

Lepper et al., 1973; Baumeister and Leary, 1995; deCharms, 1968 are not in reference section

Full Length Research Paper

## Understanding motivation of gifted student: A self-determination theory perspective

Eka Sakti Yudha\*, Sunaryo Kartadinata and Nandang Rusmana

Indonesia University of Education, Indonesia.

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This study aims to describe the motivation of gifted students through a self-determination theory (SDT) perspective. Quantitative with descriptive statistics method was used in this study. A total of 159 respondents were involved comprising of male and female gifted in accelerated class programme on senior high school in West Java province-Indonesia. Questionnaire was the instrument used with 55 items. The results obtained from this research are: (1) 19% of gifted student on intrinsic stage; 40% of gifted student on integration stage; 21% got to identification stage, 8% got to introjections stage, 12% got to external stage; (2) the highest aspect is that of competence achieved by students with the level of achievement being 63.55; and the aspect of autonomy with the level of achievement, 62.23%. The lowest aspect is the aspect of relatedness with the level of achievement at 60.86%. Overall, the level of achievement of intrinsic motivational aspects is 62.45%.

**Key words:** Intrinsic motivation, gifted student, self-determination theory.

### INTRODUCTION

Education is essential in human life because education is able to guide human life towards the improvement. Education provides the power for people to make changes and create new things that are beneficial to them and the surrounding community; therefore, it is important for each individual to acquire education. According to Constitution of the Republic of Indonesia, 1945, section 31, paragraph 1 of "every citizen is entitled to education," the article implies that education is essential to every citizen in the country so that everyone will have the right to education regardless of their background or existing conditions to them.

The principle of equal opportunity to learn is applied in the principles of democracy practiced in Indonesia. This

is to ensure that education is given to all learners, either normal, or who have special needs. Learners with special needs would require special attention and care; therefore, a special school for students who have special needs was created, which is sometimes referred to as exclusive education. However, it has been known that special schools which are exclusive for students with special needs adversely affect the development of learners, especially in the development of their social skills, thus the trend in education is inclusive classes in regular schools. Inclusive classes are classes that provide services to students with special needs in the learning process to intersect the regular program students (Direktorat, 2007). Sapon-Shevin revealed that the

E-mail: eka\_bk@upi.edu.

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purpose of their inclusive classes is that every learner has a sense of belonging (sense of belongingness), even though they differ in terms of capabilities and needs (Smith, 2012).

Gifted learners are students with special needs. In general, gifted learners are always judged or labelled by environment that they have the potential to excel. This is justified by Gottfried and Gottfried (2009), who revealed that the learners are intellectually gifted since childhood shows focus on higher goals, ability to pay attention for a long time, cooperation, positive emotion, reactive, and more enthusiastic about the tasks which involves cognitive effort compared to their peers. Nevertheless, these superior potentials also cause certain problems. From the research conducted by Cakir (2014) at a special elementary school for gifted learners, it was discovered that of the 59 participants of gifted learners in Istanbul, as many as 24 students are gifted learners who have lower academic achievement.

Low academic achievement among gifted students is mainly due to low intrinsic motivation of students (Matthews et al., 2009). Intrinsic motivation is low, this is as a result of learners who are not so interested in learning and good learning requires simple or complex levels of thinking. Low intrinsic motivations also prevent students from having a commitment to task; thus, leading to the results of academic achievement that does not correspond to its potential.

Amabile (1996: 115) defines intrinsic motivation as "any motivation arising from individual's positive reactions to a task". Meanwhile, according to Santrock (2007), intrinsic motivation (intrinsic motivation) is the internal motivation to do something for the sake of an end in itself. According to Djamarah (2002), intrinsic motivations are motifs that occur or functions that do not need to be stimulated from the outside. This is because every individual have urge to do something. Intrinsic motivation comes when they feel that their activities are fun filled, exciting and meaningful, or the activities are consistent with their values; thus, they feel their thoughts and actions are determined by themselves or can be referred to as self-determined (Deci and Ryan, 2000; Ryan and Deci, 2000; Sheldon et al., 2003). When people have the intrinsic motivation to perform an activity, they have better outcomes in the workplace; which is more effective in achieving its objectives, and consequently leading to more satisfaction and happiness (Judge et al., 2005; Koestner et al., 2008; Sheldon and Houser-Marko, 2001). In addition, people with high intrinsic motivation also tend to have the drive which is also high in exploring the complex tasks. Besides liking the exploration of complex tasks, people with intrinsic motivation do not easily give up; they actively look for cognitive challenging situations and focus more on its intended purpose, that is they are goal oriented (Fleischhauer, 2010).

