

School Location, Student Achievement, and Homework Management Reported by Middle School Students

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Abstract

The aim of this study was to examine whether student achievement and school location may influence a range of homework management strategies. The participants were 633 rural and urban students in Grade 8. These homework management strategies include: (a) setting an appropriate work environment, (b) managing time, (c) handling distraction, (d) monitoring motivation, and (e) controlling negative emotion. Compared with low-achieving students, high-achieving students reported more frequently working to manage their workspace, budget time, handle distraction, monitor motivation, and control emotion while doing homework. Urban middle school students, compared with their rural counterparts, reported being more self-motivated during homework.

Key Words: homework management strategies, self-regulation, achievement, middle school students, rural, urban, schools, students' motivation, time, emotion, home, work environment, assignments, adolescents

Introduction

Understanding students' capacity to regulate their own learning (e.g., cognition, affects, actions, and features of the environment) has been a central topic of discussion among educators (Boekaerts & Corno, 2005; Boekaerts,

Maes, & Karoly, 2005; Schunk & Zimmerman, 1998). One important school task that has been closely associated with self-regulated learning is the task of doing homework (Cooper, 1989; Corno, 1996, 2000; Epstein & Van Voorhis, 2001; Warton, 2001; Xu, 1994, 2004; Xu & Corno, 1998), as homework is often viewed as one important vehicle for developing better study habits, better time organization, and greater self-direction (Cooper & Valentine, 2001; Corno, 2000; Xu, 2004; Zimmerman & Kitsantas, 2005).

Informed by Corno's model on volitional control (Boekaerts & Corno, 2005; Corno, 2001, 2004), several studies have examined a range of homework management strategies used by secondary school students, including arranging the environment, budgeting time, monitoring attention, monitoring motivation, and coping with negative affects (e.g., Xu, 2004, 2005, 2008b, 2008c; Xu & Corno, 2003, 2006). However, these studies did not investigate whether the use of homework management strategies was influenced by student achievement and school location.

The present study has linked student achievement and school location to homework management strategies. This line of research is important, as student academic achievement may be related to the use of self-regulated learning strategies in general and with certain homework strategies in particular (Zimmerman & Kitsantas, 2005; Zimmerman & Martinez-Pons, 1990). In addition, there is a need to examine the influence of school location on homework management, as rural students tend to have lower educational aspirations (e.g., Arnold, Newman, Gaddy, & Dean, 2005; Cobb, McIntire, & Pratt, 1989; Hu, 2003) and place less value on academics (Ley, Nelson, & Beltyukova, 1996; Stern, 1994) than non-rural students, which may influence the way they approach homework (i.e., homework completion behaviors and homework management strategies).

Related Literature

The present investigation was informed by two lines of related literature: (a) literature that alludes to a linkage between student achievement and homework management strategies, and (b) literature that points to the need to examine the use of homework management strategies across rural and urban settings.

Student Achievement and Homework Management

The first line of literature implies a possible linkage between student achievement and homework management strategies (Ablard & Lipschultz, 1998; Zimmerman & Kitsantas, 2005; Zimmerman & Martinez-Pons, 1990). For example, Zimmerman and Martinez-Pons asked students to describe their use

of self-regulated learning strategies in their New York City school setting. The participants were 90 students in grades 5, 8, and 11, in a school for the academically gifted, along with an identical number from regular schools. The results indicated that gifted students, compared with regular students, made greater use of certain self-regulated learning strategies (e.g., organizing and transforming, seeking peer assistance, and reviewing notes).

More recently, Zimmerman and Kitsantas (2005) investigated the role of students' homework practice in their self-efficacy beliefs regarding their use of specific learning processes (e.g., organizing, memorizing, concentrating, and monitoring), perceptions of academic responsibility, and academic achievement. The participants were 169 girls from multi-ethnic, mixed socioeconomic status families in a parochial high school for girls in a large city.

Path analyses revealed that significant paths existed (a) from the quality of homework to the girls' self-efficacy for learning beliefs and their perceptions of student responsibility for academic outcomes, and (b) from these two academic beliefs to the girls' academic grade point average at the end of the school term. These findings suggested that student academic achievement was positively associated with the quality of homework practices, as indicated by advantageous homework practices (e.g., arranging the environment, setting priorities, planning ahead, and budgeting time).

The first line of literature suggests that student achievement may be positively related to the use of self-regulated learning strategies, in general, and with certain homework strategies, in particular. However, these studies involved limited samples in urban settings. In addition, they were not designed to examine the linkages between student achievement and a broad range of homework management strategies across rural and urban settings.

