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Motivation in Learning a Second Language: Exploring the Contributions of Family and Classroom Processes

This study looks at how family and classroom factors influence second-language learning at the junior secondary level in schools in Hong Kong. It employed an ecological perspective to look at how family-level factors and classroom-level factors uniquely combine to influence students' learning motivations in second-language learning. Nineteen secondary schools with over 2,200 secondary 1 and 2 students and their family members participated in the cross-sectional survey used for the research. Findings suggest that both teachers' instructional behaviors and peer victimization norms in the classroom play a moderating role in the association between family processes and students' motivation to learn English. It is suggested that the result of this research has important implications for home-school relations in Hong Kong as well as the restructuring of the school process to create a more supportive and nurturing environment for learning and teaching.

Cette étude porte sur l'influence des facteurs familiaux et pédagogiques sur l'apprentissage d'une langue seconde par des élèves du secondaire (premier cycle) à Hong Kong. S'appuyant sur une perspective écologique, nous avons étudié l'interaction des facteurs liés à la famille et ceux liés à l'école qui influencent la motivation des élèves pour apprendre une langue seconde. La recherche s'appuie sur enquête transversale à laquelle ont participé 19 écoles secondaires avec plus de 2 200 élèves au secondaire 1 et 2 et les membres de leur famille. Les résultats donnent à penser que les pratiques pédagogiques des enseignants d'une part et les normes relatives à la victimisation par les pairs en classe d'autre part jouent un rôle modérateur dans l'association entre les facteurs familiaux et la motivation des élèves pour apprendre l'anglais. Il est proposé que les résultats de cette recherche a d'importantes répercussions sur les rapports foyer/école à Hong Kong, ainsi que sur la restructuration des processus scolaires visant la création d'un milieu plus encourageant et stimulant pour l'apprentissage et l'enseignement.

One of the weaknesses of the current literature on school effectiveness is the lack of understanding of how various levels of analysis (e.g., school, classroom and individual levels) uniquely and interactively contribute to student outcomes (Hoglund & Leadbeater, 2004; Kennedy & Mandeville, 2000; Bryk & Raudenbush, 1992). Hence despite the accumulation of knowledge about what contributes to the academic achievement of students and the relative importance of the influence of home, school, and community, we still fall short of a convincing model of how the social environment in the family and school setting combine to influence learning (Riordan, 1997). In particular, if learning is taken to be a complex mental process comprising intention formation, task generation, action implementation, and outcome evaluation, then researchers

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should be concerned as much with how this complex learning process is influenced by the social environment constructed by the linkages between family and school as with the relative importance of home and school effects (Pintrich, 2004).

The purpose of this study is to explore how the interaction of family and classroom factors affects students' motivation to learn a second language. I hypothesize that classroom conditions moderate the effects of family processes on students' learning motivation (East, 1987). Based on Bronfenbrenner's (1979) ecological model of human development, the classroom can be conceived as the meso-system that connects the family and the school (Olson, 1995). The classroom is a social setting where norms and expectations of family and school converge and parents and teachers interact while trying to maximize opportunities for the students. The classroom also provides the primary milieu for students' social interactions. The family factors in this study include parental involvement and socioeconomic background. The classroom factors include instructional behaviors and peer victimization norms.

There has been a wealth of research on students' affective performance in second-language learning (Berger & Bradace, 1982; Dörnyei, 2000; Gardner, 1985), and how family processes affect their motivation and performance (Eccles, Wigfield, & Schiefele, 1998; Suárez-Orozco & Suárez-Orozco, 1995), but only recently have researchers started to explore how classroom processes influence the effects of family processes on student performance (Bellmore, Witkow, Graham, & Juvonen, 2004; Chang, 2004; Hoglund & Leadbeater, 2004). It is by trying to explore how the social environment impinges on the students, in particular their emotional state, that one begins to gain insight into which aspects of environment and which mechanisms enhance or degrade psychological effects of success, and why students with inadequate social support are less well equipped to deal with the in-school demands and frustration resulting from failure in school.

Motivation for Learning the English Language

Learning usually progresses through a mental process that involves initial planning and goal-setting, intention formation, task generation, action implementation, action control and outcome evaluation (Dörnyei, 2000, 2001; Hickey, 1997). When one talks about sustained, long-term activities such as learning a second language, the learning process is even more complicated. Students often need a warm and supportive family and classroom environment to learn a second language (Gardner, 1985).

In Hong Kong, English as a second language is widely considered to be of paramount importance, being taught as early as kindergarten. Society has put a lot of pressure on those in charge of the education system to nurture school graduates who are fluent in both English and Chinese languages, and this situation has not been changed with the return of sovereignty of the territory to mainland China in 1997 (Berry & McNeill, 2005). Although there has been recent acknowledgement of Putonghua as the national language, both the government and the community at large continue to recognize the importance of achieving high English-language standards in the schooling system and hence among the workforce in Hong Kong in order to maintain its competitiveness as an international commercial and financial centre (Education Commis-

sion, 2005). In order to maintain a trilingual, biliterate schooling system that recognizes the commensurability of spoken Cantonese, Putonghua, and English, and written standard Chinese and English, the government has introduced a number of measures since 1997. Some of these include implementing a medium-of-instruction policy that restricts the number of English-medium secondary schools, providing resources for the hiring of native English-speakers to teach in primary and secondary schools, restructuring the English-language curriculum so that students can be engaged more actively in language use, and introducing a new public examination format that includes spoken English. Thus although English is only considered a second language in the secondary school curriculum, it is actually occupying a privileged position in terms of allocated time in the curriculum, staffing of English teachers, and prerequisite for university entrance (Lin, 2006).

