Non-academic factors influencing students’ achievement: a study in the Indonesian madrasahs

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Abstract: This study aimed to find out non-academic factors influencing junior secondary school students’ achievements. The sample for this study was Year 9 students of Islamic junior secondary schools or madrasahs across the country. Data on students’ achievement was taken from the results of the students’ scores in their national examination which cover the score of Mathematics, Science, the Indonesian language and English subjects; while data on non-academic factors was collected by using a set of rating-scaled questionnaires. Findings of the study showed that the variable of students’ gender and age influenced their achievement together with grade repetition, resources at home, parent’s education and expected level of education attainment, number of school resources, the condition of schools’ facilities, number of lesson per week for a subject, qualification of the teachers, teachers’ lesson plan and assessment plan, and teachers’ and principals’ feedback on lessons.

Keywords: non-academic factors influencing students’ achievement; The Indonesian madrasah students’ achievement.


Non-academic factors influencing students’ achievement


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1 Introduction

Students’ achievements in a school system are bound to be influenced by various internal and external factors. These include students’ innate abilities, their perception towards education, their motivation and personal aims, support from family members and members of school society, availability of various facilities, structures, and infrastructures. All of these determine how well students performed in schools (Mushtaq and Khan, 2012).

It is important to measure students’ performances and achievements to determine what needs to be improved (Mangindaan et al., 1978). It is also important to evaluate Year 9 students’ achievement in the context of universal nine-year basic education policy implementation (Suryadi and Suryadi, 1982). In regard to studying students’ performance and achievement systematic efforts need to be made to include studying various non-academic factors influencing students’ achievements; such as quality of school life, demographic characteristics of students, demographic characteristics of school leaders, and school facilities.

In Indonesia, the formal education is implemented by two systems: the general education system and the Islamic education system. The general education system is governed by the Ministry of Education and Culture (MoEC) while the Islamic education system is under the governance of the Ministry of Religious Affairs (MoRA). Madrasah, which means ‘school’ in Arabic, refers to the formal education institution under the Ministry of Religious Affairs which uses Islamic education system (Ali, 2009). Law Number 20, 2003 on National Education System stipulates that madrasahs are an integral part of the National Education System and are not separate from schools under the general education system (MORA, 2003; MONE, 2003; USAID, 2006; Ali, 2009, 2014).

Like schools in the general education system, madrasahs, most of which are private institutions, had three levels: Madrasah Ibtidaiyah (MI) which is comparable with Primary School, Madrasah Tsanawiyah (MTs) which is comparable with Junior Secondary School, and Madrasah Aliyah (MA) which is comparable with Senior Secondary School (MONE, 2003; Ali et al., 2011; Hayat and Ali, 2011). In regard to making the madrasahs equal to the Primary School in terms of their quality the Government requires madrasahs to be accredited by the accreditation institution the Government assigns-Badan Akreditasi Nasional Sekolah/Madrasah (BAN S/M) or Board of National Accreditation of School/Madrasah (Ali, 2004). The madrasahs’ students are also mandated to take the national examination which is also taken by the schools’
students. This means that the students’ performances and achievements in madrasahs are measured using the instrument of National Examination which is required of all students in Indonesia in order to finish their study.

Most of the studies examining the students’ achievement in Indonesia were conducted in the context of the general education system (Ali and Furqon, 2016). The same is also true for studies examining non-academic factors influencing students’ achievements. Studies concerning students’ achievements in Indonesia, and those concerning the influence of non-academic factors on students’ achievements, generally excluded madrasah students from their sample. Even in the studies that included madrasah students in their sample, the number of students was not stratified fairly to represent the whole population of madrasah students in Indonesia. Therefore, it would be beneficial to conduct a study examining the nonacademic factors influencing students’ achievement exclusively in the context of madrasah education.

It was understood that there were some studies aimed to find out non-academic factors – including the quality of school life, demographic characteristics of students, demographic characteristics of school leaders, and level of school facilities, correlated with students’ achievement conducted in schools in the general education system. Lack of similar study conducted in madrasahs has raised general research problem concerning the nonacademic factors influencing their students’ achievement. This Study, therefore, addressed the problem of the extent to which the nonacademic factors are related to students’ background, school facilities and minimum services standard influence students’ achievement in madrasah or Islamic education system in Indonesia. The main objectives of this study are twofold;

- to evaluate the condition and quality of the madrasahs’ non-academic factors and their student’s achievement
- to map their achievements (strength and weakness) with respect to the subjects being examined.

