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Applying Learner-Centered Principles to Middle School Education

This article draws on a goal perspective of motivation to examine the use of the Learned-Centered Psychological Principles (LCPs) for improving the academic engagement and learning of middle school students. Using survey data from 2,200 middle school students from diverse communities across the United States, the findings indicate many important motivational benefits of learner-centered practices for young adolescents. Specifically, students reported more positive forms of motivation and greater academic engagement when they perceived their teachers were using learner-centered practices that involve caring, establishing higher order thinking, honoring student voices, and adapting instruction to individual needs. Suggestions for creating a learner-centered middle school classroom are highlighted.

> My learning problems started in middle school. When I was in elementary school, my classes were small and I received a lot of attention from my teachers. I was a fast learner, and I was placed in AG classes for math and science. When I went to middle school, my teachers no longer seemed concerned for me. My grades went from As to Cs and Ds. My teachers did not notice . . . they just kept teaching. (Ann, age 14)

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THE MIDDLE SCHOOL YEARS are a critical turning point in young people's lives. Early adolescence is an important time for youth to adjust to a rapidly changing body, learn new cognitive abilities, form positive social relationships, develop a positive sense of self, and forge a personal code of ethics and morality (Eccles & Midgley, 1989; Jackson & Davis, 2000). Schools, along with peers and families, play an important role in fostering young peoples' healthy development through the adolescent years. In a groundbreaking report, *Turning Points: Preparing American Youth for the 21st Century* (Carnegie Council on Adolescent Development, 1989), a group of educators, researchers, policy makers and media leaders concluded that middle schools are "potentially society's most powerful force to recapture millions of youths adrift" (p. 32).

Unfortunately, the story of 14-year-old Ann is a common one. Numerous reports and studies during the last 20 years have documented declines in self-esteem, motivation, achievement, and emotional well-being during the middle school years (Anderman, Maehr, & Midgley, 1999; Harter, Whitesall, & Kowalski, 1992). Early adolescence is a difficult transition for most young people, and these changes are often attributed to the multiple biological and social changes they are experiencing. However, Eccles and Midgley (1989) were among the first to suggest that mismatches between adolescents' developmental needs and the middle

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school environment may also contribute to declines in self-esteem, motivation, and achievement. During early adolescence, young people are becoming more knowledgeable and skillful, more independent, and more focused on peer relations and social status. Relationships with adults and friends become increasingly important as adolescents learn new social roles and adjust to physical changes. Yet evidence suggests that the environment in middle schools, when compared with elementary schools, is less cognitively demanding, more competitive and evaluative, more formal and impersonal, and more structured with fewer opportunities for choice and decision making (Carnegie Council on Adolescent Development, 1989; Eccles & Midgley, 1989). In short, this analysis suggests that when adolescents' developmental needs are not addressed, it can lead to negative changes in academic and emotional well-being during the middle school transition and beyond.

The publication of several reports on the condition of middle school education, including *Turning Points*, prompted many states and school districts to initiate a series of reforms during the last 20 years. Many middle schools have now implemented block scheduling, advisory teams, looping programs, interdisciplinary teaching, and schools-within-a-school structures. As a result of these efforts, studies suggest that the social environment of middle schools is improving (Jackson & Davis, 2000; Lipsitz, Mizell, Jackson, & Austin, 1997). However, some critics believe that reform efforts have not gone far enough in improving the quality of instruction for middle school students. As Lipsitz and her colleagues (1997) concluded, many middle schools today are "warmer, happier, and more peaceful places for students and adults . . . [yet most schools] have not moved off this plateau and taken the critical next step to develop students who perform well academically, with the intellectual wherewithal to improve their life conditions" (p. 535). To take these next steps, reform models are needed that help educators create school environments that are both intellectually challenging and supportive.

This article draws on a motivational framework for examining the use of the Learner-Centered Psychological Principals (LCPs) (American Psychological Association, 1997) for improving the academic engagement and achievement of middle school students. As McCombs (this issue) explains, the LCPs have the potential to benefit learners of all ages. However, with their focus on the unique needs of learners, these teaching practices may be particularly beneficial for young adolescents. Findings described in this article support this assertion.

Goal Theories of Motivation

In the last 20 years, achievement goal theory has emerged as an important framework in motivation research (Ames, 1992; Dweck & Elliot, 1983; Maehr, 1984; Nicholls, 1984). Achievement goal theory emphasizes students' reasons for choosing, performing, and persisting at various learning activities. It also focuses on the quality of students' effort, engagement, and learning. Two types of goal orientations are typically used to understand students' academic behavior in school settings. A *mastery* or *learning goal* orientation is defined as a desire to improve one's ability, master a skill, and understand learning material. Self-improvement or skill development is the goal, and students derive satisfaction from the inherent qualities of the task, such as its challenge, interest, or enjoyment. In contrast, students focused on *performance goals* are concerned with demonstrating high ability relative to others, competing for grades, or gaining recognition for their abilities. For these students, a sense of accomplishment is derived from demonstrating high ability or avoiding negative judgments of ability, regardless of the learning involved.

