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Achievement Within an Accelerated Christian Education School

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Achievement Within an Accelerated Christian Education School

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Abstract

The purpose of this study is to provide achievement data regarding children who study the ACE curriculum at a West Virginia Christian School and compare it to data of children attending public school in Wood County West Virginia. Findings show that no differences emerged among years or grades within the WVCS. Compared to the Wood County Public Schools achievement criteria, WVCS grade levels met or exceeded that criterion 17.9% of the time. Conversely, 82.1% of the time, WVCS failed to meet the Wood County Public School achievement criteria.

Achievement Within an Accelerated Christian Education School

The Evolution of Education

Education in the United States began as a responsibility of the church. By the late nineteenth century, education became the legal responsibility of individual states. Dissatisfaction with secular education resulted in a modern swell of fundamentalist Christian education, led by the Accelerated Christian Education curricula.

Evolution of Parochial Education

Public education is mostly a late nineteenth and twentieth century phenomenon. Education in the United States was mostly church-related during the seventeenth, eighteenth, and most of the nineteenth centuries (Tilley, 1998). Early church schools were the concerns of "Anglicans in Virginia and Carolinas, the Catholics in Maryland, the Puritans in New England, the Dutch Calvinists in New Netherlands, and the Quakers, Swedish, and German Lutherans, Moravians, Dunkards, and Mennonites in Pennsylvania" (Kraushaar, 1976, p. 7).

Early schools sponsored by churches or organized as charity schools made education available. Later, Pre-Revolutionary American colonies began to mandate compulsory attendance. Massachusetts School Laws of 1642 and 1647 stipulated the obligation of towns of certain sizes to maintain schools; The Connecticut School Law of 1660 demanded that education must be provided from parents to children, if a school was not made available; and, the Plymouth Colony School Law of 1677 required that every town of fifty families should maintain a grammar school – and stipulated how taxes would be levied to support the school (O'Reilly & Fellman, 1982). The Revolutionary War halted any extensive development of the idea of common schools with children compelled to attend (O'Reilly & Fellman, 1982).

While Puritanistic values dominated education for many years, between the American Revolution and the Civil War a few educators, such as Horace Mann, saw the difficulty of teaching religious values in an increasingly pluralistic society. Mann, along with others, worked for free, compulsory, non-sectarian schooling for everyone. By the outbreak of the Civil War, most public schools had dispensed with doctrinal teaching in favor of moral instruction and daily Bible reading (Elkins, 1992).

Postwar educators showed increased interest in democratizing education by providing educational opportunities to an ever more diversified school population. As an example of increased secularism, Nietz (1952, as cited in Tilley, 1998), after analyzing early texts, found that between 1775-1852, twenty-two percent of the space in readers was devoted to religious instruction and twenty-eight percent to moral instruction. By the period between 1875-1915, only one and one-half percent of reader space was devoted to religious instruction and seven percent to moral (Elkins, 1992).

During the nineteenth century, the idea of publicly supported, civilly governed schools came to the fore. Systematically, all 50 states accepted the responsibility for the education of their citizens, organized schools under civil governance, and expanded the curriculum (O'Reilly & Fellman, 1982). Catholic education also rose rapidly during the nineteenth and twentieth centuries. There were many reasons for this growth, and a major one was the anti-Catholic attitudes of many of the early protestant schools. (Nordin & Turner, 1980)

Until the Twentieth Century, Catholics or comparatively wealthy denominations operated most private schools. During the twentieth century, after World War II, the influence of John Dewey's pragmatism and militant atheism contributed to further secularization of public institutions. Independent evangelical and fundamental religious groups grew and, by the 1960s

and 1970s, began to speak out against progressivism and secularism in public schools (Elkins, 1992). Beginning between 1965 and 1975 the number of students enrolled in private religious schools increased from 615,548 to 1,433,000 or 134.4 percent according to an estimate by the Bureau of Census (Nordin & Turner, op. cit., p.391). According to a preliminary study by the National Center for Education Statistics, more than eighteen percent of the nation's elementary and secondary schools are now private (Nordin & Turner, 1980). Rose (1998) believes the Christian school movement is just one aspect of a multi-pronged attempt by evangelicals to regain their lost voice.

Evolution of Fundamentalist Education. It has been claimed that Christian fundamentalism is the chief cultural phenomenon of the United States in this decade (Yankelovich, 1981). This assertion is based on statistics indicating 45 million Americans consider themselves to be "born again" fundamentalist Christians; that media support for this view includes 1400 "all-gospel" radio stations, 30 all-gospel television channels, one billion dollars a year devoted to buying fundamentalist literature, and each year the receipt of at least 400 million dollars in donations directed to its nine most visible preachers (Hunter, 1982).

The target audience and clientele of Christian schools are usually regular churchgoers. Also they typically believe the church and family have total responsibility for education, believe this role has been subverted by governmental bodies during the past one hundred years, and believe the cost of Christian education is worth whatever it takes (Stoker & Splawn, 1980). The tenets of these churches include a "born again" experience, literal interpretation of the Bible (usually the King James version), and church attendance several times each week. Participation in secular mores, such as rock and western music, television and movies, and makeup; is usually met with disapproval. Administrators of these Christian schools consistently believe public

schools are based on humanism and their own schools are based on God and the scriptures. They define humanism as a belief that man can solve his problems, whereas these schools put God first and believe that all wisdom comes from a divine being (Stoker & Splawn, 1980). In an interview with Elkins (1992), Dr. David C. Gibbs, Jr., president of ACE, stated the mission of the Christian school is to get "the right things in and the wrong things out of the life of a child. Pride must come out of children if they are to be effective Christians and Christian education is to be a success (p. 12)."

Fundamentalist churches represent several denominations such as Assembly of God, Church of God, independent Baptist bodies, and unaffiliated churches. The greatest representation of these schools is Baptist, both independent congregations and those affiliated with the Southern Baptist Convention. Assemblies of God schools rank second with Pentecostals in third place (Pritchard, 1990).

Christian schools began to flourish in the South in the 1960s (Reese, 1985). In the period between the mid-sixties and early eighties, Evangelical Protestants claimed that their schools were being established at the rate of nearly two per day (Carpenter & Hunt, 1984). A suspicion lingers on the hypothesis that these schools were an attempt to escape integration and forced busing. National studies indicate a very large majority of students in fundamentalist Christian schools are white (Eby, 1986; Reese, 1985; Tilly, 1988) and fewer than two percent are black. (Nordin & Turner, 1980).

But, according to Reese (1985), the popularity of Christian schools is not simply racial concerns, but a comprehensive rejection of American liberal society. Fundamentalist complaints about public education include deterioration of values, teaching evolution, lack of discipline, drug use, banning prayer, and banning Bible reading from school. Public schools are also seen as

undermining traditional family values and undermining parents' right to educate their children (Elkins, 1992).

Evolution of ACE education. Fundamentalist churches sponsor most Accelerated Christian Education (ACE) schools (Pritchard, 1990). ACE clarifies and simplifies the views of the protestant fundamentalist and translates them into a school program. ACE claims to decrease the child's chances of making wrong choices. It supports prayer; censorship of texts; punishment and reward set out explicitly for certain actions; and a strong and traditional family. This view especially supports the authority of parents over their children (Hunter, 1982).

Because of fear that states will use statistics against them, many fundamentalist school administrators refuse to share such information with government agencies. Some schools go so far as to fail to report their existence, making verification of numbers difficult (Reese, 1985). Parsons (1987) estimates that ACE provides materials to some 5,000 schools serving half a million students in the U.S. Furthermore, roughly a third of all Christian schools in the United States operate with ACE curriculum. In 1984, ACE claimed that 8% of the 3.6 million students then attending private schools in the United States were using ACE materials (Elkins, 1992).