Many parents, however, would much prefer their children to learn the English language than the Chinese language, even if it is at the expense of their cultural heritage, because they think that English may enhance their children's future learning and future career (Berry & McNeill, 2005; Carkin, 2005). However, not many parents are proficient enough in English to provide direct home support to their children for learning the language, and not many parents want to communicate with their children in English at home. In fact, because most of the population in Hong Kong is Chinese who will not normally use English unless they are communicating with foreigners or otherwise need to, there is little chance for young people to practice the language at home or in the community. As a result, many students fall under great pressure and feel isolated (Biggs, 1996; Watkins, 1996). If learning a language in school does not progress smoothly and students cannot draw satisfaction from their performance in it, they may develop a poor learning attitude in the subject (Marsh, Hau, & Kong, 2002) such as feeling bored with learning English, uninterested in English, scared of learning English, or self-destructive about their poor standards.

Achievement goal theory asserts that students' goal orientations influence how they approach and respond to academic tasks (Ames, 1992; Zusho, Pintrich, & Cortina, 2005). Two particular goals are often attributed to successful academic performances. These are mastery goals (i.e., goals focused on learning and understanding) and performance goals (i.e., goals focused on the demonstration of competence, often in competitive situations). Biggs (1992) describes three motivations that learners in Hong Kong mainly employ as their approach to learning. The surface motivation is the intention of the learner to try to get by with minimal trouble, or simply to pass the subjects without aiming high. The deep motivation is present in learners who are intrinsically motivated, tend to read widely, are able to relate new content to what they already know, and can extract more meaning from their learning. The achievement motivation is present in learners who are motivated to achieve, likely to organize their own work, and mobilize internal and external resources to accomplish their goals. Most educators agree that learners with surface motivation will tend to set low goals, focus on rote learning (memorization), and be unlikely to succeed in most learning situations, whereas learners exhibiting deep motivation or achievement motivation are more able to focus their inter-

nal energy on learning and achieving goals for a longer period than those with surface motivation.

Gardner (1985) points out that students' determination to learn a second language is influenced by their effort expended in learning, desire to learn, and attitudes toward the activities involved in learning, and these three components are reflected in students' motivational intensity. He further suggests that motivation in second-language learning is also reflected in a learner's orientation. Students who employ mastery goals and learn a second language with deep motivation tend to belong to an integrative orientation that is characterized by learners' wanting to learn about, interact with, or become closer to the second-language community.

Although Hong Kong attaches great importance to the teaching and learning of English as a second language, society as a whole, and schools in particular, have not provided a nurturing environment for students to learn the language. Therefore, whether students will develop an integrative orientation and learn English with deep motivation will depend on the nature of parent-child interaction in the family, as well as what goes on inside the classroom.

Family Influence on Students' Learning Motivations

Although the influence of family socialization patterns on student's achievement has been well established, there appears to be a general belief that these patterns are more relevant in shaping their affective performances such as attitudes, self-concept, motivation, and causal attributions (Eccles, 1993; Gonzalez-Pienda et al., 2002; Wentzel, 1999; Wigfield & Eccles, 1992). The assumption behind this is that when students are aware of how they use their cognitive processes and strategies, parental behaviors can influence their learning habits and emotional disposition (Hokoda & Fincham, 1995; Klebanov & Brooks-Gunn, 1992; Reynolds & Walberg, 1992).

This study looks at how parental involvement and socioeconomic background affect children's affective performance. Parental involvement in a family is the degree to which the parents invest attention, advice, support, interest, values, and care in children. Obviously some minimum degree of adequate structure in the family is necessary, but the investment process is grounded in the parent-child relationship. Coleman and Hoffer (1987) used the term *functional deficiency* in families where there is an absence of strong relations between children and parents despite their physical presence in the household. Hence a family may be structurally adequate, with both parents present, but functionally deficient when they are seldom home or are abusive. Parental involvement in schools is signified by a high degree of interconnectedness between students, parents, and teachers. For example, encouragement, attention, comfort, trust, identity, order, and discipline in schools are important resources students need in order to learn effectively. In a school in which teachers and parents have a joint interest in the well-being of the students, the school becomes a functional community (Epstein, 1995).

