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ABSTRACT

Waldorf Education, founded by Rudolf Steiner in 1919, is based on the philosophy of critical idealism, in which teachers assist in the natural unfolding of children's preexistent possibilities. But because there has been little research on Waldorf Education, few data have been gathered on the effectiveness of its teaching methods and organizational structure, or on students achievement. An international study was conducted to determine if there was a significant difference between the creative thinking ability of Waldorf students and state school students in England, Scotland, and Germany. The hypothesis was that disparate educational practices in Waldorf and state schools were influenced by disparate educational philosophies. The sample consisted of 1,165 third through sixth grade children--479 English, 193 Scottish, and 493 German students. The findings obtained from administration of the Torrance Test of Creative Thinking Ability, suggested that Waldorf students were more creative than their state school peers. Particular credit for this was given to the maturational-readiness and nurturing curriculum of the Waldorf Schools, which includes: having the same teacher follow students from grades 1 to 8; de-emphasis on academic performance in early grades; use of art in instruction; and other teaching and curriculum considerations. (Contains 20 references.) (BGC)

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THE COMPARATIVE STATUS OF THE CREATIVE THINKING ABILITY OF WALDORF EDUCATION STUDENTS: A SURVEY

Earl J. Ogletree

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THE COMPARATIVE STATUS OF THE CREATIVE THINKING ABILITY OF WALDORF EDUCATION STUDENTS: A SURVEY

Earl J. Ogletree

There has been little research on Waldorf Education, founded by Rudolf Steiner in 1919. In spite of the Waldorf movements' many years of existence, little data have been gathered on the effectiveness of its teaching methods: the organizational structure of its schools, or the achievement of Waldorf students. Competition, academic comparisons of students and classes, and standardized testing (except for the state external examinations--Advanced Level in England and the abitur in Germany and the ACT and SAT in U.S.--taken by Waldorf graduates who wish to enter a university), are foreign to the basic principles and practices of Waldorf education. Except for a half dozen doctoral dissertations in the last decades, the lack of a comparative insignificant number of articles in educational publications and research outside the Waldorf movement has left a knowledge gap among educators.

An international quantitative/quantitative study on the status of the creativity thinking ability of Waldorf Schools was conducted by the writer. Steiner and state school pupils in England, Scotland and Germany, were evaluated. To the researchers' knowledge, it is the only major international study on the creativity of Waldorf students since the founding of the movement. This paper will describe this creativity study and explore some of the philosophical tenets and educational implications of the Waldorf and state schools involved in the investigation.

Problem

The purpose of this study was to determine if there was a significant difference between the creative thinking ability of Waldorf and state school pupils in England, Scotland and Germany. (The investigator could not get permission from U.S. Waldorf schools to conduct the study. Similar opposition was met in Europe. (It was only through friends that permission was secured.) It was hypothesized that the disparate educational practices in the Waldorf and state schools were influenced by their disparate philosophies. The basic tenets of each philosophy and their subsequent educational implications will be described even though one is aware of the risks that one runs in labeling a particular educational system. Some generalizations, however, can be made if one keeps in mind that they are subject to the limitations of all generalizations.

Waldorf and Public School Philosophies

The Waldorf Schools are based on the philosophy of critical idealism, known as anthroposophy. The state or public schools have been identified as natural or scientific realist institutions.

Idealism, is a cooperative art; i.e., it is a process in which the teacher "...cooperates with nature, assisting it (the development of watchful attention and timely prodding)." ² The educational process includes the "gradual unfolding of a preexistent set of possibilities..." nature in movement already striving, reaching, developing toward a new fulfillment of life

purpose. The task of the Waldorf teacher is to help the child to adjust to the spiritual and material facts of its being and its earthly existence so as to make the richest use of them. Huebner explains that the goal of Waldorf education is to,

...liberate the spiritual essence of the child, to remove all obstacles and hindrances, and to make possible the full child's talents for later services in behalf of humanity.

