Factors Contributing to Students' Academic Achievement of Primary School in Mountainous Areas of Vietnam

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Abstract

The paper tried to clarify factors influencing academic achievement of primary students in mountainous areas of Vietnam. The Vietnamese government has focused on the improvement in the quality of primary education especially after the quantitative expansion of enrolment rate, which has exceeded 90%. As one of criteria of the quality of education, students' academic achievement was investigated in the paper, because academic achievement is most often cited as a school effectiveness indicator by school principals, teachers, students and their parents (Gaziel, 1996).

The data collection was done by the use of questionnaires administered to 95 primary school students in mountainous areas. This was statistically analyzed and the result showed that three factors had a direct effect on students' self-reporting of academic achievement. The strongest factor is students' proficiency in Vietnamese, and the next is parents' interest in child's study followed by the existence of close friends in school.

1. Introduction

Education has been regarded as a key factor for national development by the Vietnamese government. By their strong initiative, primary education has been expanded, as shown by the increase in the number of enrolments from 8,448,685 in 1986 to 10,063,025 in 1999 (Ba C. N. et al, 2001, 132). However, quantitative expansion was made at the expense of the quality. The next stage after the universalization of primary education is, therefore, to focus on the improvement in the quality of primary education (British Department for International Development, 2001). Especially in mountainous areas of Vietnam where many students from ethnic minorities are studying under severe conditions, the quality of primary education is recognized to be one of major problems and students' academic achievement at primary school level is very poor.

The Law on Education, which was enacted in 1998, stipulates that children in mountainous areas have been given priority for access to education. Nevertheless, the intervention in schooling of mountainous areas has not been successful because students and schools suffer from educational problems peculiar to those areas, in addition to problems commonly observed in other areas. This research was, therefore, designed to identify factors that have an impact on students' academic achievement at primary schools located in mountainous areas, which will bring an initial step to the improvement in the quality of primary education at those areas.

Journal of International Development and Cooperation, Vol.10, No.1, 2003, pp. 65–83

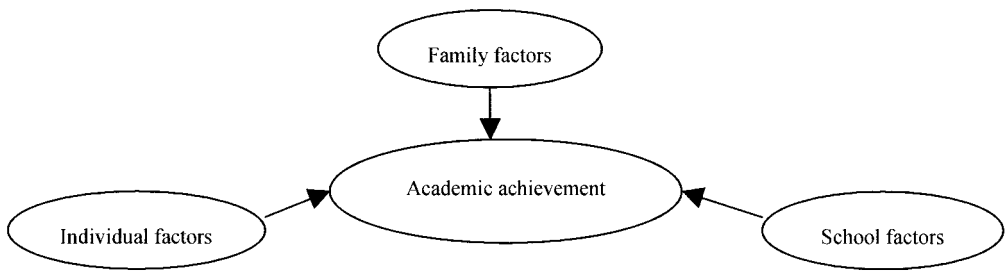
2. Argument of the selected three kinds of factors

In this research, students' academic achievement was analyzed in terms of three kinds of factors, family factors, individual factors and school factors. These three kinds of factors were selected based on previous research.

Since the presentation of the Coleman Report in 1966, it has often been argued as to which one of two factors, school factors or family factors, more strongly impacts on students' academic achievement. This report concluded that family factors have a stronger impact on students' academic achievement than school factors. Nowadays, empirical research on developed countries has generally agreed with his conclusion. However, 10 years after the presentation of Coleman Report, research by Heyneman in 1976 reached a different conclusion with his research showing that school factors are more importantly associated with students' academic achievement in Uganda (Buchmann and Hanum, 2001). Then, several research projects on this topic were conducted in developing countries and some showed that school factors were more important for students' academic achievement than family factors while others are not. This argument about the case of developing countries is still ongoing and a final conclusion has not been made yet.

In addition to these two kinds of factors, as an influential factor with an impact on students' academic achievement, some researchers have introduced the importance of individual differences in such things as natural ability and study aptitude. Snow (1994) shows from the educational psychology's point of view that personal difference is often related directly to the differences in students' academic achievement. Referring to these previous research and in order to have a comprehensive understanding of factors on students' academic achievement, **Figure 2.1** was created, which shows a framework of multiple factors (family factors, individual factors and school factors) with a direct impact upon students' academic achievement studied in this research.

Figure 2.1 Framework of the selected factors with a direct impact upon students' academic achievement



3. Research activities

3.1 Field research

For the field survey, the researcher visited two schools (school 1 and school 2) in Lai Chau Province, which is located in the north-western part of Vietnam. Lai Chau province is predominantly mountain-

ous and hilly. The population is 613,300, 75% of whom comprise ethnic minorities such as the Thai, the H'mong and the Kho-mu while the proportion of the Kinh, who makes up 90% of the total population in Vietnam are less than a quarter of this population. Agriculture and forestry are the main subsistence supporting peoples' lifestyles. Lai Chau is still one of the poorest provinces in Vietnam. Although annual economic growth rate of Lai Chau is close to 6% in recent years, GDP per capita is just approximately 130USD in comparison with 400USD on the average national income for Vietnam (Norwegian Agency for Development, 2000a; Statistical yearbook, 2000).

Both school 1 and school 2 are located in mountainous areas. School 1 is poorly equipped with no electricity and so its school policy is that windows must remain closed in order to prevent sunshine from making a classroom hot and disturbing their study although it is dark inside classrooms. This school is relatively small with only two classrooms and another small room for teachers' use. There is only one class for each grade, and grade 3 and grade 4 students study in the morning classes and grade1 and grade 2 students in the afternoon classes, with each of grade comprising about 25 students, most of whom are of the Kho-mu ethnic group. Due to its limited capacity, school 1 only accepts students from grade 1 to grade 4 and students wanting further study must be transferred to another school in order to continue their studies at grade 5. This has impacted on school retention. Since many students are reluctant to move out of their village or cannot afford the cost of boarding school, it compels them to drop out at school after the completion of grade 4. School 2 was one of cluster schools in the mountainous area. This school is equipped with a dormitory on the same premises as the school site although students have to provide everything for themselves other than bedding. The number of the students ranges from grade 1 to grade 5 and the school population is approximately 800. Student ethnicities in school 2 are diverse, mainly coming from the Kinh, the Kho-mu, the H'mong and the Thai.

