

Factors Influencing Children and Adolescents' Achievement in Indonesia

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Factors influencing children and adolescents' achievement can be divided into individual and supporting factors. The supporting factors of society, school, and family made unique contributions to children and adolescents' achievement. A case study of the Physics Olympiad gold medalist provides an illustration of the individual and supporting factors that contribute to the students' achievement. The impact of individual and supporting factors on Indonesian children and adolescents' achievement will be presented.

Introduction

Indonesia is an archipelago with the area of 1,919,440 km² and a total population of 234.7 million people (Central Intelligence Agency, 2008). Of these, 40% of the population aged 15 and over work and live in urban areas, whereas 60% live in rural areas (Statistics Indonesia, 2005). Most of them (44%) work in the agriculture sector (Statistics Indonesia, 2007). The national language is Bahasa Indonesia, although there are more than 200 coexisting ethnic languages. The majority of the population, 86%, is Islam, while with the remainder of the population is Protestant, Roman Catholic, Buddhist or Hindu.

This study was conducted in West Java, where most of the population are Javanese and Sundanese. Although there are some differences in language and cultural practices, the characteristics of Javanese and Sundanese are similar.

Prior to discussing factors influencing children and adolescents' achievement in Indonesia, we will present typical society, school, family and individual factors. Following this overview, a case study illustrating these issues will be discussed.

Factors Influencing Children and Adolescent's Achievement

Factor 1: Society

The Influence of Ethnic Group Membership

Mulder (1986) identified five characteristics of Javanese people. First, the Javanese do not separate their individuality from their primary environment (family, village) because the promotion of individuality and self-initiative is considered inappropriate. Second, the major goal of the Javanese is to attain a harmonious society within which the individual is less important. Third, it is the social duty of the individual to behave based on hierarchical social responsibility. Fourth, achievement orientation and competitiveness are not important in the socialization of Javanese children. Fifth, it is considered important to create a social environment that is warm and friendly.

The influences of ethnic group membership and adolescent identity were shown by Tarakanita (2001). Tarakanita (2001) found that the identity of 56% of Javanese adolescents was categorized as foreclosure. The high percentage of adolescents in this group may be related to the predominant belief that obedience to one's elder is very important. This belief, in turn, hinders the exploration that is necessary for adolescent identity formation.

The Influence of Religion

The influence of the Islam religion is also very prominent among adolescents in West Java. Approximately 86% of the Indonesian population was registered as Moslem. Therefore, this religion is one factor that influences achievement via the socialization of the religion through mass media such as television and the *pengajian* group (a unique Islamic study and praying group).

It is important to understand that in this article, "Islam" is discussed within the context of Indonesian society. Although sharing a common foundational core, Islam in Indonesia differs from the Islam that is practiced in some other regions around the world. This is important to note, since Indonesian culture influenced the spreading of Islam throughout Indonesia to some extent. Therefore, the Islamic thinking that is mentioned in this article might slightly differ from the Islamic thinking in other part of the world.

The socialization of Islam occurs in schools through television and the *pengajian* group. The forms of Islam socialization through television are varied. During regular days, some television channels present "Adzan" (a call for sunset praying) upon each sunset. At least once a week (usually the night before Friday – the holy day for Islam), a television program on Islam featuring a speech or talk show by experts is presented. Television soap operas frequently present Islamic messages and official speeches always begin with the Islamic greeting (Asalamualaikum Warohmatulahi Wabarokatuh). Moreover, the socialization occurs through various forms, such as films, speech, and talk shows during the fasting month Ramadhan.

Pengajian groups also reinforce religious ideals. For children, pengajian groups engage in the common activity of learning to read the Holy Qur'an. During adolescence, the *pengajian* groups typically engage in discussion and mentoring about Islam. Adult groups typically listen to speeches from experts and engage in discussion. The *pengajian* group exists not only for learning about Islam, but also, for providing a group to pray together.

Islam influences everyday life, including parenting practices. For the parents, a child is considered God's entrusted one and parents are responsible for taking care of children and educating them to become pious and obey their parents. For the newborn baby, people provide a celebration card saying: "hope the baby can be a pious person." Parents hope that their children will become an individual who is useful to the society, nation, and religion. These values are considered more important than becoming a "clever" or high-achieving person.

The influence of religion on students' achievement has been shown in the *Study of the Profile of Adolescent Achiever* (Ancok, 1996). This study showed that one of the profiles of the adolescent achievers was that their parents take responsibility for their education. Moreover, the adolescent achievers' parents believe that becoming a parent is equivalent to being devoted to God.

