Research on the motivation of retarded students

John Gregory Foley

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RESEARCH ON THE
MOTIVATION OF RETARDED STUDENTS

by
John Gregory Foley

A RESEARCH PAPER
SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN EDUCATION
(EDUCATION OF MENTALLY HANDICAPPED)
AT THE CARDINAL STRITCH COLLEGE

Milwaukee, Wisconsin
1971
This research paper has been
approved for the Graduate Committee
of the Cardinal Stritch College by

Sister Joanne Marie Kleitman
(Adviser)

Date Feb 25, 1971
ACKNOWLEDGMENTS

The writer wishes to acknowledge the external motivating force provided in Gloria Foley's gentle prodding. And also the vigilance of Sister Joanne Marie Kliebhan which prevented his floundering aimlessly in the seas of educational research.
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INTRODUCTION

Motivation is an ingredient essential to all learning and yet its true nature remains almost as elusive to twentieth-century pedagogues as it was to Socrates. Many attempts have been made to define it, but perhaps Young's definition is most applicable to the problems being considered.

The process of arousing action, sustaining the activity in progress and regulating the pattern of activity.  

Early efforts to determine the influence of motivation involved studies with animals and their responses to stimuli. Progress in studies with animals ultimately led to attempts to measure motivational influences on human behavior. However, much of the work concerning the motivational and emotional factors in the performance of the retarded is quite recent. The research discussed in this area is found to be more of a suggested rather than a definite nature. Nevertheless, it seems clear that these factors can be extremely

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useful in determining the retardate's level of functioning. This is not suggesting that motivational factors cause mental retardation, but rather that they may result in the retardate's behaving in a manner less effective than is set by his innate limits. Certainly the expansion of knowledge concerning motivational and emotional factors, their development and their potential manipulation provide promise of alleviating some of the educational and social ineffectiveness of a sizable segment of our population which functions at a low level.

Teachers of the retarded universally lament that their students bring to academic tasks a low incentive to succeed. Can it be substantiated that the retarded students possess less self motivation than normal students? Does research reveal any consistent pattern of response by retarded students to motivational engendering efforts? The goal of this paper was to examine the significant research designed to delve into these problems.
II

RESEARCH ON MOTIVATION

The Development of Theories of Motivation

Perhaps the limited understanding of motivation could be somewhat due to the variety of terms used to identify it. In educational circles alone, it is also commonly referred to as want, wish, desire, need, drive and striving.

The early Greeks were aware of the motivational forces within man and allowed for it in their concept of man's soul. In ancient Greek thinking, the soul is divided into three parts: reason and two motivational characteristics, spirit or will, which determined courage in battle, and desire, which included the basic biological needs for food, water and sex.

Christian philosophers believed that it was necessary to distinguish between reason and desire and that reason was often opposed to desire. In fact at times reason was not strong enough to limit the baser human wants and it became necessary to call upon a higher type of motivation, a motivation of divine origin (based on faith and grace) to control these urges. Thus this concept involves two opposing motivational forces influenced by a third force, reason. This
concept of two opposing motivational forces and the mediating force of reason is also the basis of psychoanalysis which has had great influence on the development of psychiatry and psychology. In Sigmund Freud's thinking, the id representing the baser motives of man was opposed by the superego, which he considered the moral drives and the third force, the ego or roughly reason mediates between these two forces. Freud put great stress on importance of motivation as a determining factor in all human activity and viewed functions, realistic perception, past experience and reason as being less influential. This stress on the motivational forces was rather dominant until the 1940's in the field of psychoanalysis.

The field of experimental psychology has generally not been as concerned with motivation as has the field of psychoanalysis. To the experimental psychologist the mind is made up of a series of complicated associations among ideas and action. The mind is like a machine which runs automatically after started, in accordance with the associations built up through experience. However, this view has undergone modification in the United States due to the strong influence of Charles Darwin, who proposed that organisms struggle for survival and in this struggle some specific biological needs must be met. So in spite of the lack of interest in the subjective

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3 Charles R. Darwin, The Origin of the Species.
motivational forces important to psychoanalysis, the experimental psychologists have nevertheless turned their attention to the consideration of the basic needs of hunger, thirst and sex which activate the organism in its struggle for survival.

