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Suggestions for the
EDUCATION AND TRAINING
of
GIFTED CHILDREN

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PREFACE

This little pamphlet has been prepared for use in connection with a survey of gifted children in California, made possible by a grant from the Commonwealth Fund, of New York City. With the help of a number of field assistants, extensive data are at present being collected on approximately 1000 of the most gifted children who can be located in the State.

This pamphlet of suggestions for training, and a second pamphlet on suggestions for reading, have both been prepared especially for the parents of these children. Although both pamphlets are tentative and subject to revision in the light of later results of our study, it is hoped that they will be found in some degree helpful.

LEWIS M. TERMAN

Stanford University,
September 15, 1921.

SUGGESTIONS FOR THE EDUCATION AND TRAINING OF GIFTED CHILDREN

The parents of gifted children are indeed very fortunate, but their position is one which carries with it difficult responsibilities. The right education of such a child is a matter of great importance not only for the happiness and success of the child himself, but also for the welfare of society.

Although no two cases present exactly the same problems, the following points may be mentioned as especially important in the home training and management of gifted children in general.

Special Attention Should Be Given to Social Development.

In every possible way the child should be encouraged to associate normally in play and other social activities with children who are not too far from his own age. There is absolutely nothing which can take the place of such experience. Children who are deprived of it rarely become leaders and are likely to develop traits of character which make them seem "queer" and render them unacceptable to others. The gifted individual who can not understand people and mingle with them on equal terms is likely to meet with less success than the person of more moderate talents who is socially normal. He is also likely to be unhappy. After the age of five or six years, a child should spend at least ten to twenty hours a week in free play with other children. All kinds of wholesome fun should be encouraged in order to prevent the child from becoming too oldish or bookish. Such organizations as the Boy Scouts, the Campfire Girls, clubs, Sunday school societies, etc., give a type of experience which is almost indispensable for normal social development.

Vanity and Egotism Should Be Discouraged.

Probably the gifted child is not by nature more inclined to egotism than the average child, but the circumstances which

surround him often favor the development of this fault. If parents, teachers and others frequently call the child's attention to his superiority, or over-praise him for his accomplishments, great harm may result. Some gifted children are ruined by conceit. No child is more universally disliked than the one who has become obsessed with a sense of his own importance.

In order to avoid this danger, it is of course not necessary to go to the opposite extreme and belittle the child's ability or accomplishments. It is hardly possible to prevent the child who is mentally several years ahead of his age from knowing that he is brighter than average children. However, it is possible for a child to know this and still be extremely modest in behavior and attitude. On the other hand, continually calling the child's attention to his superior mental qualities stimulates vanity and breeds conceit. Self-confidence is a valuable asset and should be cultivated in every way, but anything that savors of boasting or showing off should be systematically frowned upon. Newspaper publicity should be shunned. Acquaintances and relatives should be prevented from discussing the child's intelligence in his presence. He should not be placed in a position which practically compels him to play the rôle of the child prodigy.

The gifted child should be taught to judge himself in terms of a high standard, and not to be satisfied with himself merely because he has done well what most other children can do. For example, modesty and humility can be cultivated by teaching him to rate himself in comparison with the great men and women of history, or even in comparison with the most brilliant of his fellow pupils.

In preventing the development of egotism, there is nothing more effective than ordinary play with other children. The child who is deprived of the opportunity to play is not only being robbed of his childhood; he is also being deprived of his chance to become a normal adult.

Industrious Habits Should Be Inculcated.

Because he is usually able to accomplish the ordinary school

tasks without serious effort, the gifted child runs the risk of developing habits of intellectual slackness. He may come to take a certain pride in getting his lessons quickly or in making plausible recitations without adequate preparation. The remedy is for home and school to unite in setting a higher standard of school performance for such children. They should constantly be held for the best *they* can do, not merely for the average work of the class. The cultivation of a real pride in accomplishment helps toward this end. The stimulation of vanity works against it by making the child too well satisfied with whatever he does.

On the other hand, there is no reason to hurry the child through school in the shortest possible time. The important consideration is not to save time, but rather to keep the child profitably employed and to give opportunity for normal social development. Herein lies almost the sole danger of too rapid promotion in school. Only in rare cases, if ever, is rapid promotion dangerous to mental or physical health, but by limiting the opportunity to associate with other children of the same age and size, it does often prevent the development of such important traits as leadership and social adaptability. On the average, there is perhaps one child out of a thousand who could be made ready to enter high school at the age of nine or ten years, but it is a question whether any child should be allowed to enter before eleven or twelve. More rapid promotion than this is certainly unwise, unless it is possible to provide outside the schoolroom the needed social contacts with children of more nearly equal age.