Ample evidence demonstrates that there are important relationships between the socioeconomic background of families and student achievement (Alexander, Riordan, Fennessey, & Pallas, 1982; Duncan, Brooks-Gunn, & Klebanov, 1994; Garrett, Ng'andu, & Ferron, 1994; Huston, 1991). Low income or poverty are often identified as risk factors influencing parenting and child

competence (Belsky, 1980). Studies on the effects of poverty on children's educational outcomes establish that material deprivation is unfavorable to child development and school performance (Duncan & Brooks-Gunn, 1997; Garrett et al.). Parents' educational background, which is an important component of socioeconomic background, although closely related to family income, is an important family human resource that can contribute to child development in both direct and indirect ways (Parcel & Dufur, 2001). In an achievement-oriented society, most parents tend to have high expectations for their children in academic performance. Yet it is those parents with higher socioeconomic background who have more means, both physical and human, to provide educational support for their children such as engaging a private tutor or themselves acting as tutors and to keep children in school longer (Bourdieu, 1986).

Classroom Influence on Students' Learning Motivations

In addition to family factors, there is increasing evidence that classroom norms also play a critical role in students' development (Wang, Haertel, & Walberg, 1990). A number of researchers have also asserted that any interaction between family and classroom contexts in the socialization of students is also a significant factor (Barth, Dunlap, Dane, Lochman, & Wells, 2004; Bellmore et al., 2004; Chang, 2004; Hoglund & Leadbeater, 2004). One explanation for this is that students from certain family contexts may be group misfits in that their behavior is inconsistent with group norms (Wright, Gianmarino, & Parad, 1986). Another explanation is that parents may change their patterns of socialization in reaction to the perceived social norms of the classroom. For example, some parents may involve themselves more in their children's school life when they learn that their children are exposed to an atmosphere of peer victimization in the classroom (Tam, in press).

This investigation looks at two factors that are considered salient in the classroom. These are instructional behaviors and peer victimization norms. In the classroom, teachers' instructional behavior influences learners' perceptions and attitudes in the most direct and significant manner (Brophy & Good, 1974). Dörnyei (2000) suggests that teachers' supportive behaviors in a second-language classroom are closely linked to students' affective performance in three ways. The first is the use of instructional strategy in classroom interactions. This includes helping learners establish learning goals, designing class work that enables learners to apply what they have learned, and using interesting ways of presenting the lesson. The second aspect is the use of supportive feedback, which includes encouraging learners who have made progress in learning, providing feedback to learners about their learning progress, and helping them reflect on their own learning methods. The third is giving physical and emotional support, which includes teaching the learners patiently and arranging sufficient time to teach each lesson.

The classroom provides a platform where learners develop their own social network and peer groups, and these relationships may contribute to the use of time and socialization outside family and school (Patterson & Dishion, 1985). In a typical secondary school in Hong Kong, there is a home room for every class and the students call it their own classroom. It is the room where students spend most of their time while they are in school. They take their lessons, eat

their lunches, and spend their free time before class, during recess, and after school in this room. Teachers may change from lesson to lesson, but students stay in the same room throughout the day even if an adult is not present.

During early adolescence, parents and teachers are the significant persons on whose behaviors students model themselves. Their peers also serve as significant reinforcers and models of behaviors (Osborne, 2004). Peer influence is particularly strong in learning a second language because language is a tool that one uses to express individuality and group identity (Ellis, 1992). For example, students may hesitate to converse in a second language if their peers make jokes about their second-language accents. Adaptive behaviors such as prosocial interactions and task-oriented learning behaviors are more likely to increase if these behaviors are reinforced in the classroom. Similarly, classrooms with a high incidence of poor academic achievement or deviant social behavior are likely to perpetuate such maladaptive behaviors, and these can easily become a behavioral norm in the classroom. Osborne (2001) suggests that the development of norms of peer victimization in the classroom may signify a process where students have developed a weak identification with academic performance in school. Hence the ethos, the behaviors of teachers and peer norms of the classroom provide the social context in which learning and interpersonal interactions take place.

Method

Sample

This study uses a cross-sectional survey conducted in 2002 using a systematic sampling method. The data were taken from a large-scale research project that I conducted on first- and second-language learning in secondary schools in one of the 19 school districts in Hong Kong. The district was mainly populated by working-class to lower-middle-class families. According to government statistics, there were 22 secondary schools in the district, operating 121 secondary 1 (grade 7) classes, with a total of 4,672 students, and the same number of secondary 2 (grade 8) classes, with 4,888 students, giving an average class size of 38.8 and 40.5 respectively.

All 22 secondary schools were invited to join the survey, but only 19 agreed to do so. Using random selection, one third of the secondary 1 and 2 students enrolled in these schools were selected to complete the Form A survey—the questionnaire for assessing affective performances, and another one third selected to complete the Form B survey—the questionnaire for assessing classroom processes. They were asked to complete the survey in a designated period in the school hall or their classrooms, in order to prevent copying. The students who completed the questionnaire for assessing affective performances were also asked to take the Parents' surveys home for their parents to complete and return the next day.