During the middle of the twentieth-century a psychology grew out of experimental work with laboratory animals in the United States. The goal of this work was to find out more about the learning process. It was found that by depriving an animal of some basic need such as food, it would learn a task more rapidly to get a food reward. Deprivation of food disturbed a state of equilibrium by introducing a persistent inner stimulus which made the animal active until it had located some food and the eating of the food restored the equilibrium. So it was reasoned that anything which produced a strong stimulus, e.g. unusual heat or cold, withholding water, physical injury, etc., was believed to be a source of motivation. More complicated social motives were considered to develop out of satisfying the fundamental biological needs. Psychologists proposing this theory have not met with the desired success in the application of the understanding of the simplest biological needs in the determination of the more complex human motives. Perhaps the greatest difficulty in application has been due to the inability to measure the individual differences in human motivation. Also motivations are not found to be short termed and easily satisfied.
The psychoanalysis approach to human motivation also gained importance during the middle of the twentieth-century. However, this approach actually starts with the problems experimental psychologists have found to be the most difficult—that is the consideration of motives as ever-present forces in the human. The difference in the approach used by these two groups is due to the fact that psychoanalysis was nurtured in the clinic or consulting room environment rather than through work with laboratory animals. The practitioners of psychoanalysis discovered the motivational pressures that lay behind the variety of symptoms they encountered in their patients. The key figure of psychoanalysis of course was Freud and through the years his theory of motivation was changed in many ways, but he consistently maintained that there were three primary motivational forces: the sex instinct, labeled the libido, which was considering sex in its broadest sense; the death instinct which included all of man's aggressive urges, and anxiety, which was not thought of as an instinct with a direction like the other two, but it did motivate behavior as it arose out of fear of the other instincts and out of conflict in their aims. Freud's theory has been criticized as being unscientific and considering motives of abnormal personalities while ignoring the normal. It has been pointed out by his critics that the

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normal personality is motivated by the need for achievement or self-actualization and there is no provision for these forces in Freud's theorizing.

In spite of the fact that psychologists and psychoanalysts use different approaches, there are some areas of agreement. Both believe that motives can be unconscious, meaning that man is usually not aware of them, but he can be if he stops to think of them. They both contend that human motivation is not the only determinant of behavior but merely one of the determinants, the other determinants are called ego functions in psychoanalysis and habit or realistic perception by experimental psychologists. Also both are inclined to look upon man as being motivated in a primary sense to reduce tension aroused by biological needs or instincts.

Not all psychologists fit neatly into the traditional experimental psychologist mold concerning the subject of motivation nor do all psychoanalysts accept Freud because of his view that the basic life urge is sexual in nature. Alfred Adler, an outstanding psychoanalyst, was among those who disagreed with Freud on this point. There are some others considered neo-Freudians who emphasize cultural rather than the biological factors in determining basic human motives.

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Carl Rogers⁶ and other psychologists have contended that psychoanalysts overemphasize the negative human urges and do not give sufficient credit to the creative drive for self-actualization.

Murray⁷ seems to lead another group of psychologists that believe it is too early to attempt to categorize human motivation into a few fundamental urges and that greater research into the lives of normal people is necessary. There are a few like Allport⁸ that doubt that it is possible to make specific categorizations of motives that will apply to all people and that a better approach would be to find what unique urge motivates a certain person at a given time.

Some outstanding psychologists and psychoanalysts have approached the study of motivation in a manner that defies putting them into specific groups and yet their contributions should be discussed.

Hyman⁹ discusses how psychologist Hebb developed his work in motivation along with his concept of the human nervous

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system. During his early work the widespread doctrine of motivation had been formed in the 1920's and basically it maintained that an animal or a human was regarded as passive until acted upon by external forces. Therefore, an organism was very much like a machine and would operate only when supplied with power from a separate source. The separate sources were the drives of hunger, sex, thirst, pain and mothering. Hebb\textsuperscript{10} in his work found a number of phenomena that did not fit into the dominant drive theory. This led him to caution others involved in similar research.

We may overlook the rather large number of forms of behavior in which motivation cannot be reduced to biological drive plus learning.\textsuperscript{11}

This was also a volley aimed at those who seemed to believe that behavior found in the higher species could be completely understood by working with cats or dogs.

