

Motivation: The Learner's Mainspring

"Most studies of motivation have been based on logic, common sense and old wives tales."

WHAT makes Johnny try hard in school? Teachers try "to motivate" their students, but the fact is, educators have too little understanding of what motivation toward learning in school really is. One reason for this lack of understanding is a lack of research.

Research in motivation has been abundant, but research in the area of motivation toward learning in school has been more limited. Theoretically, achievement in school is a function of past experience and present experiencing. Symbolically, an equation could be contrived to explain learning which might look something like this:

$$E_{pa} + E_{pr} \rightarrow A$$

in which " E_{pa} " equals past experience, " E_{pr} " equals present experiencing, and " A " equals achievement or learning in school.

Expanding on the constructs inherent in the symbol " E_{pr} " we can logically identify the following components as part of the conceptualization involved: number and quality of stimuli available, neurological abilities of the organism to process these stimuli, and motivation. Using symbols again, our formula for learning now reads like this:

$$E_{pa} + (S + A_n + M) \rightarrow A$$

in which " E_{pa} " equals past experience, " S " equals stimuli, " A_n " equals neurological abilities, " M " equals motivation, and " A " equals achievement or learning in school.

Following these kinds of logical operations, one could conceptualize a theory of learning in which the discrete components of the learning act, including motivation, might be identified and verbally described. Motivation might be extrapolated from the total context eventually and described as that which gives both direction and intensity to the learning act. But saying that motivation is "*that which gives both direction and intensity to the learning act*" hardly tells us what motivation is. We may know what it *does* but not what it *is*, and unless we can approach the problem from some other angle, all we generate is words.

What Is Motivation?

What *does* make Johnny try hard in school? Coming at the problem inductively may be a fruitful approach.

Over the years educators have been

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made acutely aware that many students quit school. Others, such as juvenile delinquents, many slow learning students, and certain youngsters in culturally deprived areas appear to be motivated away from school and academic learning. No one would deny that these youngsters have motivations. The motives they reflect, however, are evidently aimed in entirely different learning ways.

Drawing upon studies of youngsters such as these, and leaning heavily upon the phenomenological approach, Frymier has conducted extensive studies of more than ten thousand junior high school students over the United States during the past five years (6, 7, 8, 9, 10, 11). Three particular approaches have been used.

First, employing conventional design and testing procedures, adolescents identified by their teachers as being high or low motivated students responded to hundreds of written test items formulated from the conceptualizations drawn from the dropout, delinquency, and phenomenological studies described above. Over a period of time items were identified which consistently differentiated students whom their teachers saw as varying in motivation toward school.

Later studies demonstrated that these same students achieved differently in school when such factors as sex and intelligence were controlled. Ultimately analysis of the "content" of the discriminating items provided data from which inferences could be drawn concerning the nature of motivation to learn in school. Taken together these items constituted the Junior Index of Motivation (JIM Scale). In essence, variations in self concept, in personal goals and values, and in one's concept of others were clearly reflected in the way high and low motivated students responded to the items in the scale.

Secondly, drawing upon these patterns of data, *The Ohio State Picture Preference Scale* was then devised (11). Completely nonverbal in nature, the picture preference scale consists of pairs of pictures arranged together in such a way that students simply make a choice of one picture or the other in each particular pair. Because the pairs of pictures had been selected to reflect differing kinds of emotions and feeling tone, it was hypothesized that students whose motivations differed would respond in different ways to each pair of pictures in the total scale. Again, using conventional design and item analysis procedures, items which discriminated between groups whose motivations differed were identified and later analyzed. The same kinds of behavioral patterns already described for high and low motivated students emerged again.

Third, to test out these inferred patterns of motivational meaning, other studies were also conducted. Objectives of the studies were to probe specifically the variations in self concept, socioeconomic background, concept of others, and attainments in school among youngsters identified as differing in motivation according to the two measuring scales which had been developed (3, 4, 20, 21). A number of other studies along these lines are still under way.