Many ACE schools have small enrollments. The average school enrollment is twenty-five students, but the range includes home schools with a single pupil to established church schools enrolling upward of twenty-five hundred children (Davis, 1990). Small schools find the ACE program affordable. Parsons (1987) describes ACE, "The school-in-a-kit operation (p. 66)".

In 1990, ACE served 100 countries (ACE, 2003). Reflecting on this phenomenal growth, Carper (Carpenter & Hunt, 1984) commented that, "Not only do these schools currently constitute the most rapidly expanding segment of formal education in the United States, but they

also represent the first widespread secession from the public school pattern since the establishment of Catholic schools in the nineteenth century (p. 111)."

The fastest growing segment of ACE is the home school market. Beginning in 1980, a number of families left public schools in favor of home schooling (Kelley, 1989; Lines, 1987). By 1985 the trend was strong. Lighthouse Christian Academy, the home schooling arm of ACE, provides more than five thousand families with materials, tests, records, and counseling services. The home school market accounts for roughly one-fifth of the total number of families using the ACE curriculum (Davis, 1990).

History of Howard. According to a "Personality Profile" published in ACE's newsletter, The Defender (n.d.), Donald Howard, founder of ACE, served in the Marine Corps for three years; he attended Bob Jones University (BJU) in Greenville, South Carolina, where he earned B.A., M.A., and Ph.D. degrees. His 1966 doctoral dissertation was titled, *The Influence of the Secular School Relative to the Christian Community* (Davis, 1990). Dr. Howard pastored the First Baptist church of Commerce, California; taught at Tabernacle Christian Schools and Bible Institute in Greenville, South Carolina; served as Vice President of the University of Plano, Plano, Texas; and was President of Dallas Christian Academy, Dallas, Texas. Howard also founded Calvary College in Letcher, Kentucky.

Dr. Donald Howard and his wife Esther Howard established the first ACE school in 1970 when they became disillusioned with public schools. Looking for a better way to educate their own children, they developed a program to "teach academic skills and content within a context of traditional American spiritual and moral values" (Basic Education, n.d., p. 3).

Dr. Howard wrote extensively on his perception of the ills of American education and the desirability of Christian schools as an alternative. In his videotape, ACE: School of Tomorrow,

Howard (1989) listed several factors in his decision to establish a private school: the progressive school movement, secular humanism, Supreme Court decisions removing prayer and Bible reading from public schools, the "God is dead" movement, and the women's movement.

In his videotape Teen Turmoil, Howard (1987) claimed John Dewey "introduced humanism into the schools." In fact, Dewey was a pragmatist and atheist. Howard also includes Horace Mann as an enemy of traditional schools and American Christian values. Mann's goal of universal public education coupled with his condemnation of teaching religious values in an increasingly pluralistic society contributed to the decline of American Education, according to Howard.

Howard (1983) advocates four requirements for saving "our public schools" and to help eliminate the economics and bureaucracy of "government education that stand between the parents and their schools" (p. 38):

1. Restore education to parental control and remove it as a function of government,
2. Abolish the U.S. Office of Education,
3. Pass a tuition tax credit bill, and
4. Return to theistic curriculum.

Although it is unknown why Dr. Howard no longer works within the ACE ministry, his wife has taken on an extensive role. After serving as President for five years, Mrs. Esther L. Howard announced in the spring of 2002 that she had appointed Dr. David Gibbs, Jr., to assume this role. Dr. Gibbs is described as "a longtime friend of ACE and founder of the Christian Law Association, which defends cases nationwide for Christian schools in litigation." Mrs. Howard's, new role in the ministry is as Chairman of the Board (The Defender Special Edition, 2002). With the changing of the presidential guard in 2002, "Mrs. Howard reaffirmed an already

known commitment to shift ACE to nonprofit status. She previously owned the company outright but started divesting her ownership gradually last year and transferring all of her ACE ownership to the nonprofit Accelerated Christian Education Ministries (ACEM).

The Accelerated Christian Education "Ministry"

According to Stoker and Splawn (1980), churches desiring to start an ACE school must make formal application to ACE headquarters. The application form contains a Statement of Faith and Practice and the applicant must sign that it agrees with this statement. The statement of faith asserts that:

1. The plenary, verbal inspiration of the Bible, equally and in all parts and without error;
2. The one God, eternally existent Father, Son, and Holy Spirit, Who created man by a direct, immediate act;
3. The preexistence, incarnation, virgin birth, sinless life, miracles, substitutionary death, bodily resurrection, ascension to Heaven, and second coming of the Lord Jesus Christ;
4. The fall of man, the need for regeneration by the operation of the Holy Spirit through personal faith in Jesus Christ as Savior on the basis of grace alone, and the resurrection of all to life or damnation;
5. The spiritual relationship of all believers in the Lord Jesus Christ, living a life of righteous works, separated from the world, witnessing of His saving grace through the ministry of the Holy Spirit (Accelerated Christian Education, n.d.).

The application also asks whether the applicant church supports the National or World Council of Churches. Churches that support either Council will not be allowed to establish an ACE school unless they sign a disclaimer (Stoker & Splawn, 1980).

Staff. According to their website, ACE (2003) recommends that each school have an administrator (principal) who may be the church pastor, a supervisor (teacher) for each thirty-five students and a monitor (paraprofessional) for each teacher. When a church begins a school, it must send the principal and consultant to ACE headquarters for a week of training. The monitor is trained by the local school.

Beyond the Statement of Faith and Practice, which must be signed by staff and parents, ACE exerts no control over the qualification of the staff an individual school hires. Many Apostolic administrators believe that a college education is not necessary for good teaching (Hipes, 1988) and that God is able to qualify his teachers (McElhaney, n.d.). Although ACE recommends all teachers hold at least a B.S. degree, the most important degree is a B.A. (Born Again) in Salvation (O'Reilly & Fellman, 1982). For any school to be Christian, all members of staff must be born again. ACE suggests that the best combination for the classroom is a husband-wife team because the real objective of school is to learn how to live (Stoker & Splawn, 1980).

In an effort to make learning a positive experience, ACE trains staff to "be inspiring and positive…instead of demeaning with negatives" (Mayes, 1992, p. 10). Monitors are trained to work positively with the students, discussing problems and asking questions that lead to a desired response. ACE offers the following guidelines to help the student with learning limitations: Limit his distractions, check his academic prescription, build his self-confidence, work with his parents, check his diet, consult a Christian counselor, pray for him, and remember his needs (Mayes, 1992).

In addition to the week's training for its staff, ACE also markets thousands of instructional audiotapes on topics such as teaching strategies, content management, discipline, room arrangement, and teacher development. All tapes emphasize spiritual growth (ACE, 2002).

Home schools are treated separately. The Lighthouse Christian Academy (LCA) is a full-service home school academy that utilizes the ACE curriculum. ACE offers free training to two persons who are members of a support group committed to buying ACE materials for one to five students during one school year (ACE, 2002). The Lighthouse Christian Academy, Lighthouse Christian School, Texas, and Lighthouse Christian School, Florida (A.C.E.M.'s two model schools), have received accreditation from the Southern Association of Colleges and Schools (SACS) and the Commission on International and Trans-Regional Accreditation (CITA) (ACE, 2003).

ACE facilities. ACE schools can be found in almost any type of building, such as remodeled downtown business buildings, former residences, and churches. Typically, though, the physical facilities of ACE schools tend to be the church facilities, whatever they may be. Churches typically have building space that is idle during the week and thus have available space, which can be readily adapted to provide a school facility (Stoker & Splawn, 1980).

ACE requires that content be taught in a learning center, which is a classroom designed for study carrels. A study carrel consists of a desk with partitions for privacy on each side, which is designed to allow private, individual study; achievement oriented time-on-task at the individual's own (supervised) pace; and an allowance of space for small and large group activities (O'Reilly & Fellman, 1982).