Educational Aspirations in Rural and Urban Settings

Over the past 20 years, research has indicated that the educational aspirations of rural youth lag behind those of their urban counterparts (Arnold et al., 2005; Cobb et al., 1989; Eider, 1963; Haas, 1992; Haller & Virkler, 1993; Hektner, 1994; Hu, 2003; Kampits, 1996; Kannapel & DeYoung, 1999; Khattri, Riley, & Kane, 1997; Stern, 1994). For example, using descriptive statistics from the National Education Longitudinal Study of 1988 (NELS: 88), Hu examined educational aspirations and postsecondary access by students in urban and rural schools. Using 10th graders as a baseline population, the study found that higher percentages of rural students had aspirations for high school or below (16.6% for rural, in contrast to 11.0% for urban students) and for two-year college education (33.1% for rural, in contrast to 27.1% for urban students), and lower percentages of rural students had aspirations for four-year

college education or beyond (50.2% for rural, in contrast to 61.9% for urban students). The study also found that smaller percentages of students in rural schools were enrolled in postsecondary institutions (51.1% for rural, in contrast to 57.4% for urban students).

Related findings from other studies have further indicated that rural students place less value on academics (Ley et al., 1996; Stern, 1994). In a study of 2,355 students from 21 rural high schools in 21 states, Ley et al. asked students to indicate the importance of 21 attributes relating to their personal goals after high school. The data revealed that they placed more importance on personal qualities (e.g., being dependable and having the ability to get along with others) and less importance on specific areas of academic achievement (e.g., being proficient with basic English skills and math skills). It follows, then, that lower educational aspirations and less importance placed on academics could lead to a sense that “school isn’t for me” (Haas, 1992). Specifically, this approach could lead to a sense that “homework isn’t for me,” as alluded to in one survey of 210 high school seniors in seven rural high schools (Reddick & Peach, 1993). This study found that whereas 91% of the students indicated that homework was directly related to what they were taught in class that day, only 37% felt that homework was beneficial.

The second line of literature suggests that, compared with urban students, rural students tend to have lower educational aspirations, place less value on academics, and have lower academic motivation (e.g., Arnold et al., 2005; Hu, 2003; Kannapel & DeYoung, 1999). These differences further suggest that rural and urban students may approach their homework differently (i.e., homework completion behaviors and homework management strategies), as students’ perception of the instrumentality of the present academic tasks to obtain future goals (e.g., postsecondary educational opportunities) influence their use of self-regulation strategies, deep-processing study strategies, effort, and persistence (Miller & Brickman, 2004; Schutz, 1997).

Recently, several studies examined the use of homework management strategies in urban and rural settings. However, these studies employed either an all-urban sample (e.g., Xu & Corno, 2003) or an all-rural sample (e.g., Xu & Corno, 2006). Thus, there is a need to combine both a rural sample and an urban sample in one study, to allow a direct comparison of the use of homework management strategies across rural and urban settings, as rural students may perceive less utility for doing homework and may feel less compelled to do homework.

Consequently, there is a need to examine both location and student achievement in relation to a broad spectrum of homework management strategies in the same study. Specifically, are some strategies of homework management

more common than others? Do observed mean differences in homework management strategies vary by school location or student achievement?

Method

Participants

To address the criticism that previous homework research tended to focus on middle-class Caucasian students (e.g., Cooper, Lindsay, Nye, & Great-house, 1998; Xu, 2005), the present study made an attempt to recruit districts with a student body from diverse cultural and socioeconomic backgrounds. The superintendents, principals, teachers, and parents were contacted to secure their permission. The teachers administered the homework survey between the middle of October and early November, 2005. Overall, the survey response rate was 90.4%, and the racial/ethnic breakdown of the respondents was comparable to that of the school districts as a whole.

In the survey, students were asked about their level of academic achievement by selecting one choice that best described their grades across school subjects for the previous two years, including (1) *mostly A's*, (2) *mostly B's*, (3) *mostly C's*, (4) *mostly D's*, or (5) *below D*. This survey item was adapted from the NELS: 88. The only difference was that in NELS: 88, the students reported their grades in specific subjects (e.g., English), whereas the students in this survey reported their grades across all of their school subjects. The students' responses in this sample were *mostly A's* (28%), *mostly B's* (40%), *mostly C's* (24%), *mostly D's* (7%), and *below D* (2%). This percentage breakdown was similar to that of a large nationally representative sample of participants in NELS: 88, where the corresponding percentages for English, for example, were 31%, 38%, 23%, 6%, and 2%, respectively.