Realism, on the other hand, is an operative art. It is involved in the process of producing something.... "something which nature cannot produce itself." Education is the gradual acquisition of information, understandings, facts, attitudes, values and skills applied by teachers and other adults which the individual acquires in the course of growing up. The objective is to assist the child to learn and adjust to the culture and society in which he will live. It is a molding process "to become a tolerant and well-adjusted person in harmony with this physical and cultural environment." Or as Kneller explains, the purpose of a realist education is that,

Since the realist's view of the world exists independently of man, is governed by laws over which we have little control, the school should transmit a central core of subject matter that will acquaint the pupil with the world around him.

The divergent goals of the idealist and realist philosophical schools of thought are congruent with their view of reality and how we know reality.

Idealism maintains that reality (the world) is basically spiritual rather than physical. The physical world is a manifestation of the spiritual. For example, everything physical we see on earth is a product of an idea, whether the idea is expressed through man or comes from its primary source--the spiritual world. Therefore, man, animals, plants, etc., were and are ultimately a product of the workings of the spiritual world. And the physical world is temporal--maya; whereas the spiritual world is permanent and real, possessing meaning and purpose.

On the other hand, the realist holds the physical world to be a greater reality than the spiritual. The physical can be known directly via the five or six senses. It is permanent and enduring. The material world is ultimate reality and explainable by natural scientific laws. The things in the environment (trees, cities, animals, etc.) "exist in and of themselves, independent of the mind."

The idealist views the child as a spiritual being and that who has a destiny to fulfill in accordance with his spiritual nature. The child, therefore, brings with him inherent talents and capabilities. Realists argue that the human being is a biological-social being, born with few or no inherent individual talents and capacities. They maintain that an individual's abilities are determined by the impact of the physical-social environment on his genetic makeup.

These divergent philosophies have definite implications for the role of the teacher and the methods of teaching. Since the child has inherent talents and capacities, according to the idealist, the role of teachers is to develop these

potentialities. Their role is to help draw or "wring" out that which is latent in the child, rather than to pour in knowledge or to force learning. An integral part of this learning process is the personality and character of the teacher, whose humainty must be worthy of emulation. The idealist teacher is a "gardener of the child's soul," a cultivator of a compatible learning environment. Education is a process, a developmental process in which certain subjects are introduced at specific stages of intellectual and personality development and taught in a specific manner (actively and pictorially) to support and enhance the psycho-physical developmental process. "The teacher cannot mold the child's nature; that is entirely a matter of self-development."⁵ Barnes, former faculty head of a Waldorf School, adds:

Many schools today are in a hurry to train young children and boast of the feats their five or six year olds can perform. There seems to be little sense to this race. Often it dwarfs significant aspects of the child; too often it prohibits growth. Steiner would have a child simmer in his own juices awhile, develop strength for a lifetime rather than exploit and deplete them foolishly.⁶

In contrast, the realist teachers views themselves as a purveyor of knowledge and facts about the culture and the world. It is the student's responsibility to master these elements of knowledge that have stood the test of time. The curricular emphasis is on the mastery of subject-matter content. For the realist, subject-matter content is an end in itself; for the idealist it is a means to an end. The curriculum of the realist school is largely determined by the needs of the culture, society and tradition. In the idealist school, the curriculum is selected to meet the developmental needs of the child. The realist believes that "any subject can be taught effectively in some intellectually honest form to any child at any stage of development."⁷ Emphasis is placed on the intellectual/academic rather than on the total development of the child. This was particularly characteristic of the state schools in England, Scotland, and Germany sampled in this study. Some characteristic commentaries by European educators such as Bereday, King and McKay agreed that publicly-supported schools in England, Scotland and Germany were dominated by intellectuality and the curriculum, with obvious variations^{8, 9, 10} and exceptions, were almost uniformly academically oriented.

