ARC08258

Paper presented at the annual meeting of the Australian Association for Research in Education, Queensland University of Technology, Brisbane, December, 2008

Students' reasons for working or not working in class: Aligning academic and social motivation.

Jennifer Archer
School of Education
University of Newcastle
Callaghan, NSW, 2308
Jennifer.Archer@newcastle.edu.au

Abstract

This study investigated the extent to which students worked or did not work in school for essentially social reasons rather than for academic reasons. Primary students in Year 6 (n = 253) and high school students in Year 7 (n = 231) completed a survey about reasons for working or not working in school. Students indicated that social motives encompassing parents, teachers, and peers were important to them, both as reasons to work and reasons not to work. ANOVA analyses produced interesting sex and level of schooling differences. Females students and primary students were more likely to hold social reasons for working hard (including to please the teacher, to make the teacher look good, and wanting to be like friends), while male students and high school students were more likely to hold social reasons for not working (including to annoy a disliked teacher, to make a disliked teacher look incompetent, wanting to be like friends, not wanting to look stupid, and not working because parents don't care). These results are discussed in terms of the complexity of students' motivation. Though it is desirable to have students working because they find tasks intrinsically interesting, it is unrealistic to imagine that this will occur for most students most of the time. Pedagogy that incorporates students' social motives and fosters an awareness of future goals may increase learning.

Introduction[1]

Achievement goal theory came to prominence in the 1980s as one of several cognitively based models of motivation (McInerney, 2005). Since then the theory has been extended. There has been increasing recognition of the complexity of students' behaviour. One area of development has been the way in which students' academic goals can be intertwined with social goals. Another area of development is the way in which deliberate adoption of goals may coexist with less conscious

behaviour. These less conscious behaviours may result from drives or needs such as the need for social affiliation. Less conscious behaviour also may be the result of students' not imaging that other behaviour is possible.

Initially, achievement goal theory identified two major goals (Ames, 1992). Students who worked at tasks because they wanted to understand or master them were said to have adopted a mastery goal. Students who worked because they wanted others to acknowledge their competence were said to have adopted a performance goal. This is an ego-focused goal, concerned with how one is perceived by others. Originally it was argued that mastery-oriented students should produce better quality work than performance-oriented students because mastery-oriented students focus all attention on their work and seek strategies that will help them to succeed.

Harackiewicz and her colleagues (e.g., Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000) challenged the view that a performance-orientation always was undesirable. They distinguished a performance-approach goal (a goal held by confident high-achieving students who want to look competent in front of others) and a performance-avoid goal (a goal held by anxious students who do not want to look foolish in front of others). Performance-avoid students use a variety of strategies to achieve their goal of not looking incompetent. They may procrastinate (*I would have produced good work if I spent more time on it*), cheat, or publicly claim they did not prepare for examinations. In this way a high mark can be attributed to ability rather than effort, and a low mark can be attributed to lack of effort rather than lack of ability.

Another goal also was identified. This goal was called an academic alienation goal or a work avoidance goal (e.g., Archer, 1994). The goal is to do enough work to complete a task but no more. Academically alienated students may do sufficient work to satisfy minimal requirements but prefer to invest their time and energy elsewhere. Their attitude to school may be positive (*it's interesting work but I've got too many other things going on*) or negative (*it's so boring I can't wait to get away*). Performance-avoid students and academically alienated students can display similar behaviour. Performance-avoid students want to give the impression that, like academically alienated students, they do not care about doing well but in fact they do.

Adding a social component to achievement goal theory

Achievement goal theory has broadened, now looking at social aspects of classrooms (eg, Dowson & McInerney, 2001, 2004; Summers, 2006; Urdan & Maehr, 1995). Classrooms are intensely social places. Social goals and academic goals can work independently (eg, Wentzel, Barry, & Caldwall, 2004). Students want to make friends, join a group, prevent others from joining a group, and so on. Achieving these goals may not impinge on academic work. However, social goals can be achieved via academic work. Students may do their academic work, or not do it, because they want to be accepted within a group. They may work because they like the teacher and want to please him, or they dislike the teacher and refuse to work to annoy him. Students may work or not work to please or annoy parents. Students can engage in work to achieve multiple goals. So a student may work because he finds the work interesting (mastery goal) and because it allows him to spend time with his friends (social goal).