After World War II, Hebb's\textsuperscript{12} work led to the conclusion that nerve cells are not physiologically inert when they are not being stimulated externally. He also found that a nerve cell is active on its own account and can discharge or be activated without stimulation. Hence in this concept, hunger was merely a cue that guides or directs and is no longer considered a drive. From this position, Hebb\textsuperscript{13} reasoned that the

\textsuperscript{10}Ibid.,
\textsuperscript{11}Ibid., p. 95.
\textsuperscript{12}Ibid.,
\textsuperscript{13}Ibid.,
brain is constructed to be active and as long as it is supplied with sufficient nutrition it will continue to be active. He then concluded that the brain activity is what determines behavior and the only behavioral problem becomes that of accounting for inactivity. A rather interesting experiment was used to illustrate this conclusion: The students of a large school were told that they were no longer required to do school work unless they wanted to. If they made noise and interrupted their classmates at work, their punishment was to be sent outside to play. The reward for good behavior was the right to do more work. Under these circumstances all of the students discovered in a day or two that within certain limits they preferred work to no work.

Later Hebb\textsuperscript{14} revised this concept of motivation due to the information acquired from the sensory deprivation experiments of Bexton, Heron, and Scott.\textsuperscript{15} This experiment involved paying college students to lie on a cot wearing translucent goggles, gloves and cardboard cuffs in order to reduce sensory stimulation as much as possible. It was found that most students could tolerate this reduction in sensory stimulation for only a few days. Hebb,\textsuperscript{16} with this

\textsuperscript{14}Ibid.
knowledge, reasoned that if the thought process was internally
organized and motivated, then why should it break down under
conditions of perceptual isolation as it did in this situation.

Hebb's\textsuperscript{17} motivational concept was further changed by
the discovery of an arousal system in the brain. Therefore
he concluded that the brain has two functions, one is the
cue function or guiding behavior and the other the arousal or
vigilance function. This new theory suggested that drive or
motivation can facilitate or impair performance and that low
motivation results in a poor performance and that motivation
that is too high can also result in a poor performance. This
suggests that there is a maximum level of motivation for dif-
erent types of tasks.

Hebb\textsuperscript{18} also found that individuals will seek or will
be motivated by some slight deviation from what they are
accustomed to, but will avoid too great a deviation.

Ward\textsuperscript{19} attempted to measure the effect on aspiration
shown by children in kindergarten, first and second grade as
it was influenced by withdrawal of a reward and the withholding
of a reward. He found that the group having its token rewards
withdrawn would select an easier task when given a chance than

\textsuperscript{17}Ibid.\textsuperscript{.}

\textsuperscript{18}Ibid.\textsuperscript{.}

\textsuperscript{19}W. D. Ward, "Withholding and Withdrawing Rewards As
Related To Level Of Aspiration," \textit{Child Development}, 40
the students who had their tokens withheld. The conclusion drawn was that failing to be rewarded will curb the level of aspiration less than having a reward taken from a child for failing to perform a task successfully.

Methods Used To Study Motivation

The methods used to study motivations usually fall into two broad general approaches. There are those which attempt to have an organism do something that it may not normally do but yet is believed capable of doing. The other approaches involve observing behavioral peculiarities which indicate the influence of motives instead of other causes of behavior.

The methods psychologists have used in attempting to engender motives in animals and humans are customarily placed in the following categories:

1. Deprivation--Studies in which the subject is deprived of something it needs for its biological existence (e.g. water or food) for a specific length of time. During this time the performance or behavior is observed.

2. Studies using lures of a special nature--Most organisms seem to have within their very nature either what is termed an approach or avoidance response to various stimuli to which it appears sensitive. Psychologists have used this stimuli as a natural lure in the study of the motivational process in the organism.
3. Studies in which strong stimulation is used--Such physical conditions as air blasts, shower pressure exerting needle indented discomfort, ice water immersion and electric shocks have been commonly used to motivate actions.

4. Verbal appeal--It has been found that it is possible to motivate human subjects through verbal encouragement and appealing to certain motives; example would be an appeal to please the director of the study, or to the subjects' need to be liked by others.

5. Examination of histories--The personal histories of people are studied to discover a common motivational force that is believed to be an influence in their lives. In using this technique, one group which is thought to be highly motivated in a certain area is compared to a group that is considered to be very average in that area. This method is frequently criticized because there is no experimental control and as a result the two groups may be different in other ways than in the motivational force being observed and this influence could be presumed to be due to the motivational differences.