As it is logically possible that in some cases, for example, students with mostly C's and some A's may have an overall grade point average similar to those students with mostly B's and some D's, there is a need to provide a more definite comparison between two groups of students who varied in their academic achievement. Consequently, among 1,047 eighth graders who responded to the survey, two groups of students were included in the present study: (a) 288 students with mostly A's, and (b) 345 students with mostly C's or below.

Concerning the validity of students' self-reported grades, a recent study (Dickhaeuser & Plenter, 2005) showed very strong correlations ($r = .90$) between self-reported and actual academic performance (regardless of gender or achievement level), based on 866 students in grades 7 and 8. Meanwhile, the use of course grades as an important indicator of academic achievement is in line with other related studies in this area (e.g., Keith, Diamond-Hallam, & Fine, 2004; Singh, Granville, & Dika, 2002).

Of the 377 students in the rural sample, 48.3% were male and 51.7% were female. The sample was 68.7% Caucasian, 23.9% African American, 3.8% multiracial, 1.9% Asian American, 1.2% Native American, and .5% Latino. In the rural sample, 31.8% received free meals. These students were from several rural communities in the southeastern U.S., with a population density of 33 to 150 persons per square mile. The economic base of these communities rested in manufacturing, construction, retail trade, and agriculture (e.g., cotton, poultry, and soybeans). In these communities, a median household income ranged from about \$23,000 to \$48,000, and a median value of housing unit ranged from about \$50,000 to \$99,000.

Of the 182 students in the urban sample, 44.7% were male and 55.3% were female. The sample was 51.9% African American, 37.4% Caucasian, 5.3% multiracial, 2.4% Asian American, 1.5% Latino, and 1.5% Native American. In the urban sample, 32.2% received free meals. These students lived in a southeastern city with a population of about 180,000. The economic base of the city rested with several industries, including educational, health, and social services; retail trade; and arts, entertainment, recreation, accommodation, and food services. The city had a median household income of approximately \$32,000 and a median value of housing unit of about \$64,000.

Instrument

The students were asked about their homework management strategies, using the Homework Management Scale (HMS). The scale consisted of 22 items related to arranging the homework environment (e.g., “find a quiet place”), managing time (e.g., “set priorities and plan ahead”), handling distraction (e.g., “stop homework to send or receive instant messaging”), monitoring motivation (e.g., “find ways to make homework more interesting”), and controlling emotion (e.g., “calm myself down”). Possible responses for each item were *never* (scored 1), *rarely* (scored 2), *sometimes* (scored 3), *often* (scored 4), and *routinely* (scored 5). The five items of this scale were reversely scored (see Table 1).

Xu (2008c) examined the validity of scores on the HMS within the framework of structural equation modeling. Based on data from rural middle school students ($n = 699$), Xu conducted confirmatory factor analysis (CFA) to test the validity of the HMS structure. Factor-analytic results revealed that the HMS comprised 5 separate yet related factors: arranging the environment, managing time, handling distraction, monitoring motivation, and controlling emotion. This factor structure was then cross-validated with data from the urban middle school students ($n = 482$). With an established baseline model for the rural and urban samples, Xu further tested the validity of the multigroup model in which both baseline models were tested simultaneously, to determine evidence

Table 1. Descriptive Statistics for Homework Management

Subscale/Item	Item-total ^a	α (CI) ^b	M	SD
Environment		.743 (.709, .774)	3.15	.90
1. Locate the materials I need for my homework	.449			
2. Find a quiet area	.557			
3. Remove things from the table	.536			
4. Make enough space for me to work	.573			
5. Turn off the TV	.430			
Time		.715 (.676, .750)	2.89	.88
6. Set priority and plan ahead	.495			
7. Keep track of what remains to be done	.542			
8. Remind myself of the available remaining time	.535			
9. Tell myself to work more quickly when I lag behind	.440			
Motivation		.809 (.784, .833)	2.67	.95
10. Find ways to make homework more interesting	.479			
11. Praise myself for good effort	.761			
12. Praise myself for good work	.744			
13. Reassure myself that I am able to do homework when I feel it is too hard	.539			
Emotion		.775 (.744, .802)	2.65	.92
14. Tell myself not to be bothered with previous mistakes	.556			
15. Tell myself to pay attention to what needs to be done	.614			
16. Tell myself to calm down	.561			
17. Cheer myself up by telling myself that I can do it	.584			
Distraction		.771 (.741, .799)	3.18	.95
18. Daydream during a homework session ^c	.564			
19. Start conversations unrelated to what I'm doing ^c	.617			
20. Play around with other things while doing my homework ^c	.574			
21. Stop homework repeatedly to find something to eat or drink ^c	.552			
22. Stop homework to send or receive instant messages ^c	.425			