In Archer (2004) 14 high school teachers were observed in the classroom and interviewed about their perceptions of students' motivation and what occurred in the observed lessons. Why did they think some students worked while others did not? Their responses were categorised into the following goals. Some of these goals are "standard" achievement goals while others show an intertwining of achievement and social goals. The goals are divided into two categories: goals of students who engage in academic tasks and goals of students who do not.

I'm doing this task because:
➢ *It's interesting* (mastery achievement goal, interest)
➢ *It's important* (mastery achievement goal, important)
➢ *It will help me get a job* (mastery or performance achievement goal, important)
➢ *I'll look good when I do it better than the others* (performance-approach achievement goal)
➢ *I'll look stupid if I don't do it* (performance-avoid achievement goal)
➢ *My parents want me to do well at school* (social/family goal)
➢ *My friends are doing it and I want to do what my friends are doing* (social/friends goal)
➢ *I'll be punished if I don't do it* (social conformity; academic alienation goal)
➢ *I like the teacher so I'll do what she wants to please her* (social/teacher goal with authority resting with the teacher)
➢ *We like the teacher so we'll do what she wants to make her look good* (social/teacher goal with authority resting with the students)
➢ *It's what you do at school* (social conformity, no conscious goal)

I'm not doing this task because:
➢ *It's boring* (mastery achievement goal, lack of interest)
➢ *It's not important* (mastery achievement goal, lack of importance)
➢ *It won't help me get a job* (mastery or performance achievement goal, lack of importance)
➢ *My parents don't care if I don't work at school* (social/parents goal)
➢ *My friends aren't doing it and I want to be like my friends* (social/friends goal)
➢ *I will look stupid if I do the task badly* (performance-avoid achievement goal)
➢ *There are other things that I would rather do* (academic alienation goal)
➢ *I don't like the teacher so I don't want to do what she wants me to do* (social/teacher goal with authority resting with the teacher)
➢ *We don't like the teacher so we'll make her look incompetent* (social/teacher goal with authority resting with the students)
➢ *My classmates aren't doing it* (social conformity, no conscious goal).

This set of goals obviously needed to be posed to students directly. This occurred in the current study.

Two goals identified in this research can be linked with the sociological literature on how power or control can shift within a classroom (Gore, 1993). When all students act together (though one can imagine a similar situation with one or two powerful students), students can exert control over teachers. This is evident in the goals of working to make the teacher look good or not working to make the teacher look incompetent. There is a subtle but important distinction here. Students who work to

please a teacher have a different motivation from students who work to help a teacher; and students who refuse to work to annoy a teacher have a different motivation from students who refuse to work to humiliate a teacher. A shift in power from teacher to students has occurred.

Behaviour not impelled by consciously adopted goals

Another notable finding was teachers' observations that some students did not appear to hold conscious goals at school: they *go through the motions* without consciously setting goals for what they want to achieve at school. Achievement goal theory was based on the premise of conscious goal adoption, that students deliberately set goals for achievement. However, conscious adoption of a goal may not always characterise what happens in classrooms. Students may assume that there is only one way to behave, that there is no choice available. This thinking has been described as *cognitive availability.* Some ideas or behaviours are available to us while others we do not contemplate.

… one's learning history may make certain options readily available, others not. The culture in which one is raised may have a decisive influence here: To a Mennonite child, stealing is not cognitively available as an option, whereas to an inner-city American youth it may well be. Indeed, society's learning curriculum may try to short-circuit the decision-making process altogether, by making only one alternative cognitively available as the only right or possible thing to do. If this is successful, an actor may "just do" the socially approved thing, "mindlessly" if you wish, without really making a decision at all (Mook, 1996, p.393).

Young people in Australia have no choice but to go to school. What do they see as normal behaviour, or the only possible behaviour? There are some students for whom defiance of school authority is the norm. For other students it is normal to defer to authority. There is the threat of punishment if students refuse to work, but for many threat is not necessary. They work because this is what students do in school. In this case, can students be said consciously to have adopted a goal? One could argue that there is a social motive that impels students to conform, almost unconsciously, to the conventions of their culture, but it is different from the consciously adopted goals specified in achievement goal theory.

