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Student differences and environment perceptions: How they contribute to student motivation in rural high schools ☆

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Abstract

This research investigated relationships among characteristics of students and learning environments influencing variables related to motivation for learning and achievement in rural high schools. Participants were 625 students in all four grades, in 19 rural, public high schools. Questionnaires assessed two environmental factors, three self-perceptual characteristics, two motivational outcomes and three achievement-related outcomes. Regression analyses were utilized to identify differential predictive relationships. Overall, teacher characteristics appeared to more strongly predict students' positive self-perceptions and motivation than did peer characteristics. Perceived ability and valuing most strongly predicted learning and future goals, which, in turn, most strongly predicted motivation. Motivational outcomes strongly predicted grade in class, but not intention to complete high school or postsecondary aspirations. Important differences emerged by subject area. Implications for research and classroom practice are discussed.

Keywords: Rural; High schools; Student motivation; Teacher influences; Classroom environment; Goals; Perceived ability; Self-perceptions

1. Introduction

Student motivation influences critical school-related outcomes, including (but not limited to): attention, effort, goals, work quality, behavior, well-being, test scores, grades and school completion (Hidi & Harackiewicz, 2000; Linnenbrink & Pintrich, 2002a; Pintrich, 2003; Reeve, 1996). Student motivation is the result of interactions among complex factors including: at-home and family circumstances and resources, school-based resources and opportunities, interactions with teachers and administrators, interactions with peers, school-related learning and developmental experiences, and the beliefs and perceptions that these interactions and experiences give rise to (Maehr, 1989; Pintrich, 2003). Students' school-related motivation is a complex construct to study and to influence (Pintrich, 2003), and one potentially important but understudied factor is how rural students' school motivation reflects prior motivation research.

1.1. Focus on rural schools

This study specifically sought to identify characteristics of the motivational dynamic in rural high schools because they are underrepresented in the research literature. Though rural students and schools present special needs, relatively little systematic research has been done in rural schools (Gándara, Gutièrrez & O'Hara, 2001). Over 30% of U.S. schools are in rural communities, and 18% of U.S. students attend rural schools (National Council for Educational Statistics, 2001). However, less than 6% of research done in schools included rural schools, even as a percentage of the sample. Families served by rural schools include large concentrations of ethnic minorities, families in socioeconomic distress, and families led by single or undereducated parents (Flora, Flora & Fey, 2003; Khattri, Riley & Kane, 1997; National Center for Educational Statistics, 2004;

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Stern, 1994). These subgroups are studied more often in urban areas, but less frequently in rural areas, where remoteness and social isolation further limit access to critical resources (Hardré, 2007).

Beyond rural schools simply being underrepresented, they often also face serious resource issues including little economic support from struggling businesses (Hardré, 2007; Stern, 1994), large numbers of ESL students (Khattri et al., 1997), few highly qualified teachers (Holloway, 2002), and instability of teaching staff (Regional Educational Laboratory at AEL, 2003). These factors, among others, place rural students at risk for low motivation and lack of school success (D'Amico, Matthes, Sankar, Merchant & Zurita, 1996; National Research Council, 1993). Most rural schools offer fewer support and extracurricular programs overall than do non-rural schools (Ballou & Podgursky, 1995; National Center for Educational Statistics, 2004), and teachers must be "expert" in multiple subject areas for multiple grade levels (Colangelo, Assouline & New, 1999; Fowler & Walberg, 1991; Lemke, 1994). Dropout in some of the most remote rural schools is up to 30–40%, over twice the national average of 12% (National Center for Educational Statistics, 2001), and rural students are more likely than urban students to curtail their academic and career aspirations (Gándara et al., 2001; Kao & Tienda, 1998). Some studies in particular regions and states have found no difference between rural and urban samples (e.g., Deci & Ryan, 1987), but in others the differences are significant (Holloway, 2002), and in some findings are mixed (e.g., Gándara et al., 2001; Wolters, Yu & Pintrich, 1996), so ongoing and extended research is necessary (Flora et al., 2003).