2 Literature review

The conceptual perspective on students’ achievement and its influencing factors had been formulated by psychologists and educationists. One example was Carrol (1963) who developed a model of students’ achievement. The model and its comprehensive explanation and elaboration were written in his paper “A model of school learning”. The model comprises three factors: aptitude, ability and perseverance as internal factors to learners; and two external factors, i.e., the opportunity to learn and the quality of instruction, considered as determinant factors to the school students’ learning achievement.

There were also several studies exploring factors influencing students’ achievements or academic performance either overall or in certain subject(s). Farooq et al. (2011) conducted a study on the effect of students’ background factors on their quality of academic performance in Years 9 and 10 of junior secondary schools of Punjab, Pakistan. The study found that parents’ socioeconomic status (SES) and parents’ education had a significant influence on students’ overall academic achievement as well as achievement in the subjects of Mathematics and English.
Concerning classroom variables influencing students’ achievement, Mushtaq and Khan (2012) identified two types of related-factors influencing students’ achievement: internal classroom and external classroom factors. The way teachers communicate with students in the classroom and the way teachers provide guidance to the students together with the condition of the classrooms’ learning facilities had significant effects on students’ academic performance.

Wright et al. (1997) developed a model of students’ achievement. In the model, they identified teacher and classroom context factors influencing students’ achievement and described them in a functional model by which it was explained that school system, heterogeneity of classroom students, class size, teacher-students interaction in the classroom affected students’ achievement. They also explained that the students’ achievement was the function of those factors.

Teacher-related factors influencing students’ achievement were also studied in Kenya by Kimani et al. (2013). Their study identified a more elaborate teacher factors influencing students’ academic achievement. The study found that teachers’ age, gender, professional qualification, and teaching experience were not significantly related to students’ academic achievement. Teachers’ job group, teachers’ weekly teaching workload, administration of students classroom assignment, evaluation of students’ continuous assessment test (CAT) results, provision of individualised attention to weak students, time of completion of syllabus, and setting performance target for Kenya Certificate of Secondary Education (KCSE) significantly affected students’ academic achievement.

With respect to availability and use of learning resources and class size a study conducted by Subedi (2003) indicated that those factors gave significant effects on student achievement. These also related to students attitude towards school life which according to Marks (1998) gave significant influence to students’ achievement. Al-Agili et al. (2012) studied Libyan students who studied in Kuala Lumpur. They identified factors influencing the students’ achievement in mathematics. They found that teachers’ teaching practice, teachers’ attribution, classroom climate, students’ attitude towards mathematics and anxiety significantly influenced students’ achievement in mathematics.

There were also several studies measuring non-academic factors and their correlation with students’ achievements, although none had been done specifically in the context of Indonesian madrasahs. Lietz (2006) studied the gender differences in reading achievement at the secondary school level. This study found that girls performed better than boys in reading tests. A similar study with similar findings was conducted by Organization for Economic Co-operation and Development (OECD, 2009). The study examined gender differences in 15-year-old students in terms of performances in school. It was found that on languages tests, girls outperformed boys, while on Science tests, boys outperformed girls.

OECD (2007) also studied students’ science competencies, in which it was found that boys performed better than girls in Science. Another study that examined the gender differences in students’ achievements was Neuschmidt et al. (2008). They analysed gender differences in mathematics and science using data from TIMSS 1995-2003. Their findings indicated that boys performed better than girls in science and mathematics.

Hattie (1999) reported influences on student learning in which she stated that students who were older due to grade repetitions performed less well than their peers. In the same report, Hattie also showed that feedback and suggestions for remediation had the strongest impact on students’ achievements. Keeves (1992) performed a study on
students’ Science achievements and factors influencing them. It was found that students in larger schools performed better. However, the school size was not the factor that directly affected students’ achievements. Keeves’ study showed that larger schools tended to be better equipped and these resources had great influence on students’ achievements. Keeves’ finding confirmed Raudenbusch and Williams’s (1991) study, in which they found that internationally, schools with better resources performed better than other schools, regardless of school size.