The methods used in the observance of behavioral peculiarities to determine the influence of motives begin with what the subject had done that might indicate a motive. A planned stimulation of the behavior might not be used, and an individual's introspection is acceptable. Generally,
after the motive has been determined the behavior it triggers is observable. A behavior is then selected which proves successful and enables the subject to organize or direct his future acts.

Realizing the value of comparing the behavior of one person with another's has resulted in establishment of three systems which are commonly used to get data.

1. Asking the subject about their values, interests and motives usually by means of a questionnaire. The criticisms of this system are that perhaps the person questioned may not truly know what his interests are or that men repress their true feelings and therefore a questionnaire may not reflect true values or wants.

2. Observation by a psychoanalyst or occasionally a psychologist of person's behavior including dreams, free associations, conscious relating of motives and overt actions. Frequently a rating scale is used and used more than once to determine the reliability of the response. In the hands of specially trained judges the reliability is quite high and some psychologists believe this indicates that it can be agreed as to what a person's motives are. Critics maintain the personality of the judges will influence their observations.

3. The arousing of motives. Examples are need for affiliation or the need for achievement. This is customarily attempted through special instructions and through searching for unusual effects of the motives.
in standardized picture stories by the subjects. The impressions of the pictures are compared with those impressions expressed by another group of subjects. Neither the observer nor the subject is aware as to how the motivation will be revealed. Since the subject is not aware of how the motive will be observed, he cannot attempt to block out or try to appear more favorable.
III

RESEARCH APPLYING SPECIFICALLY TO THE
MOTIVATION OF THE MENTALLY RETARDED

The motivational research that applies specifically to individuals of below normal intellectual ability is very limited and for the most part it has been done in the past decade and a half. The methods of research used were generally no different than those described above, with adjustments made to facilitate the individual's understanding. Much of the early research involved institutionalized subjects, a factor that is widely believed to influence the individual's performance.

Stevenson and Cruse attempted to determine the social reinforcing effect critical remarks, rather than supportive, would have with normal and institutionalized subjects. They found that the normals began to work vigorously but quit when their greater efforts led to no decrease in criticism. They found that some of the feebleminded subjects performed much longer under punishment than the normals. The authors observed that critical comments seemed to be effective as a reinforcer with both the normal and feebleminded.

Terrell and Stevenson,\textsuperscript{21} aware of previous studies that had shown that normal children tend to reject and isolate retarded peers, developed a study to investigate the relationship which exists between normal and retarded children. The study was specifically concerned with assessing the effectiveness of the normal children as social reinforcing agents in a simple performance task. The retarded students were attending special classes though they were integrated in some normal classes. The results of the study showed that the retarded child placed greater value on a supportive statement when it was made by a normal child than when it was made by a child acknowledged to be of sub-normal intelligence.

One of the early observances of motivation as it influences the mentally retarded was made by Stevenson and Zigler.\textsuperscript{22} In 1957 they were questioning Kounen's\textsuperscript{23} theory of rigidity of behavior among the feebleminded. Kounen had found that the feebleminded would stay at a task of drawing simple figures far longer than normal subjects. He termed this behavior "rigidity" and believed this indicated there is very limited effect to neighboring regions of the brain when one area is directly affected. Stevenson and Zigler developed two experiments to test the rigidity theory. The first involved having the subjects make a right guess and being


\textsuperscript{23}\textit{Ibid.}.
rewarded with a sticker as a motivation. The measured results showed no difference in successful performances of subjects, nor did the more direct measure of rigidity reveal a significant difference between groups. The authors concluded from the first study that rigidity is a general behavior mechanism that appears when subjects are presented with problems beyond their capacity to solve and that a feebleminded person's performance, when compared to a normal subject of the same mental age and similar motivation would show signs of rigidity no more frequently than the normal subject.

The second experiment by Stevenson and Zigler\textsuperscript{24} involved the discrimination of the sizes of blocks. The results revealed that as long as the feebleminded were matched as to mental age with the normals, there was no difference in the display of rigidity. It was concluded that in Kounin's\textsuperscript{25} studies the feebleminded were not required to learn a task, but had to perform the task from instructions given verbally. It also was pointed out in Stevenson and Zigler's\textsuperscript{26} hypothesis that the difference between normal and feebleminded subjects reported in earlier studies was actually related to the motivational differences between the two groups. Thus the study of motivation for these men was an outgrowth of

\begin{itemize}
  \item \textsuperscript{24}Ibid.
  \item \textsuperscript{25}Ibid.
  \item \textsuperscript{26}Ibid.
\end{itemize}
their scrutiny of Kounin's work. Zigler, Hogden, and Stevenson then constructed three simple motor tasks each one designed to allow the experimenter to obtain a satiation and co-satiation error score by using two conditions of reinforcement. The reinforcement consisted of either nonsupportive or positive comments.