A total of 2,236 students completed Form A and 2,261 students completed Form B. Table 1 provides the demographic description of the student sample. Also, 1,783 Parents' surveys were returned. Among those who completed the Parents' survey, 394 (21.1%) identified themselves as fathers, 1,352 (75.9%) identified themselves as mothers, 9 (0.5%) identified themselves as guardians or close relatives, and the rest did not identify their relationship to the students. The return rate was 70.2% for Form A, 71.0% for Form B, and 56.0% for the

Table 1
Demographic Descriptions of the Sample

	Form A		Form B		Average age	
	Male	Female	Male	Female	Mean	SD
Secondary one	556	574	542	598	12.84	0.85
Secondary two	567	539	539	582	13.81	0.86
Total number	2,236 (49.7%)		2,261 (50.3%)		13.31	0.99

Parents' survey. Classroom process measures collected from Form B were aggregated at the classroom level, and I retained only those aggregates with a minimum of three students in a class. The total of 194 classes provided sufficient information for classroom-level analysis.

Measures

This study explores the interaction of family and classroom factors on students' motivation to learn a second language. Figure 1 presents the conceptual diagram of the study. Three sets of survey questionnaires were used. Form A contains instruments for assessing students' affective performance in English, which form the dependent variables of this study. Form B contains instruments for assessing classroom processes. The Parents' survey contains instruments for assessing family processes. Descriptions of the survey instrument are provided in the Appendix. The following section describes the individual scales and properties of the survey instruments.

Students' Motivation for Learning English

The instrument for students' learning motivation was adapted from Biggs' (1992) Learning Process Questionnaire (LPQ). The original version contains 36 items for each of the surface, deep and achieving motivations subscales, and surface, deep, and achieving strategies subscales contain six items. The LPQ was originally published in 1979 and was later translated and published in Chinese (Biggs, 1979, 1992). Norm tables of the LPQ had been developed both in Australia and Hong Kong, and reliability had been reported to be within a range of 0.5 to 0.8. For the purpose of the present study, I selected five items from the deep motivation scale. Respondents are asked to rate each item on a five-point scale ranging from *totally agree* (5), *agree* (4), *no opinion* (3), *disagree* (2) to *totally disagree* (1). The alpha reliability of the deep learning motivation scale is 0.7064.

Family Processes

Parental involvement in school is based on Ho's (1995) concept that parents can be involved in two domains of activities in school. One domain is involvement in school activities, and the other is involvement in decision-making. There are six items in each domain. Respondents are asked to rate their level of involvement on a five-point scale ranging from *always* (5), *most of the time* (4), *sometimes* (3), *seldom* (2), *never* (1). Alpha reliability of the composite scale reported in this study is 0.9301.

Socioeconomic background of the family is a composite score based on two variables: monthly household income and average educational level of parents. For the monthly household income, respondents are asked to provide information on a nine-point scale ranging from \$5,000 or less (1), 5,001 to 10,000 (2), 10,001 to 15,000 (3), 40,001 to 45,000 (9) in Hong Kong dollars. For the educational level, respondents are asked to provide information on a 10-point scale ranging from *no formal education* (1), *primary education* (2), *junior secondary* (3), *senior secondary* (4), *matriculation* (5), *vocational school* (6), *vocational school (diploma level)* (7), *community college or sub-degree programs* (8), *university degree* (9), *graduate school* (10). Socioeconomic background of the family is the average of the standardized values of the monthly household income and average educational levels of parents.

Classroom Processes

Teachers' instructional behavior is adapted from Dörnyei's (2000) model of teacher behavior in the classroom, which focused on three aspects of instructional behavior. The first is the use of various instructional strategies to help students in the classroom. The second is the use of supportive feedback to students. The third aspect is on giving physical and emotional support to students. Respondents are asked to rate each item on a five-point scale ranging from *always* (5), *most of the time* (4), *sometimes* (3), *seldom* (2), *never* (1). Alpha reliability of the composite scale reported in this study is 0.8245.

Peer victimization is conceptualized as the extent to which a student's classmates have participated in victimization behaviors in school in the current school year. There are six items in this scale and they are all designed specifically for the present study. Behaviors described in these items are common victimization behaviors in Hong Kong secondary schools. Respondents are asked to rate each item on a five-point scale ranging from *very often* (5), *many times* (4), *sometimes* (3), *seldom* (2), *never* (1). Alpha reliability of the composite scale reported in this study is 0.8511.

The properties of these instruments, their means and standard deviations, number of items, number of response categories, and reported reliability are summarized in Table 2.

Statistical Model

This study employed a two-level model for statistical analysis (Bryk & Raudenbush, 1992) using the Hierarchical Linear Modeling 5 developed by Scientific Software International (Bryk, Raudenbush & Congdon, 1996). The performance of students was considered to be a function of the individual-level and classroom-level variables. A 2-level model was employed because it is assumed that there is an aggregated effect at the classroom level that influences the performance of students and these classroom-level variables may interact with individual-level variables. Thus in each class,

$$y_{ij} = \beta_{0j} + \beta_{1j} \chi_{1ij} + \dots + \beta_{kj} \chi_{kij} + r_{ij} \quad (1)$$

where y_{ij} is the academic performance of student I ($I=1, \dots, n_j$ students) in class j ($j=1, \dots, j$ classes in the study). The β_{kj} term is the regression coefficient in class j associated with variable χ_k ($k=1, \dots, k$ student-level variables), and r_{ij} is level 1 random error assumed to be normally distributed with mean 0 and finite