Although there are many benefits of the high intrinsic

motivation if it is owned by learners, but there is still little attention paid to intrinsic motivation research in Indonesia. Therefore, this study aims to fill this gap by examining the intrinsic motivation in the context of schools, particularly in gifted learners. This study focuses on the fact that gifted learners have basic potential that is superior, compared to regular students. Additionally, gifted learners also have different characteristics than regular students, particularly in terms of academic. Therefore, special attention is needed for gifted learners in school.

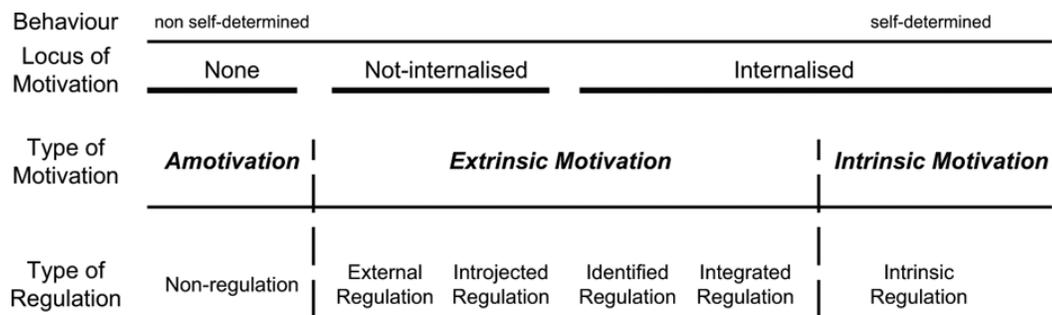
Education is a conscious effort to prepare students through guidance, instruction and or training for its role in the future. Therefore, the fulfilment capabilities of gifted learners are inseparable from the role of teachers and guidance counsellors. Guidance and counselling is one of the goals for learners to have an awareness of the potential in the aspects of learning and understand the various obstacles that may arise in the process of learning. However, as mentioned, gifted learners have different academic potential from the regular learners; so, gifted learners require different education. Therefore, tutoring needed by gifted learners will be different from that of regular learners.

## LITERATURE REVIEW

Self-Determination Theory (SDT) is a theory of motivation that exists among people doing things, without interference and influence from outside (Deci and Ryan, 2002). In the 1970s, researches on SDT include comparisons between intrinsic and extrinsic motives, and the role of intrinsic motivation in individual behaviour (Lepper et al., 1973). In mid-1980, SDT was formally introduced and accepted as an empirical theory. The main principles of this theory are: (1) become human nature to be proactive with their potential as well as control the drive and emotion; (2) humans have a tendency towards the growth and development of the integrated functions; (3) development and optimal action is innate in people but it does not happen automatically, to actualize the innate potential support from the social environment. The main studies that provide the basis for SDT is the research on intrinsic motivation (Deci, 1971). Intrinsic motivation refers to doing an activity for the sake of the activity itself, since they are interesting and satisfying, as opposed to extrinsic motivation that is performed to obtain external purposes.

Various motivation is explained by the level internalized. Internalization itself refers to an active effort to transform extrinsic motives into personal values and behaviours that initially assimilate externally (Ryan, 1995). Deci and Ryan (1991, 1995) expanded their research on the study of intrinsic and extrinsic motivation which proposes three main elements of intrinsic





**Figure 1.** Taxonomy of motivation based on Self-Determination Theory (SDT) (Ryan and Deci, 2000).

motivation that builds self-determination, namely the need for competence, need for autonomy, and the psychological need for relatedness (Deci and Ryan, 2002). SDT states that if three requirements are met, the optimum development for individuals will be created.

