My current research interest focuses on the role of classroom processes in the development of academic motives and self perceptions. Through my research and the research of others it has become clear that what happens in the classroom is not only different for different students but in addition similar occurrences are interpreted differently by students of different sex, race and self perceptions. The meaning of success and failure appears to be especially important in determining a child's academic motivation. In this research I will measure achievement motivation and achievement behavior as defined by Nicholls (Note 1) as behavior aimed at developing and/or demonstrating high ability or avoiding demonstrating low ability. Nicholl's conceptualization sees ability as defined by the individual with two distinct reference points: 1) ability measured with reference to one's own past ability and performance, and 2) ability measured with reference to the performance of others. The first, which Nicholls calls task-involved, implies viewing learning or increased competence as an end in itself. This conceptualization includes intrinsic motivation as defined by White (1959) in his theory of competence motivation and continuing motivation as conceptualized by Maheer (1976). The second, which Nicholls calls ego-involved, views learning as a means to an end where an attempt to learn or improve mastery is made only if this will lead to a demonstration of higher ability as measured by social comparison. This is closely related to the classic interpretation of Atkinson's theory (Atkinson & Feather, 1966) of need achievement where ability is conceived in relation to an outside norm.

I will study classroom factors which lead to perceptions of high and low perceived ability and classroom processes which encourage the development of or result from motives of task-versus ego-involvement. These relationships will be explored by focusing on the two critical incidents of success and failure in the classroom, the situational variables surrounding these incidents (e.g. teacher praise or criticism), the child's academic motivation and self perceptions of ability. Naturalistic observations will be used to document objective measures of success and failure and the circumstances that surround these events for different students. Student interviews will be used to assess students' interpretations of these events and the reflection of these perceptions in behavior. Because past research has found it particularly difficult to predict achievement behaviors of white females and minorities, pilot interviews will include intensive interviews of these two groups to identify the dimensions of success and failure and achievement motives particularly salient to these groups.

Relationship to previous research

Over the past several years our research has been aimed
at identifying the critical motivational/attitudinal mediators of achievement behaviors, specifying the causal relationships among these beliefs, and outlining the developmental origins of individual differences in these beliefs. In particular we have demonstrated the importance of constructs such as causal attributions, subjective expectancies, self-concept of ability, perceptions of task difficulty, and subjective task value (cf. Parsons, Adler, Futterman, Goff, Kaczala, Meece, & Midgley, in press).

Testing the hypotheses that enrollment decisions are a joint function of students' expectations for their performance in a particular math course and of students' perceptions of the importance or incentive value of taking mathematics, we administered questionnaires to over 1400 students in grades 5-12, their parents, and their teachers over a three year period. Thirty-six classrooms were observed. Final grades in math and English and scores on standardized achievement tests were collected annually for the entire student sample. Both self-concept of ability and subjective task value emerged as important mediators of achievement behaviors. In addition, small but consistent sex differences were found on several of the important mediators. The importance of both parents and teachers as potential sources of individual differences on these variables was also demonstrated.

Classroom processes

Analysis of our classroom data showed some sex differences in student teacher interactions. More importantly we found that similar teacher treatment did not relate to achievement behavior in the same way for boys and girls. In particular the meaning of teacher praise and criticism was situationally and individually specific (Parsons, Kaczala, & Meece, in press). This finding is supported by a recent review of the use of reinforcement in the classroom by Brophy (1981). We also found that while teacher-student interaction in the classroom showed some power in predicting boys' achievement behaviors, it showed little relationship to the achievement behaviors of girls. Similarly, Morrison & Gurin (Note 2) in a study of black and white 6th grade students found classroom behaviors predictive of the achievement of both black and white boys, but nonpredictive of the achievement of white females and only to a small degree predictive of the achievement of black girls.

This present research, by broadening the definition of achievement motivation to include both ego-involved and task-involved motives and by focussing on the motives and salient classroom factors for female and minority students, will add to the knowledge of how classroom processes and the interpretations students place on these processes affect
achievement motives. Particular attention will be paid to two mechanisms by which classroom processes may affect motives: students' attributions and perceptions of ability.

Attributions

Much research has been done on causal attributions made in achievement situations and how these relate to perceptions of ability and achievement motives. But much of the evidence of attributions effects on achievement behaviors has been gathered in the lab and does not always replicate in the classroom (see Parsons, Note 3).

There is evidence that girls have different attribution patterns than boys (Dweck & Reppucci, 1973) and that girls' attributions seem to be debilitating for achievement in the lab setting. But we need to know more about how these attributions develop and their effects in natural settings before we advocate attributional retraining.