The conceptual perspective explained that student’s achievement is influenced by internal factors namely aptitude, ability and perseverance. It is also influenced by external ones namely the opportunity to learn and quality of instruction. Several studies have shown evidence indicating a significant influence of the external factors such as students’ background, classroom condition, teachers’ quality, etc. to their achievement. The more elaborate external factors are considered as the non-academic ones and the extent to which they influence the Indonesian madrasah students’ achievement are the focus of this study.

3 Research methodology

Population for this study was all MTs students in Indonesia. MTs was chosen because it was the mid-level of Madrasah education, connecting the primary level (MI) and the senior secondary level (MA). The Year 9 students were chosen as the sample year for this study because by the Law this level is the final year of compulsory education in Indonesia (MONE, 2003).

The schools in this study were first categorised by whether it was a public or private school. Of the total number of school population: those in the category of madrasahs ($N = 12,396$), around 10% ($N = 1256$) were public schools. Further, the schools were categorised into one of five groups based on the average school performance on the national examination. The schools were further grouped into three regions: the eastern region of Indonesia, Java Island, and the Western region of Indonesia. This categorisation was intended to facilitate the analysis of the students’ achievements across Indonesia.

To increase the accuracy of sampling, schools in each region were sorted according to the province, public/private, achievement group, and a number of students who sat the 2008 exam as an indication of school size. The next step of sampling was calculating the sampling interval by dividing the total number of schools in the sampling frame in each region by the number of schools to be sampled. The sampling interval in the Western region was 72, in Java was 130, and in the Eastern region was 46. Then, the random starting point was selected for each region, and the schools were selected by choosing every 72nd school in the Western region, every 130th school in Java, and every 46th schools in the Eastern region. This method was to ensure that every school had equal probability to be chosen, regardless of its enrolment size.

Eight instruments were used in this study. The first four instruments were designed to measure junior secondary school students’ achievements in each of the four subjects tested in national examinations: Mathematics, Science, Indonesian Language, and English. The Mathematics and Science tests were translated into Indonesian and verified to ensure an accurate translation. For the English tests, the stimulus and answer options were in English, but the scene setting sentences were translated into Indonesian for each set of items (Lietz and Nugroho, 2009). The other four instruments were designed to
measure the nonacademic factors assumed influencing the students’ achievement namely the quality of school life, demographic characteristics of students, demographic characteristics of school leaders, and level of school facilities.

The instrument to assess Mathematics achievement consisted of 30 items. These items were derived and adapted from the trends in mathematics and science study (TIMSS) and the international benchmark test (IBT) Mathematics Years 4, 6, and 8. The instrument to assess Science achievement was a 30 item test. The items were derived from TIMSS and IBT Science Years 4, 6, and 8. In the pilot study, two 40 item tests were trailed for Indonesian Language test. 30 of the items that could show the spread of students’ ability while differentiating between better and poorer performing students were included in the final version of the instrument. To assess students’ achievement in English subject, the competency in English as a foreign language assessment (CEFLA) instrument was used.

To measure the quality of school life, the school life questionnaire (SLQ) was used. SLQ was designed by Australian Council for Educational Research (ACER), and it measured students’ perceptions and feelings towards aspects of school life. The aspects included students’ attitude towards school in general, towards learning, towards teachers, and towards other students. The SLQ consisted of 40 items or statements, 35 positive statements and five negative statements, and was measured using four-point Likert scale (1 point for ‘strongly agree’ and 4 points for ‘strongly disagree’).

To measure students’ demographic characteristics, the student background questionnaire (SBQ) was used. It was designed by ACER to obtain background information on students enrolled in MTs. The background information included students’ gender, parental education, educational resources in the home, socioeconomic status, and attitudes toward school and homework practices. The purposes of this measurement were to provide a profile of Year 9 students, to enable reporting students’ achievements based on subgroups, to provide information on variables (e.g., number of books, language spoken at home) that had been shown to have great influence on students’ achievements (Keeves, 1992; OECD, 2007) and to create indicators.

For this study, the student questionnaire consisted of 23 items to uncover information concerning the topics of students’ demographic (gender, age, language spoken at home), educational resources at home (number of books, availability of newspapers and magazines), socioeconomic status of the home (availability of electricity), home context (number of meals eaten per day, time spent working for the family), school attendance (number and reasons for school absence, grade repetition), school resources (library, study materials, exercise books, instructional time), homework (frequency, assistance, and checking), outside school tuition (hours per week spent in extra tutorials), and educational aspiration (expected level of education).