In school 1, 26 students in one class of grade 3, 22 Kho-mu, 1 Thai, 1 H'mong student and two students who did not answer the question about their ethnicity, and 21 students in one class of grade 4, all of whom were Kho-mu, answered the questionnaires. In school 2, the same questionnaires were given to 48 students in two classes of grade 4, with 10 Kinh, 3 Kho-mu, 1 H'mong and 10 Thai students in one class and 7 Kinh, 4 Kho-mu, 4 H'mong and 9 Thai students in the other class. Ethnic minority students use their own language at home. Therefore, as some of students have difficulty in understanding Vietnamese, school teachers and the two staff from Ministry of Education and Training (MOET) explained and helped them to fill in the questionnaires.

3.2 Data collection

There are two limitations with the data collection: constraint of the number of samples, and the definition of students' academic achievement.

First, the number of samples is small. The number of samples may need to be at least 200 in using Regression analysis (Helena and Sue, 1987). However, due to time constraint, the researcher could collect only 95 samples in this survey, which considerably damaged the reliability of this survey. Moreover, the samples were obtained from only two schools, which made it difficult to analyze school factors.

Secondly, as a criterion of respondents' academic achievement, the researcher was not able to obtain the respondents' grade transcript. Therefore, the researcher asked a similar content of the two questions in the questionnaire in order to judge respondents' academic achievement as exactly as possible. One question" Do you think your academic achievement is good ? "asked about respondents' perceived aca-

demic achievement by using four scales and the other one“ What ranking of academic achievement do you think you belong to ? ”asked about respondents' ranking of academic achievement that they thought they belonged to in their class by using three scales in the questionnaire. But, the relationship between the answers of the two questions appears to be weak (**Table 3.1**); its coefficient is 0.179 at a significance level of more than 5%. Examining the answers to the two questions, the researcher decided to choose respondents' perceived academic achievement, as the indicator of students' academic achievement. The first reason is that ranking of academic achievement is a relative evaluation in the class. Differences of academic levels among schools or classes cannot be ascertained from that. It cannot rule out the possibilities that the academic ability of the best student in one class or one school is no better than that of the worst student in another class or the other school. Furthermore, ten respondents did not answer the question on their ranking of academic achievement that they thought they belonged to in their class while one respondent did not answer the question on her perceived academic achievement. Some of students appeared to be unclear about their ranking of academic achievement in their classes. In addition, in association with ranking of academic achievement, only four variables achieved correlations at a significance level of less than 5% but, in association with respondents' perceived academic achievement, ten factors showed significant correlations. Finally, in the case that the dependent variable was ranking of academic achievement, adjusted R square was just 0.142 in using multiple regressions while that of perceived academic achievement was 0.610. Therefore, it is assumed that students' perceived academic achievement should be used as a more appropriate indicator of their academic achievement although it cannot be denied that students' perceived academic achievement is not necessarily accurate as it is a subjective evaluation.

Table 3.1. Crosstabulation of self-reporting of academic achievement and ranking of academic achievement in a class

		Do you think your academic achievement is good?					
		Very good	Good	No good	Bad	No answer	Total
What ranking of academic achievement do you think you belong to?	1-10	5	5	13	2	0	25
	11-20	5	7	18	9	1	40
	Poorer than 21	3	3	6	8	0	20
	No answer	1	2	7	0	0	10
Total		14	17	44	19	1	95

3.3 Survey questionnaire

As already mentioned, main three kinds of factors were identified to demonstrate a framework contributing to students' academic achievement. Possible factors likely to affect students' academic achievement in Vietnam were considered so as to develop the content of questionnaires for a field survey. The questionnaire was developed before arrival in Vietnam. It was modified once in Vietnam before the main survey by discussing the contents of questionnaire with officials of MOET in order for the questions to reflect Vietnamese educational situation and enable children to easily understand them. But, at the same time, some politically sensitive questions, such as whether a parent is a member of Communist Party, were asked to be removed. The questionnaire begins with the questions about gender, ethnicity, and name of school and then two questions, self-reporting of academic achievement and the ranking of self-reporting of academic achievement in class, were asked first.

In addition to these questions, 19 questions, which are assumed to be associated with students' academic achievement, were introduced in three sections. Section A is questions about family factors, section B about individual factors and section C about school factors, whose questions employed multiple-choice answers using scales.

Section A comprises ten questions: (1) labour at home, (2) study hours at home, (3) father's interest in child's study, (4) father's literacy, (5) mother's interest in child's study, (6) mother's literacy, (7) family possession of motorbike, (8) family possession of TV, (9) family possession of bicycle and (10) family possession of radio. In section B, five questions about individual factors were asked: (1) desire to go to primary school, (2) desire to go on to junior high school, (3) the existence of close friends in school, (4) repetition and (5) proficiency in Vietnamese. In section C, two questions of school factors were posed: (1) teacher's kindness and help for study and (2) time spent to go to school from home.

3.4 Data analysis

Table 3.2 represents the distribution of self-reporting of academic achievement and shows that the mean is 2.72, which is between the answer 2" good "and the answer 3" no good "and that standard deviation is 0.995. In comparison with 14 students and 17 students who chose the answer 1" very good " and the answer 2" good "respectively, which represent 33% of total number of respondents, 44 out of 95 students responded to the answer 3" no good "and 19 student to 4" bad ", occupying 67% of the total number of students. Overall, these results indicate that students in the survey areas have a somewhat negative impression on their academic achievement.