Table 2
Summary of the Descriptive Properties of the Survey Instruments

<i>Instrument</i>	<i>Respondent</i>	<i>No. of items</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Response categories</i>	<i>Reported reliability</i>
Monthly household income	Parent	1	\$15,600	\$12,600	-	-
Parents' education	Parent	1	3.13	1.08	1-10	-
Parental involvement in school	Parent	12	1.9910	0.6719	1-5	0.9301
Motivations to learn English	Student	5	3.3074	0.7622	1-5	0.7514
Instructional behaviors	Student	9	3.3514	0.3189	1-5	0.8245
Peer victimization	Student	6	2.1906	0.8099	1-5	0.8511

variance. An assumption of this model is that the in-class regression coefficients will vary across classes and that this variation will be related to the aggregated level 2 characteristics. For each of the parameters in Equation 1, there is a between-class model:

$$\beta_{kj} = \gamma_{k0} + \gamma_{k1}z_{1j} + \dots + \gamma_{kp}z_{pj} + u_{kj} \quad (2)$$

where z_{pj} ($p=1, \dots, p$ class-level variables) represents class characteristics, the β_p terms represent coefficient relating level 2 characteristics to in class slopes and will be reported as the fixed part of the model. The parameter u_{kj} is level 2 random error assumed to be normally distributed with mean 0 and finite variance.

The hierarchical linear model normally has a nested structure—individuals nested in social units such as classes. The biggest advantage of a hierarchical model over a single-level model is that in the latter case such as data treated at class level, lower level data will be averaged to provide mean classroom-level scores, hence variations at the lower levels will be totally ignored but in the hierarchical model, variations at all levels are retained.

Results

Table 2 reports the means and standard deviations of the variables. In some of these variables, the means deviate greatly from the conceptual means, sometimes close to two standard deviations. These include parental expectation, parental involvement in school, and peer victimization norms. This suggests that parents in Hong Kong in general are not much involved in their children's schools and that young persons' norms of peer victimization are not serious. The fact that parents have little involvement in their children's schooling is considered a normal behavior pattern for Chinese parents. Also, the mean monthly household income of HKD15,600 (approx. US\$2,000) is considerably lower than the reported average household income of HKD18,705 in Hong Kong in 2001 (Census and Statistics Department, 2006).

Zero-order correlation was conducted between the variables at the individual level and the group level separately, and these are reported in Table 3.

Table 3
Correlation Coefficients of the Variables

Variables	<i>Individual level variables</i>				<i>Group level variables</i>	
	1	2	3	4	5	6
1 Gender (girls=2; boys=1)	-					
2 Parental involvement	-0.093***	-				
3 Socioeconomic background	-0.012	0.148***	-			
4 Motivation to learn English	-0.037	0.027	0.009	-		
5 Instructional behaviors					-	
6 Peer victimization					-0.276***	-

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.005$.

Learning motivation is not significantly related to the socioeconomic background of the family and parental involvement in school. School effectiveness studies have consistently revealed that socioeconomic status is the most important family background variable (Alexander et al., 1982) and only in developing and less-developed countries is the relationship attenuated (Fuller & Heyneman, 1989). In this study, the lack of contribution of socioeconomic status of the family to the learning motivation of students may suggest that socioeconomic background of the family is closely related to academic achievement, but is not an effective measure for predicting youngsters' motivation in learning English.

Sex (male=1, female=2) is significantly related to parental involvement. The fact that parents tend to participate more in a boy's schooling may be explained in two ways. In the same age cohort boys tend to be less mature than girls and hence need more attention from their parents even at the junior secondary level. Also, in a male-dominated society such as China and Hong Kong, parents tend to put more resources into boys' upbringing than that of girls because boys are the heirs in the family. Finally, instructional behaviors and peer victimization are significantly related to each other. This may suggest a close connection between peer victimization and its negative influence on students' perception of instructional behaviors, as suggested by social control theory (Hirchi, 1969).

Multilevel Regression: Base Model

The multilevel analysis of the affective performance of students in English language employed both the family-level variables (SES and parental involvement) and classroom-level variables (instructional behaviors and peers' antisocial behaviors) as independent variables, and motivation in learning as the dependent variable. All variables were standardized measures before being entered into the equation. Table 4 (Model 1) shows the result of the basic model without interaction effect, with gender being controlled by including it in the equation.

Main effects. Consistent with the correlation table in Table 3, none of the family variables contributes significantly to learning motivation. Furthermore, the classroom variable that contributes significantly to learning motivation is

instructional behaviors. Instructional behaviors contribute positively to learning motivation ($\beta=0.810$, $p<0.005$). These figures show that the support of the English teacher such as in helping students establish learning goals, using interesting ways of presenting the lesson, giving supportive feedback, providing emotional support to the students, and so forth will have an important effect on students' learning motivation. Peer victimization does not contribute significantly to students' learning motivation. Because peer victimization is the extent to which a student's classmates have victimized other students in the current school year aggregated at the class level, it may not have a direct effect on learning. However, the close relationship between peer victimization and instructional behaviors shown in Table 3 suggests that peer victimization norms may have an indirect effect on learning, and this may be an issue that could be explored further.