The goals students adopt for learning have important implications for how they approach and respond to academic tasks and activities. In general, evidence suggests that students demonstrate the most positive (or adaptive) pattern of learning when they are focused on mastery or learning goals. With a mastery focus, students prefer challenging activities, persist at difficult tasks, report high levels of interest and task involvement, and use learning strategies that enhance conceptual understanding and recall of information (Ames & Archer, 1988; Graham & Golan, 1991; Meece, Blumenfeld, & Hoyle, 1988; Meece & Miller, 2001; Stipek & Gralinski, 1996). Mastery and learning goals are also associated with positive perceptions of academic

ability (Ames & Archer, 1988; Meece et al., 1988; Midgley et al., 1998). The positive relationship of learning-focused goals to both achievement behaviors and competency perceptions are found across grade levels and subject areas.

In contrast, performance-oriented goals show a different pattern of findings across studies. Some studies reveal that performance goals are associated with surface-level learning strategies (e.g., memorizing and rehearsing information), which do not necessarily promote conceptual understanding (Graham & Golan, 1991; Meece et al., 1988; Nolen, 1988). Performance-oriented goals are also associated with self-handicapping strategies (e.g., fooling around, procrastinating) for late elementary school-aged children (Urdan, Midgley, & Anderman, 1998) and with academic cheating behaviors among middle school students (Anderman, Griesinger, & Westerfield, 1998). However, these patterns are not consistently found across studies, and researchers have emphasized the need to distinguish between approach and avoidance forms of performance goals (Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002). Some evidence suggests that performance-oriented goals (e.g., demonstrating ability and outperforming others) are positively associated with achievement outcomes, especially for college samples (Harackiewicz et al., 2002).

Goal theory and the learning environment

In addition to understanding differences in student achievement patterns, goal theory is useful for characterizing the learning environment of middle schools. Considerable evidence indicates a shift in the motivational orientation and climate of classrooms from a mastery- to performance-goal orientation during the middle school transition. For example, Midgley and colleagues (Midgley, Anderman, & Hicks, 1995) compared elementary and middle school teachers' use of teaching practices emphasizing mastery goals (e.g., emphasizing understanding rather than rote memorization, recognizing students for trying hard, accepting mistakes as part of the learning process). When compared with elementary teachers, middle school teachers reported using fewer of these teaching strategies. Similarly, longitudinal studies have shown that students perceive their classroom environments as less focused on mastery goals and more focused on performance goals, as they make the transition into middle school (Anderman & Midgley, 1997). As school or classroom goals change, students also adopt performance goals for their own academic work (Anderman & Anderman, 1999; Roeser, Midgley, & Urdan, 1996).

The goal structures of classrooms also have important implications for students' self-concepts of ability and educational values during the transition from seventh to eighth grade. Increases in the perceived emphasis placed on performance goals (competition and ability comparisons) had a negative effect on ability and value beliefs over time (Roeser, Eccles, & Strobel, 1998). Thus, declines in mastery goals that emerge at the transition into middle school may continue to the next grade levels. As just described, declines in students' orientation toward mastery have important implications for the quality of their academic engagement and learning.

In summary, goal theories of motivation provide a useful framework for describing the learning environment of middle school classrooms. This framework assumes that children are motivated to engage in school activities for multiple reasons, and the goals students adopt have important implications for how they approach and engage in learning. Significant changes occur in students' goal orientations during the late elementary and early adolescent years, with a shift toward greater concern with competition and outperforming others. While the long-term impact of performance goals is not yet clear (Kaplan & Middleton, 2002), considerable evidence suggests that children and young adolescents benefit the most from classroom environments with a mastery focus (cf. Ames, 1992; Stipek, 2002).

Importance of Learner-Centered Practices for Middle School Education

Given the changes that occur in motivation during the middle school years, the learner-centered principles and practices may be particularly beneficial for young adolescent learners. The Learner-Center Model is based on 14 principals derived from educational and psychological research (APA, 1997). Key assumptions of the Learner-Centered Model are summarized in Table 1. In the learner-centered framework, students are viewed as active participants in learning and co-constructors of knowledge. Teachers

are encouraged to take their students' individual and developmental characteristics into account when planning lessons. Learning activities help promote the development of conceptual understanding and higher order thinking skills. Opportunities for authentic learning are evident, and learning activities are adapted to differences in students' linguistic, cultural, and social backgrounds. Additionally, the learner-centered framework emphasizes the importance of supportive classroom environments that foster positive, caring relationships. When implemented, learner-centered practices help create a learning environment that is well matched to the developmental needs of young adolescents.

