GIFTEDNESS AND GIFTED EDUCATION
(An Overview)

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ABSTRACT

Aceh has great talents and prodigy who need intervention. Talking about these talents should start with understanding them as a whole, who they really are, how can we identify them, how can we best serve them for their best potential growth. Designing the programs that best suit them become the next step after carefully selecting them. Later, we need to formulate special programs, special schools, special human resource who will work with them to boost these prodigies' abilities. Failing to do so will only result in undermining and downgrading their ability instead of doing them a favor. It is highly recommended that government start tapping into this as early as possible for maximum result. In this short article, I also present on how government should work with these talents and prodigies by carefully selecting them. Selection process will later base the whole programs and determine its success. Different approach and interventions are presented here as option and ways to be taken and considered for best result possible. These approaches are not the only solution to be considered. There should be more out there that government should also consider. Last aspect, but not least, is developing human resources who will teach them. Teachers must be carefully selected and trained so that they can understand and are able to pace up and formulate the curriculum that best serve their students' need.

Key Words: *Giftedness, gift, education*

Aceh has undergone some major changes in its history. These essential changes, unfortunately, happen after the devastating disaster; tsunami. This natural catastrophe has changed the course of the province's developmental planning towards better good and more promising living area. One of the most promising areas to look into is gifted and talented programs.

Even long before tsunami, Aceh has had some high performing schools. These schools spread out all over Aceh districts, like Pidie, Aceh Besar, Lhokseumawe, West Aceh, and such. Public well-performing schools are usually government's project schools. Government wants to set example and target on well-performing schools for other schools to follow. In addition to these, in private sector, Modern Islamic Boarding schools set example of their own. They are highly regarded and well-known in Aceh for high quality graduates, at least at province level. Distribution wise, most of well performing schools are at high school levels and less and lesser are found at junior school levels and at primary level respectively.

Despite the establishment of some encouraging, established, high standard schools dedicated to boost educational growth and performance in Aceh, in addition to some existing ones, still, some potential gifted students remain untapped. This is mainly due to classic, hard-to-solve problem of education in Aceh, family financial status. Sadly, this is not the only discouraging factor, selection, access, bureaucracy, and traditional values also add up to hinder gifted and talented students from getting access into *'good'* schools. Often, they cannot effort high tuition and fees charged by the schools. Parents cannot afford to send their children to well-performing schools for financial reasons. In addition, some other reasons such as perception towards education, school availability and testing procedures added to the situation.

DEFINITION

Definition of giftedness

What is gifted anyway? Here, I will try to provide you some explanation from different sources on its definition. The label "gifted" is considered by many to be fortunate for better skills compared to others especially academic prodigy.

A definition constructed by the NSW Parents and Citizens Association and accepted by their 2000 Annual Conference expresses it this way:

> "Gifted/talented children are those children who possess an untrained and spontaneously expressed natural ability in at least one ability domain significantly beyond that typically seen in children of the same age. Giftedness comes in many forms and levels. It is found in students of all socio-economic groups, and of diverse personalities and backgrounds. It can be combined with other exceptionalities/special needs such as learning disabilities, socio-economic disadvantage, geographic isolation, Aboriginality and having English as a second language."

The United States Office of Education definition (Marland 1982) suggests gifted and talented students are those "who have outstanding abilities, are capable of high performance and who require differentiated educational programs (beyond those normally provided by regular school programs) in order to realize their contribution to self and society". It is therefore crucially important to recognize such great talents to better understand their talents, design suitable programs for them, and help them develop fully.

The Federal Definition of Gifted and Talented in NCLB (US) The term "gifted and talented", when used with respect to students, children, or youth, means students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities.(Title IX, Part A, Section 9101(22), p. 544)

Gifted education

Gifted education (also known as Gifted and Talented Education (GATE), Talented and Gifted (TAG), or G/T) is a broad term for special practices, procedures and theories used in the education of children who have been identified as gifted or talented (Wikipedia.org).

However, there is no standard global definition of what a gifted student is. In 2011, the National Association of Gifted Children published a position paper that defined what a gifted student is. Gifted describes individuals who demonstrate outstanding aptitude or competence in one or more domains. Aptitude is defined as an exceptional ability to learn or reason. Competence is defined as documented performance or achievement in the top 10% of the population (Wikipedia.org).