PACE Design and Format

The children work at their own pace through packets (PACEs) which contain information and self tests. According to ACE advertising, one teacher, working with two non-professionals, can instruct 40-50 students in one room with any combination of grades. Davis (1990) interviewed textbook editor Florence Hester who described the principle underlying ACE

products: “We produce a curriculum that students can learn, not a curriculum that teachers can teach (p. 109).” The teaching function is not really to teach, but to supervise, monitor, or help students work their way through the packets according to PACE directions (O’Reilly & Fellman, 1982).

Some of the staff has public school experience as teachers and administrators, some are from higher education, and some have added legitimacy for curriculum development because they are mothers. Hester, as quoted by Davis (1990) states that justification for motherhood as preparation for writing curriculum materials arises from the ACE premise that “A mother knows more how to read a child than any other (p. 113).” Writers are selected for their experience as classroom teachers and school principals in schools that use ACE materials. Most have been employed at ACE headquarters for several years prior to joining the editorial staff and all have demonstrated doctrinal purity during their ACE affiliation (Davis, 1990). John Tiner represents one exception to the in-house procedure. Tiner is known for his expertise in “creation science” and has authored several Christian devotional books. ACE contracted with Tiner for a high school science series (Davis).

Athletics, physical activity, counseling, and spiritual guidance, are not considered suitable subjects for packaged instruction, thus are not components of ACE’s product line. Each school, or teaching parent, must address these areas to meet individual needs and beliefs.

Curriculum. ACE administrators assert that the company thrives on the forefront of educational expertise. The first curriculum edition was established in 1972; the second curriculum edition in 1974; the third curriculum edition in 1980. ACE reports that the cost of producing these three editions, including core classes, electives, videotapes, and software,

exceeds $50 million dollars. According to ACE, the fourth curriculum edition is currently being developed (Brodhacker, 2003).

The ACE curriculum is available for kindergarten through the college level. Each new student is administered a nationally standardized achievement test to measure his present approximate level of achievement and reading level (ACE, 2002).The material is written from an authoritative position based on the King James version of the Bible and is expected to be learned as it is written. As reflected in the Statement of Faith, ACE suggests that building education upon the King James Version of the Bible is the only guarantee of a "pure" Christian education (ACE, 1979a).

Each subject contains 144 PACEs beginning with curriculum Level 1, PACE 1, and ending with curriculum Level 12, PACE 144. Courses above level 97 earn credit toward graduation. Normally, a student will complete about 12 PACEs in each subject each academic year; however, this will vary according to the student's ability. PACEs are self-directed instructional devices because students work their way through them at their own rate. Since students progress at their own speed, they spend differing amounts of time on each PACE and subsequently in each grade. Traditional timetabling procedures in which a block of time is assigned for all students in each subject would not be necessary in ACE schools. Some students may complete 20 or more PACEs per subject in one year while others may complete considerably fewer than 12 PACEs. Each student sets goals for himself in each subject area for each day and week. The goals must be approved by a staff member to assure that realistic ones are being set. The student then works in his carrel most of each day. When help is needed, the student puts up a small American flag, or a Christian flag, and a monitor or consultant comes by for assistance (Stoker & Splawn, 1980). The typical student is working on one PACE in each of

five subjects, but the PACEs may be on varying levels, according to his achievement in each subject. Only English, Math, Science and Social Studies are listed for mandatory use (ACE, 2002).

PACE booklet. A PACE is a booklet with about forty pages of short essays each followed by a set of nine to eighteen questions and a scripture to be memorized. A typical completion question is, "Texas is big , beautiful , and exciting! (ACE, 1984). Students fill in the blanks, match answers, select from multiple choice, or write short answers to these questions. Characters drawn in the cartoons represent a variety of ages (babies through grandparents), ethnicities (for example, blacks, Asians, and Hispanics), and family groups (for example, single parent families, young families, and extended families). In keeping with the teaching of character traits, each high school English PACE has a "Wisdom" insert in the middle of the packet. The Wisdom series, written by Dr. Johnson, Vice President for Development, addresses issues such as family conflicts and boy-girl relationships. Johnson makes a concerted effort to portray diverse individuals and groups in the Wisdom homilies (Davis, 1990).

In addition to teaching character traits, each PACE contains other objectives, instructions, illustrations, directions, activities, check-ups, self-tests, and final tests. A score key kept at a center table and supervised by the teacher marks the final tests. The final test is the supervisor's measurement of what the student has learned. If the student makes at least eighty percent, he goes on to the next PACE; When a student scores less than 80% on a PACE Test, the entire PACE must be repeated. According to ACE, the experience of repeating PACEs will produce the realization that it is important to learn the material thoroughly. According to Stoker and Splawn (1980), the only time a student is required homework is when he fails to accomplish his goal for the day. In that case, he must take the work home and bring it back completed the next morning.

Another ACE innovation is the “Gap PACE for spot learning”. This program allows parents, monitors, and administrators to diagnose specific instructional needs and prescribe the appropriate Gap PACE. In this way, a student with a learning discrepancy can fill the knowledge void. The Gap PACE enables students with learning disabilities to get the re-teaching they need (ACE, 2002).

Throughout the academic year, when the student successfully completes a PACE, a gummed star is awarded for display. Some supervisors give a larger star for scores above 90% and a flag seal for 100%. In addition to the above, ACE provides materials and suggestions for congratulations slips, honor roll, field trips, award banquets, national honor certificates, and literature certificates to reward student achievement (Mayes, 1992).

Progress monitoring. Students are trained to see daily assignments as steps necessary to maintain continuous progress that is part of a life-training process. A goal chart is maintained in the upper right corner of the student’s carrel and a progress chart in the upper left corner. A check of the daily goal chart against the front of the PACE tells the monitor whether the students are keeping their schedules. Students have the responsibility to set and complete goals; staff members have the responsibility to see that students do so. ACE trains monitors to spend one uninterrupted hour each day specifically checking student goals (Mayes, 1992).

ACE Discipline

“Foolishness is bound in the heart of a child; but the rod of correction shall drive it far from him,” (Proverbs 22:15). ACE schools base their discipline rules and regulations on such Bible verses, and have stringent discipline in comparison to the discipline in public schools. Parents are required to sign a statement of agreement with and support of the rules of discipline before they will accept their children as students.

> Discipline is what is done FOR a student; not TO him. By nature a child rebels against parental and school controls which suppress carnal desires… Punishment should be at an appropriate level, relative to the offense. (ACE, 1982).

A demerit system seems to be the core of the ACE schools discipline program. Demerit marks are given for disturbances or for breaking rules (ACE, 1982).

Corporal punishment is seen as not only necessary but commanded by God through the scriptures. Corporal punishment is used in ACE schools for offenses such as lying, cheating, fighting, laziness, and failure to attain goals. The principal paddles the student, reads him an appropriate scripture, prays with him, and hugs him to indicate a love relationship (Stoker & Splawn, 1980). To rule out spanking is to omit a key ingredient in discipline! It brings repentance and thus allows the child to clear his conscience; he can start over. "The rod and reproof gives wisdom" (Proverbs 29:15) (ACE, 1982).

Suspension or expulsion may be utilized for attitude incompatibility, uncooperative spirit, rebellion toward discipline, sowing discord, chronic complaining, chronic unexcused absences or tardiness, nonconformity to standards of conduct and grooming, lack of parental cooperation, inability to respond to individualized instruction (Stoker & Splawn, 1980).

Discipline is also maintained through a reward system. Students are encouraged to achieve and assume responsibility for their own achievement through an incentive program. This incentive program is a three-level program – Level A, C, and E. Each level carries with it certain responsibilities and privileges (Stoker & Splawn, 1980).