The next instrument was a principal interview. This instrument aimed to collect background information on School Principals and the information on the schools themselves. The information sought included location, teachers’ characteristics, student enrolment, school management operations, teaching and assessment practices, and school facilities. The last instrument was school inventory. Using this instrument, an assessment was made in terms of the extent to which schools meet the minimum service standard developed by Ministry of National Education based on the Board of National Education Standards (BSNP). It included the standards related to content, process, teaching staff, facilities and infrastructure, management, and evaluation.
To measure students’ academic achievements, the four instruments were administered to the sample schools’ students in the Eastern Indonesia, Java Island, and Western regions of Indonesia. The results of the tests were analysed in several steps. First, the data was cleaned, which meant that rigorous checks regarding consistency and completeness of answers as well as the accuracy of coding and data entry were conducted. Second, a psychometric analysis was conducted. Third, sampling error and variances were calculated. Fourth, the achievement scores were calculated for every student who participated in the study. Finally, a descriptive analysis by region was conducted for all achievement tests.

The other four instruments were also implemented to obtain relevant data. The collected data were then analysed in the following ways. First, descriptive statistics were generated for all variables in the SBQ, the principal interview, and the school inventory. Then, descriptive analysis was undertaken on responses to school live questionnaire. The next step was to merge achievement data to data files containing information collected from SBQ and correlation analysis was undertaken to examine which of the student background variables are related to students’ achievements. The last step was to conduct correlation analysis to examine which of the school level variables are related to students’ achievement. The correlation analysis was conducted using Spearman’s Rho correlation coefficients.

4 Findings and discussion

The study identified non-academic factors influencing students’ achievement indicated by a significant correlation of the factors to the student’s achievement in mathematics, science, Indonesian, and English.

4.1 Findings

From the students’ background questionnaire administered to the sample of students in the three regions, the following results were found. Overall, there were more girls (52.6%) than boys (47.4%) attended Year 9 schools. In Java region, the proportion of Year 9 girls and boys in MTs was 52.2% and 47.8%, respectively. In the Western region, the proportion was 53.1% girls and 46.9% boys. Meanwhile, in the Eastern region, the proportion was 54.0% girls and 46.0% boys.

Concerning parents’ education, students in the Eastern Indonesia reported the highest completion of tertiary education (8.6% for fathers and 5.8% of mothers). The highest proportion of parents’ completion of secondary education was reported in the Western region of Indonesia (38.2% for mothers and 46.6% of fathers). And students in Java reported the highest proportion of parents completing primary education (56.5% for mothers and 45.7% of fathers).

Concerning languages spoken at home, 14.5% of students in Java reported to speak Indonesian most often at home and over 83% reported to mainly speak the regional language. In the Western region, 32.9% students reported to mostly use Indonesian at home and 64.4% mainly spoke the regional language at home. 25.1% of students in the Eastern used Indonesian most often at home, and 73.3% mostly spoke another language. Over 63% of students in Java worked less than one hour for their family, while in the Eastern and Western regions, only one-third of the students reported working less than
one hour. 26.9% students in the Western and 23.0% students in the Eastern regions reported working more than three hours for their family, a significant amount of number compared with the 10.3% in Java. In other words, students in Java region have more ‘free’ time than students in the Western and Eastern regions of Indonesia.

More students in the Western region reported having books than students in Java and the Eastern regions. 30.0% students in the Western region had 11–30 books (only 26.5% in the Eastern and 21.1% in Java); 11.3% students possessed 31–50 books (compared to 7.3% students in the Eastern and 7.8% in Java); 6.1% students had 51–100 books (compared to 3.7% students in the Eastern and 3.6 in Java). However, more students in the Eastern region (6.8%) reported having more than 101 books in their home (4.0% students in the Western and 3.9% students in Java did).

Regarding the expected level of education, the highest level of expectation was in Java Island, where the percentage of students expecting to complete Year 9 or Year 12 was higher than it was for all students. On the other hand, the expected level of education in the Western and the Eastern regions was higher, with 74.3% students in the Eastern and 75.2% students in the Western expected to complete university degree; meanwhile, only 40.5% students in Java did. Around 70% students in the Western took extra tutorials outside the school, while only 20% students in Java and around one-third of those in the Eastern did. The largest number of students taking extra tutorial was for English subject (39.7%), followed by Science (31.6%), Mathematics (30.4%), and the Indonesian language (27.8%).