In all three countries the tripartite educational systems were dominated by an external examination system that selects children at an early age (11+ in England and Scotland, and ages 10-11 years in Germany), academically able or intellectually qualified for a secondary education leading to the university.* Approximately 20-25 percent are admitted to the university preparatory secondary schools (grammar), and the other eighty-plus percent go on to terminating secondary schools, leading to non-professional or trade occupations. Although, European state schools have partially adopted a modified version of the American comprehensive high school and school-based management in English schools since the 1960's, it is beyond the scope of this paper to go into detail on the changes state schools of the three countries, subsequent to this study. Apart from the number of efforts at educational reform (implementation of the

comprehensive schools) in the three countries. a tripartite system of education, based on a natural realist philosophy in which examinations are an integral part of the educational process still exists. For the purposes of this study it was assumed, based on the above factor of homogeneity of state school educational practices within a country, that the state schools were more alike than they were different. A single state school was an accurate reflection of their respective school systems.

By their traditional nature the state schools are committed to a curriculum that is intellectually-based, formal and academically oriented. However, this is not true of the Waldorf Schools. All Waldorf schools are with the few exceptions of newly founded schools, include grades kindergarten through twelve (thirteen in Germany). This inclusive system had certain advantages, for example, freedom from the pressures of external examinations, particularly the intermediate examinations at ages 11-12 and at ages 15-16, academic competitiveness, and ability grouping/tracking (streaming in England), prevalent from the early grades in the state schools. However, the Waldorf schools are not totally free of external state examinations. In the last years of secondary schooling, time is set aside for seniors to prepare for the university admission examinations (G.C.E.- Advanced Level in England and Scotland and the Abitur in Germany). Waldorf students are not only grouped by age level, but the teacher remains with the same students grades one-eight, a surrogate parent to his/her charges. Consequently, there is no need for periodical external or class examinations. Cooperation is encouraged, competitiveness avoided. The class is a social unit, a family.

This freedom allows the Waldorf teacher to implement Steiner's maturational-readiness curriculum, unfettered by state rules and regulations. Kerr, who contrasted the English state schools with the Waldorf schools, characterized the latter as unorthodoxed.

The Steiner school believes in developing the emotional side of children first, and the intellectual aptitudes later, without forcing them... (and) aim at developing happiness rather than achievement.

Steiner (1972) explained,

...at the Waldorf School, value is placed upon artistic rather than intellectual training at the beginning of the school life. The teaching is first pictorial, nonintellectual; the relation of the teacher to the child is pervaded by a musical quality, and by such methods we achieve the degree of intellectual development the child needs.

The Waldorf or idealist school has a child-centered curriculum. The approach is not only nonintellectual, but holistic. The task of the Waldorf teacher is to help the child to realize his latent capacities in each of the domains-- psychomotor, emotional and cognitive. The Waldorf curriculum, which is sequenced in accordance with the child's unfolding stages of development, provides the child with competencies and skills in art, music, crafts, languages, speech, geometry and the academic areas. Essentially, every subject taught in the Waldorf

Schools is pervaded by artistic activity. Every subject area, including drawing, painting, crafts, and music, is taught as a developmental skill, not as an isolated subject. In the Waldorf school curriculum every child can find success:

In view of the theory that the potentialities and talents of children vary greatly, the curriculum is unusually rich. In addition to the regular subjects there are gardening, surveying, mechanics, bookbinding, weaving, spinning, etc. With such a variety of offerings, every child will find something of interest and something in which he may excel. The generally accepted distinction between gifted and nongifted thus tends to vanish. Every normal human being is gifted in some area.¹³

Teaching methods and timing of presentations are as important as the content. Images, rhythms, movements and emotional involvement are the heart of each lesson. Although Waldorf children may not perform as well on conventional worksheets and tests as their state school peers, they enjoy the activities and subjects they learned. It is the engendered emotional and physical participation and energy that allows Waldorf students to experience material that they otherwise may not be able to learn conceptually. A pedagogical principle in Waldorf education is the "experience knowledge." In summary, Waldorf (idealist) teachers attempt to fit the curriculum to the developmental needs of the child, whereas, realist teachers attempt to fit the child into a curriculum determined, in the main, as dictated by tradition and societal needs.

Creativity Studies:

A great deal of the research in creativity has been devoted to factors that influence creativity development. In the main, the researchers have found that an enriched-stimulating, as opposed to a deprived-unstimulating environment, and active-exploratory versus a passive-instructional teaching approach, and a permissive as opposed to an authoritarian learning atmosphere have positive effects on creativity development.

