

The Consequences of Pressure on Adolescent Students to Perform Well in School

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Abstract

The aim of this research was to explore the influence of culture and context on students' motivational orientations, sense of well-being, and academic performance, by investigating differences among three groups of high school students, namely, Hong Kong Chinese, Canadian Chinese and Canadian of European origin on motivational variables and performance. A second goal of this study was to examine the relationship among the motivational variables within each group. 571 grade 12 and 13 students from high schools in Hong Kong and Montreal Canada participated in this study. The results showed that Hong Kong students spent significantly more time studying, but they were more anxious, felt less competent, and received lower grades, than their Canadian counterparts. The relationships among the motivational variables were generally in line with those reported in Western studies. The results clearly showed the influence of culture and context of learning on students motivational orientation and sense of well-being. The undesirable consequences of pressure on students to achieve high grades were discussed.

Key words

Adolescent psychology; Educational achievement; Motivation; School anxiety; Self-efficacy

Introduction

In recent years cross-national research has shown consistently that Chinese students outperformed their Western counterparts in standardised achievement tests.¹ Systematic studies have excluded intelligence or ability as a reason behind this superior performance. A number of studies have found that cultural values, beliefs and practices may be associated with Chinese students' motivation and achievement.^{2,3} While the achievement of Chinese students is glorified in both East and West, little is thought about the

price that they pay. Statistics from Education and Manpower Bureau of the HKSAR showed that the number of students who attempted suicide decreased steadily from 52 in 1994 to 18 in 2001. However, the number of successful suicide increased from 12 to 19 during the same period.⁴ Studies in Hong Kong have found a depression rate ranging from 19% to 31% depending on the cut-off point used⁵ and 40% of hospitalised adolescents who attempted suicide did so because of poor academic results.⁶ Shek and Mak (1992)⁷ also reported that 23% of students aged 11-20 were psychologically at risk. Among them 11% were categorised as severely, 19% as moderately and 23% as mildly depressed.

In this paper we present recent evidence from our cross-cultural studies, to show that Chinese students in Hong Kong are under great pressure to perform well in school at the expense of their social development and emotional well being. The study reported here explored the influence of culture and context on students' motivational orientation (i.e. students' goal orientation, self-efficacy, test anxiety, effort), and academic performance as well as the relationship between these variables within each culture.

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Participants were, Chinese students in Hong Kong, Canadian students of European origin, and East Asian Canadian students predominantly Chinese (referred to as Chinese Canadian). In the following section a literature review is provided as a background to our study.

The Culture and Context of Learning in Hong Kong

Considerable research evidence shows that culture and context of learning have profound influence on students' motivation, learning and sense of well being. At the classroom level, factors such as the teaching method, evaluation, feedback, and the nature of teacher student interaction have important influence on students' intrinsic motivation, level of involvement in academic activities, and feeling of efficacy and pleasure in mastering the learning task.⁸⁻¹¹ The nature of task and assessment can impose task specific goals that guide students' learning strategies and influence their cognitive and affective behaviour, as well as their level of involvement in a learning task.^{9,12}

In Hong Kong, the standard of achievement is extremely high and geared towards the brightest and highest achievers in the classroom. Students are given an extraordinary amount of daily homework and are seldom praised or given reward for good performance. In contrast, punishment for poor performance is administered frequently.^{13,14} According to Western research findings, such learning environment has adverse effect on the development of intrinsic motivation and would encourage performance goal orientation.^{11,15}

At a more general level students' attitude towards learning and achievement are affected by cultural values and practices.¹⁶ With increasing modernisation younger generation of Chinese are adapting more Western values and becoming more like their individualistic Western counterparts.¹⁷ Research evidence however, suggests that collectivistic values still play a central role in Chinese achievement.^{3,16} Family and social groups continue to have great influence on students' achievement behaviour. Academic excellence is often motivated by a wish to please one's family.¹⁶

Peers and other social groups also play an important role in providing support and in academic activities, and peers often engage in such activities together.^{18,19}

Chinese culture also attach great importance to education and believe that education is necessary for building one's character, for financial and social advancement, and for better job prospects.^{2,16} For the Westerners, however, education is considered as only one of the venues.