Regarding homework, the subject with the most frequently-assigned homework was English. 50.9% students reported doing English homework twice or more a week, compared to 44.2% for Mathematics, 38.1% for science, and 27.3% for Indonesian. The most frequently-checked homework was Mathematics (51.4% students reported so), followed by Science (45.5%), English (44.7%), and Indonesian (37.8). Around 75% of the students received help when doing their homework, while almost 20% reported never received help from anyone besides their teachers.

From the SLQ administered to MTs students in the three regions, the following results were found. All in all the 35 positive statements in SLQ received an agreement rating of 3.17 (SD = 0.1) on the scale of 1 to 4, with 4 being ‘Strongly Agreed’. Statements that receive the strongest agreement were those that related to students’ views on the importance of the things they learned at school and the relevance to their future. Over 96% of students agreed with the five statements with this topic. Statements that receive western agreement were those that dealt with students’ views on the way they thought were valued by others in the schools. Over 30% of students disagreed with the six statements discussing this issue.

Students’ attitude towards school life was found to be correlated with access to study materials (textbooks) and the frequency in which the teachers checked their homework. Students with more access to study materials (those with English, Mathematics, Science, and Indonesian textbooks) had a stronger positive attitude towards school life. Similarly, students whose teachers frequently checked their homework tended to have a stronger positive attitude towards school life.

The interviews with MTs Principals and the school inventory resulted 64.7% of MTs were located in rural areas and 22.7% were located at or near small towns. The mean overall enrolment size was 184 students, slightly higher than the enrolment size in Java (117.2) and lower than the enrolment size in the Western region of Indonesia (211.4).
MTs type correlated strongly with enrolment size, in which public MTs was larger than
private ones. Over 80% of principals have at least an undergraduate degree. However,
less than 60% had undergone specialised training in school management.

Concerning employment status of teachers, 20% of the teachers were civil servants,
the rest were either permanent teacher employed by the foundation funding the MTs
(52.7%) or honorary teachers (27%). Most of the teachers (65.6%) hold an undergraduate
degree. Across the four subjects focused in this study and the three regions, the qualified
teachers were only half of the total MTs teachers. The shortages of qualified teachers
were particularly for the subject of Mathematics in Java and Science in the Western
region. Overall, in all regions, there were notable shortages of certified teachers in the
four core subjects, but particularly in English and Indonesian teachers in the Western.
Almost 70% of MTs teachers were required to prepare assessment plans.

However, only 44% of teachers’ assessment plan included observation, and only
41.3% included regular feedback and remediation for students. The general physical
condition of school buildings appeared to have an inverse correlation with
negative attitudes to school. Students whose school buildings were in a better condition
reported lower negative attitudes to school life. Students of schools lead by principals
who believed that the schools’ foundation and the schools’ imam were important in
deciding what would be taught at the schools reported stronger negative attitudes to
school life.

4.2 Discussion

An analysis of the correlation between students’ background variables and achievements
was conducted. The result of this analysis provided evidence concerning which student
background characteristics were related more strongly to achievement. It should be noted
that the correlation coefficients found in this study were lower than the correlation
coefficients in natural science or engineering studies, put forward an interpretation of
effect sizes for correlation coefficient in psychological and educational research, in which
a correlation of 0.10 was considered small, 0.30 was considered medium, and 0.50 was
considered large.

On the basis of the correlation analysis of students’ background variables
with students’ overall academic achievements, it was found that the variables of gender,
students’ age and grade repetition, resources and books at home, parental education,
and students’ expected level of education had non-trivial correlations with students’
achievements (correlation coefficients more than 0.1). Meanwhile, the specific
background variables that had correlation coefficient more than 0.1 included the number
of lessons per week in a subject, extra tutorials outside the school, and the frequency of
homework assignment from teachers. However, the frequency with which teachers
checked students’ homework did not appear to correlate strongly with achievements (that
is, the correlation coefficients were less than 0.1), except for the case in the Eastern
region (correlation coefficient 0.11). The results of this analysis have led to the following
conclusions.