Conclusions from This Research in Motivation

What do the results of the above studies indicate? Several interesting but sometimes puzzling patterns of data seem evident thus far. Keeping in mind that almost all of this research has been done with junior high school youth, these conclusions seem warranted in general terms today (5): low motivated students are

Table 1: Mean Junior Index of Motivation Scores of Ninth Grade Boys and Girls from Socioeconomically Different Schools

School	Total number	Boys' mean score	Girls' mean score
A	133	126.7	136.1
B	182	123.8	132.2
C	249	110.0	119.7
D	99	114.1	121.0
E	101	99.7	106.1

unhappy and afraid; they resist change and new ideas, they are unduly concerned with objective and materialistic things, and they dislike school intensely. Highly motivated youngsters would be described in the opposite ways.

These studies have also yielded data concerning the relationship of motivation to differing racial and socioeconomic factors. Table 1 describes mean JIM Scale scores achieved by students whose sex, racial, and social situations differ. These were all ninth grade boys and girls, but the schools they attended served entirely different socioeconomic areas.

School A, for example, was a plush new school in an exclusive suburban area in the Midwest, whereas School E represented a segregated Negro school in a Southern state. All of the other schools have been arranged on a rough socioeconomic continuum in between Schools A and E. At least two patterns clearly appear.

First, girls consistently seem to be more highly motivated to learn in school than boys during the junior high school years. Secondly, the motivational levels of youngsters are obviously related to the kind of social situation from which they come.

This picture of motivation suggests that motivation to learn in school is something which students *have* or *are* rather than that which teachers *do* to help them

learn. Studies now under way suggest that motivation to learn in school is a fairly *constant* factor. It is subject to change, but generally only slowly. Teachers *can* affect students' motivational levels, but over extended periods of time like a year; probably very little in a single day.

Motivation to learn in school is a function of one's personality structure, his goals and values, his conception of self and others, and his attitude toward change. These aspects of human behavior are learned and they are subject to modification. Nevertheless, teachers concerned about their youngsters' motivations have to do much more than use a carrot on a stick or a paddle on the behind if they hope for significant changes in any way.

Need for Research Today

The fact that in every analysis of the data done in the studies reported here girls consistently appeared to be more highly motivated to learn in school than boys underscores the kinds of sex differences which Waetjen and Grambs (22) have pointed out previously. Variations between children from schools of contrasting socioeconomic areas also have been highlighted at other times (14, 18). These observations can be added to the research of still others (1, 12, 13, 15, 16, 17, 19) which suggest that the motivation to learn in school is a manifestation of one's total personality structure and his overall psychological needs. It would appear that the educational construct becomes eminently clear: stress and striving in school must be researched and thought about in new and different ways.

In light of the above, the following questions seem pertinent: Are there crucial periods in the development of motivation to learn in school (2)? Are

there significant changes in the motivational patterns of boys and girls over a period of time? Will highly motivated youngsters respond best to an increase in external stress, while low motivated students need an entirely different plan of teacher structure and social press? Do certain teachers make a particular kind of positive impact upon their students' motivational patterns? If so, how does this impact occur? Can teachers be taught to behave in these impact-producing ways in professional schools?

Do the new curriculum programs which stress intuitive, discovery-type learning actually increase students' motivations to learn, as their proponents maintain? How will preserving or doing away with neighborhood schools affect students' motivations to learn over a period of time? Can children from depressed economic areas and disadvantaged educational backgrounds raise and maintain motivational levels to learn in school? These questions all need creative research and thoughtful study.

For too many years we have postulated the nature of motivation in school, using logic and common sense and old wives tales. We must change those postulates to hypotheses and subject every one to an empirical test. If we muster the courage for such an approach, the educator's conception of motivation to learn in school will probably undergo drastic and significant change. And if this statement is true, then we ought to get started right now.

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the professional educator. As long as the professional demands that tutorial programs conform to his notions of the "way things should be done," he cannot but injure the integrity of the tutors and the possibilities of collaboration. The tutors receive their own rewards for their work; primary among them is the joy of independent work for meaningful social goals. When this work is bureaucratized under the direction of adult professionals it is no longer an independent venture.

Tutorial programs can collaborate with school systems, but they cannot be an arm or agency of such systems. They are independent and their independence must be cherished as one of the appeals to both tutors and disadvantaged youngsters. As independent agents they challenge the educational system to change, to reform, to help do the job the tutorials are doing. They challenge the educational system to reform in order better to meet the needs of disadvantaged racial, economic and cultural minorities. As educators we can appreciate this challenge.

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