From this study and others the authors concluded that certain behaviors of the institutionalized feebleminded that had been attributed to their inherent rigidity should be considered as results of the great social depreviation experienced while living in institutions. After these studies, Zigler expressed the belief that there is a different hierarchy of reinforcers for the feebleminded. He observed that tangible reinforcers such as stickers were of greater reinforcement value than the mere interaction with the experimenter which in turn was greater than the reinforcement gained from performing the task correctly. It was further concluded that previous studies had not considered the following: That feebleminded children generally have been deprived of adult contact and approval and consequently they have a higher positive reaction tendency than do normal children to interact with an approving adult, that they also have a higher negative

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27 Ibid.
28 Ibid.
29 Ibid.
reaction tendency, (this negative reaction is expressed as a wariness of adults which is believed to be due to the more frequent negative encounters that feebleminded children have experienced at the hands of adults,) and that there is possibly a different hierarchy of reinforcers effecting the performances of the feebleminded.

In reference to the popular hypothesis that retardates have a higher expectancy of failure than normals, Zigler suggested that the hypothesis was too simple and needed further refinement. His work in this area indicated that,

The many failures experienced by retardates generate a cognitive style of problem-solving characterized by outer directedness. By this statement Zigler meant that the retarded child comes to distrust his own solutions to problems and therefore seeks guides to action in the immediate environment. From Zigler's position it would be concluded that the retarded child is not motivated by confidence in the decisions he has made. It also would account for the great suggestibility so frequently observed. Of this manifestation Zigler commented:

Evidence has now been presented indicating that, relative to normals of the same age, the retarded child is more

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31 Ibid., p. 297.
32 Ibid.
33 Ibid.
sensitive to verbal cues from an adult, is more imitative of the behavior of adults and of his peers and does more visual scanning.\textsuperscript{34}

There are those who find it difficult to agree with Zigler's\textsuperscript{35} findings, among them Milgram.\textsuperscript{36} Milgram\textsuperscript{37} sees as most significant the findings that retardates tend to be outer-directed rather than inner-directed in their problem solving and that perhaps there is a different hierarchy of reinforcers. However, he takes issue with what he assumes to be an effort on Zigler's\textsuperscript{38} part to dichotomize researchers in the field into two extremes, a motivational position, and those espousing a cognitive theory. The cognitive group according to Milgram's\textsuperscript{39} appraisal of Zigler's\textsuperscript{40} classification is viewed as holding a defect or difference position because they fail to consider the motivational differences of the retarded. Milgram\textsuperscript{41} contends that those involved in cognitive research have used techniques to shore up relatively inefficient cognitive

\begin{itemize}
  \item\textsuperscript{34}Ibid., p. 297.
  \item\textsuperscript{35}Ibid.,
  \item\textsuperscript{36}M. A. Milgram, "The Rationale and Irrational in Zigler's Motivational Approach To Mental Retardation," \textit{American Journal of Mental Deficiency}, 73 (January, 1969), 527-32.
  \item\textsuperscript{37}Ibid.,
  \item\textsuperscript{38}Zigler, "Continuing Dilemma," 292-8.
  \item\textsuperscript{39}Milgram, "Rationale and Irrational, " 527-33.
  \item\textsuperscript{40}Zigler, "Continuing Dilemma," 292-8.
  \item\textsuperscript{41}Milgram, "Rationale and Irrational," 527-33.
\end{itemize}
abilities by special training or to circumvent the relatively weak abilities and capitalize on the stronger ones by packaging the stimulus input or teaching method so as to permit retardates to achieve a desired result by alternate routes.

Ellis\textsuperscript{42} maintains Zigler\textsuperscript{43} presents a distorted view of the defect approach which makes it appear perhaps somewhat simple minded and to have emotional qualities.