Students may not conceive of another way of behaving. They are acting to achieve barely conscious or unconscious needs. Pintrich (2003) wrote of renewed interest in the role of needs in human motivation. There are limitations in cognitive models that explain behaviour in terms of constructs such as goals (consciously articulated), attributions, and evaluations of self-efficacy. Early motivation research by McClelland and Atkinson (e.g., Atkinson, 1964; McClelland, Atkinson, Clark & Lowell, 1953) defined motivation in terms of needs, specifically the need for achievement, the need for power, and the need for affiliation. Some of the social goals may be more accurately described as a need for affiliation, for social connection and acceptance. However, the social goals described here are more varied than the need for affiliation.

Urdan and Maehr (1995) also link the earlier work on needs and motives and the current focus on social goals. The need to make social connections with peers is particularly strong in adolescence. Fredricks, Blumenfeld, and Paris (2004) argue that needs have been overlooked in the current focus on cognitive models of motivation. They discuss Connell's self-system model that incorporates a need for relatedness, a need for autonomy, and a need for competence. They argue that students need to feel that they are accepted as members of a school community (the need for relatedness is satisfied) before they are prepared to work.

Finally, there is current interest in the effect on motivation of students' conception of time. Students who understand that current tasks, though not particularly interesting, will help then reach future goals are more likely to succeed than students who give little thought to the future (Andriessen, Phalet & Lens, 2006; Kauffman & Husman, 2004; McInerney, 2004). Students who lack a clear sense of how school work can help them in later life may be easily swayed by current social motives such as working to please a teacher or not working to annoy a teacher. In the current paper, the interplay of social and academic goals is investigated.

Present study

In the present study, 253 Year 6 primary school students and 231 Year 7 high school students from Catholic schools in the Newcastle area completed a survey about why they worked or did not work in school. Because some items could be seen as sensitive (for example, items referring to parents), the surveys were written about a student named Sam (for male students) and Lisa (for female students).

The introduction was as follows for male students (with the same introduction and items for female students):

Here are some sentences about a boy named Sam. Please read each sentence and tick one of the boxes to show how much you think you are like Sam or how much you aren't like Sam. There are no right or wrong answers. Just tick the box that's right for you.

Students responded using a five point Likert scale (1- I am not like Sam at all; 2 – I am not like Sam; 3- I am a little bit like Sam; 4 – I am like Sam; 5 – I am like Sam a lot).

There were nine items concerned with working in school (*Sam usually does the work his teacher gives him because ...*) and eight items concerned with not working in school (*Sam sometimes does not do the work his teacher gives him because …*). They were developed from teachers' understanding of why students work or do not work discussed in Archer (2004).

Reasons for working:
Item 1: *he thinks school work is important and wants to do it well*
Item 3*: he wants everyone to see that he is the best student in the class*
Item 6*: his friends are doing it and he wants to be like his friends*

Item 7*: he like the teacher and wants to please the teacher*
Item 8*: he enjoys learning new things*
Item 10*: he wants to please his parents*
Item 11*: he likes the teacher and wants the teacher to look like a good teacher*
Item 14*: that's what you have to do in school*
Item 17*: he will get into trouble if he doesn't do it*

Reasons for not working:
Item 2*: his friends aren't doing the work and he wants to be like his friends*
Item 4*: He mucks up instead (of working). He doesn't think he's smart enough to do the work and he doesn't want to look stupid if he gets a low mark.*
Item 5*: he doesn't like the teacher and won't do things to please the teacher*
Item9*: he doesn't like the teacher and he wants to make the teacher look like a bad teacher*
Item 12*: his parents don't care if he doesn't do the work*
Item 13*: he thinks the work is boring*
Item 15*: he thinks the work is not important*
Item 16*: he thinks it's too hard and he will never get it right*

The reasons were derived from long standing achievement goals and the additional reasons discussed in the previous section.