Factor 2: School

The ideal outcome of schooling is stipulated by Act number 20 year 2003 concerning the National Education System, which states that the function of national education is to develop ability and to form individual character and a civil society. This is to occur in the context of increasing the educational ability of the society with the goal of developing students' religious potential, God-obedience, good behaviour, health, knowledge, skill, creativity, independence, and ability to become a democratic and responsible citizen. In addition, the Act stated that educators are professionals who are responsible for planning and implementing the learning process, evaluating the outcome, guiding and training, as well as doing research and providing services for the society, especially for the educators in higher education.

Many problems exist in the implementation of an ideal education in Indonesia. One of the major problems is the low teacher salary, which requires instructors to seek additional sources of income. Thus, teachers cannot devote their full attention to their students.

Another problem is related to the frequent change of curriculum. For example, during the last five years, while the 2004 curriculum was still in the process of trial and socialization, the government implemented a curriculum with a different name and conceptual framework in 2006. The curriculum change distracted teachers' focus away from teaching and required teachers to spend their time and energy on implementing the new curriculum.

Fortunately, several efforts have been conducted to improve the quality of schooling within Indonesian society. Parts of these changes were reflected in the development of various types of schools that differed from the common school.

Common School

In the common school, specifically the state primary and secondary schools, the students stay in school for five hours (7:00 – 12:00 A.M. for the morning shift, or 12:15 – 5:15 P.M. for the afternoon shift). Morning and afternoon shifts occur in schools that have space or building limitations. Therefore, the schools take turns with other schools in using the buildings.

The students learn various areas at different allocated times and sometimes with different teachers. The schedule is, for example, (a) Physical Education (7:00 -8:20 A.M.) ; (b) Mathematics (8:20 – 9:20 A.M.); (c)

Morning tea break (9:20 – 10:00 A.M.); (d) Bahasa Indonesia (10:00 – 11:20 A.M.); and (e) Religion (11:20 – 12:00 P.M.). Most methods used teacher-centered, one-way communication, and the method of teaching religion was similar to that of other learning areas. The number of students in a classroom was between 30 and 50 students.

There was no integrated learning area, nor practices in conducting the religious way of life. However, some schools instructed the students to wear Muslim dress every Friday, provided a slot time for *shalat* (Islamic praying) during the afternoon school time, and conducted a one-day *pesantren* for the whole class at Ramadhan (fasting month).

Full Day School

The first type of school that differs from the common school is the full day school. While the students in the common state primary school stay in school for five hours, students in the full day school stay in the school for 8 hours. In this type of school, students are trained in Islamic daily life. One example of this type of school is *Salman al-Farisi School*, located in Bandung, West Java, which declared its educational goal to make students world leaders.

Boarding School

The second type of school is the boarding school, in which students stay in dormitories. An example of this type of school is the *Insan Cendekia School*, which is located in Serpong, 36 km from Jakarta. In 2006, this school enrolled approximately 360 10th to 12th grade students and 36 faculty members. The school is based on the integration of science, technology, and *imtaq*. *Imtaq* is the abbreviation of *iman* which means faith, and *taqwa* which means obedience to God's will.

The curriculum in this school is comprehensive and integrated, and the learning materials consist of basic knowledge in science and technology, Islamic religion, English and Arabic, and life skills. The objective of the education is to equip students with at least three capabilities: (a) faith and obedience to God, (b) competence in science and technology, and (c) ability to apply the knowledge in society. The school day begins at 4 A.M. with reading the holy *Qur'an*. Three days per week, students receive tutorials in Math, Physics, Chemistry, and Biology. Teachers in this school are often high achievers, highly dedicated, and highly committed to transferring their knowledge and supporting the students' achievement. About 93% of the graduates of this school were accepted to the best universities in Indonesia. In addition to instruction, at least three factors influence student achievement: discipline in time, learning atmosphere, and regularity of the learning program.

Pesantren

The third example of a school that was created as an effort to achieve better schooling in Indonesia is the modern *pesantren*. *Pesantren* is usually used as the label for the traditional Islamic boarding school. The *santri* (student in *pesantren*) study and live in the dormitories available in the school. However, some *pesantrens* have

currently been built and managed by modern management. An example of a modern Pesantren is the *Pesantren Al-Zaytun*, which is located in Mekar Jaya village, West Java. This school enrolls 7,000 students (elementary school, high school, and university) and employs 400 teachers, in addition to college students who also teach at the elementary school. The students from this school come from Indonesia, Malaysia, Singapore, South Africa, and Nigeria.