Cognitive Evaluation Theory (CET) focuses on the discussion about the impact of social context on intrinsic motivation, the influence of factors such as rewards, interpersonal control, and the impact of ego on intrinsic motivation and interest.

CET highlights the important role of autonomy and competence in fostering intrinsic motivation. This is very important in the field of education, the arts, sports, and many other fields.

Organismic Integration Theory (OIT) was used to discuss the extrinsic motivation in various forms. There are four subtypes of extrinsic motivation, namely regulation, introjection, identification and integration, which were arranged on continuum line internalization. The higher the internalized extrinsic motives are, the higher the individual's autonomy. OIT highlights the factors that favor autonomy and relatedness (relatedness) as an essential part in the internalization of extrinsic motives.

Causality Orientations Theory (COT) explains the individual differences in the tendency to act on the environment and behave in different ways. There are 3 types of orientation. They are: (1) the orientation of autonomy, an individual act caused by an activity and interest in respect of these activities; (2) the orientation control, individual focuses on the rewards and benefits that will be received in an activity; (3) the impersonal orientation or a motivated characterized by anxiety about the competence in performing an activity.

Basic Psychological Needs Theory (BPNT) outlines the concept of psychological needs and its relationship to psychological health. BPNT found that psychological well-being constructed of autonomy, competence, and relatedness.

Contents Goal Theory (GCT) was used to discuss the

difference between intrinsic and extrinsic purpose and impact on motivation. Interest extrinsic such as financial stability, appearance, and the popularity is in stark contrast with the intrinsic purposes such as community, close relations, and personal development.

Relatedness Motivation Theory (RMT) discusses the relatedness (connection), that is, matters relating to the development and maintenance of personal relationships with close friends or lovers, and it is one of the three basic psychological needs. This theory states that the interaction in a relationship is important for a good adjustment for someone because the relationship meets the satisfaction of the need for relatedness (Figure 1).

Deci and Ryan (1991, 1995, 2002) extend their study of research on intrinsic and extrinsic motivation; proposing three main elements of intrinsic motivation that builds self-determination: (1) autonomy, that person's need to control life itself and act according to the desire of self (Deci and Vansteenkiste, 2004). Autonomy may also be interpreted as a need for someone to freely integrate the actions performed by self without being bound or gaining control over another person. Factors such as gift (reward) or threat can decrease an individual's autonomy in its actions. While conditions such as free to choose or know the feelings of the individual can improve the satisfaction of the needs of autonomy. (2) Competence, namely, the need to control the outcome or outcomes and learn mastery of an activity, experience mastery (White, 1959). Competence can also be defined as a person's need to have power to control and master the actions performed. Individuals can satisfy the needs of competence if he feels responsible for a competent action. A positive feedback (positive feedback) can effectively satisfy the need for competent individuals. (3) Relatedness (connectedness with others), namely, the need to interact, connect, and watch others (Baumeister and Leary, 1995). Relatedness can be interpreted as an affinity with another person; a person's need to feel a sense of belonging, connected, and being together with other people.

Satisfying the needs of these three can make individuals achieve function and healthy psychological development. In addition, these needs can change the regulation behavior that initially did not have the motivation, referred to as the internalization of motivation. Meanwhile, non-fulfilment of the three requirements can lead to decreased motivation to develop oneself and the inability to perform an activity.

The first type is amotivasi (lack of motivation), namely, the lack of desire to act. Amotivasi is the result of feeling appreciated for an activity (Ryan, 1995), or feeling incapable of carrying doing the activity (Deci and Ryan, 1975), or do not believe that these activities will deliver the expected results (Seligman, 1975).

The second type is the first type of extrinsic, where motivation is an external regulation. This arises as a result of the low autonomy on extrinsic motivation. Individuals with this type of external regulation of an activity, meet with external demands imposed or reached reward. Individuals with this type of action are usually controlled and have an external perceived locus of causality (EPLOC) (deCharms, 1968). External regulation is the kind of motivation that is contained in Skinner's operant conditioning, with very different intrinsic motivation.