But what course is the parent to take? On the one hand is the danger of holding the child to tasks which are so much below the level of his ability as to encourage habits of intellectual slovenliness. On the other hand is the danger of such rapid promotion that the child will find himself a social misfit among his schoolfellows. Both dangers must be avoided. To compel the gifted child to go through school at the usual rate for average children is fraught with great dangers. Extra

promotions are absolutely necessary. On the other hand, if mental development is so rapid as to make the child ready for high school before the age of eleven or twelve years, there are various ways in which the danger of intellectual slackness may be avoided. The school course may be enriched by additional subjects and by the extension of supplementary reading. If this does not suffice, half-day attendance may be resorted to, or, in extreme cases, the child may be kept out of school altogether during alternate half-years. The main objection to the latter plan is that the child's opportunities for social contacts may thus be still further reduced. Usually the best solution is a combination of extra promotions and enriched course of study.

Is Intensive Training in Early Childhood Desirable?

Largely as a result of numerous ill-advised magazine articles, which have appeared in the last few years, the erroneous belief has become prevalent that any child can be made a genius by intensive mental culture during the first four or five years of life. Needless to say, there are no facts whatever which support such a view. There is no psychological or pedagogical alchemy by which intellectual commonplaceness can be transmuted into the gold of genius. Such intensive culture is not even necessary for the fullest development of the genius which comes by nature. Many of the most promising of the gifted children of whom we have records are children who had no formal instruction of any kind until the age of six, seven, or even eight years. One boy who did not know his letters at the age of eight and a half years graduated from Stanford University at barely twenty years with a higher average mark than that obtained by any of his three hundred classmates.

However, this case is not mentioned in support of the view that children should not learn to read till the age of seven or eight years. There is no reason why a child should not do so at five or four years, or even three, if he wants to and can do so with a minimum of instruction. A few children begin read-

ing at the age of three or four years practically without help. There is no reason to think they are injured by it so long as the reading habit does not develop to such an extent that it crowds out a host of other interests just as important.

In deciding upon the time for any particular kind of instruction, the highest wisdom undoubtedly lies in following the lead of the child's interests. Forced culture breeds an unnatural priggishness and in other ways leads to disappointment. The mind should be allowed to develop at its natural rate, without artificial stimulation. There are no methods of formal training by which the powers of the mind may be permanently "sharpened" in babyhood. "Prodigy making" by such methods is at best a sorry and disappointing business, and at its worst is little less than criminal.

Give Information When It Is Called for and Help the Child to Help Himself.

Even the average child, at the age when intellectual curiosity begins to develop, asks a multitude of questions. The gifted child not only asks many more, but he asks more intelligent ones and asks them more insistently. This, in fact, is one of the best indications of mental superiority. The gifted child is usually impatient to know the why and wherefore of things and will not rest until his curiosity has been satisfied.

This is the opportunity of parents. Knowledge acquired when it is wanted is like food eaten when one is hungry. It is quickly assimilated and becomes a permanent part of the mental structure. Parents who take the innumerable questions of the child seriously and answer them as fully and truthfully as his intelligence will justify or as their own information will permit are satisfying the most important of the child's educational needs in the pre-school period. When questions are asked which the parents can not answer, a good plan is to look up the information with the child; or better, to have the child look it up himself with a little direction as to where and how he may be able to find it. There are few delights more satisfy-

ing than those which come from finding things out for one's self. To make a pretense of knowing what one does not know, or to give an answer which is incorrect or inexact, is worse than to ignore the child's question altogether. The parent who frequently accompanies his children in their voyages of discovery not only renders them one of the richest of all services, but renews his own youth in the process.

Intellectual Initiative Should Be Cultivated.

The child should be encouraged to think and do for himself. Various kinds of hobbies, such as making nature collections, constructing machinery or apparatus, setting up wireless outfits, etc., are extremely worth while. Such activities organize the child's thinking and set it to working for the attainment of distant ends. Hobbies enable the child to a great extent to educate himself, and their value is therefore so great as to justify their encouragement even when the activities which they involve cause a considerable amount of inconvenience or annoyance to other members of the household.

There is hardly any limit to the number and variety of hobbies having large educational value. Among those which can be recommended most heartily are wireless telegraphy (or other electrical experimentation), photography, work with engines and motors, chemical experiments, boat making, shop work of various kinds, crop growing, athletics, and collections. Many a boy learns more physics in working with his motor or wireless outfit than the high school can teach him in a year. Many another lays a solid foundation of biological knowledge by such hobbies as bird study, butterfly collecting, animal raising, etc. Geography, mineralogy, physics, chemistry, botany, zoology and history are all subjects in which the bright child can make rapid progress by means of collections of amateur experimentation. Such hobbies are in a majority of cases as suitable for girls as for boys, especially photography, nature study, collections, crop growing, etc.