Table 3.2. Distribution of self-reporting of academic achievement

	Do you think your academic achievement is good?					Total	Mean	SD
	Very good	Good	No good	Bad	No answer			
The number of students	14	17	44	19	1	95	2.72	.955

* Very good=Score 1, Good=Score 2, No good=Score 3, Bad=Score 4, No answer=Missing value

Table 3.3. Descriptive statistics of self-reporting of academic achievement

			Statistic	Std. Error
Self-reporting of academic achievement	Mean		2.72	.098
	95% Confidence Interval for Mean	Lower Bound	2.53	
		Upper Bound	2.92	
	5% Trimmed Mean		2.75	
	Median		3.00	
	Variance		.912	
	Std. Deviation		.955	

On the variable of gender, male students were given score 1 and score 2 to female students. The respondents consist of four ethnic groups, the Kinh, the Kho-mu, the Thai and the H'mong. According to their ethnicity based on self-reporting of academic achievement (**Table 3.4** and **Table 3.5**), the respondents were categorized into two groups, ethnic majority, the Kinh, and ethnic minorities, the Kho-mu, the Thai and the H'mong. Kinh students were given score 1 and score 2 to ethnic minority students.

Table 3.4. Self-reporting of academic achievement by ethnicities

	Do you think your academic achievement is good?					Total	Mean	SD
	Very good	Good	No good	Bad	No answer			
Kinh (Majority)	9	6	1	1	0	17	1.65	.862
Kho-mu(Minority)	0	6	28	16	0	50	3.16	.703
H'mong(Minority)	2	0	4	0	0	6	2.33	1.033
Thai(Minority)	3	5	11	0	1	20	2.42	.769
No answer	0	0	0	2	0	2		
Total	14	17	44	19	1	95		

*Very good=Score 1, Good=Score 2, No good=Score 3, Bad=Score 4, No answer=Missing value

Table 3.5. Self-reporting of academic achievement by ethnic majority and ethnic minorities

	Do you think your academic achievement is good?					Total	Mean	SD
	Very good	Good	No good	Bad	No answer			
Ethnic majority	9	6	1	1	0	17	1.65	.862
Ethnic minority	5	11	43	18	1	78	2.96	.802
No answer	0	0	0	0	0	0		
Total	14	17	44	19	1	95		

* Very good=Score 1, Good=Score 2, No good=Score 3, Bad=Score 4, No answer=Missing value

School factors between the two schools are expected to be different (**Table 3.6**). To make the differences clear, score 1 was given to school 1 and score 2 to school 2.

Table 3.6. Self-reporting of academic achievement by schools

	Do you think your academic achievement is good?					Total	Mean	SD
	Very good	Good	No good	Bad	No answer			
School 1	1	3	26	17	0	47	3.26	.675
School 2	13	14	18	2	1	48	2.19	.900
Total	14	17	44	19	1	95		

* Very good=Score 1, Good=Score 2, No good=Score 3, Bad=Score 4, No answer=Missing value

Family wealth was measured by checking whether the family has four particular belongings (motorbike, TV, bicycle and radio) in each family group and scores from 1 to 5 were used. Score 1 is given as the best score if a family possesses all of four items, score 2 given to students whose families possess three of the four items, score 3 to students whose families possess two of the four items, score 4 to students whose families possess one of the four items, and score 5 is given as the poorest score if a family does not possess any of four items (refer to **Table 4.2**).

Moreover, father's interest in child's study and mother's interest in child's study are in a high correlation; its coefficient is 0.634 at a significance level of less than 1%. In order to make the interpretation of the survey result simpler, scores of father's interest in child's study and those of mother's interest in child's study were integrated into one variable as parents' interest in their child's study, where scores from 1 to 7 are given. Score 1 is given as the best score if scale 1 of four scales is marked on both ques-

tions about father's interest in his child's study and mother's interest in her child's study. Score 7 is given as the poorest score in case scale 4 of four scales is marked on both of the two questions (refer to **Table 4.4**).

For the data analysis, the following methods were employed: T-test, crosstubulation, correlation and multiple regression analysis followed by the creation of Path diagram. T-test was used to explore the existence of significant difference between variables, males and females, and ethnicities, respectively. Crosstabulation is expected to explain the number of samples in each category. Correlation would give some indications to clarifying the relationships between self-reporting of academic achievement and other variables, which might be associated with self-reporting of academic achievement. The combination of multiple regressions has been executed to investigate the relationship between a dependent variable and an independent variable and, based on the result of these multiple-regressions, a path diagram was created to show the relations of causes and effects of each variable and how strong relations they are.

4. Interpretation of the research result

4.1 Correlations, distribution and descriptive statistics of each factor

The purpose of this data analysis is to clarify the characteristics and the factors influencing students' academic achievement. Influences of gender, ethnicities and factors consisting of family, individual and school factors, have been examined in association with self-reporting of academic achievement.

Correlations between each factor

In order to clarify the correlations between self-reporting academic achievement and other factors, which are deemed to be important for students' academic achievement, bivariate correlations were used. Bivariate correlations are expected to give some clues to clarifying the existence of the relations of cause and effect concerning self-reporting of academic achievement (See **Appendix**).

Ethnicity and school

Both ethnicity and school are strongly correlated with self-reporting of academic achievement. These results are due to the classification of ethnicities and schools made in the previous chapter, which are based on respondents' self-reporting of academic achievement and attribution.

Family wealth

Family wealth and self-reporting of academic achievement are not correlated significantly. One possible reason for it is that cultural differences, especially deriving from ethnicities, are more strongly influential in determining students' academic achievement.

Table 4.1 shows that many families do not have basic items for their living. It can be inferred from this situation that most of families cannot afford to pay attention to their child's study.