Theoretical Background

This study was based on expectancy by value theory of motivation. According to this theory, the value that students attached to the achievement task, expectancy of the performance outcome, and the affective reactions aroused in a similar achievement situations determine student motivation.²⁰

The value that students attach to achievement is reflected in the type of achievement goals that they have. Social cognitive theories of motivation have emphasised the importance of achievement goal orientation in determining achievement behaviour. "Goal orientation represents an integrated pattern of beliefs that leads to different ways of approaching, engaging, and responding to achievement situations".²¹ Two types of goal orientations have been studied frequently: Learning/mastery goal and performance goal.^{15,22} Students with learning goal orientation engage in learning activities with the intention of gaining knowledge, understanding, and mastery of subject matter. These students use self-regulatory and effective strategies to learn. They generally have high degree of self-efficacy, attributing their success and failure to their own effort, they usually have low level of test anxiety and perform well in an achievement situation.^{21,23} Students adopting performance goal, on the other hand, use ability as a criterion for judging their own self-worth, they are concerned with how others judge their abilities compared with their classmates. Hence, they engage in learning strategies such as memorisation and surface strategies in order to be able to pass the exams. Since these students' self-worth is judged on the basis of their perception of ability to outperform others successfully, they often avoid challenging tasks to protect their self-esteem. Hence, such students are at risk of developing learned helplessness, low self-esteem, anxiety, and depression when faced with difficult task or failure.^{24,25} More recent research evidence shows that students may have both mastery and performance goals to varying degrees depending on the "nature of task, the school environment, and the broader social and educational context".²⁶

This conceptualisation of performance goal has been challenged in recent years. Some studies reported that performance goal could lead to different achievement behaviours depending on the motive for achievement. Pintrich et al (2001)²³ for example, distinguished between "extrinsic goal" orientation and "relative ability". The former goal focus on grades and their achievement behaviour is in line with original conceptualisation of performance goal. The latter focus on "besting others".

These students have higher levels of self-efficacy, metacognition, and make use of more effective strategies in learning. Hence, it is possible that these various goals have positive or negative outcomes depending on the context of learning. In addition some scholars have argued that there could be multiple goals.²⁶ For example, social goals such as pleasing one's parents, peers, and teachers may be important in motivating students to achieve.

There is now considerable evidence that people from different cultural backgrounds may be motivated by different forces and achieve their goals in different ways.^{3,27,28} Research evidence shows that in collectivistic cultures such as Chinese, family and group goals are given higher priority than those of the individual,²⁹ and individualistic and affiliative goals are closely related.³ In a previous study among the Chinese in Hong Kong we found that being a good daughter or a good son was an important achievement goal.³ Hence, in this study in addition to learning and performance goals, we also examined goals of pleasing parents, teachers, and peers.

Goal orientations are reported to be influenced by the context of learning. Competitive classroom structure encourages performance goal, whereas, classroom structures emphasising learning rather than grades promote learning goal orientation.¹⁵

The expectancy of success is related to students past experience in similar achievement situations. Experience of success will increase confidence that one's effort would lead to success, thus promoting a sense of self-efficacy. Bandura³⁰ defined self-efficacy as students' belief in how well they could perform in a learning task and their judgment of responsibility for their own performance. Self-efficacy can thus be used as a measure of expectancy of success. Research shows that high level of self-efficacy is associated with learning goal, self-regulation, and effective use of learning strategies.³¹ Students who believe in their own ability to do well in a task, engage in "more metacognitive strategies, and are more likely to persist at a task than students who do not believe they can perform the task".³¹

A third component of achievement motivation is affective response to the achievement situation. Among many different affects test-anxiety has been the focus of much research. Although contradictory findings have been reported, most studies found that test anxiety is associated with low self-efficacy,³² extrinsic motivation, and performance goal.³³

There are other indicators of achievement motivation

such as risk taking, persistence, and effort. In this study we also included the level of effort that students put in studying.