Random part. The presence of significant contributions in the random part of a multilevel model suggests that there may be subtle relationships between the independent and dependent variables. There may be several reasons for a significant contribution from the random part. Some common reasons are the unequal distribution of variance in the model, unequal distribution of variance among the classes, or a nonlinear relationship between the independent and dependent variables. For example, in Table 4 it is shown that family relationship contributes significantly to learning motivation at the individual level. Yet a significant contribution of socioeconomic background in the random part ($r=0.022$, $\chi^2=201.97$, $p<0.05$) suggests that the variance of the socioeconomic background-learning motivation slope is not distributed evenly, and one of the possibilities is that interaction effects may be taking place. Therefore, in the following section, interaction effects of the multilevel regression are explored for those variables that have a significant contribution in the random part.

Multilevel Regression: Interaction Effects

Interaction effects are perhaps more interesting and insightful than the main effect because these show the complex interactions of the various social ecological systems. After adding the interaction terms, the level 1 variance component was reduced from 0.823 to 0.822, which means that only a small portion of the variance is explained by the interaction term. The proportion of variances explained in the final model was 13.1%, 5.1% of which was explained by personal and family-level factors, and 8.0% was classroom-level factors. Table 3 (Model 2) shows the result of the multilevel regression, with interaction between individual level and classroom level included in the analysis.

In Table 4, interaction of teacher behaviors with socioeconomic background contributes negatively to learning motivations ($\beta=-0.064$, $p<0.05$). Figure 2 shows how the interaction between socioeconomic background and instructional behaviors contributes to learning motivations. The two lines in the plot are two groups of classes with strong (one standard deviation below the mean) and weak (one standard deviation above the mean) instructional behavior. The gradient (coefficient) for strong instructional behavior is close to level, but that of weak teacher behavior is high. The explanation for this may be that the effects of instructional behaviors for students coming from varied socioeconomic background are not the same. For classes with weak instructional behaviors (lack of varieties of instructional strategies, little supportive feedback

Table 4
Family and Classroom Effects on Learning Motivation

	Model 1	Model 2
Main Effect	Coef. (S.E.)	Coef. (S.E.)
Intercept, β_{00}	0.036 (0.028)	0.036 (0.028)
Gender, β_{10}	0.072 (0.027)**	0.074 (0.028)**
Involvement in school, β_{20}	0.069 (0.026)**	0.070 (0.026)**
Socioeconomic status, β_{30}	0.024 (0.026)	0.004 (0.025)
Instructional behaviors, β_{01}	0.810 (0.090)***	0.788 (0.093)***
Peer victimization, β_{02}	-0.068 (0.131)	-0.094 (0.133)
<i>Interaction Effects</i>		
socioeconomic status x instruct. behaviors, β_{31}		-0.132 (0.066)*
socioeconomic status x peer victimization, β_{32}		-0.187 (0.081)*
<i>Random Effects</i>		
	Var. comp. (χ^2)	Var. comp. (χ^2)
u_0	0.042 (241.9)***	0.042 (241.1)***
Gender, u_1	0.027 (192.5)	0.028 (192.5)
Involvement in school, u_2	0.018 (181.9)	0.018 (181.9)
Socioeconomic status, u_3	0.022 (201.6)*	0.020 (193.0)
Level 1 variance, r	0.823	0.822

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.005$.

and little emotional support), learning motivation is positively related to the socioeconomic background of the students. However, for classes with strong instructional behaviors, the contribution of socioeconomic background of the students to learning motivations is reduced. In other words, learning motivation can be sustained for students regardless of socioeconomic background if the instructional behaviors are strong.

Interaction of peer victimization with socioeconomic background contributes negatively to learning motivations ($\beta = -0.096, p < 0.005$). Again this suggests that there may be a differential peer victimization effect on family background. Figure 3 is a plot of regression lines for socioeconomic background as a function of learning motivations for students with strong and weak peer victimization norms. The two lines in the plot are two groups of classes with strong and weak peer victimization norms. Although both lines

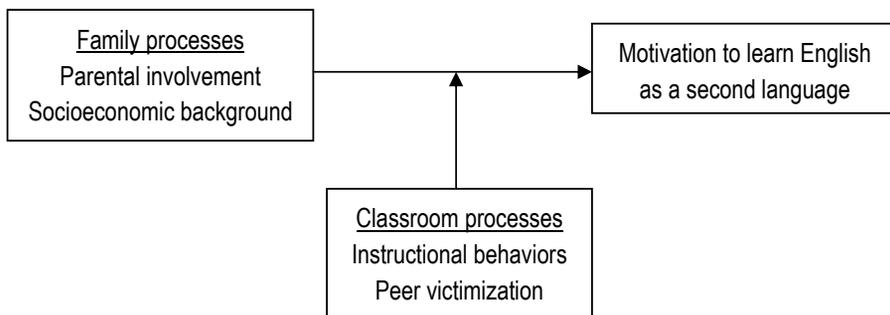


Figure 1. Conceptual model of the study.