Other researchers have found inspiration in Zigler's\textsuperscript{44} motivational probings. Mac Millan\textsuperscript{45} set up interrupted task paradigm in an attempt to determine whether the cultural-familial retardates have a higher expectancy for failure than non-retarded subjects. The subjects were all about nine years of age. The data revealed that the retarded groups placed the blame on themselves for not completing tasks, while the normal subjects frequently blamed external causes. Resumption choice and placement of blame were significantly related for non-retarded subjects but not for retardates. These results were interpreted to support the notion that cultural-familial retardates do have a higher expectancy for failure than normal children.

\textsuperscript{42} N. R. Ellis, "A Behavioral Research Strategy in Mental Retardation: Defense and Critique," \textit{American Journal of Mental Deficiency}, 73, 557-66.

\textsuperscript{43} Zigler, "Continuing Dilemma," 292-8.

\textsuperscript{44} Ibid.

\textsuperscript{45} D. L. Mac Millan, "Motivational Differences Cultural-Familial Retardates vs Normal Subject on Expectancy For Failure," \textit{American Journal of Mental Deficiency}, 74 (September, 1969), 254-8.
Mac Millan noted that the normal subjects when given a choice of spending extra time on a task that they had completed successfully or were unable to complete usually chose the one they were unable to complete. The retarded would most frequently select a task that they had been successful with. This the author believed seemed to indicate a behavior directed toward demonstrating competence and also the unwillingness to chance failure again.

The expectancy of success as a motivating force in retarded adolescents was investigated by Schwarz and Jens. They used an ambiguous task which was described as an I.Q. test to two groups and as a performance task to two others.

The broad purpose was:

To explore the role of motivation and its effect on performance of mentally retarded adolescents within the context of the special classroom as well as when they are integrated with comparably aged students enrolled in regular academic programs.

This hypothesis was related to the findings of Atkinson, who predicted that motivation will be strongest when there is uncertainty as to the outcome.

Atkinson conceived of motivation as a joint function of the subjective probability and incentive value of success. The strength of the drive is assumed to be a resultant of the strength of the motive, the subject's anticipation that

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46 Ibid.


48 Ibid., p. 946.

49 Ibid.
he can achieve a goal and the value of the goal object. Motivation = f (motive x expectancy x incentive.)

Schwarz and Jens maintained that educable retarded students are sensitive to past failure experiences and that their performance is influenced by the absence or presence of a peer group that they feel is of a higher level of intelligence. Therefore when confronted with a task in the presence of the higher level peer group, they see their chances for success as being diminished and are less motivated to put forth a maximal effort. Their study showed this to be true because those subjects being tested with normal peers did not do as well as those tested in the educable mentally retarded classrooms. It was somewhat surprising that those receiving instructions that the task was an I.Q. test did significantly better than those who had been told it was merely a performance test. This was not anticipated.

The conclusion drawn by Schwarz and Jens was:

It is one thing to be unable to cope with a certain task and quite another to have developed a personal philosophy which leads to a further reduction in performance when the individual leaves the confines of the special classroom.

50 Ibid., p. 946.
51 Ibid.
52 Ibid.
53 Ibid., p. 949.
Stamm and Gardner\textsuperscript{54} designed a study which focused upon social models as possible factors in the control and/or modification of the behavior of mildly retarded adolescents. They hoped to find out if the retarded subjects would conform or be influenced by symbolically presented models in a simulated group technique. Would mildly retarded females conform more readily than mildly retarded males? Also, would the subjects be influenced differently by symbolic models defined as peers who are normal or identified as being retarded?

The task was the counting of clicks made by a metronome and finding out the number the models had counted. The models were revealed to be either retarded or normal. The results of this study showed that the retarded females made more conformity responses when they heard the models described as another special school retarded student. The male subjects reported more out-of-school associations with individuals not attending the special school. The conclusions drawn by the authors from this study were:

The vocational counselor or teacher by systematically using normal peers to present and reinforce certain behaviors or attitudes, could be more effective in the education and rehabilitation of the retarded.\textsuperscript{55}

Thus peer models might serve to initiate new kinds of responses as well as curb responses of the retarded which would not contribute to his social-vocational adjustment.