Program Evaluation

Defining Program Evaluation

A program is a collection of several learning experiences held together by logistics such as scheduling, staffing, equipment, communication, finances, and so on (Priest, 2001). Research differs from evaluation in that, "Research is the activity aimed at obtaining generalizable knowledge . . . which may result in theoretical models, functional relationships, or descriptions[,] . . . obtained by empirical or other systematic methods and may or may not have immediate application" (Worthen &Sanders, p. 19). In contrast, "Evaluation is the determination of the worth of a thing. It includes obtaining information for use in judging the worth of a program" (Worthen &Sanders, p.19) and seeks to "improve" practice effectiveness in a specific situation (Priest, 2001). During the past decade, program evaluation has developed as a process distinct from educational research and has become a source for educational improvement (Worthen & Sanders, 1991).

"Program evaluation refers to the thoughtful process of focusing on questions and topics of concern, collecting appropriate information, and then analyzing and interpreting the information" (Taylor-Powell, Steele, Douglah, 1996, p. 1) in order to make necessary decisions about the program (McNamara, 1998). Program evaluation is decision-oriented. This is perhaps the most distinctive difference between program evaluation and research. The results of program evaluation are used to make decisions about the program (Hanson, 1978). In an era where resources for educational programs are limited, those programs that can document their success in having an impact on their participants and in using resources efficiently will be at an advantage for ongoing funding (The American Physiological Society, 2003, ¶ 2).

When a program is evaluated, one critical issue will be whether the program supports the institutional mission and goals (Healey, 2000). Without effective evaluation, the program staff may fail to document important impacts the program has on its participants. It may also fail to recognize how different components in the program are affecting the participants or participating institutions. In addition, evaluation helps focus staff efforts and project resources on the specific goals of the program. Without written goals and specific objectives, the staff members often direct their individual efforts toward slightly different goals, thereby reducing the efficiency of the overall program (The American Physiological Society, 2003, ¶ 1).

Program Evaluation Theory

A theory is "a body of knowledge that organizes, categories, describes, predicts, explains, and otherwise aids in understanding and controlling a topic" (Shadish, Cook, and Leviton, p. 31). In other words, a theory describes the various methods and approaches of a subject (e.g., program evaluation) and includes the assumptions of why those methods work. Datta (2001) perceives, ". . . [a] great distance between those who see evaluation as a quest for social justice which requires advocacy for the disenfranchised and those who see evaluation as the most nonpartisan, fair search we can mount for understanding what is happening and why, and for reaching judgments on merit, worth, and value (p. 403)."

It is difficult to pinpoint the first person who suggested the need to consider theory in evaluation, although in his seminal work on curriculum design, Ralph W. Tyler (1949) briefly discussed the importance of theory in developing instructional objectives. Though Tyler (1949) did not directly address learning theory in his explication of the role of evaluation, clearly he felt it was important for schools to study the strength of the theory and the effectiveness of the

learning experiences that were to be shaped from it. Thus, Tyler was perhaps the first to discuss the importance of examining theory in evaluation.

Some authors focus on the various types of theory involved in program evaluation. For instance, Rossi and Freeman (1989) developed a three-pronged typology of evaluation theory. According to the authors, well-developed programs should be based on sound "impact models," which amount to translations of conceptual ideas into interventions founded on three fundamental hypotheses: (a) causal, (b) intervention, and (c) action.

The causal hypothesis is the set of underlying cause-effect relations that define the social problem for which an intervention is designed to address. Hence, the causal hypothesis specifies the reasons the problem persists. The intervention hypothesis explains how the program will address the causes to ameliorate the undesirable outcomes. It serves as the logic of the program, and represents what most theory-based evaluators would consider "program theory." An action hypothesis is necessary to describe how the program will address all key components of the cause and potential side effects that may unintentionally alter the natural flow of the cause-effect chain.

Chen (1990) expanded on Rossi and Freeman's (1989) program theory model and discussed a more extensive array of the various theories involved in evaluation. He distinguished six theory types partitioned as either normative or causative in nature. Normative theory relates to the program blueprint, or how it was designed to work. Assessing normative theory amounts to assessing if "what was done" matches "what should have been done." Causative theory details how the program works. The type of evaluation undertaken to improve programs depends on the end-goals (McNamara, n.d.).

Worthen and Sanders (1991) suggest there are two types of program evaluation, formative and summative. In a formative evaluation, the researcher gathers evidence to support the ongoing development and improvement of a program as it is being implemented (Healey, 2000). A summative evaluation provides data, that clearly demonstrate whether the program is accomplishing its stated goals and objectives (The American Society, 2003, ¶ 1), for external decision makers, who will then determine whether the program should be continued, augmented, reduced, or terminated. Summative evaluation has a feedback process that goes outside the programming unit (Healey, 2000). Although the data collected may be the same for formative and summative evaluations, the presentation will differ. Whether the results are used within the programming unit or outside it, decision-making is the intended use of the data collected (Healey, 2000).

McNamara (1998) offers as three major types of program evaluation: goals based evaluation, processed based evaluation, and outcomes based evaluation. Goals based evaluation evaluates the extent to which programs are meeting their predetermined goals or objective. The process-based evaluation serves to gain an understanding of how a program really works, and its strengths and weaknesses. An outcomes based evaluation asks if the organization is conducting the needed program activities to bring about the outcomes clients desire, rather than just engaging in busy activities which seem reasonable to do at the time.

Purposes of Program Evaluation

Programs must be evaluated to decide if the programs are indeed useful to constituents (McNamara, 1998). The benefits of sound program evaluation, which include program improvement and accountability, continue to be compelling (Trevisan, 2001). Scholars cite three reasons for doing evaluations (Isaac & Michael, 1983; Priest, 2001; McNamara, 1998;):

1. Accountability: driven by internal and external demands (Priest, 2001) to confirm that objectives are met, to make better decisions about program planning or operations, to authorize fiscal payments, to meet grant obligations, and/or to correctly allocate program resources. Or as McNamara (1998) explains, "verify you're doing what you think you're doing (p. 2)." Program evaluations are often conducted to provide accountability to state legislature and departments of education (Allen, 1992; Fairchild, 1993; Schmidt)
2. Improvement: driven by the internal demand to identify program strengths or weaknesses, to create safer practices, to increase educational value, to establish quality benchmarks or assurance standards
3. Marketing: Driven by the external demand to advertise past program effectiveness, to indicate a collective track record of successful programming, to promote positive public relations, and/or to advocate or lobby social policy.

Use of Program Evaluation in Education

Program evaluation in education. Most social programs serve one ultimate goal--to improve social conditions. Many social interventions in areas such as education are designed to improve the life prospects of individuals deemed in need of skills, knowledge, or outlooks to function more effectively in the world (D'Agostino, 2001). Although tightly controlled studies are ideal in experimental settings, some researchers have questioned their applicability to school settings (Goldman, 1989; Hayes, 1994; Pine, 1981). In 1981, the Joint Committee on Standards for Educational Evaluation listed the standards of excellence in evaluation and reaffirmed them in its 1994 version (Joint Committee on Standards for Educational Evaluation, 1981, 1994). Support for the standards of excellence in evaluation is provided by the stated rationale for the Joint Committee in the same document:

1. Lifelong education is important to individuals, institutions within society, and society itself.
2. Evaluation is an integral, inevitable feature of all aspects of education.
3. Evaluations that are properly commissioned, conducted, disseminated, and used help improve education in general, and specific programs, products, and materials in particular.
4. Evaluation standards can play a vital role in upgrading and ensuring the quality of educational evaluations (p. 6).

As Baker and Niemi (1996) pointed out, educational psychologists and educational evaluators have an overlapping history and share common values. Both disciplines (a) are committed to improving education, (b) consider some of the same individuals as important figures in their respective developments (such as Thorndike, Tyler, and Cronbach), (c) value sound measurement and methodology, and (d) have, at some times during their development, emphasized theory building and theory-based inquiry.