Method

Participants

A total of 571 grade 12 and 13 students aged 17-19 from high schools in Hong Kong (N=217), and in Montreal, Canada (N=354) participated in this study. There were two groups of Canadian students: East Asian Canadian students predominantly Chinese (referred to as Chinese students, N= 66), and European Canadian (N=288), predominantly of French and English origin). Schools in Hong Kong were selected so as to match with the Canadian schools in terms of educational standard and socioeconomic backgrounds of the students.

Measures and Procedure

A questionnaire consisting of two parts was administered to the students. Part 1 included questions about demographic background (i.e. age, education background of parents, average results for last term examinations as well as students performance on mathematics, English and social sciences), amount of time spent on different activities (including homework, hobbies, partying, playing, etc.), and perception of own abilities. Part 2 included questions related to goal orientations, academic self-efficacy (adapted from Patterns of Adaptive Learning Survey, PALS, Midgley, Maehr and Urdan, 1993) as well as questions related to test anxiety, cognitive and self-regulated learning strategies (adapted from Motivated Strategies for Learning, MSLQ, Pintrich & De Groot, 1990). In this paper the results on test anxiety will be included only. A 7-point rating scale was used with 1 indicating the lowest and 7 the highest ratings. Good validity and reliability of these scales have been reported both in US and in China.^{34,35} Item correlations resulted in excluding some of the questions. The Cronbach alpha reliability in the present study ranged from 0.72 to 0.89. Following are examples from the questionnaire:

Self-efficacy: "If I have time, I can do a good job on my school work".

Test-anxiety: "I have an uneasy, upset feeling when I take a test".

Learning goal: "Understanding the work in school is more important to me than grade I get".

Performance goal: "I want to do better than other students in this class".

Family-oriented goal: "I do well in school so that my family will be proud of me".

Teacher-oriented goal: "I do my work because I want the teacher to like me".

Peer-oriented goal: "To be accepted by my friends I sometimes let my school work slip".

Although several measures of academic performance were used only, the average mark for the last examination will be reported in this paper.

Results and Discussion

The aim of this research was to explore the influence of culture and context on students' motivational orientations, sense of well-being (i.e. goal orientations, self-efficacy beliefs, test anxiety, and students' actual effort), and academic performance, by exploring differences among three groups of adolescents from two different ethnic background studying in two different learning contexts on these variables. A second goal was to see the relationship among these variables for the three groups of students.

One-way ANOVAs with culture as independent variable and motivational variables, effort, and performance as dependent variables showed significant differences between the groups on all the variables except for the performance goal (see Table 1). Hong Kong students spent significantly

more time studying, but had lower marks, felt less competent (i.e. had lower scores in academic self-efficacy), and more anxious compared with their Canadian counterparts. However, no difference was found between Hong Kong Chinese and Canadian Chinese students on test anxiety. These findings clearly showed the negative effect of education context on Hong Kong students' sense of well being and achievement. The context of learning in Hong Kong schools compared to their Canadian counterparts is very competitive, specially at grades 12 and 13 when students prepare for the university entrance examinations. Hong Kong students work very hard and spend a lot of time studying, however, the amount of effort that they put into their studies did not match with their grades. Sixty-five percent of Hong Kong students received a mark of 60% or less. Of these, 21% had a mark less than 50% and only 10% of students had a mark between 70-79%, while only 2% of Canadian students had received a mark less than 60%. An overwhelming majority of them (i.e. 90% of Chinese Canadians and 82% of European Canadian students) received a mark of 70% or above. This shows that the standard of achievement in Hong Kong is extremely high so that no matter how hard students tried, with exception of a few, they were not able to receive good grades. Indeed, the overall correlation between effort and exam results for the two Canadian groups are significant and positive, whereas for the Hong Kong Chinese is negative (see Table 2).