Table 4.1. Crosstabulation of family possession of four items

Does your family have a motorbike?	Does your family have a TV?	Does your family have a bicylce?	Does your family have a radio? Yes	Does your family have a radio? No	Total
Yes	Yes	Yes	7	3	10
		No	1	0	1
		Total	8	3	11
	No	Yes	6	0	6
		No	1	0	1
		Total	7	0	7
No	Yes	Yes	5	3	8
		No	2	0	2
		Total	7	3	10
	No	Yes	23	11	34
		No	18	9	27
		Total	41	20	61

Table 4.2. Distribution of family wealth

	How many of the four items does your family have?						Total	Mean	SD
	Four items	Three items	Two items	One item	No item	No answer			
The number of students	6	15	29	29	10	6	95	3.25	1.080

* Four items=Score 1, Three items=Score 2, Two item=Score 3, One item=Score 4, No item=Score 5, No answer= Missing Values

Labour at home

Labour at home shows a significant correlation with self-reporting of academic achievement. Labour at home is often said not only to reduce time for study at home but also to make children feel too tired to study. Hence, it is natural that labour at home has a negative relationship with students' academic achievement. **Table 4.3** shows that most students feel a severe burden on their working at home and the areas where the survey was conducted are very disadvantaged ones. This result depicts a serious problem with students' study environment.

Table 4.3. Distribution of labour at home

	Do you have to work hard for your living?					Total	Mean	SD
	Very hard	Hard	Not hard	Not at all	No answer			
The number of students	58	27	8	0	2	95	1.46	.652

* Very hard=Score 1, Hard=Score 2, Not hard=Score 3, Not at all=Score 4, No answer=Missing value

Parents' interest in child's study

Parents' interest in child's study shows a strong correlation with self-reporting of academic achievement. It is expected to improve their academic achievement. Parents with strong interest in child's study try harder to make a good arrangement of study environment for their child. They would try to

push their child to study, send him/her to school, purchase learning materials and place a great value on his/her study under severe economic conditions. But, according to the survey result, in general, many parents are not very interested in child's study. Especially, it was reported that more than half of mothers did not check their children's study at all (**Table 4.4**). This might be where an intensive intervention needs to be made.

Table 4.4. Crosstabulation of father's interest in child's study and mother's interest in child's study

		Does your father often check your study?				Total
		Very often	Often	Not often	Not at all	
Does your mother often check your study?	Very often	7 (score 7)	3 (score 6)	2 (score 5)	0 (score 4)	12
	Often	3 (score 6)	6 (score 5)	2 (score 4)	0 (score 3)	11
	Not often	0 (score 5)	1 (score 4)	13 (score 3)	3 (score 2)	17
	Not at all	2 (score 4)	7 (score 3)	13 (score 2)	25 (score 1)	47
Total		12	17	30	28	87

*Mean score is 4.99 and SD is 1.926

Father's literacy and mother's literacy

Both father's literacy and mother's literacy are significantly correlated with self-reporting of academic achievement. Father's and mother's literacy not only enhance their interest in child's study but also more easily enables them to check and help child's study. In this survey, 67 out of 87 fathers are literate and 48 out of 88 mothers are literate, whose literacy rates are very low compared to national average literacy rate, 94%.

Table 4.5. Distribution of father's literacy and mother's literacy

	Yes	No	No answer	Total	Mean	SD
Can your father read and write Vietnamese?	67	20	8	95	1.24	.427
Can your mother read and write Vietnamese?	48	40	7	95	1.46	.501

*Yes=Score 1, No=Score 2, No answer=Missing value

However, it must be kept in mind that since father's and mother's literacy skills mean the literacy skill of Vietnamese here, it could be harder to get a positive answer" Yes "on the question" Can your father/mother read and write Vietnamese? "from 78 ethnic minority parents from the Kho-mu, the Thai and the H'mong whose home languages are not Vietnamese .

Study hours at home

Study hours at home did not show a significant relation with self-reporting of academic achievement. This may be due to the insensitive structure of the question. As 90 out of 94 students chose answer 2 (between 1 hour and 2 hours) or answer 3(between 1 minute and 1 hour), the difference in study hours at home ranged between 1 minute and 2 hours might possibly influence the difference in academic achievement betweens students (**Table 4.6**). In urban areas, primary school students often study for more than 2 hours after school. But, this is not likely to be the case in mountainous areas. Besides the reason for labour at home, actually, some students were expected to have difficulties in studying at home because, in mountainous areas, their families do not have electricity installed at home and there is

no light for their children to study at night after their working in a farm. It is, however, interesting that none of students answered that they do not study at all in home.

Table 4.6. Distribution of study hours at home

	How long do you usually study at home per day?					Total	Mean	SD
	More than 2 hours	1 hour-2 hours	1 minute -less than 1 hour	Not at all	No answer			
The number of students	4	27	63	0	1	95	2.63	.568

*More than 2 hours=Score 1, 1 hour-s hours=Score 2, 1 minutes-less than 1 hour=Score 3, Not all=Score 1, No answer=Missing value

Desire to go to primary school

The correlation between desire to go to primary school and self-reporting of academic achievement was statistically significant. Desire to go to primary school could partly show how students wish to experience school life. This will influence the attendance rate, which is assumed to be related with students' academic achievement. The survey result shows that almost all the students felt like going to school (**Table 4.7**). Taking into consideration the significant correlation between desire to go to primary school and self-reporting of academic achievement, it might be a positive trend for the overall academic achievement.

Table 4.7. Distribution of desire to go to primary school

	Do you like to go to your school?					Total	Mean	SD
	Very much	Much	Not much	No	No answer			
The number of students	76	15	4	0	0	95	1.24	.520

*Very much=Score1, Much=Score 2, Not much=Score 3, No=Score 4, No answer=Missing value

Desire to go on to junior high school

Desire to go on to junior high school was also significantly related with self-reporting of academic achievement. Desire to go on to junior high school is in a close relation with desire to go to primary school and most students felt like continuing their education at junior high school as well. Desire to go on to junior high school as well as desire to go to primary school could partly demonstrate motivation for study at school, which positively influences students' academic achievement. In most areas of Vietnam, at least, students have to pass primary graduation examination for entering junior high school.