The motto of this school is "*Basthotan fi al ilmi wa al jismi*" (strong in knowledge, and strong in physical) and is, therefore, focused on sport and art activities. Facilities are available for football, basketball, volleyball, badminton, lawn tennis, table tennis, athletics, hockey, etc. They also have a special committee to manage the sport and art activities. This pesantren held the National Sport and Art Tournament for the Pesantren in Indonesia (*POSPENAS*) in 2001.

A unique feature of this school is that it provides its own food supply through its farms and fishponds. All of these facilities contradict people's misconception that the pesantren is "nothing," or has no facilities.

Achievement and social awareness are encouraged in this pesantren. For social awareness, for example, Boy and Girl Scouts distributed rice packages and meats from the *Qurban* (cattle slaughtering) ritual to the people living in the surrounding areas of Al Zaytun. In addition to general knowledge, students in Al Zaytun learn religious knowledge and practices, as well as the way to live together in tolerance and peace.

Factor 3: Family

Family is the third factor influencing students' achievement. A study of the parent profiles of the high-achieving students (Nashori, 2003) illustrate the importance of parent training and the enhancement of children's aptitudes. In turn, parent effort develops the internal motivation of students. High-achieving students usually have a competitive spirit, do tasks happily, exhibit discipline in studying (e.g., effective time management), and develop the ability to work well with others.

Parental Principles

Study by Nashori (2003) showed that the parents of students with high achievement in Indonesia exhibit at least five principles. The first principal is demonstrating religious behavior and ethics-morality. This principal is shown by the encouragement to conduct compulsory prayers and respect others. The second principal is discipline, where parents of high-achieving students utilize their time optimally and encourage family discipline. The third is leadership, through which parents would lead their children to do their tasks appropriately. The fourth principle of achievement and achievement motivation often leads parents of high-achieving students to have high achievement motivation. Finally, the fifth principal is patience and the ability to delay pleasure.

Participants

Participant 1 – the Gold Medalist (Individual Factor)

The gold medallist, Budi, is a Moslem and Javanese. He was the gold medallist in the International Physics Olympiad (IPhO), which involved students from 66 countries, when he was 18 years old. He was nominated through a tight selection process from schools on the country level, and he had high academic achievement in secondary school (always in the top 10). After the competition, he was awarded a scholarship from a prominent university in another Asian country to complete his bachelor's degree.

Participant 2 – the Father (Family Factor)

The father of the gold medallist, Agus, is 54 years old, Moslem, and Javanese. He works as a civil servant, and he obtained his master's degree from the University of Indonesia. He is known as a religious and helpful person by neighbors, as illustrated by decision to become a foster parent for poor children.

Participant 3 – the School Teacher (School Factor)

The third participant, Sapto, is 38 years old, Moslem, and Javanese. His highest formal education was a bachelor's degree, and he is a teacher of a secondary school where Budi attended. He was the teacher and advisor of Budi and served as the advisor of the Physics Study Club at Budi's school.

Procedures

The instrument that used was an open-ended questionnaire. Example questions included: (a) explain your experiences during the process of achieving the gold medal at the IPhO; (b) what did you do to attain the achievement; (c) why did you do it; and (d) what made you win.

The questionnaires were distributed to the three participants, after which the participants completed the questionnaires and returned them to the researcher. After the written responses from the participants were received, the follow-up interview was conducted to obtain more explanations, especially for unclear answers. The analysis of participant responses was then conducted by finding the unique themes for each participant, as well as the overlapping themes among the participants.

Results

The Situation

The process of participating in the International Physics Olympiad was challenging because each participant had to follow a long and tough journey for a long period of time. Participants were selected annually on the following levels: (a) school, (b) city, (c) province, and (d) national.

The students who were selected on the national level attended a camp. In the case study, Budi was one of 42 students selected on the national level. After the selection, students had to attend a one-month camp filled with lectures, practices, and tests. Among these 42 students, only 10 students could continue to the next step of participating in a 7-month camp filled with lectures, practices, and tests. Of these 10 students, only 8 students could participate in the Asian Physics Olympiad. Furthermore, only 6 out of these 8 students could continue participating in the camp, and only 5 students were selected to participate in the International Physics Olympiad.

During the special camp, the students stayed in the dormitory and studied six days per week. They spent most of their time learning Physics, and the learning materials were relatively new for them.