Table 1 Mean Ratings (Standard Deviations) for Test Anxiety, Goal Orientations, Time Spent Studying, and Grades for Hong Kong Chinese, Canadian Chinese and European Canadian Students

	Hong Kong Chinese (<i>N</i> =217)	Canadian Chinese (<i>N</i> =66)	European Canadian (<i>N</i> =288)	F-Ratio
Test Anxiety	4.16 ^a (0.10)	3.81 ^b (0.17)	3.67 ^a (0.08)	7.37**
Learning Goal	3.91 ^a (0.07)	4.26 ^b (0.12)	4.45 ^a (0.06)	19.08****
Performance Goal	4.53 (0.07)	4.86 (0.13)	4.64 (0.06)	NS
Teacher Oriented Goal	2.96 ^a (0.08)	2.79 ^b (0.15)	2.29 ^{ab} (0.07)	20.72****
Family Oriented Goal	3.98 ^a (0.09)	4.30 ^b (0.16)	3.37 ^{ab} (0.08)	21.00****
Peer Oriented Goal	2.80 ^a (0.06)	2.35 ^a (0.11)	1.93 ^a (0.05)	56.34****
Academic Self-Efficacy	3.99 ^{ab} (0.06)	4.47 ^a (0.12)	4.76 ^b (0.06)	40.38****
Time Spent Studying (Effort)	5.56 ^{ab} (0.11)	4.57 ^a (0.20)	4.17 ^b (0.09)	50.37****
Average Mark in Last Term Exam	2.47 ^{ab} (0.10)	6.39 ^a (0.18)	6.02 ^b (0.09)	408.26****

** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$, NS=Not Significant. Superscript letters a, b, ab, indicate significance differences, groups share the same superscript are significantly different from each other.

Table 2 Correlations between Test Anxiety, Self-Efficacy, Goal Orientations, Amount of Time Spent Studying and Average Grade in Last Term Examinations for Hong Kong Chinese, Canadian Chinese and European Canadian Students

Variable	1	2	3	4	5	6	7	8	9
Test Anxiety									
Hong Kong Chinese	1.00								
Canadian Chinese	1.00								
European Chinese	1.00								
Self-Efficacy									
Hong Kong Chinese	NS	1.00							
Canadian Chinese	-0.49***	1.00							
European Chinese	-0.23***	1.00							
Learning Goal									
Hong Kong Chinese	0.15*	0.21**	1.00						
Canadian Chinese	-0.29*	-0.49***	1.00						
European Chinese	-0.12*	0.30***	1.00						
Performance Goal									
Hong Kong Chinese	0.28***	0.40***	0.26***	1.00					
Canadian Chinese	0.29*	NS	NS	1.00					
European Chinese	0.22*	0.28***	NS	1.00					
Teacher Oriented Goal									
Hong Kong Chinese	0.23***	0.14*	NS	0.20**	1.00				
Canadian Chinese	0.24*	NS	NS	0.44***	1.00				
European Chinese	0.20***	NS	NS	0.23***	1.00				
Family Oriented Goal									
Hong Kong Chinese	0.27***	NS	0.17*	0.26***	0.29***	1.00			
Canadian Chinese	0.45***	NS	NS	0.46***	0.39**	1.00			
European Chinese	0.25***	NS	NS	0.27***	0.54***	1.00			
Peer Oriented Goal									
Hong Kong Chinese	0.14*	NS	NS	NS	0.39***	0.22**	1.00		
Canadian Chinese	NS	NS	NS	0.28*	0.53***	0.32***	1.00		
European Chinese	0.22***	-0.14*	NS	NS	0.33***	0.27***	1.00		
Time Spent Studying									
Hong Kong Chinese	0.18**	NS	0.19**	0.24***	NS	0.15*	NS	1.00	
Canadian Chinese	NS	0.35**	0.37**	NS	NS	NS	NS	1.00	
European Chinese	NS	0.27***	0.22***	0.23***	NS	NS	-0.15*	1.00	
Average Grade in Last Term Exam									
Hong Kong Chinese	-0.17*	0.19**	-0.14*	NS	NS	NS	NS	-0.20**	1.00
Canadian Chinese	-0.29*	0.46***	NS	NS	NS	NS	-0.24*	0.35*	1.00
European Chinese	-0.18**	0.35***	0.17**	0.18**	-0.12**	NS	0.18**	0.41***	1.00