Table 1
Assumptions of the Learner-Centered Model

1. Learners are distinct and unique. Their distinctiveness and uniqueness must be attended to and taken into account if learners are to engage in and take responsibility for their learning.
2. Learners' unique differences include their emotional states of mind, learning rates, learning styles, stages of development, abilities, talents, feelings of efficacy, and other academic and nonacademic attributes and needs. These must be taken into account if all learners are to be provided with the necessary challenges and opportunities for learning and self-development.
3. Learning is a constructive process that occurs best when what is being learned is relevant and meaningful to the learner and when the learner is actively engaged in creating his or her own knowledge and understanding by connecting what is being learned with prior knowledge and experience.
4. Learning occurs best in a positive environment, one that contains positive interpersonal relationships and interactions, comfort and order, and in which the leaner feels appreciated, acknowledged, respected, and validated.
5. Learning is a fundamentally natural process; learners are naturally curious and basically interested in learning about and mastering their world. Although negative thoughts and feelings sometimes interfere with this natural inclination and must be dealt with, the learner does not need to be "fixed."

Source: McCombs & Whisler (1997)

Support for the LCPs in middle school classrooms

As discussed previously, young adolescents need classroom environments that afford opportunities to develop their cognitive abilities and competence, to gain independence and autonomy, and to connect positively with adults and peers. Rather than focusing exclusively on the motivational or social climate of classrooms, the Learner-Center Model takes a more holistic approach (McCombs & Whisler, 1997). It includes strategies for promoting high academic achievement as well as offsetting problems of alienation, disengagement, and emotional distress.

I was fortunate to participate in the development and validation of the Assessment of Learner-Center Practices (ALCP) surveys. The validation sample included 109 teachers and 2,200 students from middle schools in urban, suburban, and rural communities across the United States. More than 80% of the teachers were White, and just over half were women. Forty percent of the teachers had 16 or more years of teaching experience, and a majority taught either science or mathematics.

Both teachers and students completed surveys to assess the use of learner-centered teaching practices in the classroom (for description of assessment instruments, see McCombs & Whisler, 1997). For the purposes of the validation study, three goal orientations were included based on my prior research (Meece et al., 1988; Meece & Miller, 2001):

1. *mastery goals,* defined as a desire to improve one's ability, to master a skill, and to understand learning material;
2. *performance goals*, defined as a desire to demonstrate high ability and to outperform others; and
3. *work-avoidance goals,* defined as a desire to complete tasks with a minimum of effort. This third goal measure was included to assess academic disengagement.

To validate findings related to the influence of goals on other measures of motivation and learning, the study also included rating scales to assess students' academic efficacy and level of cognitive engagement in schoolwork (active vs. superficial). Teachers were asked to rate each students' classroom performance. In addition, information was also collected on teacher demographic characteristics, such as certification level, teaching experience, and gender.

The analyses revealed several interesting findings for middle school educators. Both teachers'

and students' ratings of learner-centered practices were correlated with measures of student motivation and achievement, but patterns of relations were stronger for student ratings. Only teachers' reported support for higher order thinking showed a positive relation to student outcomes. In contrast, students' ratings on all dimensions of learner-centered practices (e.g., honoring student voices, caring and respecting students, promoting higher order thinking, and adapting to individual and development differences) were positively related to student motivation and achievement. Of interest was the differential relation of learner-centered practices to students' achievement goals. Each learner-centered dimension was positively associated with students' mastery goal ratings, with correlations ranging from .42 to .52. Positive relations were also found for students' ratings of their performance goals, with correlations ranging from .16 to .21. In contrast, students' work-avoidant goals and learner-centered perceptions were negatively correlated (r's = -.02 to -.07). Thus, learner-centered practices appear to have the strongest positive relation to students' mastery goals. Consistent with motivation research, mastery goals related positively to students' ratings of academic self-efficacy (r = .60) and active engagement in learning activities (r = .77), as well as teachers' ratings of classroom performance (r = .15).

In addition, students' perceptions of classroom practices were more predictive of student motivation and achievement than were any of the teacher demographic variables, including class size, content area, or years of teaching experience. These findings emphasize the importance of taking into account students' perceptions of teaching practices. Students and teachers may view the learning environment differently. And consistent with the learner-centered approach, it is the students' *perceptions* and experiences that are most meaningful and useful for understanding classroom behavior (McCombs, 1997; McCombs & Lauer, 1997).