Reasons for working
Item 1: mastery goal (important)
Item 3: performance-approach goal (to look smart)
Item 6: social goal (be like peers)
Item 7: social goal (please teacher)
Item 8: mastery goal (enjoyment)
Item 10: social goal (please parents)
Item 11: social goal (make teacher look good)
Item 14: no conscious goal
Item 17: academic alienation goal, no conscious goal

Reasons for not working
Item 2: social goal (be like peers)
Item 4: performance-avoid goal (not to look stupid)
Item 5: social goal (not please teacher)
Item 9: social goal (make teacher look incompetent)
Item 12: social goal (parents don't care)
Item 13: mastery goal (boring)
Item 15: mastery goal (not important)
Item 16: academic alienation goal

Results

Table 1 shows means and standard deviation for all survey items for all students. Across all students, reasons to work (in particular, school work is important, to please parents, it's what you do in school, to learn new things, and you get into trouble if you

don't) were endorsed more strongly than reasons not to work (in particular, work is boring, work is too hard, work is not important, disliking the teacher and as a result not pleasing the teacher, and being like friends who aren't working). It is interesting to note that the two non-conscious reasons for working (*it's what you do in school*, *you get into trouble if you don't work*) were strongly endorsed by students.

Table 2 shows means and standard deviations for reasons for working in school by sex. Similar sub-scripts indicate means that are not significantly different from each other. For males, the most important reason to work is to please parents; followed by schoolwork is important and it's what you do in school; followed by enjoy learning new things, followed by wanting to do what friends are doing, pleasing the teacher, making the teacher look good; and finally by wanting to be seen as the best students in the class. For females, the most important reason to work is school work is important; followed by pleasing parents, enjoying learning, it's what you do in school; followed by getting into trouble if you don't; followed by pleasing the teacher, making the teacher look good; followed by doing what friends are doing; and finally by wanting to be seen as the best students in the class.

Table 3 shows means and standard deviations for reasons for not working in school by sex. Similar sub-scripts indicate means that are not significantly different from each other. For males, the most important reason not to work was being given boring work; followed by unimportant work, work that is too hard, wanting to annoy a disliked teacher, wanting to make a disliked teacher look incompetent, not wanting to fail and thereby look stupid, and wanting to do what friends are doing; and finally by parents not caring if school work is not done. For females, the most important reason for not working was being given boring work; followed by work that is too hard; followed by doing what friends are doing, wanting to annoy a disliked teacher, wanting to make a disliked teacher look incompetent, not wanting to fail and thereby look stupid, wanting to do what friends are doing, and work is unimportant; and finally by parents not caring if school work is not done.

A series of analyses of variance (ANOVA) tests was conducted on reasons for working and not working in school. Sex and level of schooling acted as independent variables. The relevant means and standard deviations are shown in Table 4. The ANOVA results for each item in the survey are detailed below. Table 5 shows the significance levels for sex, level, and interaction effect for each ANOVA. Reasons for working are provided first.

Work because school work is important
The main effect for level was not significant ($F_{(1,483)} = 2.854$, p = .092).
The main effect for sex was significant ($F_{(1,483)} = 33.474$, p = .000), with females rating higher than males.

Work because wants to be seen as the best student in the class
The main effect for level was significant ($F_{(1,483)} = 11.289$, p = .001), with primary students higher than high school students.
The main effect for sex was significant ($F_{(1,483)} = 5.648$, p = .021), with males higher than females.

Work because wants to do what friends are doing
The main effect for level was significant ($F_{(1, 481)} = 8.065$, p = .005), with primary students higher than high school students.
The main effect for sex was significant ($F_{(1, 481)} = 6.125$, p =.014), with males higher than females.

Work because likes the teacher and want to please the teacher
Main effect for level was significant ($F_{(1,477)} = 20.382$, p =.000) with primary students higher than high school students.
Main effect for sex was significant ($F_{(1, 483)}$, p = .011) with females higher than males.

Work because enjoys learning new things
Main effect for level was significant ($F_{(1,483)} = 13.278$, p = .000), with primary students higher than high school students.
Main effect for sex was significant ($F_{(1,483)} = 11.633$, p = .001), with females higher than males.
The interaction effect was significant ($F_{(1, 483)} = 3.922$, p = .048), with high school girls not significantly different from high school boys.

Work because wants to please parents
No main effects and no interaction effect.

Work because likes teachers and wants to make teacher looks good
Main effect for level ($F_{(1, 484)} = 13.992$, p = .000), with primary students higher than high school students.
Main effect for sex was significant ($F_{(1,483)} = 4.729$, p = .030), with females higher than males.