Table 4.8. Distribution of desire to go on to junior high school

	Do you want to go on to junior high school after primary school?					Total	Mean	SD
	Very much	Much	Not much	No	No answer			
The number of students	64	25	5	0	1	95	1.37	.586

*Very much=Score 1, Much=Score 2, Not much=Score 3, No=Score 4, No answer=Missing value

Also, students who like to go to primary school and junior high school might just like to go to school even at any level of education. Besides, the experience with life at primary school might become one of the important factors for students' determination to go on to junior high school. These could partly

explain the high correlation between desire to go on to junior high school and desire to go to primary school, whose coefficient is 0.612 at a significance level of less than 1% (See **Appendix**).

Close friends in school

The existence of close friends in school is another factor that is significantly correlated with self-reporting of academic achievement. Majority of students felt that they had many close friends at school (**Table 4.9**). It might help create a comfortable atmosphere for their study. Students with close friends in school could more easily have friends help their study or share textbooks and study kits, which are lacking in many schools. With their close friends in school, they would find it more enjoyable to study at school. These positive environments for study might contribute to students' better academic achievement.

Table 4.9. Distribution of close friends in school

	Do you have close friends in school?					Total	Mean	SD
	So many	Many	Not many	No	No answer			
The number of students	43	45	4	0	3	95	1.58	.579

*So many=Score 1, Many=Score 2, Not many=Score 3, No=Score 4, No answer=Missing value

Repetition

Repetition did not show a significant correlation with self-reporting of academic achievement.

Repetition often becomes part of reasons that discourages a repeater to go to school on account of the difference in ages between his/her and other students and decrease his/her motivation to continue with study. But it does not seem to be detrimental to students' desire to go to primary school in this survey because the correlation between repetition and desire to go to primary school is -.023 and the correlation between repetition and desire to go on to junior high school is -.006 (See **Appendix**).

More than one-third of students have an experience with a repetition (**Table 4.10**). The existence of many repeaters may contribute to their easily getting along with other students and high repetition rate may not make them feel very inferior. However, the influence of repetition on academic achievement would be different if a student went through repetition more than twice, but it is not possible to examine the overall situation in this survey as only one student has such an experience.

Table 4.10. Distribution of repetition

	How many times of repetition have you ever gone through?					Total	Mean	SD
The number of times	Never	Once	Twice	More than twice	No answer			
The number of students	60	33	1	0	1	95	1.37	.508

*Never=Score 1, Once=Score 2, Twice=Score 3, More than twice=Score 4, No answer=Missing value

Proficiency in Vietnamese

The correlation between self-reporting of academic achievement and proficiency in Vietnamese is the strongest. Classes and examinations take place in Vietnamese at most schools like school 1 and school 2, except schools where students are from single ethnic minority and a teacher with proficiency in their language is available. The language of instruction at school is often different from home language to ethnic minority students, and some of them have a difficulty in understanding teachers' instruction.

Students' proficiency in Vietnamese is, therefore, likely to have a role in determining academic achievement.

Although 22 out of 95 students answered that it is easy to study in Vietnamese, it is important to remind that every 17 Kinh student chose the answer while only 5 out of 78 ethnic minority students chose that answer (**Table 4.11**).

Table 4.11. Distribution of proficiency in Vietnamese

	Is it difficult to study in Vietnamese?				Total	Mean	SD
	Easy	Not easy	Difficult	No answer			
The number of students	22	44	26	3	95	2.04	.725

*Easy=Score 1, Not easy=Score 2, Difficult=Score 3, More than twice=Score 4, No answer=Missing value

Ethnic minority students might get used to studying in Vietnamese as they reach higher grades. Excluding Kinh students, **Table 4.12** demonstrates the distribution of proficiency in Vietnamese by classes. Class 1 students, who are grade 3, were reported to be poorer at understanding Vietnamese compared to the other three classes, all of which are grade 4. It would be too early to conclude from this comparison between only four classes that ethnic minority students' proficient levels of Vietnamese become better at higher grades, but it presents possibilities for further study.

Table 4.12. Distribution of ethnic minority students' proficiency in Vietnamese by classes

	Is it difficult to study in Vietnamese?				Total	Mean	SD
	Easy	Not easy	Difficult	No answer			
Class 1 students	0	4	20	2	26	2.83	0.381
Class 2 students	1	19	1	0	21	2.00	0.316
Class 3 students	4	8	1	1	14	1.77	0.599
Class 4 students	0	13	4	0	17	2.24	0.437

*Class 1 students indicate grade 3 students in school 1. Class 2 students are grade 4 students in school 1. Class 3 students are students in one of the two grade 4 classes at school 2. Class 4 students are students in the other grade 4 class at school 2.

Teacher's kindness and help for study

Teacher's kindness and help for study is not significantly correlated with self-reporting of academic achievement. No respondents chose answer 4 on this question. As teaching is still a highly respected profession and students are conventionally obedient to them in Vietnam, teachers tend to be respected by students. Furthermore, it cannot rule out any possibilities that students' response were not objective in their assessment as they might have been afraid that teachers would check their answers.

Table 4.13. Distribution of teacher's kindness and help for study

	Is your teacher kind and helpful for your study?					Total	Mean	SD
	Very much	Much	Not much	No	No answer			
The number of students	67	20	7	0	3	95	1.36	.620

*Very much=Score 1, Much=Score 2, Not much=Score 3, No=Score 4, No answer=Missing value

Besides, the questionnaires were collected from students in only four classes, which means that the characteristics of only four teachers were examined. A teacher who is popular for one student is also often popular for other students and a teacher who is not popular for one student is usually not popular for other students, either. The number of teachers about whom students were asked is more important for this kind of question than the number of students who answered the questionnaire. However, the number of teachers examined is far too few to statistically obtain the results in this survey. Moreover, the question" Is your teacher is helpful and kind for your study? "is not necessarily related with teaching skills affecting students' academic achievement. Teacher's popularity might be different from teaching skills to primary school students, especially those with little interest in academic achievement.