Individual Factor

Budi had developed his own orientation and learning strategies. He also always thought critically when he read various resources, thinking deeply about why things happened. However, he always tried to do his tasks as fast as possible; he did not focus on competing with others, but instead, tried to do his best. He said, "During the camp, I didn't emphasize that I was competing with the others, which would put a burden on me. My goal at that time was to get through as best as I could, stay as relaxed as possible, and engage in work that was appropriate for my capabilities."

Budi had internal motivations, or reasons, for conducting strategies to achieve. His goal was to master the learning materials. He is also interested in physics reading materials related to technology, science, and politics.

With regards to his effort, Budi used his religious beliefs as a basis for working hard. Budi said, "...religion gave me mental peace...also the reassurance that when we work hard for a goal, we will be repaid for our hard work." He also felt that he received social support from many part of his life. For example, he received good materials and advisers from the camp organizers. From schools, he received several special policies related to his school records and administration. Even after he returned to school, some teachers taught him additional lectures on Saturday and Sunday.

The Family

Budi's parents were involved and made efforts to help Budi achieve the gold medal. Firstly, with regard to the competition itself, they provided Budi with encouragement. As the father said, "We ... encourage the child. Therefore, he has the self-awareness to learn at his best, to prepare himself for facing a future that is full of competition and challenge." The parents also attended their child's competition event. As explained by the father, "We came to the competition to encourage him, and stayed so that he could feel calm during the competition."

Secondly, the parents provided facilities, materials, stories, and models for learning. They provided a computer, science books, and other books for members of the family, including Budi. They also told their children stories about successful people and the process to achieve the success. The parents also influenced Budi by modelling. The father said, "He saw that his parents, although they were already old, still kept learning and reading. ... We were interested in reading books and acted upon that interest."

The third demonstration of parent effort was the support they gave to Budi, especially when he faced difficulties. They tried to keep close to the child so that, "...in every situation, the child does not feel lonely. Therefore, the child feels calm in facing various problems," as the father explained. The parents responded by going to the child and listening to his grievance, and they encouraged the child to keep persevering. The parents also encouraged Budi to interact with and ask the teacher and the most intelligent student in the class for help so that he could learn from them. They also encouraged the child to keep calm, and prayed for him before the tests. Budi's parents always urged him to stay close to God, and they observed that "... his self confidence grew and he did not give up when facing failures."

The forth way Budi's parents endeavored to help their children was through the religious activities they engaged in for their sake. They prayed for the children, participated in the *Shalat Tahajjud* (late night pray), fasted (beyond the fasting month), and conducted other religious activities. Budi's parents coped with concerns related to the child's performances through religion. They prayed, as well as believed and submitted themselves to God, and they also thanked God for each of the child's actions. The reason for the parents' investment practices was their high expectations for the child. As the father said, "We expected that our children will be the best children in the future in terms of their abilities and ideals."

The other parent efforts were related to their daily encouragement. In daily life, the parents always encouraged their children to participate in science and mathematic competitions, to assess themselves, and to keep trying even after failure (e.g. when Budi achieved the bronze medal in the Asian Region). When Budi complained, "Father, I was nervous because this was my first time competing with foreigners," the father said, "It is all right.

Thank God there is still a time to improve yourself in the World region.” The parents encouraged the children to keep learning to face the future. The believed that the most important factors for achievement were having goals and putting in the maximum effort to attain those goals. According to Budi’s parents, their parenting style generally included: (a) always giving explanations and models, (b) being patient, and (c) avoiding violence.—

The School

Budi’s school was an Islamic Boarding School in West Java and provided him with various sources of support. Some of them were provided Sapto, the teacher and advisor of Budi. The school: (a) followed the ability and development of each student; (b) mapped the students’ abilities; (c) encouraged high ability students to join the physics study club; (d) gave enrichment with higher level material; (e) developed ability and interest; and (f) asked students to join competitions.

The school was also involved in the process of selecting the Physics Olympics. The school gave guidance during meetings and provided structured tasks oriented towards the Physics Olympiad tests, which had a level of difficulty higher than the common secondary school level. The school also encouraged the students to work hard and encouraged collaboration among the students, teachers, principals, and other members of the school.

The school (principal) gave students who participated in competitions a high level of support via structured, well-planned, and scheduled guidance and tasks. Through the teachers, the school also led students to practice time-management and responsibility, as well as have a deep understanding of teaching physics and the content of the subject matter. The teachers helped students to understand the subject matter, focusing on the appropriateness of the concept to daily life.