About 12 years ago, Ginsburg (1992) observed, "Evaluation activity of the U.S. Department of Education followed an extreme boom-and-bust cycle. The rise in spending on evaluation of programs in the 1970s and the decline during the first term of the Reagan administration were not much different from the experiences of other agencies" (p. 37). There is scant information on whether the Government Performance and Results Act (GPRA) has brought together evaluation findings and budget decisions. However, in at least one instance, the meta-analyses of DARE, the Drug Abuse Resistance Education program, showed results so discouraging that the Robert Wood Johnson Foundation put $13 million into a major program

revision. Their goal is to salvage the valuable access of police officers to schools while overhauling program theory, concepts, approach, and curricula (Wholey, 1997).

Importance of Program Evaluation in ACE

The ease of program implementation and its emphasis on a disciplined life are seen as strengths (Eby, 1986). PACEs are administratively convenient and economic; teachers and pupils are placed in a pre-planned and clearly organized environment; parents understand that Christian moral uprightness has returned to guide their children; and, for those that seek it, Bible inerrancy is the corner stone of the school. In offering this, and watching over its growth, Howard quotes John Wesley's 1735 statement on the need for this type of alternative: You are better off to send your child to the devil than to send him to the common school (Howard, 1979, p 19). But the question of whether ACE schools are effective still remains.

Little evaluation has been done by agencies outside the ACE community, and, among these studies, the research is mixed. Research was found which addresses the following categories:

Discipline

Fundamentalists usually see human nature as inherently wayward. This means that children must be strictly disciplined and controlled by the authority of adults, the church, and the Bible (Stoker & Splawn, 1980). Miller (1990, 1993) makes the point that saving children from evil is just one rationale for physical punishment, but a related goal is to promote obedience from children, a characteristic of a "proper" Christian household. In this view, man should not question God, and children should not question the adult who wears the cloak of divine omnipotence.

All of the students interviewed for Stoker and Splawn's (1980) study expressed agreement with the discipline of the schools. This was true even of students who had been administered corporal punishment. Students stated without exception that one of the reasons they liked ACE schools was because they had stricter discipline than public schools.

While some may regard this as a sensible and proper Christian upbringing, Alice Miller (1990, 1993) calls it "poisonous pedagogy." She points out that we see here the roots of systems dependent on obedience, such as Nazism. Here are the words of the commandant of Auschwitz, Rudolf Höess, from his memoirs (Höess, 1963, quoted in Miller, 1990):

> It was constantly impressed upon me in forceful terms that I must obey promptly the wishes and commands of my parents, teachers, and priest, and indeed all adults, including servants, and that nothing must distract me from this duty. Whatever they said was always right. These basic principles by which I was brought up became second nature to me. (p. 68)

The practice of corporal punishment continues despite the fact that almost all of behavioral psychology agrees that using positive reinforcement of alternative behaviors gains greater and longer lasting behavior change than does the use of punishment. The resolution on corporal punishment passed by the American Psychological Association (1975) sums up what psychologists know and believe. "THEREFORE BE IT RESOLVED: That the American Psychological Association opposes the use of corporal punishment in schools, juvenile facilities, child care nurseries and all other institutions, public or private, where children are cared for or educated" (p. 632).

"The claim for biblical support is sometimes based on the aphorism 'spare the rod and spoil the child,' which is not biblical, though it often is claimed to be and easily

could be." (Greven, 1992). As described by the noted psychologist Erik Erikson (1968), this kind of upbringing leads to the warping of personality and the stunting of psychosocial growth. The psychosocial challenges faced by children and adolescents--trust versus mistrust, autonomy versus shame and doubt, initiative versus guilt, and so forth, cannot be resolved in ways to promote healthy adult adjustment in households that demand obedience through punishment.

When questioned on these matters by Speck and Prideaux (1993), the vice president of ACE said, "ACE does not necessarily embrace philosophical beliefs compatible with those of most contemporary writers of curriculum" (p. 284). Nonetheless, when the New Testament is examined, there is no evidence that Jesus ever condoned violence toward children.

Discrimination

The curriculum of ACE takes up and simplifies the views of the Protestant fundamentalists and supports prayer, censorship of texts, the strong and traditional family, and corporal punishment. ACE emphasizes Biblical orthodoxy and separation from the outside world. The ACE schools have been criticized for religious, racial, and community segregation (Hunter, 1982).

Religious discrimination. According to one mother of an ACE student, "this program allows us to teach our child a HEALTHY basis of knowledge in religion that does not force any one's religious views or rules on him." (ACE, 2003) However, the most apparent criticism of ACE schools has been that of religious discrimination. Throughout the PACEs that make up each course are found biblical references and quotations from the Scriptures. The Alberta Department of Education (1985) cautions that it is only when the use of the approach to integrate educational

content within a religious context impedes learning that an objection can be raised. Alberta cited one example of possible interference with learning by the religious orientation of ACE material is the ACE science program. The elementary part was rated problematic while the junior high science and biology programs were rated as unacceptable. The unacceptable ratings were given by Alberta because of the repeated condemnation of those who reject the author's interpretations of the Bible as they pertain to science.

According to Alberta (1985), the condemnatory language of those holding opposing views is a notable example of intolerance. Alberta further asserts that ACE materials do not respect the integrity of those who hold other views and do not teach a charitable attitude toward people who approach scientific data in a different manner.

Racial discrimination. Alberta (1985) also found that ACE materials do not display a systematic lack of tolerance and understanding toward any of the minority groups. Occasional lapses do occur as were noted in social studies where a degree of insensitivity towards blacks, Jews, and Natives was identified (Alberta). For example, one of the spelling words in the Word Building PACE is "squaw," offensive slang for a female Native American. Children have derogatory names. An overweight child is named "Pudge", two African American children named "Racer" and "Booker".

However, the promotion of attitudes of tolerance, understanding, and respect for others is more than an avoidance of slights towards people who are different. According to the criteria used in the audit of Alberta Education resources, material that fosters critical thinking as a basic objective is a necessary ingredient for developing each attitude. ACE materials are notably lacking in this respect.

Community segregation. Joan Brown, Australian President of State School Organizations, perceives the ACE system as promoting indoctrination and isolation to a level that is not socially acceptable (Geeson, 1981). The religious rights of parents versus the rights of their children to join the mainstream of society (and contemplate the future rather than the past) have also been noted (Nordin & Turner, 1980).

Lack of Accreditation

When one considers (1) parental rights in the upbringing of a child; (2) the free exercise of religion clause of the First Amendment; (3) the bar to government establishment of religion in that same First Amendment; (4) the desire of many Americans to have their child in a secular and sectarian learning setting, problems arise (O'Reilly & Fellman, 1982). Repeatedly, citizens have sought legal protection in special problems that have arisen with public schools, where skeptical views of the adequacy of secularized curriculum have led to avenues for education that often do not conform to statutory mandates (O'Reilly and Fellman).

Christian school administrators do not seek nor want approval by state and regional accrediting bodies, for to do so would be to refute their reason for existence. Administrators, who are often preachers, believe the school is a ministry of the church as much as the regular worship services. ACE considers state accreditation a farce and a violation of the First amendment to the US Constitution (Stoker & Splawn, 1980). It is the schools' position that it operates under God's laws and thus is not subject to the laws of man (O'Reilly & Fellman, 1982). Where church schools are required to be state accredited, ACE, when challenged, has gone to court and won (Stoker & Splawn).

For example, in Nebraska an ACE school refused to request approval of the program even though the State Department of Education had, in advance, indicated likely approval. This

same school also refused to employ accredited teachers. Because the Nebraska school laws require inspection of the schools by the county superintendent, school officials refuse to submit to such control, contending that the state has no right to inspect God's property (O'Reilly and Fellman, 1982). In another venue, the Kentucky Supreme Court ruled the state could enforce fire, health, and safety regulations and some standardized testing requirements, but could not require use of state-approved teachers and textbooks (Turner, 1981).