\textsuperscript{55}\textit{Ibid.}, p. 602.
Zito and Barden\textsuperscript{56} investigated the differences in the motivation to achieve between three groups of negro adolescents, those in special EMR classes, EMR's in regular classes and negro students of normal ability. The conclusions and implications made were:

1. Retarded adolescents participating in the study seemed to be influenced more by success than by failure.

2. Negro retardates have basic achievement motivations comparable to negro students of normal background.

3. Special Class experiences seems to make educable adolescents cautious in setting goals for themselves.

4. Retardates from a special class seem to anticipate failure to achieve goals.

5. Retardates from regular classes seem to anticipate success in achieving goals.

6. Retardates from regular classes display greater achievement in word recognitions than special class retardates.

The authors believe the findings of their study raise some rather serious questions for educators charged with the

\textsuperscript{56}R. J. Zito and J. I. Barden, "Achievement Motivation Among Negro Adolescents in Regular and Special Education Programs," \textit{American Journal of Mental Deficiency}, 74, 20-6.
developing and evaluating of secondary level special education programs. Among the questions the authors believe that need to be asked are: "Should academic achievement be given greater emphasis in the special education curriculum? Should the segregation of educable retardates into homogeneous classes be greatly modified?"\(^{57}\)

The authors do not see as a solution to the problem the renewing of the pressures that the retarded were confronted with in the regular classes, nor do they advocate the removal of most pressures as is the practice in the special classes, but rather that the students should have a clear reason for learning. They also believe that an achievement goal could provide the reason. They feel that daily academic goals could be established by the teacher which would require the retardates to put forth diligent efforts to reach these goals. Once they have been achieved, they should be raised slightly to further motivate the retarded pupil. In this manner a realistic amount of stress may be introduced into the special class to help arouse the good achievement motivation the authors of this study found to exist in educable retardates. The authors further suggest the use of achievement tests, academic marks, educational counseling, and participation with normal class peers whenever possible.

\(^{57}\text{Ibid.}, p. 25.\)
Morgan, working with mildly, moderately and severely retarded institutionalized children attempted to determine responsiveness to stimulus of the groups. It was concluded that:

Although this finding suggests a relationship between stimulus complexity and intelligence, the relationship is not a direct one.59

Though Krutman's study on the use of operant learning with retarded children is without objective data, it provides observations that can easily be applied to classroom situations. Appropriate behavior by trainable retardates was reinforced with the giving of tokens which could be exchanged for items in a classroom store. The teacher participating in the study was convinced that the system was more effective than the traditional techniques. The author's opinion was:

Token economics are particularly useful for inexperienced teachers who need to learn how to motivate and manage children. The system teaches the teacher to be a good observer and to focus on reinforcing appropriate behavior. It also enables the teacher to quickly establish control over the children. Once the children are under control, other more natural reinforcers such as praise, status and grades, will take effect and the need for the system will gradually decrease except for those few children who continue to require more intensive assistance with their behavior and academic work.61


59 Ibid., p. 37.


61 Ibid., p. 112.
Mc Gee has advanced the theory that moderate failure can be used successfully as an instructional tool. Mc Gee believes that if the mentally retarded experience moderate failure while within the shelter of the special class, they might be better prepared to cope with the haphazard failure that will confront them throughout their lives. The author has observed that EMR's who come from homes in which instant success or indulgence is not often available are frequently more successful in job situations. Perhaps because these EMR's are exposed to failure within the home they are more able to cope with the trials and failures of a job situation. The author found that moderate failure produced better results than either straight success or straight failure and this led to the conclusion:

The implication is that the teacher of the mentally retarded who believes in presenting her students with only success experiences is denying herself the use of an important educational tool, namely moderate failure.

In a study to determine the effects of goal-setting and modeling on the performance of retarded adolescents, Kliebhan

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63 Ibid.

64 Ibid.

found that the statistical data did not support the hypothesis: Expectancy should result in greater production and better quality work than would result from Imitation.

This hypothesis was based on the assumption that personal motivation (competition with oneself) is more effective than social motivation (competition with another).\textsuperscript{66}

The study showed an improved quality of work and evidence that the use of motivating factors vitalized the performance of the job. The author believed that the behavior of the retarded could be effected positively by the influence of both personal and social incentives.

Evans and Spradlin's\textsuperscript{67} awareness of the great numbers of institutionalized persons presently being released to become part of the work-a-day world attempted to determine whether mildly retarded institutionalized males are more productive working under a salary or a piece rate plan.