Gifted education, therefore, is special programs designed to cater the needs and interest of students with special talents. The program is therefore expected to accommodate different types of talents, not just the school smart.

DIFFERENT TYPES OF GIFTEDNESS AND ITS INTERVENTION

It is a common belief that acceleration can place socio-emotional pressure on a student and that accelerated placement should not be considered unless the student shows him or herself to be socially and emotionally robust. In contrast much of a gifted child's apparent socio-emotional immaturity is more likely to be due to his inappropriate placement away from others of a like mind.

Research suggests a student's social and emotional development is correlated more highly with his or her mental age than with his or her chronological age (Tannenbaum 1983, Janos & Robinson 1985). Research also suggests that children tend to make friendships with those of a similar mental age (O'Shea 1960).

The teacher considering accelerated placement needs to assess the student's current skill levels in all areas to eliminate as much uncertainty as possible about the placement decision. A student does not necessarily need to have reached all the curriculum entry milestones of a higher level for that level to be the "best fit" for that student's needs. Consequently as with most students there may be gaps in the student's skills (and some transitional remedial work may be required).

However, before going further to the intervention, it is necessary to recognize different types of giftedness and potential ability.

UNDERSTANDING DIFFERENT TYPES OF GIFTEDNESS AND POTENTIAL ABILITY

This identification comes from certain traits and talents shown in ones' development. Different traits and talents will lead to different capacity and type of giftedness. The following are different type of giftedness and potential ability known to many.

1) general intellectual ability
2) specific academic aptitude
3) creative or productive thinking
4) leadership ability
5) visual and performing arts
6) psychomotor abilities

This idea of different types of gifts has been developed by Howard Gardner in his theory of multiple intelligences. The key point is to realize that gifts and gifted children don't all come in the same box and ability. They may possess one or more talents at the same times.

Gifted and talented students can show the same diversity of personalities and learning styles as other groups of students. They too, for example, can be inhibited and slow to respond. Some may be exceptionally or profoundly gifted in one or more areas. Consequently gifted program should observe their differences instead of just focusing on one. It is therefore, not acceptable to chose, for example, top 1% to be all included in the gifted programs.

Gifted children are not always easy to identify. Potential does not always show in achievements. There can be many impediments that block or misdirect the development of the ability. Gagne (1995) has developed this understanding of the role of the child's motivation and of factors in the child's environment (family, school, peers, etc) that may hinder the child's ability being realized into achievements. Not all gifted children are achievers. Many hide their potential in order to try to fit in with their class. No wonder then, that even teachers are not typically good at identifying gifted children, although research suggests that, with training in gifted and talented education, teachers can significantly improve their record at identification (Gear 1978, Pegnato & Birch 1959).

Understanding these talents allows someone especially educator and related stakeholders to better design programs for further developments. Having this knowledge in hand will definitely help with the design, whereas lacking this knowledge will shrink the essence of the programs itself. In addition, it is widely believed by many educators that teachers play huge rule to either develop or ruin their pupils' talent. Therefore, in order not to ruin their talents, it is imperative to understand them at first place.

Characteristics checklist for gifted children
The following lists were adapted from various sources. Gifted students are not expected to show all the traits listed in any section. List provided here is partial and not complete as other expert opinions are maybe available (Kulik, JA).

General intellectual ability

General intellectual ability is the most common talents sought by education stakeholders as well as students. Often times, education players give higher appreciation towards these talents in comparison to many others. People who posses this talent comes with certain traits, such as:

a) Is an avid reader with avid interest in science or literature.
b) Provides very alert, rapid answers to questions.
c) Has a wide range of interests and venturesome, wanting to do new things.
d) Tends to dominate peers or situations however is secure emotionally.
e) Needs little outside control - applies self discipline.