None of the ACE schools surveyed by Stoker and Splawn (1980) were accredited by the Texas Education Agency, and none of them plan to seek such accreditation. The schools involved in the study, with three exceptions, do not have consultants. They merely have monitors, or aides, most of them having only a high school education, or less. One monitor in one school who was teaching reading had only a grade-school education. Salaries paid to the schools surveyed are generally low. Some schools operate with volunteer, unpaid personnel as monitors.

ACE Curriculum Theory

Withholding the issue of certification, some see the teacher's role as positive in that she can become familiar with each student's learning process and can have more time to assist individual students (Eby, 1986). Many educators agree that the individual learning aspect of ACE instruction might benefit highly motivated students or those needing attention. According to Eby (1986), the fact that schools can admit students at all levels without hindering the overall functioning of the program is considered a plus.

PACEs are well written in that they present information clearly and are organized around explicit objectives. The use of examples, practice exercises, systematic reviews, and cumulative exercises illustrates the incorporation of commonly accepted, sound principles of pedagogy

(Alberta Department of Education, 1985). For example, one set of PACE goals is: To learn when to use a 1. comma, 2. colon, 3. quotation marks; To learn abbreviations; To learn to have peace through Jesus – to be peaceful (ACE, 2002, p. 8).

The PACEs content may approximate the public school's curriculum, but a careful reading reveals the blending or interweaving of facts and opinions, especially information flavored with fundamentalist Christian doctrine (Davis, 1990). The ACE educational strategies are at direct odds with contemporary views in educational psychology. ACE's centuries-old penchant for obedience over thoughtfulness, for commands rather than explanations, reappears in the child-rearing advice given by many past and current religious counselors, and such guidance has affected American social life and schooling (e.g., McCaslin & Good, 1992). The recent revolution in learning theories from behaviorism to cognitivism includes a profound change in the way we view children (see Greeno, Collins, & Resnick, 1996). Contemporary constructivist and situationist views of learning do not begin with an "obedient mind"; rather, they start with a view of the mind as active and socially mediated. The new psychology has changed how learning and instruction are thought about in the different subject matter fields (De Corte, Greer, & Verschaffel, 1996; Linn, Songer, & Eylon, 1996). These various subject matter fields now require of a learner curiosity, agency, and thoughtfulness---characteristics that cannot develop well when obedience is the primary goal of child rearing. Speck and Prideaux (1993) note that nearly all speculative activities about the world and the human condition have been purged from the curriculum, and so, therefore, have all of the teaching methodologies that promote speculation— inquiry learning, laboratory learning, cooperative learning, and so forth.

Program Content

Resources. None of the facilities investigated in Stoker and Splawn's (1980) study had science laboratories, gymnasiums, or cafeterias. Most schools provided a room in which students ate lunches brought from home. In some instances, a microwave oven was provided for heating food brought from home. Although all of the schools give children play breaks, there was little equipment available to play on or with.

Mathematics. Those who designed the ACE packets, believe that mathematics is a factual enterprise, and should be taught as an example of God's orderly universe. Some fundamentalists fear that the "new math" of the 1960s would undermine faith in absolute values, and therefore could lead to relativistic thinking, which is precisely what the secular humanists want. (Gaddy, Hall, & Marzano, 1996). This belief is in direct opposition to The National Council of Teachers of Mathematics (1989) which promotes the "belief that learning mathematics is a sense-making experience" (p. 15) involving hands-on activities, not merely the memorization of vocabulary and procedures.

English. English is taught as a way to spread God's word, and language use is emphasized through exercises like "Jesus died for (your, you're) sins." and "God (is, are) good." Missing from high school reading lists is such literature as *The Diary of Anne Frank* and *Romeo and Juliet* (too sexual), *Othello* (promotes interracial marriage), and *Catcher in the Rye* (multiple issues of sexuality; profanity; self-indulgence; lying; defamation of women, people with disabilities, God, and minorities. However, one homeschool mom and dedicated A.C.E. customer in Tennessee lauds, "…the literature books I can trust without having to examine them for moral content" (ACE, 2003). Secular books that are endorsed include *Charlotte's Web, Heidi* (based on the classic), *Swiss Family Robinson*, and *The Rime of the Ancient Mariner*.

Social Studies. Contrary to the ACE learning philosophy, The National Council for the Social Studies (1994) embraces constructivist pedagogy. In their ideal classrooms students build civic competence by searching for information and by manipulating data; they develop and present arguments and stories; and they participate in groups and make social choices (National Council for the Social Studies, 1993).

Throughout the Social Studies curriculum, themes of capitalism and patriotism are often blended with Christianity. Sexism abounds throughout the entire curriculum. As one mother and former user of ACE states,

> When the girls are drawn [in cartoons] they are playing with dolls or helping Mom in the kitchen…the girls are never shown doing anything outside. The boys are learning and making outstanding discoveries about life's lessons. One day my daughter asked me how come she has never learned about any women in her PACE's. I looked through all her works and there were lessons about Jonathan Edwards, George Whitefield etc. No women at all. (High, 2003, ¶ 1)

One story that is part of the Social Studies ACE packet conveys the sexist message that men and women have sex-defined roles. In this story a mother says to her son:

> Your father is the head of our home. It is God's plan for the father to be head of his family. I talk to your father about things, but he is the one who decides what we must do. I would do wrong not to obey your father because he is the head of our home. God is pleased when a mother obeys the father in the home. (Speck & Prideaux, 1993, p. 287).

Science. Practical Homeschooling Magazine touts that, “the A.C.E. science series is the easiest to use, most exciting, best organized, and most thorough high school science curriculum I have yet seen" (ACE, 2003, ¶ 13).

Still, science in many Christian schools is taught inadequately by secular standards (Speck & Prideaux, 1993). ACE Packets for Year 8 Earth Science include a unit that provides "proof" of creationism and another unit that provides "proof" of the flood. Both science processes and science facts appear to be taught poorly in ACE schools. One science ACE packet (1986) defines science as "the search for the principles of God's creation based upon reproducible experiments.... We should always subject a principle to the test of the Bible" (p. 3). In contrast, science was described by the National Academy of Sciences as: "Scientific interpretations of facts are always provisional and must be testable" (quoted in Knight, 1985, p. 118). Thus, scientific notions about challenging authority, the need to observe phenomena oneself, the ability to develop testable hypotheses about the phenomena of interest, and the belief that all ideas about the natural world are provisional is anathema to ACE, which maintains a belief in the literal interpretation of the Bible. The inerrancy belief, of course, is the root of the dispute about evolutionary theory.

As might be expected, the call for obedience by youth to authority and the Bible leads to direct conflicts with the processes and the theories of contemporary science. The ACE science packet (1986) says that Darwin is an important figure in science but that his theory of evolution is wrong:

> The Bible is completely against any such theory. Evolution claims that man arose through a series of random changes. The theory leaves no room for man's responsibility or man's sin. If evolution were true, no man would be born a sinner because Adam would never have fallen and committed the original sin of disobedience to God. If evolution were true, Christ would not have needed to die for our sin. (p. 12)

Explaining tensions between proponents of evolution and creationism, two theories of the origin of animals and man, an American history PACE reads,

> Both cannot be right. Is it logical to trust Darwinism or God? …men began to apply Darwinian thought to social relationships. The result of this extension of evolutionary thought was known as "social Darwinism." The survival of the fittest was applied to business practice and politics with disastrous consequences. Both the Nazism of the German Third Reich and Soviet International Communism justified their acts of terror, oppression, and racism with the theory of Social Darwinism (American History, 1983).

The "Activity Pac" for the Science (1096) booklet includes matching the words atheist and silly, along with thermodynamics and entropy.