Work because it's what you do in school
The main effect for sex was significant ($F_{(1,484)} = 4.935$, p = .027), with females higher than males.

Work because you get into trouble if you don't
No main effects and no interaction effect.

ANOVA tests for reasons not to work are provided below. Table 4 provides relevant means and standard deviations.

Don't work because friends aren't working
Main effect for sex was significant ($F_{(1,482)} = 4.108$, p = .043), with males higher than females.

Don't work because I don't want to look stupid if I get a low mark
The main effect for sex was significant ($F_{(1, 481)} = 6.090$, p .014), with males higher than females.
The interaction effect was significant ($F_{(1,481)} = 4.237$, p =.040), with high school females not significantly different from high school males.

Don't work because don't like the teacher and won't do what the teacher asks
The main effect for level was significant ($F_{(1,481)}$ = 7.732, p =.006), with high school students higher than primary students.
The main effect for sex with significant ($F_{(1,481)}$ = 12.651, p = .000), with males higher than females.

Don't work because don't like the teacher and wants to make the teacher look bad
Main effect for level was significant ($F_{(1,483)}$ = 5.608, p =.018), with high school higher than primary school.
Main effect for sex was significant ($F_{(1,483)}$ = 33.390, p = .000), with males higher than females.

Don't work because parents don't care
Main effect for level was significant ($F_{(1,482)}$ = 7.475, p = .006), with high school students higher than primary students.
Main effect for sex was significant ($F_{(1,482)}$ = 8.820, p = .003), with males higher than females.

Don't work because work is boring
Main effect for level was significant ($F_{(1,481)}$ = 6.021, p = .014), with high school students higher than primary school students.
The interaction effect was significant ($F_{(1, 481)}$ = 10.631, p = .001), with high school females not significantly different from high school boys.

Don't work because work is not important
Main effect for level s significant ($F_{(1,482)}$ = 4.207, p = .041), with high school students higher than primary students.
Main effect for sex was significant ($F_{(1,482)}$ = 8.620, p = .003), with males higher than females.
The interaction effect was significant ($F_{(1,482)}$ = 6.039, p =.014), with high school females not significantly different from high school males.

Don't work because work is too hard
No main effects or interaction effect.

The ANOVA results show interesting differences in reasons to work and not to work in school between male and female students and between primary and high school students.

Considering reasons for working in school, in general it is primary students and female students who indicate a greater willingness to work hard than high school students and male students. Females indicate that they work in school because school work is important, because they like the teacher and work to please the teacher, because they like the teacher and work to make the teacher look good, and because work is what you do in school. Primary students indicate that they work in school because they like the teacher and want to please the teacher, because they like the teacher and want to make the teacher look good, they want to be like their friends who are working, and they want to be seen as the best student in the class.

Males more than females worked so as to be seen to be the best student in the class, and to do what their friends were doing. There was one interaction effect for working because of enjoyment in learning new things. Main effects showed primary higher than high school, and females higher than males. The interaction effect showed that high school girls did not differ from high school boys on this item.

ANOVA results for reasons not to work also were interesting. In general, males and high school students rated the items more highly than females and primary students. In addition, there were three interaction effects where high school girls responded similarly to high school boys. Males more than females did not work in school because their friends were not working and they wanted to be like their friends. Males more than females indicated they did not work because they did not like the teacher and so would not do the work teachers asked them to do. Males also indicated that they did not work because they did not like the teacher and wanted the teacher to look incompetent. Males indicated they did not work because their parents would not care if they didn't work. High school students more than primary students indicated they did not work because they disliked the teacher or because they wanted the teacher to look incompetent. High school students more than primary students also indicated they did not work because their parents did not care if they worked or not.

The three interaction effects occurred with not working because of a fear of looking stupid, because of boredom, and because work is not important. In each case, it was high school females responding in a similar fashion to high school males. They preferred to muck up in class rather than fail and look stupid; they thought school work was boring, and they thought school work was not important.

To sum up, females students and primary students are more likely to acknowledge social reasons for working hard in school (such as working to please the teacher or make the teacher look good, and wanting to be like friends who are working), while male students and high school students are more likely to acknowledge social reasons for not working in school (such as not working to annoy the teacher or make the teacher look incompetent, wanting to be like friends who aren't working, not wanting to look stupid in front of others, and not working because parents don't care about school work).