Children who do not have hobbies should be encouraged to

develop them. This can best be done by giving them some acquaintance with the hobbies of other children. When a particular interest has begun to develop it should be encouraged to take deep root. Hobbies lose a large part of their educational value if one succeeds another too rapidly. Some children keep three or four going at the same time for long periods, and profit from all. Others seem to gain more from one or two continued throughout childhood and perhaps even into adult life. It is a mistake, however, to try to prolong a hobby after the child's spontaneous interest in it has vanished, and a still greater mistake for parents to try to force their own hobbies on their children.

Provide the Best Books and in Large Variety.

The chief danger is that not enough effort will be made to bring the child into contact with the *best books*. A special reading list of several hundred titles has been prepared to aid parents in this regard. This list will be sent to all parents who supply the data called for in the "Home Information Blank." The titles are classified according to subject matter, and in each case the age is given at which the book is likely to be preferred by children of superior ability. The list also contains several books on the education and training of children.

Occasionally the gifted child develops a mania for reading the greatest possible number of books. One child of eight years, for example, had read nearly a thousand volumes. This is a tendency which can easily be carried too far. If there is anything in which quality is more important than quantity, it is in children's reading. This does not mean that the child's reading should be mainly of the "improving" or moralizing kind. The term "quality" is intended to refer to first-class literature of all types, from stories and jingles suitable for babies to the best of the world's fiction, poetry, biography, and drama. There is excellent literature of every kind suitable for every age, and it is better for the gifted child to number his readings by hundreds in such literature than by thousands in literature of inferior quality.

The child of superior intelligence is likely to show a preference for books which are only preferred by other children who are several years older. This is entirely natural and should not be discouraged. If a gifted ten-year-old can read a play of Shakespeare or a novel of George Eliot and enjoy it there is no reason why he should not do so. On the other hand, no pressure should be exerted to force the child's reading interests to a precocious maturity.

But Books Are Not Everything.

Everyone stands in need of many kinds of experience which books can not supply. A certain amount of restraint is sometimes necessary to prevent the gifted child from spending so much of his time reading that he loses contact with the concrete world of reality. A good part of every day should be devoted to play, tools, apparatus, collections or other hobbies. Interest in every aspect of the material environment should be encouraged, including trees, animals, flowers, industrial processes, museums, zoological and botanical gardens, etc. Local industries, state legislatures, and points of historical interest should be visited when possible, and in every way the child should be made alive to the things that are going on around him.

In this connection, the value of work should be mentioned. Every child should have certain regular home duties to look after, and the child who naturally tends to be very "bookish" needs these and similar contacts with reality most of all. No greater mistake could be made than to encourage in the child an attitude of superiority toward the everyday affairs of the household. No difference how gifted a child may be, he should be trained early in habits of helpfulness and to a sense of responsibility. One case may be cited as an illustration of what *not* to do. The mother of a certain gifted boy of eight years still continued to dress and undress him, to give him his bath and to do for him all sorts of things which sensible mothers teach their children to do for themselves at an early age. Her

excuse was that for her boy to do such commonplace things would rob him of the time needed for creative thinking! Children of superior mentality can be taught to do these things at an earlier age than average children, and for the good of their souls, as well as in the interests of normal social and moral development, ought to be.

Care of the Health.

The same laws of hygiene apply to the gifted child as to children in general. Any child should go to a dentist at least once a year, and preferably twice a year. The teeth should be brushed twice daily. A medical examination should be given at least every two years, however well and strong the child may seem to be.

Diet should be carefully supervised whether the child is prone to digestive troubles or not. A preponderance of sweets and starchy foods is always bad. A moderate amount of good candy, however, is permissible. Fruit, eggs, and milk should be allowed in abundance, but no coffee or tea.

The amount of sleep needed varies from child to child and from age to age. Data from nearly 3,000 unselected school children showed that the average California school child *does* sleep the following number of hours at the different ages:

Age	6	7	8	9	10	11	12	13	14	15	16
Hours of sleep.....	11	10 $\frac{3}{8}$	10 $\frac{1}{2}$	10 $\frac{1}{4}$	10	10	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9	8 $\frac{3}{4}$	8 $\frac{1}{2}$

The above figures are somewhat higher than have been found for English and German children, and probably indicate fairly well how much the average child ought to sleep. It is unlikely that gifted children need more sleep than others, but because of the lively activity of their minds, it is often hard to get them to take the normal amount. For this reason, the conditions for sleep should be made as favorable as possible. There is no danger of the child sleeping too much. Sleep habits are especially important in the case of the child of delicate nervous constitution.