Substandard Content

Rose and Brouwer (1986) and Rose (1988) state the danger in ACE is not in religious content but in its emphasis on maximizing efficiency at the expense of analytical, creative thinking. ACE, according to Rose and Brouwer, prepares students for low-skill, low-paying jobs rather than those that require leadership skills. In *Keeping Them Out of the Hands of Satan* (1988), Rose expresses her concern that by using ACE curriculum, fundamentalists are unwittingly limiting their children's future social status by reinforcing lower class employment expectations.

Alberta, Canada. The content coverage of Alberta public schools as compared to ACE curriculum shows that ACE is severely lacking. Overall, the ACE program only covers 50% of the public school courses (Bevan, 1984). Furthermore, the ACE curriculum does not meet the high school diploma requirements in English, nor prepare students to write the English Diploma Examination. In language arts the reviewers from the Alberta Department of Education (1985)

found the PACE curriculum materials covered only reading and writing, omitting three of the five main skill areas, i.e. viewing, listening, and speaking. Over 60% of the provincial Mathematics 30 core objectives are omitted from ACE mathematics materials, while less than 50% of the core science programs (biology, chemistry, and physics) receive adequate coverage in the ACE science PACEs.

Alberta (1985) also laments that the manner in which content coverage has been affected is also important. One approach to content analysis is to divide cognitive skills into two levels, namely, higher-level cognitive skills (analysis, synthesis, evaluation, and application) and lower-level cognitive skills (knowledge, comprehension). According to Alberta, there are far too few examples in the ACE curriculum materials where students are called upon to exercise their creative powers, to be original and to develop critical thinking skills. Rote learning and fill in the blanks do not allow the student to analyze and interpret data. Children are expected only to parrot information provided by the educational modules. The syllabus used by ACE consists almost entirely of memorizing and then regurgitating information into a workbook. Oral language, listening skills, mental involvement, critical thinking, communication, and peer interaction is not promoted. This method of introducing material is not appropriate for teaching the goals of schooling (Bevan, 1984).

Following are comments, from a student and two mothers, respectively, found on the Home School Reviews website:

> I attended a Christian school who used this curriculum and found it was basically a babysitting service. I did "ok" because I was always a great reader, loved reading, and didn't mind being stuck to myself for long periods. However when I transferred to public high school, I was a couple of years behind in math, and never really was successful at

> the math concepts that I missed those years. I also realize now that I was simply retaining enough to pass the tests and move on. (Sheri, 2002)
>
> I found out that [my daughter] "loved" this curriculum (3rd and 4th) because it was so easy and she did not have to think! She told me that she wants to change now because she feels like she needs to "quit messing around " and get serious about her school. She also feels that she is stupid! (Karen, 2002)
>
> My kids use the SOT in a Christian school … But when I had my kids tested at the local public schools with the proficiency test they all flunked out. And my kids where were suppose to be 2 grade levels ahead from using SOT!! (Disappointed Mom, 2002)

Australia. According to the Speck & Prideaux (1993), the ACE science program is perhaps the most deficient; students are taught only those scientific principles which coincide with biblical knowledge. Furthermore, the ACE social studies program is not consistent with that used in Australian public schools.

The Australian Schools Commission appointed Michael Norman, a well-known and well-qualified independent school principal, to survey ACE and their practices (Geeson, 1981).

Norman's major reservation concerned:

> …their very absolutist and fundamentalist view of how learning takes place. It's not just that the atmosphere is too intense, but they are neglecting what childhood is about. Unrestrained play is sometimes an important part of childhood… they (ACE schools) are pushing what, in some respects is a good idea, to an extreme limit. (Geeson, 1981, p. 44)

On the Home School Reviews website, a mother who worked as a "teacher" for ACE while her child was enrolled in the program expresses her disappointment with the program:

> I was pleased overall, but I also saw some things that disturbed me. My 7-year-old son sat at his cubicle for days at a time with no breaks. He was miserable. When I asked why he missed all his breaks (everyday for an entire week) I was told it was because he had scoring violations. I asked if he could have a spanking instead of just sitting for days on end. By the time I picked him up at 3:30 his brain was mush. Another time he didn't have his Bible passage for the month memorized. The "supervisor" made him write the entire passage 10 times. She said that if he did not turn it in the next morning that he would not have his breaks for the rest of the week. He had already missed all breaks. It was a Tuesday and we had a special music group performing at our church that night. I missed it all because I was sitting in the church's library trying to get a blubbering 7 year old to write a passage (8 verses) from Romans, 10 times. Spiritually, he would have gotten a lot more from the church service, but those all important verses must be regurgitated, or else!! (High, 2003)

Student Achievement

In Stoker and Splawn's (1980) study all the schools surveyed stated that their students achieve more than students do in the public schools. ACE headquarters maintains that students in ACE schools tend to show up to two years above public school students on the 1959 California Achievement Test (CAT) (1963 norms). In reporting such progress, no mention is made that public schools cannot be selective as can ACE schools (Stoker & Splawn).

Eby's 1986 study, using the 1978 Metropolitan Achievement Test and the Scholastic Attitude Measure, compared five Christian schools (ACE and A Beka) on the basis of reading and mathematics performance and attitude. ACE students demonstrated greater achievement in

reading and a more positive self-concept the longer they were in the program. ACE scored above the norm in mathematics only in the upper grades.

Bob Jones University (J. Deuink, cited by Elkins, Personal Communication, November 5, 1991) did an informal study in which their student population was subdivided into groups. While other groups' ACT scores have climbed in the last four years, the ACT scores of ACE/Alpha Omega students have dropped (Elkins, 1992).

The same Bob Jones University study shows that ACE/Alpha Omega students had the lowest GPAs in both 1985/85 and 1990/91.

Rose cited McDearmid's (1979) results that found sixteen percent more ACE graduates than public school graduates went on to college than for the general population in Pennsylvania. Ronald Mayes conducted a study using the High School and Beyond School Questionnaire originally prepared for the National Center for Educational Statistics by the National Opinion Research Center. Of the 18 regional coordinators contacted by Mayes, four provided the requested list of selected model ACE schools. Of the 49 model ACE schools submitted by the four regional coordinators, 23 (46.9%) returned completed surveys. The report shows that 59.9 recent ACE graduates went on to college. This is substantially higher than the 49.1 percent of public school graduates shown to have gone to college according to the original High School and Beyond School Questionnaire.

Research Question

How do the West Virginia Christian School achievement scores compare to the public school standard of achievement in Wood County, West Virginia?

Methods

Participants

A fundamentalist Christian School in West Virginia, which employs ACE as their curriculum, is the focus of this study. The school has been in operation since the early 1980's and has graduated 175 students. For the purposes of this study, said school will be referred to as WVCS. Also included, as a standard of comparison, is the measure by which schools are evaluated in Wood County, West Virginia, the county in which WVCS resides.

Instrumentation.

California Achievement Test. The principal of WVCS provided California Achievement Test – Fifth Edition (CAT5) scores for grades 1 through 12 for the years 1999 through 2003. The student CAT5 scores were analyzed.

The CAT5 is a K.0 – 12.9 test series "Designed to measure achievement in the basic skills taught in schools throughout the nation (CAT5, 1993, p. 6)." The test is developed and published by CTB Macmillan-McGraw-Hill. The basic academic skills are tested in seven curriculum areas: Reading, Language, Spelling, Mathematics, Study Skills, Science, and Social Studies. Thirteen overlapping levels, Level K to Level 21-22, are appropriate for grades ranging from kindergarten through grade 12.

Two test configurations, the Survey and the Complete Battery, are developed to measure the same content with items of closely matched difficulty. Each configuration has two forms, A and B, and allows for norm-referenced interpretation. The longer Complete Battery also allows

for criterion-referenced interpretation, known on this test as curriculum referencing. The Survey contains 20 items for each subtest whereas the Complete Battery contains 24-50 items per subtest. Depending upon the test level, the length of the test is designed to take 87 to 330 minutes to complete.