Conclusion

The results of the current study point to the complexity of students' motivation in classrooms. Students' responses showed that social goals (encompassing peers, teachers, and parents) exert a significant influence on students' behaviour in the classroom, both positively and negatively. It is noteworthy that the more negative aspects of social life (for example, wanting to annoy a teacher, wanting to make a teacher look incompetent, wanting to be with friends who aren't working) tended to emerge in high schools. To expect that teachers will be able to design tasks that generate intrinsic interest in all students at all times is unrealistic. Students are forced to go to school and forced to engage in activities that they do not enjoy.

To help their students learn, teachers should accept the social dynamics of the classroom and manipulate them to their advantage. Teachers should establish cordial relations with student leaders, perhaps via sporting teams or artistic groups. If rapport

is established, then students will be more likely to engage in the tasks the teacher gives them. If student leaders engage in the tasks, then other students are likely to follow. From here it is possible that some students may develop an interest in the tasks. Cordial relations between teachers and students are not sufficient in themselves, but they may be the first step towards academic engagement.

There is an interesting idea that could be developed in future research (the current data cannot address the idea). That is, social motives may be more dominant in areas of low socio-economic status than in areas of high socio-economic status because many low SES students do not see schooling as a route to desirable and interesting jobs. As noted in the introduction, students who understand that current tasks, though not particularly interesting, will help then reach future goals are more likely to succeed than students who give little thought to the future (Andriessen, Phalet & Lens, 2006; Kauffman & Husman, 2004; McInerney, 2004). Students who lack a clear sense of how school work can help them in later life may be easily swayed by current social motives such as working to please a teacher or not working to annoy a teacher. It may be that successful teachers in low SES areas understand students' social motivations and use social goals to enhance learning. For example, if students don't work because their friends are not working, getting the support of group leaders may get students to work. The leaders work because they like the teacher and want to please the teacher while the group members work because they want to do what their friends are doing.

[1] Parts of this section of the paper come from Archer (in press).

References

Allen, J. B. (2003). Social motivation in youth sport. *Journal of Sport and Exercise Psychology, 25*, 551-567.

Andriessen, I., Phalet, K., & Lens, W. (2006). Future goal setting, task motivation and learning of minority and non-minority students in Dutch schools. *British Journal of Educational Psychology*, *76*, 827-850.

Ames, C. (1992). Classrooms: Goals structures, and student motivation. *Journal of Educational Psychology*, *84*, 261 – 271.

Archer, J. (1994). Achievement goals as a measure of motivation in university students. *Contemporary Educational Psychology*, *84*, 261 – 271.

Archer, J. (2004). *Learning as a means to achieve social goals: A motivational analysis.* Paper presented at the annual meeting of the Australian Association for Research in Education, Melbourne, Victoria, November 29 - December 2.

Archer, J. (in press). Motivational implications of the Quality Teaching Model in New South Wales. In C-h Chi and P.D. Renshaw (Eds.), *Reforming learning: Concepts, issues and practice in the Asia-Pacific Region.* Singapore: Springer.

Atkinson, J. (1964). *An introduction to motivation.* Princeton, NJ: Van Nostrand.

Dowson, M., & McInerney, D.M. (2001). Psychological parameters of students' social and work avoidance goals: A qualitative investigation. *Journal of Educational Psychology*, *93* (1), 35-42.

Dowson, M., & McInerney, D.M. (2004). The development and validation of the goal orientation and learning strategies survey (GOALS-S). *Educational and Psychological Measurement*, *64* (2), 290-310.

Fredricks, J.A., Blumenfeld, P.C., & Paris, A.H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74(1)*, 59-110.

Gore, J.M. (1993). *The struggle for pedagogies: Critical and feminist discourses as regimes of truth*. London: Routledge.

Harackiewicz, J.M., Barron, K.E., Tauer, J.M., Carter, S.M., & Elliot, A.E. (2000). Short-term and long-term consequences of achievement goals in the college classroom: Maintaining interest and making the grade. *Journal of Educational Psychology*, *92*, 316 - 330.

Kaplan, A., & Maehr, M.L. (2007). The contributions and prospects of goal orientation theory. *Educational Psychology Review*, *19* (2), 141-184.