Time spent to get to school

The correlation of time spent to go to school and self-reporting of academic achievement is not significant. More than half of students were reported to get to school from their house within 30 minutes, and most of students were reported to get to school from their house within 1 hour. In mountainous areas, the long time spent to get to school is often raised as a problem causing the low attendance rate, which leads to students' poor academic achievement. In addition, walking to school for a long time is detrimental to the condition of students' health. Students in mountainous areas are often undernourished due to poverty, which makes it difficult for them to concentrate on study at school (Lockheed and Verspoor, 1991). This effect, however, does not appear in this survey.

Table 4.14. Distribution of time spent to go to school

	How long does it take you to get to school?					Total	Mean	SD
	Less than 30miniutes	30minitues-1hour	1hour-90miniutes	More than 90miniutes	No answer			
The number of students	57	34	4	1	3	95	1.45	.635

*Very much=Score 1, Much=Score 2, Not much=Score 3, No=Score 4, No answer=Missing Value

4.2 Path analysis

In order to measure which factors have stronger impacts on self-reporting of academic achievement and what percentage of self-reporting of academic achievement can be predicted directly or indirectly by these factors, a path diagram was created by using the combination of stepwise multiple regression analysis on the results of the questionnaires (**Figure 4.1**). The arrows demonstrate the relation of cause and effect, and path values indicate how strong the influence of one factor on the other factor is. Significance level is 5%. The adjusted R square of self-reporting of academic achievement is 0.610, which is statistically significant at the level of less than 1%. The path diagram represents that three factors, proficiency in Vietnamese, parents' interest in child's study and the existence of close friends in school, have a significantly direct effect on self-reporting of academic achievement.

Four factors, school that students belong to, study hours at home, desire to go to primary school and desire to go on to junior high school, seem to have an indirectly significant effect on self-reporting of academic achievement. Eight factors, gender, family wealth, labour at home, father's literacy, mother's literacy, repetition, teacher's kindness and help for study, and time spent to go to school, do not appear to have any significant effect on self-reporting of academic achievement either directly or indirectly. As for repetition, and teacher's kindness and help for study, the significant relations with any other factors

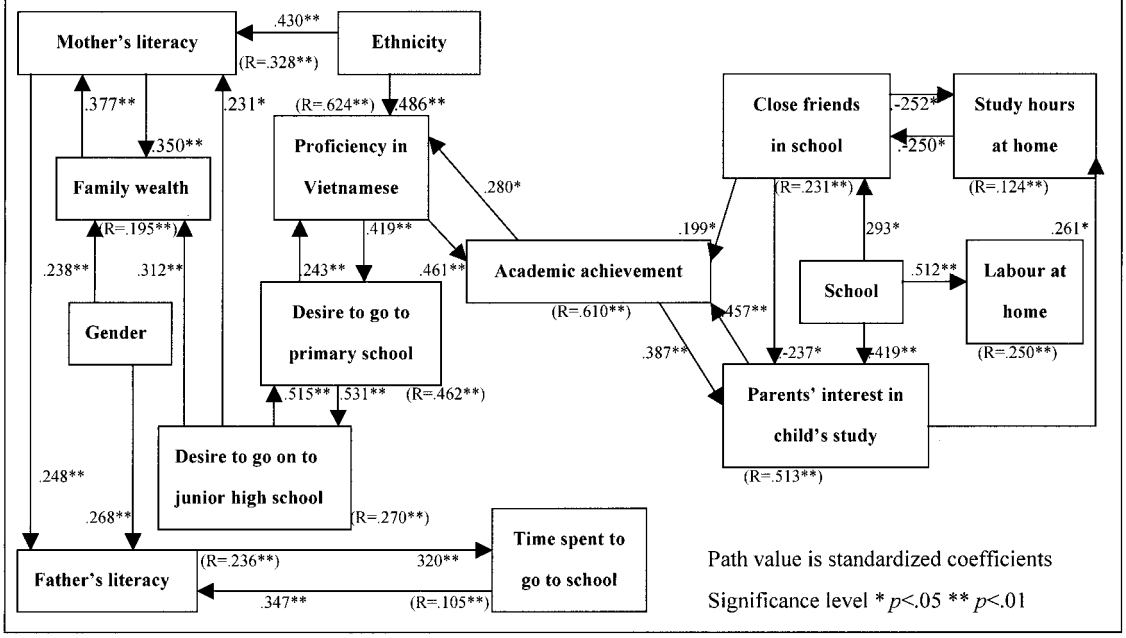
are not perceived.

Proficiency in Vietnamese

Proficiency in Vietnamese has been found to be the most influential factor for self-reporting of academic achievement. This means that students who are proficient in Vietnamese have a tendency to attain better academic achievement. Thus, the language barrier must be minimized to raise students' academic achievement at schools in mountainous areas. As the instruction of language for classes is often Vietnamese and younger minority students have a problem with understanding teachers' instruction, much of instruction time is consumed in learning Vietnamese (Norwegian Agency for Development, 2000c, 6).

The path diagram indicates that, due to the poorer proficiency in Vietnamese, ethnic minority students are handicapped in gaining good achievement compared to Kinh students. Attribution of students' ethnicity, Kinh or ethnic minorities, contributes most to the difference in proficiency in Vietnamese, which shows that students from ethnic minority are at a disadvantage for study in Vietnamese as every Kinh student answered in the questionnaire that it is easy to study in Vietnamese.