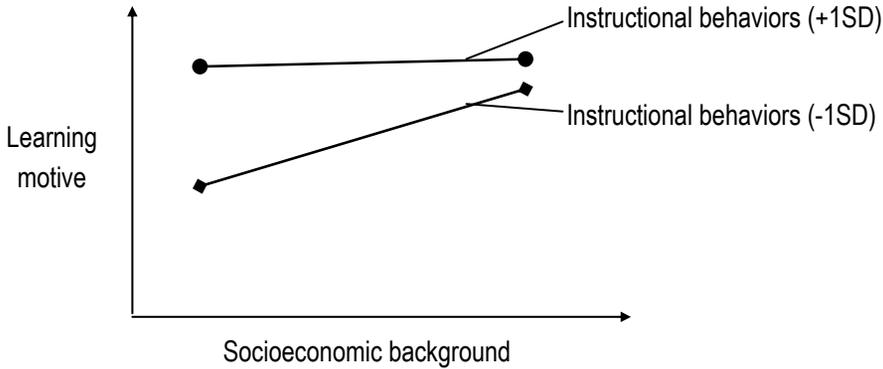


Figure 2. Plot of socioeconomic background against learning motive for good and poor instructional behaviors.

have positive gradients, the line that represents the weak peer victimization norm has a larger gradient than and is above the line that represents strong peer victimization norms. The explanation for this may be that for classes where there is an absence of the peer victimization norm, a positive contribution of socioeconomic background on students' learning motivations does exist. However, for classes where the peer victimization norm is strong, the learning atmosphere may be so poor that students' motivations for learning are much reduced and the expected association between socioeconomic background and learning motivations is significantly reduced.

Discussion

In understanding the learning motivations of children, this study draws on an ecological framework to outline the varied but intertwined ecosystems where family and school interact and reinforce one another in creating a social support system. Multilevel analysis technique is employed to assess the unique and interactive effects of family- and classroom-level variables on the learning motivation of junior secondary students. Two family-level variables and two classroom-level variables are identified as key factors that affect children's learning motivations and learning strategies.

The findings provided modest support for my hypotheses that the contribution of family processes in students' affective performance is moderated by the social contexts of the classroom. Socioeconomic background contributed

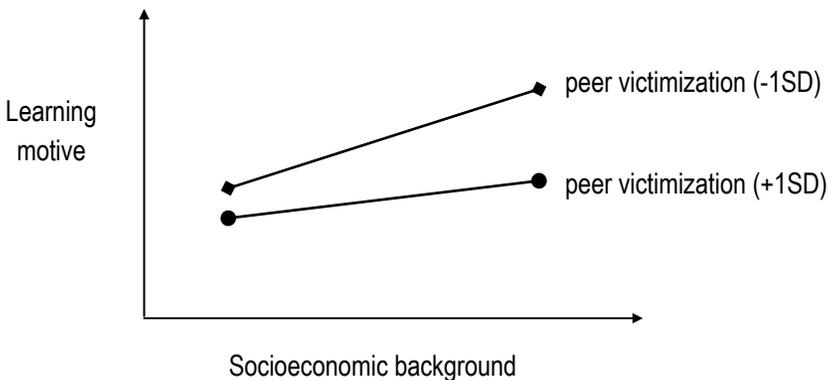


Figure 3. Plot of SES against learning motive for classes with strong and weak peer victimization norms.

positively to motivations in learning English for students in classrooms with a weak norm of peer victimization, but a strong norm of peer victimization in the classroom tends to weaken this association. In the light of these findings, in the following section, I discuss the unique and interactive contributions of ecologies of family and classroom to student learning. I also consider the implications of these findings for school effectiveness.

Classroom Influences

Consistent with my hypotheses, the effect of teachers' supportive behaviors has both a direct effect and an interactional effect on students' learning motivations. Supportive behaviors by teachers tend to benefit everybody in the classroom regardless of their social background. The absence of these supportive behaviors from teachers tends to penalize students coming from low socioeconomic backgrounds, causing them to be even more at risk (Slavin, Karweit, & Madden, 1989). This finding is consistent with the school effectiveness literature that indicates that schools seem to play a more significant role in improving the learning opportunities of students coming from disadvantaged families than those coming from mainstream families (Teddlie, Stringfield, & Reynolds, 2000).

Contrary to common expectations but confirming my hypotheses, the norm of peer victimization in the classroom has no direct effect on students' affective performance, but its effect on students' motivation for learning English is only indirect through interaction with their social background. This study provides evidence to support the fact that the peer victimization norms moderate the relationship between students' socioeconomic background and their motivation for learning English. The contribution of peer victimization norm as a classroom-level variable is important because most of the existing studies tend to treat peer victimization as an individual-level variable, and seldom use it at the group level to predict individual outcomes, ignoring the effects of behavioral norms on the learning atmosphere of the classroom (Bellmore et al., 2004).