Much of the research indicated that the idealist educational approach is the more propitious method for the development of creativity. Torrance concluded that too much pressure on children to learn academic subjects prematurely tends to stifle fantasy. He also set forth five principles that teachers should follow to develop creativity: 1) treat children's questions and ideas with respect; 2) treat unusual ideas with respect; 3) show children their ideas have value; 4) provide opportunities for self initiated learning; and 5) provide periods of nonevaluated practice.¹⁴

Additional recent research has shown that forced learning can affect not only the child's learning potential but his emotional and social stability.¹⁵ Steiner felt very strongly about the influences of an intellectualistic education on the creative potential of children. He argued that teaching in a purely abstract/conceptual form should be delayed as long as possible, because intellectual "forcing (deadens) and prematurely burns up the child's native imagination. If we demand intellectual concepts and responses too soon the child is brought to false maturity."¹⁶ Recent findings by Elkand indicate that pressuring children to learn before they are ready causes stress, had a feeling of lack of control over one's life, "a learned helplessness." ^{16.5}

Torrance, a pioneer in creativity research, attempted to include the Waldorf Schools in one of his earlier studies, but failed to obtain the necessary cooperation, hypothesized that Waldorf pupils would not have shown the usual regression in creativity at ages nine-ten years; It had been my idea at that time that we should not find in these schools (Waldorf) the discontinuity in (creativity) development that we find so commonly in most schools at the beginning of the fourth grade."¹⁷

Instrument

For the purpose of this study, general definition of creativity is:

...the capacity of an individual to produce compositions, products or ideas related to particular tasks which are essentially new or novel, previously known or unknown to the producer or creativity is a process, the contribution of new ideas a different viewpoint; a new way of looking at a problem, situation or event, where the freedom of the individual is the basis of expression".¹⁸

Creativity is closely associated with divergent-open response-type thinking, whereas convergent thinking is associated with intellectual reasoning or close response-type thinking. The research or operational definition of creativity for this study is the results on the Torrance Test of Creative Thinking Ability.

Procedures of Study

The population/sample included a total sample of 1165 third-sixth grade European children, which included 479 English, 193 Scottish and 493 German pupils and 557 boys and 608 girls. The sample was drawn from six Waldorf schools and six state schools of which 499 were Waldorf pupils and 666 state school pupils. Two participating Waldorf schools were selected in Germany out of a total population of 27 Waldorf schools, three out of five in England and the single Steiner school in Scotland. Representative state schools were selected in each of the cities where a Steiner school was selected to obtain a comparative sample. The schools (Waldorf and state) were located in Munich and Stuttgart, Germany; Edinburgh, Scotland; and Gloucester, Ilkeston and Stourbridge, England.

The Waldorf and state school pupils were matched on the basis of their socioeconomic status by their location and by their responses on a modified version of the "Registrar General's Occupational Classification Scheme" to categorize the pupils according to social class by occupation of parents. (Social class classification by occupation between cultures is not the sole determinant, it is however, the major criterion used by most social science research.) (Social class status was the only means available to pair the samples in that I.Q. and standardized achievement test scores were not available in the Waldorf School nor from the state schools. The sample was administered the Torrance Test of Creativity Thinking Ability orally in their native language.* The tests were uniformly modified in terms of time allotment for each task and instructions given the pupils. The data were analyzed by school systems, country, social class, age, sex and grade level using the one-and two-way analysis of variance and the F and "t" tests to determine the statistical significance (.05) difference of the results.

Results

The findings showed that cross-culturally, Waldorf School pupils obtained significantly higher (.01 level) creativity scores than their state school peers. This held true when analyzed by social classes. The only exception was that lower-socioeconomic state pupils scored higher on verbal originality than their Waldorf peers, but insignificantly. This was probably influenced by differences in sample sizes. There were only 21 lower socioeconomic state school pupils.