Specific academic aptitude

Specific academic aptitude is also called school smart. These talents will help students be school star, if carefully utilized. Students, as well as parents, lay the highest appreciation towards these talents. As the most observed and obvious talents, especially at schools and other related education centers, specific academic aptitude play dominant role in students' education development. People with this talent have some indications such as:

a) Shows similar characteristics to general intellectual ability but concentrated around one or a few fields.
b) Has long attention span in areas of interest therefore spends time voluntarily beyond ordinary assignments on projects of interest to him or her.
c) Learns rapidly, easily and with less repetition in one or a few specific areas (probably not all subject areas).
d) Likes to study one or some subjects, fields or knowledge more than others and is able to show broad perspective on one or more subject areas.
e) Is able to extend learning from these key areas to various situations somewhat unrelated in orientation.
f) Is able to judge own and others' relative abilities in key areas of interest.

Creative thinking and productive

Creative and productive are two easy said but hard to do words. Being creative and productive are two main traits sought by almost many to be successful in life. Some traits in creative and productive human being are:

a) Is flexible in thinking patterns and therefore is fluent in producing and elaborating on ideas and issues presented.
b) Acts spontaneously, intuitively and is able to make unusual associations between remote ideas.
c) Senses when problems exist however still tolerate ambiguity and uncertainty.
d) Senses inconsistencies and discontinuities of issues or problems faced.

e) Readily guesses and makes hypotheses to redefines elements of a problem or task.

Leadership

Leadership has been one phenomenal talent to be developed nowadays. Many education institutions, from school to university levels, put high attention in tapping into these unique traits. They want to work on these talents and innate abilities. Some traits for people with leadership talents are:

a) Has the ability to organize, stimulate and arouse others.
b) Understands how people feel and how groups function by recognizing skills and abilities possessed by others.
c) Interacts with others easily by showing social skills and ability to listen to others empathetically.
d) Can give directions clearly and effectively to others and articulate the own and group goals and ideas clearly.

Below, I will discuss further about some treatments and intervention to help and further develop gifted students. Some of the suggestions and ideas on giftedness intervention are as follows. Suggestions provided in this paper are partially and not full, therefore it cannot comply to all aspects and various expert suggestions in working with these talents.

ABILITY GROUPING
Ability grouping is grouping students within their like-wise mind and ability. Basing this perception and belief that ability grouping will enhance the students' ability, below are some experts' opinion regarding ability grouping.

Group acceleration
Group acceleration involves avoiding or minimizing timetabling difficulties by grouping the differing needs of a range of students into one class-size group. For example a promising group of second graders of SMP students may want to go to better school where like-wise minded students study. This process is a practical compromise solution that assumes there is a class-size group of students with similar talents and needs.

Ideally, this grouping process should not just be based on students' education report and performance, but rather should be a comprehensive process to better serve their needs and detect their actual and true talents. It is not simply a matter of IQ testing though this can identify giftedness of certain types. Rather, the use of multiple identification criteria from a variety of sources is generally most effective. A school or parents, looking particularly for academic giftedness, might use all of the following:

a) Teacher nominations (these are far more accurate with pre- and in-service training in gifted education). Teachers at school provide list of talented students

for gifted and talented programs. This nomination serves as one baseline data for this special program.

b) Parent nominations (via parent questionnaire as to the child's characteristics, interests and home achievements at time of enrolment, etc). Parents' nomination can be one good indicator in gifted identification. As the person close to the students, parents have great ability and chance to identify these talents.

c) Peer nominations (with questions such as "who would you turn to with such and such a problem?"). Peer, especially good bodies, usually knows and understands their friends thus allow them spot their talents.

d) Self nominations (made easier when specific programs are advertised and open to the whole school - well-hidden talents can be discovered this way). Self nomination allows specific identification and interest in certain gifted programs therefore, identification can be specific.

e) IQ test is the most common way in gifted identification. This test is usually used to rank students ability based on their IQ level.

Within-class ability grouping

Grouping students within classroom clearly benefit students (Slavin 1986, Karweit 1984). Kulik and Kulik (1989) consider both those within-class ability grouping strategies designed for all students and those targeting only academically talented students. They find the former benefits all students to a small extent whilst the latter shows particularly strong advantage for academically talented students. Here, students of different ability are grouped in the same class, instead of being separated in different class.

There are multitude of different ways of devising and using ability groups depending on the teacher, class and subject area. They can range from teacher-nominated to those with large degrees of self-selection based on predetermined tasks with clearly different levels of ability and motivation required. Teachers in charge of the class will face some challenges as they will have to prepare different material and deal with different ability in this class.