Intrinsic motivation: Task-involvement

Nicholls and others question the advisability of concentrating on attributions and motivation components he calls ego-involved. He encourages the consideration of the option of minimizing students' concerns about how their ability compares with that of others and of increasing their involvement in learning as an end in itself (Nicholls, 1979). Two conceptualizations of motivation closely linked to the concept of task-involvement are the concepts of competence motivation and continuing motivation. There is little research which looks at the determinants of these behaviors but both seem important when looking at classrooms and achievement.

The notion of competency motivation or effectance motivation has been gaining interest since the seminal work of White (1959). Harter (Note 4, Note 5) has identified several dimensions of perceived competence within the classroom environment and has developed and tested a measure with elementary school children. In addition, Harter and her colleagues have designed a measure to determine the information children use to make judgements of their own competency (Harter, Note 6).

Continuing motivation (CM) is a concept developed by Maehr (1976) which he defines as a tendency to return to and continue working on tasks away from the instructional context and without external pressure to do so. He distinguishes CM from motivation for short term performance and points out that teachers and techniques that encourage attention to a task in the classroom can, at the same time, discourage continuing interest in the task outside the classroom. Maehr argues that in our increasingly complex
culture, we need to view education as a continuous process, not limited to a particular life stage or institutional context.

Questions addressed by this study include:
1) How do attributions relate to classroom behaviors?
2) Are attributions for success and failure generated by students in natural settings?
3) Do particular modes of teacher evaluation or classroom structure foster different attribution patterns?
4) Do particular modes of teacher evaluation or classroom structure foster different modes of achievement motives?
5) Are these relationships different for students of different sex or race?

Plan of research

The proposed study will use a variety of research strategies to examine the relationship between classroom processes and academic motivation and will evolve over the two years of the postdoctoral program (See Table 1). Because my research will be conducted in a classroom setting, when I first come to Wisconsin I will need time to become familiar with the community of Madison and to make contact with administrators and teachers of a school system with the characteristics essential to the research. While establishing these outside contacts, I will also be familiarizing myself with the resources of the Research and Development Center. During this time I will do a secondary analysis of the observation data collected in Michigan. These data include observations of 500 white boys and girls in grade five through nine and measures of the students' internality and attributions for success and failure. While we have found that attributions do not relate directly to achievement, we have not looked at the relation between these dimensions and students-teacher interactions. A subset of the sample could be selected by choosing equal numbers of boys and girls within each classroom reporting alternate attribution patterns, and high, average and low ability levels. Analysis will include within and across class differences for these students. These findings should be interesting in their own right and will partially guide the selection of process variables to be included in the subsequent study.

The first half of the first year will also be spent doing an intensive literature search of motivation and classroom processes research. Special notice will be taken of development of motivation patterns for girls and minority students.

Later in the year, piloting of outcome measures will
take place. While existing measures will be used when possible, care will be taken that instruments used in the study will measure both ego-involved and task-involved motivation. Interviews of girls and minority students will focus on their experiences of successes and failures and the salient factors of these incidents for them (e.g., self attributions, criteria of success, reference point used in estimates of ability).

The final study will look at students in fifth or sixth grade math classes. Questionnaire and achievement measures will be administered to students before and after classroom observations are collected. Initial data will be used to identify students of three ability levels and three motivation levels within each class observed. These students will be observed on several occasions. Observations will focus on the critical incidents of success and failure and the circumstances surrounding these incidents (e.g., difficulty of task, form of teacher evaluation, presence of competition and social comparison). A high inference measure such as that developed by Moos and Trickett (1974) will be used to describe classroom management and goal orientation dimensions.

Interviews of the students will focus on success and failure incidents that were observed in the classroom observations. Students will be asked about their perceptions of these incidents, causal attributions of the outcomes, their perceptions of how their teacher's evaluates them as well as other factors which seem salient to them in the pilot interviews.

Data analysis

Data analysis will incorporate qualitative analysis of pilot interviews. Correlation and regression analysis will be used to access the relationships between the classroom variables and measures of motivation and achievement.

Resources

Resources required to conduct the proposed research include computer processing time, data management assistance and secretarial help for the typing of questionnaires, interview schedules, observation codebooks and reports and articles. Also needed is the help of research assistants equivalent to one full-time assistant at times of data collection. Research assistants will help in the collection of classroom observations, interviews and the coding of data.


REFERENCES


