orientation, attributions, affect, and self-esteem change. *Self and Identity, 1*, 313-336.

Robles, A. M. (2008). *The perceptions of strengths-based play, team cohesion, relational capacity, and group dynamics: Voices of elite athletes*. Unpublished doctoral dissertation, Azusa Pacific University, Azusa, CA.

Saleebey, D. (1997). The strengths approach to practice. In D. Saleebey (Ed.), *The strengths perspective in social work practice* (2nd ed., pp. 49-57). New York: Longman.

Saleebey, D. (2001). *Human behavior and social environments: A biopsychosocial approach*. New York: Columbia University Press.

Saleebey, D. (2006). Introduction: Power in the people. In D. Saleebey (Ed.), *The strengths perspective in social work practice* (4th ed., pp. 1-24). Boston: Pearson.

Schreiner, L. A. (2004a). *Affirming students' strengths: A campus-wide approach to student success and retention* (Report to the Fund for the Improvement of Post-Secondary Education P116B00306). Washington, D.C.: U. S. Department of Education.

Schreiner, L. A. (2004b). *Academic Engagement Index*. Unpublished instrument.

Schreiner, L. A., & Anderson, E. C. (2005). Strengths-based advising: A new lens for higher education. *NACADA Journal, 25*(2), 20-27.

Schreiner, L. A., Hulme, E., Hetzel, R., & Lopez, S. (2007). *Positive psychology on campus*. Unpublished manuscript.

Shushok, F., & Hulme, E. (2006, September-October). What's right with you: Helping students find and use their personal strengths. *About Campus*, 11(4), 2-8.

Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the state Hope Scale. *Journal of Personality and Social Psychology*, 70, 321-335.

Strauss, A. & Corbin, J. (1998). Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA: Sage.

Swanson, J. E. (2006). Success in the first year: Impact of alternative advising on students at a liberal arts college. *Dissertation Abstracts International*. (UMI No. AAT 3246327)

Turner, J. L. (2004). *StrengthsQuest counseling applied to high school freshmen*. Los Angeles: CASP Scientist-Practitioner Grant.

Vallerand, R. J., Blais, M., Briere, N. M., & Pelletier, L. G. (1989). Construction et validation de l'Eschelle de Motivation en Education. *Revue Canadienne Sciences du Comportement*, 21, 323-349.

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C., & Vallerand, E. F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1017.

Williamson, J. S. (2002). *Assessing student strengths: Academic performance and persistence of first-time college students at a private church-affiliated college*. Unpublished doctoral dissertation, University of Sarasota, New York.

Winseman, A. L., Clifton, D. O., & Liesveld, C. (2004). *Living Your Strengths* (2nd ed.). New York, NY: Gallup Press.