On the whole, the findings of this study are consistent with the person-environment fit hypotheses that strain will probably develop when there is dissonance between environmental opportunities and demands and the temperament of the person (East, 1987). The findings demonstrate that certain classroom social contexts such as teachers' supportive behaviors are more conducive to a normative relationship between family processes and learning outcomes, whereas other contexts such as peer victimization norms are less conducive to such a relationship.

Family Influences

Existing evidence shows that parental involvement in school contributes positively to student's academic achievement (Ho & Willms, 1996), but that the motivation to be involved is less for parents in poor socioeconomic and disadvantaged communities (Epstein, 2001; Lareau, 2003). The findings of this study suggest that parental involvement does not contribute directly or indirectly to students' motivation to learn. This result was expected given that parents already have weak involvement in Hong Kong schools and are even less involved at the classroom level (Ng, 2006).

The absence of a direct association between socioeconomic background and students' learning motivation but the presence of moderating effects of classroom social contexts on their relationship suggests that the effect of socioeconomic background on students is both profound and subtle. It has been shown that the contribution of socioeconomic level of family is responsible for only 10% of the behavioral and academic difficulties of children (Lipman, Offord, & Boyle, 1995). In other words, even if family poverty were eliminated, there would only be a maximum of 10% reduction in the number of children experiencing difficulties in schools. Hence the findings of this study suggest that the social contexts of a classroom may pose a bigger risk than socioeconomic background to the affective performance of students.

Implications

In the light of the fact that teachers' instructional behaviors and peer victimization norms have moderating effects on the contribution of family processes to students' learning motivation, teachers and school administrators should pay more attention to the social lives of students in the classroom. In particular, effective measures should be implemented to ensure that the classroom is free of aggression and victimization, and education programs should be designed to help students develop a prosocial attitude and positive peer relationships. Also, preservice and inservice teacher training programs should pay more attention to enabling teachers to develop instructional skills that are conducive to learning motivation, as well as skills in classroom management and ways of developing a supportive and nurturing relationship with the students.

Limitations

Nevertheless, this study has a number of limitations. First, this study has ignored the contribution of school contexts to student performance. The system of student allocation in Hong Kong secondary schools operates such that students of varying academic ability are allocated to varied schools. Because of this, it is conceivable that the patterns of learning motivations and strategies in secondary schools may vary. Perhaps this is also why the interaction effects in the present study account for only a small percentage of the total variances in the multilevel model. Second, there are no achievement data to control for the effect of prior school achievement on students' affective performance. It is difficult to distinguish whether the affective performance is the result of family-level effects or classroom-level effects. Third, more family process variables such as the actual amount of time parents spend on the care and education of their children and the frequency with which they perform such a role can be added to the multilevel model, which may shed more light on the relationship between family factors and student performance. Fourth, information about family processes was provided by parents, but some such as that on family relationships might possibly be more valid if it was provided by their children, the students. Fifth, having considered only the classroom-level factors such as supportive behavior of the English teacher, classroom climate, and the norm of peer victimization as effects contributed by the teacher and students, this study neglects other classroom-level factors such as characteristics of the class teacher and student organization and grouping practices, which may have stronger explanatory power but are not the subjects of this investigation. Finally, be-

cause this study is an ex post facto design using a cross-sectional survey method to investigate an interactional phenomenon, the prediction power is severely limited and no causal relationship can be inferred (Kerlinger & Lee, 2000).

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Appendix

Survey Instruments

Students' Learning Motivation in English

- I find that learning English can give me a feeling of satisfaction.
- When I am engaged, the learning of English will become interesting.
- I found some of the topics in English Language really excite me and cause me to spend time in learning.
- I think my English teacher should help me develop my own way of seeing things.
- Even when other people may know more than myself, I should still say what I think is right.

Parental Involvement in School

- I will participate in the seminars organized by the PTA.
- I will participate in the volunteer work of the school.
- I will participate in the parent-child activities organized by the PTA.
- I will participate in the annual meeting of the PTA.
- I will participate in the work of the PTA committee.
- I will participate in parent consultation meetings.
- I will voice out my opinions about operations of the school.
- I will voice out my opinions about school policies to the PTA committee.
- I will voice out my opinions about school policies to the management board.
- I will voice out my opinions about school policies to the class master/mistress.
- I will voice out my opinions about instructional approaches of the school.
- I will voice out my opinions about extra-curricular activities of the school.

Teachers' Instructional Behavior

Our English teacher helps us set learning targets.

Our English teacher designs class work to enable students to apply knowledge.

Other than normal direct instruction, our English teacher uses a variety of instructional approaches to teach us.

Our English teacher delivers the lesson in a lively manner.

Our English teacher encourages students who have made progress.

Our English teacher reminds us to examine our learning methods.

Our English teacher gives feedback to us about our progress.

Our English teacher is very patient when teaching us.

Our English teacher allows sufficient time to teach each lesson.

Peer Victimization

Threaten fellow classmates

Say mean things about fellow classmates to others

Bully fellow classmates in the school by forming gangs

Ridicule fellow classmates in the classroom

Steal personal belongings from classmates

Fight with fellow classmates