Streaming classes
Kulik (1985) found that students permanently streamed in classes based on ability slightly outperformed students in non-streamed classes, with the effect strongest in high ability classes, weaker (but still positive) in middle level classes and making no difference in low ability classes. Slavin (1986) found no significant positive or negative effects for such permanent streaming. Looking solely at gifted and talented programs Kulik (1989) found these students performed significantly better than comparable students in mixed-ability classes. This is maybe because talented students study with group of like-minded peers who usually posses high interest in their education and give better attention towards the learning process itself.

The research is more uniformly supportive of ability class grouping for specific subject areas. This selective streaming is often applied in mathematics and/or language arts. Kulik (1989) found selective streaming advantageous even without these constraints. This has been widely applied in many developing countries such USA. They usually have acceleration or advance programs. These programs provide advance level of learning to specific group of students. They are usually selected to participate in this special program to meet their ability and interest. They, therefore, will have chance to study certain subject(s) more advance than their peers.

Curriculum compacting

Curriculum compacting is the process of identifying learning objectives, pretesting students for prior mastery of these objectives, and eliminating needless teaching or practice if mastery can be documented" (Reis et al. 1992, p.10). The aim is to avoid wasting time and risking loss of motivation in teaching material that students have already mastered. Curriculum compacting allows all students of different abilities to benefit from this program as this is not designed specifically or solely for talented students.

Research from the US suggests [1] that the difficulty level of textbooks has declined (Farr & Tulley 1985) with "new work" in mathematics texts only accounting for about half of the texts' content (Flanders 1987), [2] that most average late primary students can pass pretests on basal comprehension tests before the material is presented (Taylor & Frye 1988), [3] that eliminating up to 50% of the grade level curriculum for gifted students made no difference in achievement test results (Reis et al. 1992), and [4] that with minimal training teachers can effectively identify and eliminate already mastered material (Reis et al. 1992). This program, therefore, requires teachers' attention to carefully select and identify already mastered material and avoid repetition to save time and boredom.

Curriculum differentiations

Curriculum differentiation is a broad term of creating different learning experiences for different students. Keirouz (1993) suggests typical procedures in the case of gifted and talented students include:

a) Deleting already mastered material from existing curriculum. Teacher will indentify the already mastered material and eliminate them from the curriculum to save time and focus on other content.

b) Adding new content, process, or product expectations to existing curriculum. This is made possible as teacher has eliminated some content out off the existing curriculum.

c) Extending existing curriculum to provide enrichment activities. In addition to adding some additional contents into the curriculum, teacher can also add enrichment activities to help boost students' developments.

d) Providing course work for able students at an earlier age than usual and writing new units or courses that meet the needs of gifted students.

Intervention to gifted and talented students should be planned and designed carefully. Careful design and planning will ensure the future success of the programs instead of ruining their talents. These will also contribute in the program application and intervention. Teachers will also benefit from these as they will find the programs applicable and understandable.

Maker's, one of the expert in this area, differentiated curriculum design (Maker 1982a, 1982b, 1986). He suggested that curriculum needs to be differentiated to meet different types of interest and talents in terms of:

Learning environment: The aim is to create a learning environment which encourages students to engage their abilities to the greatest extent possible, including building knowledge and skills in what they perceive as a safe, flexible environment. It should be:

a) Student-centered. The idea of student-centered learning environment lingers around making students as the subject of the learning process instead of being the object. Students are expected to play major role in their education development and teacher as facilitator.

b) Encouraging independence. Independence in student self development has becoming very popular. Teachers need to plan to develop students' independence and create positive learning experience to make this possible.

c) Open and accepting. Learning environment should be open and accepting. No discrimination of any types should exist to create safe and fair learning environment to all students.

d) Complex. Learning must be complex. Complex learning environment will help better students' development. Students will surely benefit from and learn better if educators can provide them with maximum and complex learning environment.

e) Highly mobile. Classroom must not be static. It should be mobile. Mobile classroom usually provides more relax and interesting situation thus make learning process easier and faster.