Overall, the student results support the use of the LCPs for improving student motivation and achievement during the middle school years. Students reported a stronger mastery focus when they perceived their teachers as using learner-centered practices that involve caring, establishing higher order thinking, honoring student voices, and adapting instruction to individual needs. Students in these classrooms are less focused on ability concerns and avoiding work. Additionally, students who were more focused on mastery goals reported higher levels of academic efficacy and greater use of active learning strategies, such as checking answers and relating information to earlier learning. Students' perceptions of learner-centered practices were also positively related to teachers' ratings of their classroom performance. Taken together, these results identified many important benefits of learner-centered practices for young adolescents.

Applying a Learner-Centered Approach in the Middle School Classroom

The LCP findings lend support to the growing literature on the type of reform needed in middle schools. For example, the National Middle School Association (1992) emphasizes the need for educators to be knowledgeable of young adolescents, to provide a curriculum that is balanced and responsive to their needs, to use a variety of instructional strategies, to help students make continuous progress, and to foster a positive school climate. Additionally, common themes can be found in new curriculum standards for mathematics, science, history, and English that are guiding reform at national, state and local levels (e.g., National Center for History in the Schools, 1994; National Council of Teachers of English and International Reading Association, 1995; National Council of Teachers of Mathematics, 1989; National Research Council, 1996). Looking across curriculum areas, these standards emphasize a focus on (a) conceptual understanding and mastery of concepts; (b) active construction of knowledge through individual inquiry, problem solving, or social processes; (c) learning activities designed to meet interests, abilities, and experiences of students; (d) sharing responsibility of learning with students; and (e) creating a challenging and supportive learning environment for all students.

The LCPs are consistent with these reform efforts. McCombs and Whisler (1997) describe specific strategies that educators can use to create a learner-centered classroom and school. In general, learner-centered practices involve a movement toward

Table 2
Key Characteristics of Learner-Centered Classrooms

In learner-centered classrooms, the teacher

- Organizes learning activities around themes that are meaningful to students.
- Provides complex and challenging learning activities that promote conceptual and analytic thinking.
- Helps students develop and refine their understanding through critical and higher order thinking skills.
- Provides opportunities for students to choose their own projects and work at their own pace.
- Provides opportunities for students to collaborate with peers of different ages, cultures, and abilities, and includes peer teaching as part of instruction.
- Uses a variety of instructional strategies and methods to match student needs.
- Includes learning activities that are personally and culturally relevant to the students.
- Encourages shared decision making and student autonomy, and gives students increasing responsibility for their learning.
- Listens to and respects students' points of view.
- Monitors student progress continually and provides feedback on individual growth and progress.
- Uses standardized and alternative forms of assessment, and allows competencies and achievement of educational standards to be demonstrated in a variety of ways.
- Uses heterogeneous grouping practices that promote cooperation, shared responsibility, and a sense of belonging.

Source: McCombs & Whisler (1997)

a constructivist and authentic approach to teaching; a focus on conceptual understanding, problem solving, and reasoning; an emphasis on student improvement and learning for its own sake; a collaborative learning and decision making process, and a classroom environment that honors and respects students' voices. Key characteristics of learner-centered classrooms are presented in Table 2.

Conclusion

Much of the research on the middle school transition has focused on negative changes in motivation and achievement. Findings from research with the LCPs suggests that the use of learner-centered teaching practices can help offset some of these negative changes. Specifically, results with the ALCP teacher and student surveys confirm the positive relations of learner-centered practices to students' mastery goals, cognitive engagement, and achievement. Moreover, findings revealed that students' perceptions of their learning environment are more predictive of student motivation and learning than were teachers' self-reported beliefs and practices. Thus, in keeping with a learner-centered approach, the classroom needs to be viewed from the student's perspective.

The results are also consistent with the view that negative changes in student motivation and achievement in the middle school years are not inevitable. These changes are rooted in the practices and policies of middle schools (see also Anderman et al., 1999; Maehr & Midgley, 1996). Collectively, teachers and administrators make decisions about how to instruct, assess, group, and manage students. The learner-centered framework can be used to help guide those decisions.

As this article goes to press, the Leave No Child Left Behind Act of 2001 is in its early stages of implementation. It is unclear what impact this new legislation will have on schools, teachers, and students. During times of an increasing focus on accountability and content standards, it is more important than ever to remember the role schools play in the development and lives of young adolescents. The ALCP assessments and surveys provide a valuable tool for ensuring that all students experience a positive middle school environment.

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