The scores, called Objective Performance Indices (OPI), are reported within intervals in some of the student reports: not mastered (.00-.49), partially mastered (.50-.74), and mastered (.75-.99). Scale scores are the basis for the various derived scores including percentile ranks, normal curve equivalents, stanines, and grade equivalents. The standard errors of measurement are generally about 2.7.

Spring and Fall standardizations each involved scores from over 100,000 students from approximately 260 public schools and 100 private or parochial schools. Sampling stratifications included four regions and two sizes (for all schools), four community types (for public and Catholic schools), and two socioeconomic levels (for public schools only).

Considerable effort was exerted to develop plans and items consistent with current curriculum and instruction, and content validity was considered carefully. Also, considerable effort was given to minimizing inappropriate differential performance across gender and ethnic groups, and some attention was given to criterion-related and constructs validity.

Reliability tends to be quite high when a large number of items are involved (e.g., for the total battery scores). The Kuder-Richardson Formula 20 (KR20) was used to estimate the internal consistency of two forms for the Complete Battery for Fall and Spring standardizations. For the total battery, KR20s ranged from .94 to .98, with a median of .96. Reliability coefficients using alternate forms with a 2-week interval were computed for Complete Battery A and B. For the subtests, coefficients ranged from .25 to .90, with a mean of .75. For the content area totals,

the coefficients ranged from .27 to .93, with a mean of .82. Internal consistency reliabilities for the complete battery are in the .80 to .90 range. The Complete Battery total scores are in the .90-.95 range.

Stanford Achievement Test -10. Students in Wood County, West Virginia measure annual achievement by use of the Stanford Achievement Test-10 (SAT-10). The SAT-10 is a K.0 – 12.9 test series designed to measure achievement in the basic skills taught in schools throughout the nation. The test was developed and published by Harcourt Assessment from 1923 – 2003. The basic academic skills are tested in seven curriculum areas: Reading, Language, Spelling, Mathematics, Listening, Science, and Social Science. Thirteen overlapping levels, K.0 to 12.9, are appropriate for grades ranging from kindergarten through grade 12.

Two test configurations, the Full Length and Abbreviated, were developed to measure the same content with items of closely matched difficulty. Each configuration has two forms, A and B, and allows for norm-referenced interpretation. The longer Full Length battery also allows for criterion-referenced interpretation (Harcourt Assessment, 2003). Each section has a suggested testing time, which is a guideline to help teachers and administrators plan. However, unlike its predecessors, the SAT-10 tests are not timed and students are encouraged to work at their own pace to answer all of the questions (Harcourt Assessment, 2003, June, 9).

The SAT-10 is aligned to a wide range of national standards, including those of the International Reading Association (IRA), the National Council of Teachers of English (NCTE), the National Assessment of Educational Progress (NAEP), the National Council of Teachers of Mathematics (NCTM) and the National Council for the Social Studies (NCSS). It is also aligned to the National Science Education Standards and the Benchmarks for Science Literacy, and conforms to the Standards for Educational and Psychological Testing and the Code of Fair

Testing Practices in Education. Content validity was carefully considered and considerable effort was given to minimizing inappropriate differential performance across gender and ethnic groups, and some attention was given to criterion-related validity and construct validity (Harcourt Assessment, 2003, June, 9).

Reliability tends to be quite high when a large number of items are involved (e.g., for the Full Length battery scores). The Kuder-Richardson Formula 20 (KR20) was used to estimate the internal consistency of two forms for the Full Length battery for Spring standardizations. For the Full Length battery, KR20s subtest coefficients in grades three, five, eight, and eleven ranged from .77 to .96, with a median of .94 (Harcourt Assessment, 2003).

Procedures.

The principal of WVCS was contacted and CAT5 scores of students in grades one through twelve were obtained for the years 1999 through 2003. Median National Percentile scores were computed by CAT5 for grades in which $N > 9$ students. Out of the 60 classes made available by WVCS (grades 1-12 over 5 years), 28 grades had a population of 10 or more students. Therefore 28 data points were available for analysis.

The administrator of standardized testing for Wood County schools, the county in which WVCS resides, was contacted. The standard by which Wood County measures achievement on the SAT-10 is that the school must perform at or better than the 50^{th} percentile nationally in order to avoid probationary status.

Results

The WVCS CAT5 scores were analyzed against the Wood County standard of achievement by using a chi square at the $p<.05$ level of significance. Results show that there was no significant difference in pass/fail rates among school years. Further, there was no significant

difference in pass/fail rates among grade levels. Median national percentile scores ranged from 15.7 to 78.5 with the mean score (M = 42.882, SD = 13.2157) falling below the 50th percentile. Of the valid data available over a five year period, 17.9%, or 5 grades of 28 grades, met or exceeded the Wood County 50th percentile benchmark for standardized achievement. Median national percentiles for all grades across all years appear in Table 1. Pass/fail rates for all grades across all years appear in Table 2.

Limitations

It is important to critically evaluate the results and the whole study. The present study has certain limitations that need to be taken into account when considering the study and its contributions. The first limitation concerns the external validity, or the generalizability of the data. The number of cases is too limited for broad generalizations. There were only 28 classrooms that participated in the complete study. Further evaluations are needed to replicate the findings in different contexts and surroundings.

The conclusions as well as the limitations of this study also bring forth some fruitful and interesting possible avenues for future research that might be needed in relation to the theme of the study. The most important avenue for future research obviously lies in continuing the elaboration of the elements of the evaluation process.

A more thorough understanding of achievement data could be achieved by considering the methods used by ACE for administering the CAT standardized testing more explicitly. However, in this research the decision was made to explicitly separate the elements so that they each could be examined individually. This detachment can be seen to provide a first step towards developing a model for understanding the emerging data. The next step would be to identify the

interconnections between the elements and to evaluate the actual process as interplay of these elements.

Discussion

The purpose of this study is to provide achievement data regarding children who study the ACE curriculum at WVCS and compare it to data of children attending public school in Wood County West Virginia. Findings show that no differences emerged among years or grades within the WVCS. Compared to the Wood County Public Schools achievement criteria, WVCS grade levels met or exceeded that criterion 17.9% of the time. Conversely, 82.1% of the time, WVCS failed to meet the Wood County Public School achievement criteria.

The drive for conducting this study comes from the intent of providing relevant data to interested parties, giving them a greater ability to make sound educational decisions where the ACE curriculum is concerned. However, Ace does not openly adopt or adhere to the philosophical beliefs of secular writers nor do they respect enforcers of state-endorsed curricula. If evaluation is the determination of the worth of a thing, then achievement data is only one small measure of import to those who would adhere to ACE. When held to the standards of Wood County Public Schools, WVCS has failed to meet achievement criteria.

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Table 1

Median National Percentiles by Grade and Year

GRADE	1999	2000	2001	2002	2003
1	78.0		38.0		
2	15.7	21.0	43.5		35.3
3			28.5		31.5
4				41.0	73.0
5					29.0
6		52.0			
7	49.0		48.7		
8	48.0	49.0		45.0	39.0
9	25.5	41.5	46.0		50.0
10		43.5	51.0		
11	49.0			45.5	
12				45.5	38.0

Table 2

Pass/Fail Data by Grade and Year

Legend for Chart:

1 = Pass Wood County 50th Percentile Criteria
0 = Fail Wood County 50th Percentile Criteria

GRADE	1999	2000	2001	2002	2003
1	1		0		
2	0	0	0		0
3			0		0
4				0	1
5					0
6		1			
7	0		0		
8	0	0		0	0
9	0	0	0		1
10		0	1		
11	0			0	
12				0	0