^aItem-total correlations. ^bThe 95% percent confidence intervals for coefficient alpha were calculated using a method employing the central F distribution (see Fan & Thompson, 2001). ^cThe item was reverse scored.

of invariance. Results revealed an adequate level of configural, factor loading, common error covariance, and intercept invariance across the rural and urban samples. For the rural and urban samples combined ($n = 1,181$), reliability coefficients (Cronbach's alpha) for scores on the five subscales ranged from .71 (for managing time) to .82 (for monitoring motivation).

The descriptive statistics for the rural and urban students in the present study are presented in Table 1. Reliability coefficients and the 95% confidence intervals for scores on each of the five subscales are included in this table. These reliability estimates (i.e., from .72 for managing time to .81 for monitoring motivation) are in the adequate to good range (Henson, 2001; Nunnally & Bernstein, 1994). Item-total correlations ranged from .425 to .761 (mean item-total correlation = .551), indicating good homogeneity.

Data Analysis

One-way, within-subjects ANOVA was conducted to examine whether some strategies of homework management were more common than others. I then conducted a multivariate analysis of variance (MANOVA) based on the principle that the dependent variables share a common conceptual meaning (Stevens, 2002). The MANOVA estimated effects of school location and student achievement on the five subscales of homework management. Student achievement was coded at two levels: Low (students with mostly C's or below) and high (students with mostly A's). School location was also coded at two levels: rural and urban. The dependent variables were mean scores on the five subscales of homework management (i.e., arranging the environment, managing time, handling distraction, monitoring motivation, and controlling emotion), which ranged from *never* (scored 1) to *routinely* (scored 5).

Results

Preliminary Analyses

Averaging over items in each subscale, 42% of the students reported that they often or routinely made efforts to arrange their homework environment; 32% noted often or routinely managing time efficiently. Forty-three percent of the students reported often or routinely attempting to avoid internal distractions (e.g., daydreaming) or other activities that would distract them from homework. Of surveyed students, 25% said they often or routinely engaged in self-motivation or self-reward. Also, 24% said they often or routinely used coping strategies to monitor and control affect during homework. Thus, there was sufficient variance to warrant correlational analyses of these data.

Pearson correlations among the five subscales of HMS ranged from .11 between monitoring motivation and handling distraction to .63 between monitoring motivation and controlling emotion. Consistent with theoretical discussions (Corno, 2001) and previous empirical findings (Xu, 2006; Xu & Corno, 2003), all of the 10 correlations were statistically significant (see Table 2), suggesting common linkages across five homework management strategies (i.e., a common conceptual meaning for using MANOVA).

Table 2. Pearson Correlations among Five Subscales of Homework Management (N from 590 to 605)

	(1)	(2)	(3)	(4)	(5)
(1) Arranging the environment	—				
(2) Managing time	.56***	—			
(3) Handling distraction	.33***	.20***	—		
(4) Monitoring motivation	.41***	.53***	.11**	—	
(5) Controlling emotion	.44***	.56***	.15***	.63***	—

** $p < .01$. *** $p < .001$

Levels of Homework Management Across the Five Subscales

Table 1 presents the descriptive statistics relating to the five subscales. One-way, within-subjects ANOVA revealed a significant difference among these five mean scores, $F(4, 551) = 47.15, p < .001, \eta^2 = .254$. An adjusted Bonferroni post-hoc comparison detected specific differences among these subscales: These middle school students reported significantly more efforts in handling distraction ($M = 3.18, SD = .95$) and arranging their workspaces ($M = 3.15, SD = .90$) than they did in managing time ($M = 2.89, SD = .88$). Results further revealed that these students reported significantly more efforts in managing time than they did in monitoring motivation ($M = 2.67, SD = .95$) or in controlling emotion ($M = 2.65, SD = .92$).