*p<0.05, **p<0.01, ***p<0.001, NS=Not Significant

Chinese Canadians and European Canadians share the same learning context in schools, but they are from different cultural backgrounds. The context of learning appeared to have a moderating effect so that the ratings of Chinese Canadian students on various variables were often in the middle. The results showed that Canadian students from Chinese background spent significantly more time studying and received higher grades, but were more anxious than European Canadian students. This finding shows the influence of culture on students' motivation and achievement. Chinese culture places great emphasis on studying hard and academic achievement. In Western University campuses it is well known that Chinese students spend an extraordinary amount of time studying and they strive for high grades. The first author recalls that, some students even avoid registering in courses where there are too many Asian students, particularly the Chinese, had registered. Many students felt that they could not spend as much time studying as Asian students did. Hence their grades would be lower in those classes because they would be compared with Asian students. Academic achievement is particularly important for the overseas Chinese because many of them are supported financially by their families back home.³⁶ Achieving excellence would not only make their parents proud, but also ensures that the family's financial help is not wasted. Hence, these students are probably highly motivated.

Generally, all subjects rated higher on performance goal than learning goal, particularly the Chinese groups (see Table 1). This finding may be related to the fact that all groups of students were preparing for entrance into university. In order to get into better universities it is important to have high grades. As noted above, focusing on grades encourages competitiveness and performance goal orientation. However, European Canadian students' rating on learning goal was higher than their Chinese counterparts and significantly so compared with Hong Kong Chinese students. This could be the result of differences in their learning experiences. Hong Kong education system is very competitive and geared towards preparing students to pass endless examinations. Such learning context does not encourage learning goal. In addition, medium of instruction until very recently was English (their second language) in most high-schools. This forces students to memorise limited factual information in order to pass exams.

The correlation between learning and performance goals for Hong Kong students in our study suggests that Hong Kong students adopt a combination of learning and

performance goals (see Table 2). This may be due to the fact that while education and learning is valued as a way to gain knowledge and develop one's character, it is also a key to social mobility and good career prospects. Hence, students could have both learning and performance goal orientations for their achievement.

Similar findings were reported by other researchers.^{9,36,37} Volet et al also reported that over time Southeast students become more similar to Australian students. Learning and performance goals were, however, negatively correlated for both groups of students in Montreal. This difference between the groups clearly shows the influence of context on learning. Compared with teacher-centered education context of Hong Kong, Montreal education system is more student-centered. Teachers use more analytic and problem based learning approaches to teaching which encourage students' deep understanding and wider reading of the subject matter. This was shown in their higher ratings of learning goal compared to Hong Kong students.

The situation for the Canadian Chinese is somewhat different. Although their context of learning is similar to the Canadian European students, but like their Hong Kong counterparts, they are under great pressure from their families to excel academically. Hence, although they rated higher than Hong Kong students on learning goal, but at the same time they had the highest rating on performance goal among the three groups (see Table 1).