When the data were examined according to country, Waldorf pupils also performed better on all tasks of the creativity test. However, they only obtained significantly higher scores at the .05 level on the total verbal and figural (drawing) sections on the grand total creativity score. The findings showed, however, that Scottish and German Waldorf pupils obtained higher overall creativity scores than their respective state school peers and also higher scores than did English Waldorf pupils.

Unlike the Scottish and German Waldorf school pupils, the English Waldorf pupils did not obtain significantly higher verbal fluency, flexibility and originality scores than their state school peers. On the drawing tasks, however, they did obtain significantly higher scores. The reason for this discrepancy is that English Primary Schools had a reputation for being progressive and innovative and not as traditional as their Scottish and German counterparts.

The general trend of Waldorf School pupils' higher performance to that of state school pupils was unaffected, for the most part, by the variables of grade level and age; eight-year-old state school pupils scored higher on the verbal tasks than did their Waldorf peers, but not significantly. It may have been the result of the delayed reading program in the Waldorf schools. When the data were examined by gender, Waldorf boys and girls prevailed over their respective state school gender significantly (.05) on all creativity tasks.

The cross-cultural data also revealed no significant drops or decrements in creative development at age nine to ten years in either school system. Torrance felt that the new demands and changes in habits that a particular culture produces at certain ages may disrupt the child's learning pattern. That is, the child compromises to accommodate social requests and to accept authority outside his home. Steiner believes the change is the result of social maturation; the child is less dependent on and views his teacher more objectively. In this study, an increase in age and grade level evidenced an accompanying increase in creativity on all the creativity tasks, but not significantly.

Additional data were collected to determine if the number of years spent in a Waldorf school significantly affected the enrollee's creativity. Data were tabulated for pupils who began their schooling career at the Waldorf school in the first, second and third grades. Analyses showed that those who entered at the third grade level scored higher than those who entered at the second grade level; and the second grade entrants obtained higher scores than those pupils who began their Waldorf schooling in the first grade. Although the difference in creativity between grade levels was not statistically significant, it may indicate that later entrants were more test sophisticated, having been exposed to a more intellectual, academic and test-oriented program in the state or private schools from which they transferred. Later Waldorf enrollee's also had better reading skills, a requirement on the verbal section of the Torrance test. Several Waldorf

teachers felt those Waldorf pupils, who had attended another schools in the early years, seemed to get on better, in some circumstances, than pupils who began their educational career at a Waldorf school.

Related results:

Further findings showed: 1) upper and middle class students had significantly higher creativity scores than their lower socioeconomic peers, 2) culture had little interactional influence, and 3) girls did significantly (.05) better on the test than boys.

Summary

The findings of the study indicate that Waldorf students were more creative, as defined by the basic criteria of the creativity test, than their public school peers. (See footnote.) There was a great deal of commentary, particularly from Waldorf teachers, about the validity of the Torrance test.* The researcher attempted to establish concurrent/predictive validity by asking each participating teacher to select their most creative pupils. Teacher judgment was based upon the criteria of the creativity test. Analysis showed that the 302 pupils nominated by their teachers as being the most creative scored significantly higher on the creativity test (.05) than their 836 nonselected peers. Although the data were not examined according to school system, the findings, nevertheless, indicated that both Waldorf and state school teachers' nomination of creative pupils related significantly to the test performances of their pupils.

Discussion:

Although the results have many of the limitations of an ex-post-facto study, nevertheless, certain generalizations can be made. It appears that the Waldorf students' performed significantly better on the creativity measures is the result of the many factors that constitute a Waldorf education, which differentiates it from the educational practices in the state schools. Probably the most important elements are the maturational-readiness and nurturing curriculum of the Waldorf schools. The continuous teacher, grades one-eight; de-emphasis on academic performance in the early grades; use of art as the medium of instruction; teaching methods, curriculum and organization of the program are arranged for the benefit of the child--his health and overall development. There is an emphasis on the stages of the child's development--to fit the curriculum to the child rather than mold the child to fit a traditional or socially-determined educational program.