School Location, Student Achievement, and the Five Subscales

The MANOVA results – using the five subscales of homework management as the dependent variables and with student achievement and school location as the independent variable – showed that school location and student achievement did not interact [Wilks’s lambda = .980, $F(5,551) = 2.069, p = .068$, multivariate $\eta^2 = .018$]. On the other hand, the main effects of school location [Wilks’s Lambda = .982, $F(5,551) = 2.291, p = .045$, multivariate $\eta^2 = .020$] and student achievement [Wilks’s Lambda = .901, $F(5,551) = 12.089, p < .001$, multivariate $\eta^2 = .099$] indicated significant effect on the combined dependent variables (see Table 3).

Table 3. Group Means and Standard Deviations for the Five Subscales of Homework Management

Characteristics	MANOVA					MANOVA Results	
	Environment	Time	Distraction	Motivation	Emotion		
Student Achievement						Wilks's $\Lambda = .901^{***}$	
Low ^a	300	2.93 (.93)	2.64 (.82)	2.99 (.96)	2.58 (.95)	2.52 (.92)	
High ^b	259	3.40 (.79)	3.17 (.86)	3.40 (.90)	2.78 (.94)	2.80 (.90)	
	<i>F</i> =	34.739 ^{***}	43.727 ^{***}	16.986 ^{***}	7.503 ^{**}	9.642 ^{**}	<i>R</i> ² = .099
	η^2 =	.059	.073	.030	.013	.017	
School Location							Wilks's $\Lambda = .980^*$
Rural	377	3.17 (.91)	2.91 (.91)	3.18 (.95)	2.62 (.94)	2.66 (.94)	
Urban	182	3.11 (.86)	2.85 (.80)	3.19 (.95)	2.79 (.97)	2.64 (.89)	<i>R</i> ² = .020
	<i>F</i> =	.564	.664	.002	4.317 [*]	.031	
	η^2 =	.001	.001	.000	.008	.000	

^aMostly C's or below

^bMostly A's

* *p* < .05. ** *p* < .01. *** *p* < .001

Separate univariate tests were performed to compare the effects of school location (rural vs. urban) on the five subscales of homework management. The results showed statistically significant effects on one subscale of homework management, namely, monitoring motivation [$F(1,555) = 4.317, p = .038$, partial $\eta^2 = .008$]. As indicated in Table 3, urban middle school students reported being more self-motivated during homework than their rural counterparts.

In addition, univariate tests were performed to compare the effects of the two levels of student achievement (high vs. low) on the five subscales of homework management strategies. Univariate tests showed statistically significant effects on all five dependent variables, namely, on arranging the environment [$F(1,555) = 34.739, p < .001$, partial $\eta^2 = .059$], managing time [$F(1,555) = 43.727, p < .001$, partial $\eta^2 = .073$], handling distraction [$F(1,555) = 16.986, p < .001$, partial $\eta^2 = .030$], monitoring motivation [$F(1,555) = 7.503, p = .006$, partial $\eta^2 = .013$], and controlling emotion [$F(1, 555) = 9.642, p = .002$, partial $\eta^2 = .017$]. As indicated in Table 3, compared with low-achieving students, high-achieving students reported more frequently working to arrange the environment, manage time, cope with distractions, monitor motivation, and control their own emotions during homework sessions.

Discussion

The present study examined whether student achievement and school location were related to a range of homework management strategies as reported by middle school students. As hypothesized, student achievement appeared related to all five subscales of homework management. Specifically, compared with low-achieving students, high-achieving students reported more frequently working to manage their workspace, budget time, handle distraction, monitor motivation, and control emotion while doing homework. In addition, compared with rural middle school students, urban middle school students reported more frequently working to be self-motivating during homework.

In line with previous findings that student achievement was positively related to the use of self-regulated learning strategies in general and with certain homework practices in particular (Ablard & Lipschultz, 1998; Zimmerman & Kitsantas, 2005; Zimmerman & Martinez-Pons, 1990), the present study took one step further, suggesting that student achievement may be positively associated with a broad range of homework management strategies, including managing the environment, budgeting time, handling distraction, monitoring motivation, and controlling emotion while doing homework.

The finding that rural students took significantly less initiative in monitoring their motivation is in line with relevant findings from the existing literature on educational aspiration of rural youth (e.g., Arnold et al., 2005; Cobb et al., 1989; Hu, 2003). As rural youth display more hesitancy about graduating from high school and going on to college, they may place less importance on academics and homework assignments. In turn, this “homework isn’t for me” approach may make them less likely to strive to be self-motivating while doing homework. This explanation is also consistent with related research showing that educational aspiration of students may influence the strategies they use to engage in studying and the level of effort they devote to that work (Miller & Brickman, 2004; Schutz, 1997; Schutz & Lanehart, 1994).