Content modification: The aim is to remove the ceiling on what is learned, and use the student's abilities to build a richer, more diverse and efficiently organized knowledge base. This building can be facilitated by encouraging:

a) Abstractness. Content should be designed in a way that allows abstractness. Students will learn abstract content and digest lesson and knowledge out of it.

b) Complexity and variety. Content must be complex and vary to broaden students' horizon. Complex and variety learning materials facilitate broader and more extensive learning process thus allows much better learning process for students.

c) Study of people. Lesson should be designed to meet people's, especially students, interest. As both subject and object of learning process, education should cater students' needs and interest.

d) Study of methods of inquiry. Content needs to be aligned with methods. Delivery method will ensure the success of the learning process and therefore needs much attention and thought.

Process modification: The aim is to promote creativity and higher level cognitive skills, and to encourage productive use and management of the knowledge the students have mastered. This can be facilitated by encouraging:
a) Higher levels of thinking and open-endedness. Process should allow high level order of thinking. High level thinking can be achieved in many ways such as different types of questions used (e.g open ended), teaching methodology and students' involvement. Learning process must not only focus on one specific yet small target. It should be open for more possibilities and postulates.
b) Creative thinking and freedom of choice. Students need to be guided into creative thinking and given freedom of choice. They need to feel free in their education that will tolerate creativity.
c) Group interaction. Group interaction offers more than just learning the material. Besides, it also teaches students to be socially savvy and promote their leadership skills.
d) Variable pacing and variety of learning process. Pacing is never single as students do not learn in the same pace. Teachers need to prepare different pace and variety of leaning process to accommodate this different needs.

Having presented three (3) types of curriculum differentiation, the writer hopes that readers can learn and maximize different ways to improve these young talents. This article is expected to deliver some ideas and bring about the case of gifted and talented to our attention for better intervention and development.

DEBATES ON GROUPING
Controversies concerning gifted education are varied and often highly politicized. There still a discussion on what Gifted and Talented really refer to. In addition, measures of general intelligence also remain controversial. Early IQ tests were notorious for producing higher IQ scores for privileged races and classes and lower scores for disadvantaged subgroups. Although IQ tests have changed substantially over the past half century, and many objections to the early tests have been addressed by *'culture neutral'* tests (such as the Raven test), IQ testing remains controversial.

Some criticism of ability grouping is based on the supposed negative impact on self-esteem for those students placed in low ability groups. Some students face emotional challenges socializing with their 'different mind' friends. Another issue is that some students do not perform as expected. They just perform averagely, thus make them feel like they do not belong in the class yet find it hard assimilate in the normal groups. These students will finally feel alienated and left out. This is more apparent when only small number of gifted is in the school. Some gifted students are even estranged due to their differences. As some of the results and findings of the research on gifted and talented varies, debates cannot be resolved.

Appropriateness of forms of gifted and talented is the most hotly debated aspect of gifted education. Some people believe that gifted education resources lack availability and flexibility. They feel that in the alternative methods of gifted education, the gifted students "miss out" on having a "normal" childhood, at least insofar as "normal childhood" is defined as attending school in a mixed-ability classroom. Others believe that gifted education allows gifted students to interact with peers that are on their level, be adequately challenged, and leaves them better equipped to take on the challenges of life (http://specialed.about.com /od/giftedness/a/gifteddef.htm).

CONCLUSION AND SUGGESTION
Gifted and talented programs need some serious studies so that both government and educators may address students' need more accurately. Good intervention will help boost their prodigies, while wrong approach may, on the other hand, harm their future development, social life and career.

To make this into reality, I propose to government, provincial and district, to establish gifted and talented programs to serve the gifted. The programming should start from primary education on wards in order to cover many grounds.
Selection should also cover many aspects and types of giftedness, rather than just focusing on school smart, but also in other areas, like music, art and creativity. Taking Howard Gardner's Multiple Intelligence into account, test committee will have to be open to possibilities for different kind of smartness.

Next step is program design and teacher training. Program should accommodate all area of giftedness and proper curriculum for students' gifts' developments. Students are categorized based on their area of giftedness and help further the subject deeper. Students do not necessarily attempt to accelerate in all areas as they will lose focus and diverged from programs' original attention: to help students fully develop their talents/ capacities. A focused and accurate approach will result in desired goals; meanwhile diverged attention will result otherwise. Having no focus will only consume students' time and energy. It will produce everything but quality education.

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