There is one respect in which the hygiene of the gifted child offers a special problem. Because of incessant preoccupation with books, the amount of exercise and outdoor life is likely to be inadequate unless precautionary measures are taken. This fault tends to run in a vicious circle. The love of reading brings curtailment of outdoor play, and the more time the child spends with his books the less he cares for the activities in which other children engage. The tendency is thus to greater and greater attachment to books and to less and less interest in plays, games, and association with others. For the sake both of health and of social development, the matter should be taken in hand at an early age, before sedentary habits and the preference for solitude have become fixed.

One other principle of hygiene deserves special attention in the case of the gifted child, namely, education with reference to sex. This is, of course, a matter of supreme importance with all children. There is no reason to believe that those of superior intelligence are more prone to develop abnormal sex tendencies than children in general, but by reason of the fact that they are more precocious than the average in their curiosity and interests, they need sex instruction somewhat earlier than other children. It is impossible to recommend an age schedule for such instruction that will fit all cases, as each child is an individual problem. The wise parent will be alert to the child's interests, will answer his questions truthfully as they come up, and will strive to retain his intimate confidence. If objectionable sex behavior appears, it should be dealt with sympathetically. Punishment in such cases usually does far more harm than good.

Amusements.

All will admit that the average quality of the amusements in which children most commonly indulge is not as high as it ought to be. For gifted children the prevalent amusements are even less satisfactory than for average children. The sensational or vulgar "movie," for example, is especially objection-

able in the case of children whose intelligence would enable them to appreciate an opera or high-grade dramatic production. Since so few of the ordinary "movies" have positive educational value and so many are harmful, attendance upon them should be rather severely limited. Once a week should be the maximum and once or twice a month would be better. Distinctly educational films, of course, belong in a different category and are often extremely worth while.

Children's parties, dances, etc., have their value for social training, but can easily be overdone. Both social training and relaxation from mental work can best be secured in the vigorous, outdoor plays, games, and sports in which children so naturally indulge. Such activities can not be too highly commended to the mother who does not want her gifted child to become a "hot-house" plant.

The Choice of a Vocation.

Parents of the gifted child are often too much and too early concerned about the choice of a vocation. It is not well enough understood that until a child's abilities and interests have had time to mature, the right choice can not be made unless by chance. During the period of rapid mental growth one interest develops after another, only to disappear and be succeeded by something else. This is usual and proper. Each wave of interest, if made the most of while it lasts, adds its own special contribution to the making of a many-sided man or woman.

The common mistake is to interpret the on-rush of interest in drawing or writing or collecting butterflies as an indication that the child should forthwith begin preparation for a life career in art, authorship, science, etc. Some parents are much disturbed by the apparently fleeting nature of the child's interests and do their utmost to keep him from abandoning old intellectual pastures for new. A little girl of ten of somewhat more than average ability but far from being a genius, wrote some poems which were published in a local newspaper. Many

thousands of little girls do the same, but in this case the father thought it meant that she must become a poet, and when the interest in authorship left her a little later, he tried scolding, shaming, and prizes in the vain attempt to bring it back. "She is going backward," he kept saying; "she is going backward." He was mistaken. She was merely going forward to new interests. The world is full of interesting experiences, and the child is right in sampling as many of them as possible.

The occupational preferences which the child spontaneously expresses from time to time may be extremely fickle or relatively abiding. The wise parent will neither on the one hand attempt to discourage such preferences, nor on the other hand take them too seriously. Instead, he will nourish the interest at hand and wait for developments. With a majority of gifted children, nothing is to be gained and much may be lost by "casting the die" early. Such children as a rule have fairly all-round ability. Many of them, for example, could probably succeed almost equally well in law, medicine, teaching, authorship, engineering, or business. The final choice will often hinge upon interests rather than upon a preponderance of specialized innate genius for this or that vocation. Of course, specialized talent plays a larger rôle in determining fitness for a career in music, painting, poetry, and the arts generally. The child who shows extraordinary genius in one of these fields may well begin his vocational training at an early age. In the large majority of cases, the wisest course to pursue with the gifted child is to give the broadest possible school training, to encourage the greatest possible number of intellectual contacts, and then to wait for the settling and shaping effects of maturity. Until then, the main problem is to feed to the limit a large variety of interests. In this task, travel, libraries, and the pursuit of hobbies are fully as important as any formal training the school can offer.

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