It is intriguing that, related to the other four subscales of the HMS, there were no statistically significant differences between the rural and urban middle school students. One possible explanation is that the role of educational aspirations in homework management behavior is less pronounced at the middle school level, as middle school students are more removed from their future goal attainment such as postsecondary educational opportunities (Xu, 2008c).

Another possible explanation is that there are fewer substantial differences in educational aspirations between rural and urban middle school students (Hu, 2003). This explanation is, to some extent, substantiated by findings from Hektner’s (1995) study, which revealed that rural middle school students, when asked how they felt when thinking about their future, reported higher levels of curiosity and confidence than rural high school students, whereas their non-rural counterparts’ ratings in these two areas increased from the middle school level to the high school level. Thus, another contribution of the present study is that it raises an important question concerning the role of educational aspiration on homework management strategies for rural and urban students at their different developmental stages.

It is important to note that the findings of the present study were based on a sample of students from diverse backgrounds. In addition, the percentage of the rural students who received free meals (31.8%) was similar to that of the urban students (32.2%), which, in turn, was very close to the national average (32.3%; Common Core of Data, 2005-2006).

Limitations and Future Research

This study has some limitations that should be acknowledged. First, the present findings are based on self-reported data. Another limitation relates to the issue of causation, a limitation facing many non-experimental studies (Winship & Sobel, 2004). Other predictor variables (e.g., adult monitoring and perception of instrumentality of academic tasks) might have an effect on homework management strategies had they been included.

The present study is the first known to employ both a rural middle school sample and an urban middle school sample in one study, thereby allowing direct comparisons of homework management strategies in these two settings, so there is a need to continue the line of research at the middle school level in other rural and urban settings. There is also a need to examine the use of homework management strategies across rural and urban settings at the high school level, as the role of educational aspirations in homework behaviors may be more pronounced at this level (Hektner, 1995; Xu, 2008c).

Another line of research should further explore the linkages between student academic achievement and homework management strategies. In addition to cross-sectional survey studies, it would be important to conduct longitudinal, non-experimental studies that follow cohorts of students to examine the linkages between academic achievement and homework management strategies over time. Similarly, other methods such as a diary study, think aloud, the experience sampling method (e.g., Shumow, Schmidt, & Kackar, 2008), and qualitative case studies (e.g., Xu & Corno, 1998) would be informative in deepening our understanding in the area of how and under what conditions students at different achievement levels manage their homework over time.

Practical Implications

The finding that high-achieving students (i.e., those students with mostly A's) made greater use of all five subscales of homework management strategies is noteworthy. The achievement of these students in school implies that these homework management strategies may have the potential to help students become more effective learners in general, not just help them complete homework assignments responsibly. It follows, then, that it may be beneficial for middle schools to provide more explicit and systematic instructions to students about how to promote responsible homework behaviors. Possible topics of these instructions might include, for example, organizing the workspace, setting priorities, planning ahead, staying focused, enhancing homework intention, and coping with unwanted emotions surrounding homework tasks. In addition, middle schools may wish to provide more explicit instructions about how to handle homework distractions, as concern over homework distractions has been growing as electronic media offer new and ever-increasing diversions while doing homework, for example, web surfing, online chatting, text messaging, and blogging (Foehr, 2006; Warton, 2001; Wallis, 2006; Xu, 2007, 2008c; Xu & Corno, 2003). There is also a need for middle schools to reexamine their homework practices and to design homework assignments that are more interesting and engaging (Warton, 2001; Xu, 2008a), as the use of homework management strategies are positively associated with homework interest (Xu, 2007).

The present study revealed that, compared with rural middle school students, urban middle school students more frequently worked to monitor their motivations. Thus, there is a need for families in rural settings to pay particular attention to their children and to help them maintain motivation and engagement during homework. Such an approach is important, as parental involvement and attitudes can play a significant role in influencing student attitudes toward their homework (Cooper et al., 1998; Xu, in press) and as family support can make a difference in helping rural students monitor their motivation while doing homework (Xu & Corno, 2006). In addition, it appears likely that rural families would benefit from guidance from middle schools on how to keep students motivated while doing homework, as rural parents reported that they were more concerned about helping children develop positive attitudes about homework than assisting them with the academic content of their homework (Reetz, 1991). Finally, both rural and urban families would benefit from guidance from middle schools on how to monitor homework motivation and cope with potentially interfering emotions, as results from the present study revealed that middle school students took significantly less initiative in these two subscales than in the other three subscales: arranging the work environment, managing time, and handling distraction.

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