Figure 4.1. Path diagram of causal model in academic achievement



Ethnic minority students might easily understand teachers' instruction and attain better academic achievement at primary education when classes are conducted in their ethnic language. But, it is important to note that, regardless of students' ethnicities, Vietnamese is supposed to become the only language of instruction from lower secondary education onward across the country. Therefore, ethnic minority students who had taken classes in their ethnic language might face more difficulties in understanding classes than other students at lower secondary education. The influence of the difference in the

language of instruction at primary education on academic achievement at lower secondary education will need to be investigated between ethnic minority students who had taken classes of primary school in Vietnamese and ethnic minority students who had taken classes in their ethnic language.

Parents' interest in child's study

Parents' interest in child's study brings a direct effect to students' perceived academic achievement. Next to the fluency of Vietnamese, this factor is the second most influential in determining students' perceived academic achievement in this survey.

School has a direct effect on parents' interest in child's study. The path coefficients indicating the effect of school on parents' interest in child's study represent a negative effect. This means that school 1 does not successfully enhance parents' interest while school 2 does. School 2 teachers regularly visit students' home to talk with their parents about their child's study. The principal of school 2 commented that the main purpose of this prevented students' dropouts. Moreover, school 2 has organized PTA and sometimes holds a meeting with students' parents. These activities might lead to their stronger interest in child's study than that of parents with their child in school 1. In addition, school 2 is well equipped for average schools located in mountainous areas. The presence of school in a village often has an impact on status and pride of the village people and thus encourages educational development (Norwegian Agency for Development, 2000b,7). The presence of better-constructed school 2 might more strongly encourage parents' interest in child's study. The other factor with a direct effect on parents' interest in child's study is also self-reporting of academic achievement. Like the relationship between students' academic achievement and his/her proficiency in Vietnamese, self-reporting of academic achievement and parents' interest in child's study have a directly significant effect on each other. Good academic achievement might contribute to raising parents' interest in child's study. Students' better academic achievement and his/her effort toward it might enhance parents' expectation of their study and stimulate parents' interest in child's study. The existence of close friends in school has a negative effect on parents' interest in child's study in this survey. Though it is hard to interpret this result, it might be impossible or meaningless to recommend students, as one of educational policies, to make less close friends so as to make their parents be more interested in their study.

Close friends in school

The existence of close friends in school is the other factor that has a positively direct effect on self-reporting of academic achievement.

Students who are proficient in Vietnamese are more inclined to make more close friends in school in this survey. They might be able to enjoy more opportunities to make friends with other ethic students, as students need to have a communication with other ethnic students in Vietnamese. School also shows a direct effect on making close friends, which means that it would be easier for students to make friends at school 1 than at school 2. This might be because, unlike school 2, school 1 mostly comprises of a single ethnicity, Kho-mu students, and they can have a smooth conversation with other students in their own language. Having close friends in school and study hours at home negatively influence each other. According to the path diagram, the more close friends students have in school, the less time they have a tendency to spend studying at home. On the one hand, students with many close friends in school might get more opportunities to play with their friends after classes. On the other hand, students who do not prefer studying at home might like to play better than those who do.

5. Summary

5.1 Conclusion

From the above discussion, it is clear that, in Vietnam, there are still many educational issues, all of which would ideally be dealt with. However, an educational budget is always limited. Consideration of the order of priority, therefore, is essential to improvement policies in education. It is an important task for educational planners to conclude the best way to improve school situations within a limited budget.

In this research, proficiency in Vietnamese is likely to be the most influential factor to improve students' academic achievement, and followed by parents' interest in child's study as the second strongest factor and then, the existence of close friends as the third strongest factor. In the path diagram of figure 4.1, in association with self-reporting of academic achievement, Vietnamese proficiency shows standardized coefficients 0.461 with a significance level of less than 1% compared to that of parents' interest in child's study, 0.457 with a significance level of less than 1% as well. This result demonstrates that Vietnamese proficiency is as important as parents' interest in child's study for students to attain good academic achievement. Thus, if the cost-effectiveness does not present a problem, the intervention in the language problems and parents' interest ought to be put on priority although the improvement policy in Vietnamese is not likely to benefit the Kinh students.

Furthermore, the researcher also conducted the filed survey to investigate school factors in relation with students' academic achievement. However, in the field survey, the researcher could only visit two schools. Thus, it is important to remind that it would be too early to conclude from this research to identify which school factors, such as school facilities or teachers' teaching skills, have a strong effect in determining students' academic achievement as, in this case, the research target was only two. The survey must be conducted in more schools in order to clarify details of school factors with an impact on students' academic achievement.

There seems to be two distinct issues for educational development in mountainous areas. One is the issue of cost-effectiveness in comparison with lowland areas. The Vietnamese government has been trying to pay much attention to disadvantaged students in mountainous areas. But, it is necessary to spend more time and human resources in order to make these disadvantaged students in mountainous areas enter and remain in schools than do students in lowlands as more support is required for their study at school. The other issue is that these mountainous areas are economically so marginal that the local governments can secure less budgets and human resources than regional governments in lowlands. They cannot give extra support to ethnic minority students. In short, they must spend more resources for ethnic minority students to go to school but, in reality, they have fewer resources available than government in lowland areas.

5.2 Reflection

Closed to 10% of people live in mountainous areas in Vietnam. Most of mountainous areas in Vietnam have currently been left behind in socio-economic development by Doi Moi policy. The Vietnamese government must involve these areas in part of national development. Saito (1996) insists that it is much harder to improve educational situation of the most 10% impoverished people in the population than to improve that of the rest of 90% because they often suffer from not only economic poverty but also social and cultural disadvantages. Conventional uniform intervention does not work for them effectively. In fact, urban areas and some of rural areas have almost attained universal primary educa-

tion, but this is not the case in mountainous areas. In mountainous areas of Vietnam, which are the most improvised places in the country, more flexible intervention than ever is required for educational development.

NOTES

[1]On the other hand, every Kinh student answered that both their fathers and mothers can read and write Vietnamese.