Gender differences were most obvious for the Indonesian language (0.16), followed
by Science (−0.15) and English (0.13). No significant gender differences were found in
Mathematics. Boys outperformed girls on Science test while girls outperformed boys in
Indonesian and English tests. Older students and those who had repeated a grade during
their schooling had a lower level of achievements than their peers. Students who had a
greater number of resources at home; such as daily newspaper, television, books, performed at a higher level. This variable had the highest correlation across all subjects: 0.23 for Mathematics, 0.23 for Science, 0.19 for the Indonesian language, and 0.24 for English. In addition, the more study materials the students can access, the higher their achievement levels tended to be.

Levels of parental education and students’ level of expected education were positively related to achievements. The level of parental education correlated most strongly with students’ performance in English (with a correlation coefficient of 0.16); while the highest correlation between students’ level of expected education and their achievements was in the Indonesian language (with a correlation coefficient of 0.17). Students that spent more time learning a subject (per week at school and on extra tutorial programs outside school) performed at a higher level than those who spent less time to learn the subject. The correlation coefficients for each subject were 0.18 (for Mathematics and Indonesian), 0.11 (for Science), and 0.14 (for English). The frequency in which the students were assigned homework related more strongly to achievements (the highest correlation coefficient was 0.10, for Science), compared to the frequency in which the teachers checked that homework (the highest correlation coefficient was 0.05, for Science and Indonesian).

This result was in line with results of other large-scale studies which show that girls outperformed boys in languages and reading tests (Lietz, 2006; OECD, 2009) and that boys performed better on Science than girls (OECD, 2007, 2009). Hattie (1999) reported similar result concerning the correlation between grade repetition and students’ achievements.

The principal interview and school inventory yielded more than 200 variables to analyse. To reduce this large number of variables, only variables with correlation coefficients exceeded twice its standard error were considered non-trivial. The variables with important correlation coefficients included school resources and size, qualification of teachers, teachers’ lesson plan and feedback, and schools physical equipment. From this analysis the following conclusions were reached.

A number of school resources had the strongest link with achievements with a correlation coefficient 0.52. Students in schools with more resources showed higher achievements. Similarly, school size was also linked to students’ performance with a correlation coefficient 0.28, in which students in larger schools showed higher performances. The education level of principals correlated with students’ achievement (with a correlation coefficient of 0.21). Although in Java and the Eastern region of Indonesia this correlation was insignificant, schools in the Western regions with more highly educated principals performed at significantly higher level. Schools with more highly qualified teachers performed at a higher level than other schools (with an overall correlation coefficient of 0.39).

Students taught by teachers with a clear lesson plan, objective, and assessment programs performed better (with an overall correlation coefficient of 0.31) than students that were taught by teachers without such programs, particularly in Java (the highest correlation coefficient was 0.39 for teachers of Mathematics). Feedback from teachers on students’ assessment, and principals’ visit to classes and feedback on lessons, related strongly to students’ achievements (correlation coefficient 0.38), particularly in the Western region.
The variable of schools’ facilities was related to achievements. However, the physical equipment that had the highest correlation differed in each of the three regions. In the Eastern region, schools that had science laboratories with demonstration materials showed higher achievements than other schools. In Java, the condition of the school buildings related more strongly with achievement; students in schools whose buildings were in a better condition performed better. In the Western region, students’ achievements were related to separate principal’s office.

Concerning school size, it appeared that students performed better in larger schools not merely because of the school size. Rather, it was because larger schools were more able to provide resources and opportunities the students needed. This was in line with the documented findings of previous studies (Keeves, 1992; Raudenbusch and Williams, 1991).

The result concerning the correlation between teachers’ feedback and achievements confirmed the findings of Hattie (1999) and Ballard and Bates (2008) which showed that feedback and suggestions for remediation had the strongest impact on achievements.

5 Conclusion

On the basis of the findings and discussions, the following conclusions were reached on the non-academic variables related to students’ achievements.

- The non-academic factors influencing MTs students’ achievements included students’ background, students’ perception of the school, and the schools’ physical and human resources.
- With regard to students’ background factor, the variables that correlated with achievements included gender, age, grade repetition, resources at home, parent’s education and expected level of educational attainment.
- Concerning schools’ facilities and human resources, the variables that correlated with achievements included a number of school resources, the condition of the physical equipment’s, number of lesson per week for a subject, qualification of the teachers, teachers’ lesson plan and assessment plan, and teachers’ and principals’ feedback on lessons.

References


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