Kauffman, D. F., & Husman, J. (2004). Effects of time perspective on student motivation: Introduction to a special issue. *Educational Psychology Review*, *16* (1), 1-7.

Leondari, A., & Gonida, E. (2007). Predicting academic self-handicapping in different age groups: The role of personal achievement goals and social goals. *British Journal of Educational Psychology, 77*, 595-611.

McClelland, D., Atkinson, J., Clark, R., & Lowell, E. (1953). *The achievement motive*. New York: Appleton-Century-Crofts.

McInerney, D.M. (2005). Educational psychology – theory, research, and teaching: A 25-year retrospective. *Educational Psychology*, *25* (6), 585-599.

McInerney, D.M. (2004). A discussion of future time perspective. *Educational Psychology Review*, *16* (2), 141-151.

Mook, D.G. (1996). M*otivation: The organization of action (second edition)*. New York: Norton.

Nelson, R.M., & DeBacker, T.K. (2008). Achievement motivation in adolescents: The role of peer climate and best friends. *Journal of Experimental Education, 76* (2), 170-188.

Pintrich, P.R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology, 95(4),* 667-686.

Summers, J.J. (2006). Effects of collaborative learning in math on sixth graders' individual goal orientations from a socioconstructivist perspective. *The Elementary School Journal*, *106* (3), 273-292.

Urdan, T.C., & Maehr, M.L. (1995). Beyond a two-goal theory of motivation and achievement: A case for social goals. *Review of Educational Research, 65(3)*, 213 – 233.

Wentzel, K.R., Barry, C.M., & Caldwell, K.A. (2004). Friendships in middle school: Influences on motivation and school adjustment. *Journal of Educational Psychology, 96(2),* 195-203.

Table 1
Means and Standard Deviations for all survey items for all students

	Total sample (n = 484)	
	M	SD
Work in school because:		
School work is important (Item 1)	3.79	0.89
Everyone sees that he/she best in class (Item 3)	2.21	1.04
Wants to do what friends are doing (Item 6)	2.51	1.14
Likes teacher and wants to please teacher (Item 7)	2.94	1.18
Enjoys learning new things (Item 8)	3.50	1.13
Wants to please parents (Item 10)	3.78	1.03
Likes teacher & wants teacher to look good (Item 11)	2.92	1.19
That's what you do in school (Item 14)	3.64	1.05
Get into trouble if you don't (Item 17)	3.31	1.23
Do not work in school because:		
Wants to do what friends are doing (Item 2)	1.96	0.86
Doesn't want to look stupid so mucks up (Item 4)	1.92	1.03
Doesn't like teacher so won't do the work (Item 5)	2.01	1.13
Doesn't like teacher, make teacher look bad (Item 9)	1.91	1.16
Parents don't care if doesn't work (Item 12)	1.36	0.67
Work is boring (Item 13)	2.69	1.25
Work is not important (Item 15)	2.09	1.12
Work is too hard (Item 16)	2.16	1.06

Table 5: Significance levels of ANOVA results for sex, level, and interaction

Item – work in school	Main effect – sex	Main effect - level	Interaction effect
Work is important	xxx	ns	ns
Be best in class	x	xx	ns
Be like friends	x	xx	ns
Please teacher	xx	xxx	x
Please parents	ns	ns	ns
Make teacher look good	x	xxx	ns
What you do in school	x	ns	ns
Get into trouble if you don't	ns	ns	ns
Item – do not work			
Be like friends	x	ns	ns
Don't want to look stupid	x	ns	x
Don't like the teacher	xxx	xx	ns
Make teacher look incompetent	xxx	x	ns
Parents don't care	xx	xx	ns
Work is boring	ns	x	xx
Work is not important	xx	x	x
Work is too hard	ns	ns	ns

x = p<.05, xx = p<.01, xxx = p<.001, ns = non significant

Table 2
Means and Standard Deviations for not working in school by sex, with subscripts showing differences among the means

| Item | Sex | | | |
| | Males (n=252) | | Females (n=231) | |
	M	SD	M	SD
Do not work in school because:				
Wants to do what friends are doing (Item 2)	2.05_b	0.87	1.88_c	0.84
Doesn't want to look stupid so mucks up (Item 4)	2.03_b	1.05	1.80_c	0.99
Doesn't like teacher, won't do the work (Item 5)	2.19_b	1.22	1.82_c	0.99
Doesn't like teacher, make teacher look bad (Item 9)	2.19_b	1.32	1.59_c	0.87
Parents don't care if doesn't work (Item 12)	1.45_c	0.77	1.26_d	0.87
Work is boring (Item 13)	2.78_a	1.29	2.58_a	1.20
Work is not important (Item 15)	2.23_b	1.16	1.93_c	1.05
Work is too hard (Item 16)	2.21_b	1.11	2.12_b	1.02