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Appendix. Correlations of every variable

		Self-reporting of academic achievement	Gender	Ethnicity	School	Labour at home	Parents' interest in child's study	Father's literacy	Mother's literacy	Family wealth	Study hours at home	Desire to go to primary school	Desire to go on to junior high school	Close friends in school	Repetition	Proficiency in Vietnamese	Ranking of academic achievement in a class	Teacher's kindness and help for study	Time spent to go to school
Self-reporting of academic achievement	Pearson Correlation	1	.058	.532**	-.580**	-.307**	.540**	.256*	.296**	-.066	.084	.353**	.217*	.230*	.123	.601**	.179	-.071	.121
	Sig. (2-tailed)		.588	.000	.000	.003	.000	.018	.006	.426	.424	.000	.037	.028	.239	.000	.104	.502	.254
	N	94	91	94	94	92	87	85	86	88	93	94	93	92	93	91	84	93	91
Gender	Pearson Correlation	—	1	.113	.113	.218*	-.122	-.186	.018	.169	.132	-.084	-.111	.026	.130	.148	.087	-.076	.060
	Sig. (2-tailed)			.283	.286	.039	.266	.094	.869	.120	.214	.428	.294	.812	.220	.167	.437	.473	.576
	N		92	92	92	90	85	82	84	86	91	92	91	89	91	89	82	91	89
Ethnicity	Pearson Correlation	—	—	1	-.462**	-.178	.369**	.257*	.438**	.008	.180	.218*	.063	-.010	.018	.688**	.162	-.173	.159
	Sig. (2-tailed)				.000	.089	.000	.018	.000	.939	.083	.033	.546	.924	.863	.000	.138	.096	.131
	N			95	95	93	87	85	87	89	94	95	94	92	94	92	85	94	92
School	Pearson Correlation	—	—	—	1	.524**	-.655**	-.258*	-.287**	.302**	-.156	-.310**	-.068	.019	.063	-.544**	.052	.138	-.155
	Sig. (2-tailed)					.000	.000	.017	.007	.004	.134	.002	.513	.858	.545	.000	.639	.184	.141
	N				95	93	87	85	87	89	94	95	94	92	94	92	85	94	92
Labour at home	Pearson Correlation	—	—	—	—	1	-.341**	-.029	-.112	.319**	.174	-.008	.045	-.071	.001	-.174	.045	.013	.003
	Sig. (2-tailed)						.001	.797	.304	.003	.097	.935	.668	.504	.995	.100	.686	.903	.979
	N					93	86	83	86	87	92	93	92	91	92	90	83	92	90
Parents' interest in child's study	Pearson Correlation	—	—	—	—	—	1	.294**	.332**	-.213	.326**	.172	.234*	-.046	.004	.330**	-.027	.079	.210
	Sig. (2-tailed)							.009	.003	.053	.002	.111	.030	.671	.969	.002	.811	.469	.054
	N						87	79	80	83	86	87	86	86	86	84	78	86	85
Father's literacy	Pearson Correlation	—	—	—	—	—	—	1	.379**	-.120	.030	.302**	.299**	.103	-.144	.216*	.031	-.048	.218*
	Sig. (2-tailed)								.000	.291	.786	.005	.006	.356	.192	.050	.792	.661	.049
	N							85	81	80	84	85	84	83	84	83	77	85	82
Mother's literacy	Pearson Correlation	—	—	—	—	—	—	—	1	-.264*	.011	.238*	.166	.053	.027	.280**	.037	-.077	.055
	Sig. (2-tailed)									.016	.918	.027	.127	.625	.809	.009	.749	.483	.619
	N								87	83	86	87	86	86	86	85	78	86	85
Family wealth	Pearson Correlation	—	—	—	—	—	—	—	—	1	.058	-.001	.096	-.110	.134	-.098	.075	-.130	-.099
	Sig. (2-tailed)										.593	.991	.375	.309	.214	.371	.509	.229	.360
	N									89	88	89	88	87	88	86	79	88	87
Study hours at home	Pearson Correlation	—	—	—	—	—	—	—	—	—	1	.007	.178	-.155	.006	.121	.086	-.018	.121
	Sig. (2-tailed)											.946	.088	.143	.951	.254	.438	.865	.254
	N										94	94	93	91	93	91	84	93	91
Desire to go to primary school	Pearson Correlation	—	—	—	—	—	—	—	—	—	—	1	.612**	.293**	-.023	.326**	.251*	-.044	.092
	Sig. (2-tailed)												.000	.005	.827	.002	.021	.675	.381
	N											95	94	92	94	92	85	94	92
Desire to go on to junior high school	Pearson Correlation	—	—	—	—	—	—	—	—	—	—	—	1	.216*	-.006	.076	.267**	.036	.035
	Sig. (2-tailed)													.040	.953	.472	.008	.733	.744
	N												94	91	93	91	84	93	91
Close friends in school	Pearson Correlation	—	—	—	—	—	—	—	—	—	—	—	—	1	.068	.222*	.410**	.282**	.148
	Sig. (2-tailed)														.524	.037	.000	.007	.163
	N													92	91	89	82	91	90
Repetition	Pearson Correlation	—	—	—	—	—	—	—	—	—	—	—	—	—	1	.103	.061	.144	.074
	Sig. (2-tailed)															.327	.576	.167	.483
	N														94	92	85	93	91
Proficiency in Vietnamese	Pearson Correlation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	.208	-.036	.235*
	Sig. (2-tailed)																.062	.732	.027
	N															92	83	91	89
Ranking of academic achievement in a class	Pearson Correlation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	.279**	.154
	Sig. (2-tailed)																	.010	.164
	N																85	85	83
Teacher's kindness and help for study	Pearson Correlation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	.075
	Sig. (2-tailed)																		.482
	N																	94	91
Time spent to go to school	Pearson Correlation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
	Sig. (2-tailed)																		
	N																		92

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).