Given the differences in individual, family, school and community characteristics, we can not simply generalize from largely urban and suburban studies to rural students and schools (Holloway, 2002), or marginalize rural samples, as is so often done (Hardré & Sullivan, in review). Instead we chose to take relevant educational questions and test them in the specialized setting that is the rural school (Holloway, 2002). Our purpose was not to compare rural students with their non-rural peers, but to test the research-based findings developed in urban and suburban schools, on a robust sample drawn exclusively from small rural high schools.

Our purpose in this investigation was not to generate a full-scale model, but to examine the differential predictive relationships among students' individual difference characteristics and perceptions that influence motivation for learning and achievement, in a rural high school sample. Based on a synthesis of previous research, the present study assessed the different predictive strengths of factors from multiple theoretical perspectives on both present and future-oriented motivational outcomes.

1.2. Individual self-perceptions

Individual motivational characteristics that students bring with them to the classroom include: types and degrees of motivation; multiple goal orientations; and both general and domain-specific self-perceptions (such as ability, expectations and valuing). These are influenced by past and present achievement and feedback from teachers and peers, and by students' responses to classroom climate, values, rules and norms (Linnenbrink & Pintrich, 2002a; Maehr & Midgley, 1996). Students' motivational responses, in turn, influence their future-oriented expectations and intentions (Maehr & Midgley, 1996; Pintrich, 2003), and the motivational responses of individuals vary across subject areas and classrooms (Bong, 2001; Linnenbrink & Pintrich, 2002b). Thus, we must investigate and consider *how* students are motivated, and by what particular influences (Linnenbrink & Pintrich, 2002a).

Also important among individual differences are the students' perceptions of the content and of themselves relevant to it (Greene, Miller, Crowson, Duke & Akey, 2004; Pintrich & Schunk, 1996; Sansone & Morgan, 1992). Because of the importance of perceptual differences, both theoretically and as demonstrated in previous studies, we included the following as individual difference self-perceptions variables: valuing the class content and skills, perceived ability and expectations of success in class. Value refers to the learner's tendency to ascribe worth and benefits to the knowledge and skills in the domain, which in turn influences attention, engagement, and investment (Eccles & Wigfield, 1995; Sansone & Smith, 2000). Value is subjective, situational, and powerfully impacts the type of academic choices that students make (Eccles & Wigfield, 1995; Miller, DeBacker & Greene, 1999; Wigfield & Eccles, 2000). Valuing is linked to breadth of past experiences, and to present and future opportunities, which are often very different in rural compared to non-rural contexts (Stern, 1994; Regional Educational Laboratory at AEL, 2003). We conceptualized valuing as an individual difference self-perception, because high school students bring with them different degrees of value for the content, and because value-promoting strategies are processed by students individually (Bransford, Brown & Cocking, 1999; Reeve, 1996).

In addition to value, students' perceptions of ability and success expectations may influence their motivation for a particular subject and class (Pintrich & Schunk, 1996). Perceived ability refers to the degree to which the individual feels able to learn the content and accomplish the tasks given in the domain. Success expectations refer to the individual's tendency to believe that he or she will do well in the class or task. Ability perceptions and success expectations are influenced by past and present successes and failures both in school overall and in the specific domain of study (Meece, Wigfield & Eccles, 1990), and they may differ across subject areas for the same individuals (Bransford et al., 1999). The experiences that influence ability perceptions and expectations may differ from rural to non-rural settings, due to the availability of skilled teachers and community role models (Bleeker & Jacobs, 2004). Students with high perceived ability in the domain tend to put forth effort (Miller et al., 1996), especially when they also value learning the content and skills (Reeve, 1996), and to persist when they have both high perceived ability and a learning goal orientation (Miller et al., 1996). High perceived ability in a particular class (also termed "competence") strongly predicts intrinsic motivation (Elliot et al., 2000; Sansone & Morgan, 1992), even when students receive negative performance feedback (Vansteenkiste & Deci, 2003). In contrast, low perceived ability and a performance goal orientation may result in maladaptive classroom goals (Dweck & Leggett, 1988). Students with higher perceived