Note. Means with the same subscript are not significantly different from each other
Note. Subscripts indicate differences among means within each group (male, female), not across groups.

Table 4
Means and Standard Deviations for survey items by sex and school level

	Males				Females			
	Primary (n=131)		High school (n=122)		Primary (n=123)		High school (n = 109)	
Item	M	SD	M	SD	M	SD	M	SD
Work in school because:								
School work is important (Item 1)	3.58	0.91	3.55	0.91	4.14	0.75	3.90	0.83
Everyone sees that he/she best in class (Item 3)	2.46	1.05	2.15	1.09	2.25	1.04	1.93	0.91
Wants to do what friends are doing (Item 6)	2.83	1.13	2.42	1.17	2.46	1.10	2.28	1.10
Likes teacher and wants to please teacher (Item 7)	3.02	1.22	2.57	1.20	3.32	1.06	2.82	1.09
Enjoys learning new things (Item 8)	3.41	1.18	3.24	1.09	3.95	0.98	3.39	1.13
Wants to please parents (Item 10)	3.78	1.01	3.77	0.99	3.78	1.03	3.79	1.12
Likes teacher & wants teacher to look good (Item 11)	2.99	1.19	2.61	1.22	3.24	1.15	2.82	1.10
That's what you do in school (Item 14)	3.51	1.10	3.55	1.17	3.89	0.93	3.61	0.95
Get into trouble if you don't (Item 17)	3.37	1.23	3.14	1.37	3.35	1.20	3.39	1.11
Do not work in school because:								
Wants to do what friends are doing (Item 2)	2.08	0.86	2.00	0.88	1.78	0.81	1.99	0.84
Doesn't want to look stupid so mucks up (Item 4)	2.08	1.05	1.99	1.05	1.66	0.94	1.95	1.03
Doesn't like teacher so won't do the work (Item 5)	2.11	1.13	2.27	1.31	1.63	0.91	2.04	1.04
Doesn't like teacher, make teacher look bad (Item 9)	2.15	1.21	2.25	1.42	1.41	0.75	1.80	0.96
Parents don't care if doesn't work (Item 12)	1.37	0.65	1.52	0.87	1.18	0.44	1.36	0.62
Work is boring (Item 13)	2.82	1.28	2.73	1.31	2.29	1.16	2.94	1.18
Work is not important (Item 15)	2.25	1.11	2.21	1.22	1.71	0.98	2.17	1.07
Work is too hard (Item 16)	2.22	1.16	2.20	1.05	1.97	0.97	2.30	1.04

Table 3
Means and Standard Deviations for reasons to work in school by sex, with subscripts indicating differences among means

Item	Male (n=253)		Female (n=231)	
	M	SD	M	SD
Work in school because:				
School work is important (Item 1)	3.57_b	0.91	4.03_a	0.80
Everyone sees that he/she best in class (Item 3)	2.31_e	1.08	2.10_f	0.99
Wants to do what friends are doing (Item 6)	2.63_d	1.17	2.38_e	1.10
Likes teacher, wants to please teacher (Item 7)	2.80_d	1.23	3.08_d	1.11
Enjoys learning new things (Item 8)	3.33_c	1.14	3.69_b	1.09
Wants to please parents (Item 10)	3.78_a	1.00	3.79_b	1.08
Likes teacher, wants teacher to look good (Item 11)	2.80_d	1.22	3.05_d	1.14
That's what you do in school (Item 14)	3.53_b	1.13	3.76_b	0.95
Get into trouble if you don't (Item 17)	3.26_c	1.30	3.37_c	1.16

Note. Means with the same subscript are not significantly different from each other
Note. Subscripts indicate differences among means within each group (male, female), not across groups.