The task used in their study was pulling a plunger on a feeder in response to a flashing light. An analysis of the data revealed that the subject responded significantly more frequently under the piece rate conditions.

Though the above research into the existing studies of motivation in education does not examine all contributions, it is an attempt to recognize those efforts which have shed the greatest light upon the stated problems.

\textsuperscript{66} Ibid., p. 221.

\textsuperscript{67} G. Evans and J. E. Spradlin, "Incentives and Instructions As Controlling Variables of Productivity," \textit{American Journal of Mental Deficiency}, 71 (1969), 129-32.
IV

CONCLUSION AND INTERPRETATION

The knowledge of the effect of motivation on a person's performance is a desirable but elusive goal. It has been substantiated by many studies that efficiency in learning increases as the strength of the motivation increases until a certain physiological limit is reached whereupon the performance of the subject begins to decrease in spite of the continued intensity of the motivation. To be put more simply, the person can become over stimulated and thus lose the flexibility and efficiency needed for the task. It is also recognized that if a motive is related to a problem it is more effective than if it is totally unrelated. Which leads to the ancient dilemma "motives are based on pleasure or pain but it is often a question as to what produced them."

The existing research related to the question, "Can it be substantiated that retarded students possess less self motivation than normal students?" reveals: That though many questions still remain as to what should be considered as motivational forces, it is quite obvious that certain basic needs must be fulfilled in all humans regardless of their mental acumen. It is also apparent that individuals vary in the degree to which they are influenced by the conscious
or unconscious efforts to meet their needs. There is no doubt that these influences are observable. The tools used to measure these influences or drives are few in number. Buros lists only Motivation Analysis Test or MAT, which is published by Institute for Personality and Ability Testing. This test is not recommended for individuals under the age of seventeen and would not be suggested as suitable to be used with individuals of below normal intellectual functioning.

Though the instruments for easy determination of self motivation are not available and may be years away, the foundations for them can already be distinguished in some of the studies reviewed. Zigler found that the retarded child is not motivated by confidence in the decisions he makes, is very sensitive to verbal cues, is more imitative of the behavior of others and does more visual scanning. All of these facts are indicative of a lesser degree of self motivation. Some researchers such as Zito and Barden observed greater anticipation for failure as in the retarded Negro adolescents contained in special EMR classes. Certainly anticipation for success or failure must be considered an expression of self motivation.

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Mc Gee\textsuperscript{71} in his proposal of using moderate failure to prepare the retarded to cope with the failures they will meet in adult life had revealed again that there are also degrees of self motivation within the ranks of the retarded. The question, "Does research reveal any consistent pattern of response by retarded students to motivational engendering efforts?" has had little light shed upon it. Once again there are no instruments available to determine a pattern of response. However, Zigler\textsuperscript{72} in his work found what he termed a different hierarchy of reinforcers. He concluded from his observations that tangible reinforcers had greater reinforcement or motivational value than interaction with the experimenter, which in turn had greater value than the mere knowledge of performing the task correctly. Krutman\textsuperscript{73} and many others have also commented on the motivational value of tangibles (in the form of tokens) when used with young mentally retarded subjects. With older retardates Evans and Spradlin\textsuperscript{74} also found that they were


\textsuperscript{74}G. Evans and J. E. Spradlin, "Incentives As Instructions as Controlling Variables of Productivity," \textit{American Journal of Mental Deficiency}, 71 (1966), 129-32.
more highly motivated by the more tangible nature of piece rate pay rather than a salary. From these findings it seems obvious that there is a strong appeal in reinforcers which reward the senses of sight and touch. Perhaps a different hierarchy of reinforcers does exist for the retardates or perhaps external motivators have the same general order but their relative influence depends upon the mental age of the subject. Certainly here is an area of research in which the preliminary steps have been taken and the direction of further pursuit appears well marked.

Another area of future motivational study that might profitably be probed would be the determination of any relationship between physical condition and motivation. It has commonly been observed that children of normal ability usually appear to be more easily motivated than EMR children. Is this ease of motivating perhaps due to the superior health habits practiced by the normal child? Can the response to motivational efforts be altered by health habits? Or is responsiveness to motivational efforts limited by the individual's electro-physiological make up?

Motivation can probably be considered the "Rosetta Stone" of all education. Without this key it is merely guess work as to whether and/or whither the student will expend his intellectual efforts.
V

SELECTED BIBLIOGRAPHY