In line with our expectations, we also found that Chinese Canadian and Hong Kong students rated significantly higher on social goals (i.e. goals of pleasing parents, peers, and teachers) than their Canadian counterparts (see Table 1) with goal of pleasing parents being the most important for all three groups. This finding is not surprising, and confirms the findings of our previous study.³ In this study we found that Chinese achievement was socially oriented, whereas for the Western students it is individualistic. An interesting finding of the present study was that among the three socially oriented goals, family related goal (e.g. studying to please parents) was rated highest followed by teacher and peer oriented goals, in that order for all three groups. This finding contradicts the popular belief and reports that adolescents are more influence by their peers at this stage of life than at any other age. The results of our study showed that as far as academic achievement is concerned students in all three groups were more influenced by their families and teachers than by their peers. Generally socially oriented goals were also correlated with performance goal for all the students, particularly the goal of pleasing one's family and the teacher. This highlights the fact that all these goals

have in common the pressure on the students to outperform others in the class. As expected, both groups of Chinese students rated significantly higher on socially oriented goals than their European counterparts which shows the influence of their socially oriented culture.

Hong Kong students also scored lowest on self-efficacy, followed by Chinese Canadian students, although the difference between the latter two groups was not significant. The difference between the students from Chinese culture and their European Canadian counterpart on self-efficacy can be in part due to the Chinese cultural characteristic of modesty when asked questions about their own competence in the questionnaire. Chinese culture promotes the value of being modest to the extent that they may even engage in self-effacing behaviour.³⁸ On the other hand the fact that Chinese Canadian students scored significantly higher on self-efficacy than their Hong Kong counterparts suggest that culture alone cannot explain this finding. The relationship between effort and exam results can explain why Hong Kong students perceived themselves to be less competent than their counterparts in Canada. The negative correlation between effort (amount of time spent studying) and exam results would indicate to the students that they may not be competent enough. Since in spite of spending a lot of time studying, they were not able to get good grades.

In line with findings of Western studies³⁸ we found a positive and significant relationship between self-efficacy, learning goal orientation, effort, and performance for all three groups, with one exception: self-efficacy was unrelated to effort for Hong Kong students (see Table 2). Similarly we also found a negative correlation between test-anxiety, self-efficacy, learning goal, and performance goal for all three groups with some exceptions for Hong Kong students on self-efficacy and learning goal. These findings generally support the theoretical link between motivational components and students task engagement. Students who were interested and motivated to learn and believed that they were competent spend more effort and had better performance than those who did not. Stepwise multiple regression analyses in the present study showed that self-efficacy belief, effort (i.e. the actual amount of time spent studying) and test-anxiety had significant impact on average performance in all three cultures (see Salili et al⁸ for detail analysis). These variables were also significant predictors of academic achievement in all three cultures. High self-efficacy, high effort and low anxiety predicted good results with the exception of Hong Kong Chinese whose high effort lead to lower grades. For these students performance goal was the most important predictor of good grades. In the

case of Canadian Chinese students' family oriented goal however, was also an important predictor of high marks. All these findings reflect the important influence of culture and context on students' motivational orientation and achievement.

Conclusion and Implications

The results of this study clearly demonstrated the important influence that culture and context of learning has on students' sense of well being and achievement orientation. Hong Kong students generally work very hard, but no matter how hard they try their teachers may not allow them to get grades that they deserve. They often surprise their students with unusually difficult examinations, well beyond the level of their competence and what they have learned in the classroom. The first author's informal interview with a group of teachers revealed that most of them believe giving low marks to students will make them more motivated and induce them to work even harder. This practice is not conducive to students' sense of competence and would create unnecessary anxiety which may eventually lead to a feeling of helplessness and even despair (particularly in low ability students) with undesirable and sometimes tragic consequences. The results of the present study, thus has important implications for educators in Hong Kong and in Canada. It is obvious that harsh education system and assessment criteria are detrimental to students sense' of competence, and result in higher levels of anxiety. Hence, educators should explore ways of changing this situation. While attempts are being made to provide health education in Hong Kong schools, more attention should also be focused on adverse effects of learning context, teaching and assessment practices on students sense of well-being. We also found that self-efficacy is the single most important predictor of academic achievement. In order to promote self-efficacy educators should design the content, instructional approach and assessment techniques in a way that would enhance students' interest, engagement and sense of competence.³⁴ Programs to modify students' motivational beliefs could also be useful.

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