To explain, Steiner developed a coherent theory of learning which includes a fourfold concept of man--physical body, etheric body (made up of vital or energy forces), astral body (soul or psyche), and the ego. It is the developmental-unfoldment of these bodies, particularly, the etheric body (which propagates growth, regenerates cells, maintains health and is the basis of cognitive development) at different ages that determine the subjects in the curriculum, their timing and method of presentation.

The research also suggests that a non-pressured, non-stressful educational milieu has a positive effect on creative development.²⁰ The Waldorf school also includes a therapeutic program that deals with the physical, psychological and readiness needs of each child. Children with developmental difficulties

are discussed at the weekly faculty meetings. A physician is general associated with the school; eurythmy (an art of movement) is used to teach reading, speech and music and for therapeutic purposes; and specific pedagogical techniques and grouping children according to their temperament are used to remediate a child's problem by balancing the, above, four members (ego, astral, etheric and physical bodies).

For example, experienced Waldorf teachers are not only able to recognize when a child has a learning problem, but knows how to remediate it. **** Steiner said Waldorf teachers should know as much about medicine as they do about their profession. Educational practices in the Waldorf schools appear to closely follow the school's philosophical goals and psychological theories so that "the part reflects the organic whole." The results suggest a school with an educational program based on maturational-readiness would have a greater chance of fostering creativeness in children that one that does not.

Although creativeness tests may be suspect as to whether or not they measure creative ability, they do indicate the ability to generate and elaborate ideas.** The results are also influenced by maturity, experience and socioeconomic status. It would appear that those students who are exposed to a broad, multi-subject developmental curriculum with equal emphasis on the arts and academic areas perform better on the creativity test than students educated in strictly academic curricula schools. The educational process may be as important as what is taught, the "nurturing" as opposed to the "molding" process may be more conducive to developing a more fully educated and well rounded individual. The findings of the study suggest that open-ended (creative) thinking can be nurtured and influenced by the type of school one attends.

Footnotes:

*These definitions are the criteria upon which the Torrance Test of Creative Thinking were based. The creativity measures consist of two parts -- a verbal section which requires a written response and a figural section that requires drawing or figure completion responses. The verbal section consists of three activities -- Ask and Guess task (given a picture of people in action -- running -- children are to write down questions, guess causes and guess consequences about what is occurring in the picture). Product Improvement task (given a picture of a toy animal, children are expected to list a number of ways they can change the toy and improve it). And the Unusual Uses tasks (given a number of many sized and shaped boxes, children are expected to list the number of creative ways they can use and make things from the boxes).

The figural section also included three activities -- Picture Construction task (children were asked to draw the most interesting and creative picture, which included a "banana-shaped" paste-on as an integral part of their drawing). Picture Completion task (children are given incomplete figures which they complete as a finished drawing). Circles task (children are given a series of circles and are asked to make objects or pictures from them).

The creativity tests are designed to measure four elements of the creativity thinking process: 1) fluency (the number of

ideas produced 2) flexibility (the different categories of ideas produced, 3) originality (the unusualness or the infrequency of an idea), 4) elaboration (embellishment and development of an idea).

**Validity and Reliability of the Creativity Test

The validity of the creativity test to measure creative thinking is an issue. The consensus is that they do not measure a kind of universal creative thinking ability. However, it is held that the tests do measure a certain intellectual process and nonintellectual characteristic; names, divergent thinking, which standard IQ tests do not measure. Torrance stated:

...a high degree of these abilities (fluency, flexibility, originality and elaboration) does not guarantee that the possessor will behave in a highly creative manner. A high level of these abilities, however, increases a person's chances of behaving creatively.

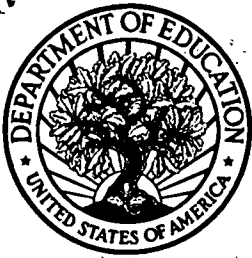
Since the Torrance Test of Creative Thinking appeared to measure an intellectual mode of divergent thinking -- open-ended thinking -- not considered by standard tests of intelligence. Since their validity and reliability were sufficiently high, these factors seemed valid enough to use the creativity test in this investigation..

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