The school considered and utilized a combination of factors that contributed to achievement: (a) ability; (b) sense; (c) interest; (d) parent support; (e) student motivation; (f) student and adviser effort; (g) hard work; (h) discipline; (i) commitment; (j) responsibility; (k) perseverance; and (l) sacrifice.

The Society

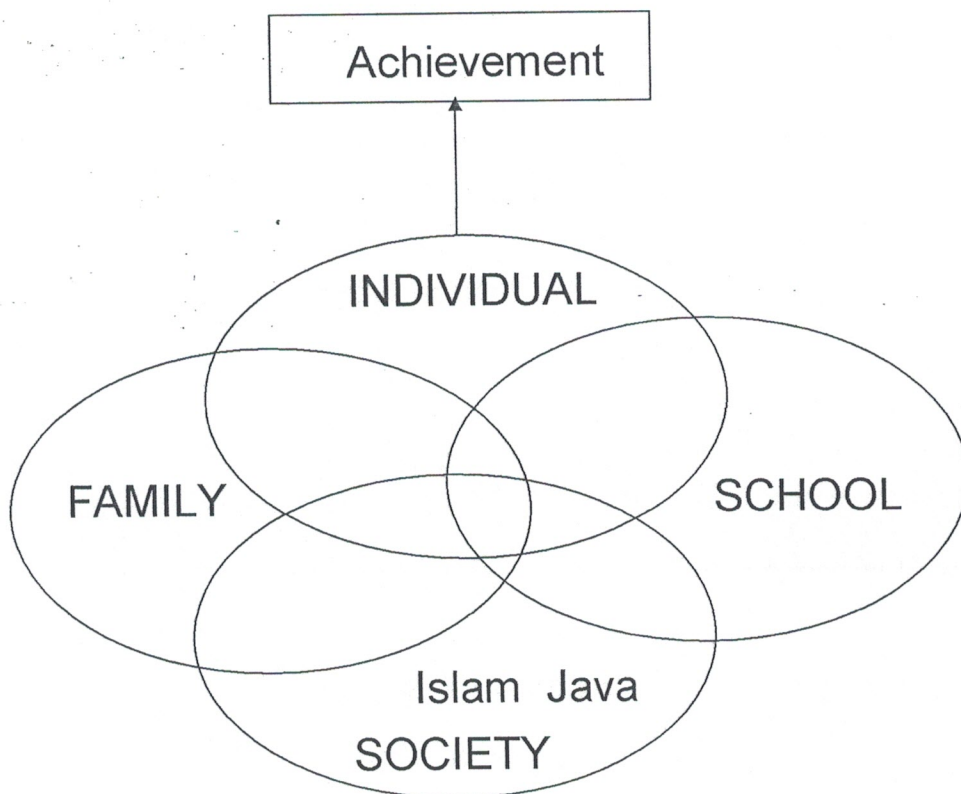
Specific data from the society was not collected. However, data from the three participants, as well as the situation, has clearly illustrated the influence of society on students’ achievement. The hold medallist and his father’s Javanese culture, the three participants’ faith in God, and the school’s Islamic base influenced their thinking and behavior.

Discussion

Factors influencing the student achievement were on the following levels: (a) individual (learning styles and strategies, motivation, and coping strategies towards problems); (b) family (encouragement, modelling, support, suggestions, and religious activities); (c) school (supporting procedures and policies, deep understanding of teaching, and consideration and utilization of multiple important factors contributing to achievement); and (d) society (culture and religion).

Similar factors were likely to be present for high-achieving students in other countries or societies. However, the implementation within the Indonesian context was unique. The implementation of each factor's role overlapped in certain areas, but differed in other areas. The overlap, for example, included the value of the society (Javanese) for not emphasizing competition. This societal value clearly appeared as an individual factor, but not within the family of the student achiever. Although the family came from the Javanese culture, it emphasized its efforts on encouraging children's achievement.

In conclusion, factors influencing Indonesian students' achievement could be described using the following diagram.



As illustrated in the diagram, individual student achievement was influenced by family, school, and society, which in this case, was characterized by Islamic and Javanese culture. Each factor has uniquely contributed to individual achievement, and the combination of each two factors also made its own contribution. For example, there were influences of the family on the individual, and there were influences of schools on the individual. Besides each factor's unique influences, all of the factors have similarities that are basically rooted in the ethnic and religious values and belief systems of the society. This societal factor influenced each of the other factors' way of thinking, which in turn, influenced the child and adolescent's individual achievement.

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