The second type of extrinsic motivation is introjected regulation. Introjection is described as a type of internal regulation that is quite controlled by the individual performing an activity accompanied by feelings of distress to avoid feelings of guilt or anxiety and improve ego or pride (Ryan and Deci, 2000a). Sample form of introjection is ego involvement in which a person commits an act to increase self-esteem and the feeling that he is valuable.

The third type of extrinsic motivation is identification. In this type of extrinsic motivation, people have learned the importance of an activity, for example in a child who learns to remember new words because he understands that it is important that he is able to write well and he appreciates such activities as the learning activities required (Ryan and Deci, 2000).

The last type of extrinsic motivation is the integrated motivation. Integration occurs when the regulation assimilated has been fully identified by the individual (Ryan and Deci, 2000a). Integrated motivation has many similarities with intrinsic motivation because they are both based on the autonomy or freedom. But still, integrated extrinsic motivation for actions carried out on the basis of integrated motivation is still done in order to get a result or outcome, although carried out on their own and appreciated by self.

Then, the last type of taxonomy motivation is intrinsic motivation that is characterized by freedom or autonomy, respect for activities, as well as an activity solely based on fun activities (do not expect any specific results from these activities).

## METHODOLOGY

The research design used in this study is quantitative with descriptive statistics. The sample used in this study is the students who are classified as gifted students in accelerated program on senior high school in west java-Indonesia, identification of giftedness based on Renzulli (1978) theory on the three ring conceptions of giftedness. The criteria of giftedness is operationally to have a score intellectual quotient (IQ) that is equal to or greater than 130; having a high score analogies (creativity test) and has a high score in need for achievement. There were 159 (76 males and 83 females) students qualified for the sampled.

The level of motivation measurement instruments to be used refers to the Intrinsic Motivation Inventory (IMI) which is an inventory that is based on the theory developed by Self Determined Theory (SDT) on Ryan and Deci (1975). The inventory develops three main aspects of intrinsic motivation by SDT, which are: need for competence, need for autonomy, and the need for relatedness. The instrument used to measure the students' intrinsic motivation in the form of a questionnaire is designed in the form of a model Likert scale. The questionnaires distributed to the answer option A Great Fit (GF), Match (M), please Match (PM), Not Agree (NA), and Very Mismatch (VM).

The data from IMI processed to determine the profile of the intrinsic motivation of gifted students, whether students have intrinsic motivation or extrinsic motivations. The classification of subjects categorized into five categories developmentally intrinsic motivation is external, introjection, identification, integration, and intrinsic to the reference as follows:

$X < [\mu - 1.8 \sigma]$ : external  
 $[\mu - 1.8\sigma] \leq X < [\mu - 0.6 \sigma]$ : introjection  
 $[\mu - 0.6\sigma] \leq X < [\mu + 0.6 \sigma]$ : identification  
 $[\mu + 0.6\sigma] \leq X < [\mu + 1.8 \sigma]$ : integration  
 $[\mu + 1.8\sigma] \leq X$ : intrinsic

## RESULTS AND DISCUSSION

General descriptions of motivation of gifted students at inclusion school were obtained from data collection for 159 gifted students based on categorization, developmentally intrinsic motivation. They are intrinsic, integration, identification, introjection, and external, and can be seen in the following Table 1.

From Table 1, it can be seen that in general, most of the gifted student occupied in intrinsic (19%) and integration (66%) level, its means that gifted children have intrinsic motivation. Intrinsic motivation is closely related to individual curiosity. When the individual has a curiosity about an activity, then the individual will be purely involved only to solve and contribute to the activity, not because of other external motives. Such behaviour indicates that the individual has intrinsic motivation. While Ryan and Deci (2000: 56) revealed that, "Intrinsic motivation is defined as the doing of an activity for its inherent satisfaction rather than for some separable consequences. When intrinsically motivated, a person is moved to act for the fun or challenge entailed rather than because of external products, pressures or reward".

According to Ryan and Deci (2000), individuals who

**Table 1.** Distribution of frequencies.

| Score             | Category       | f   | %    |
|-------------------|----------------|-----|------|
| $X \geq 110$      | Intrinsic      | 31  | 19   |
| $96 \leq X < 110$ | Integration    | 66  | 40   |
| $81 \leq X < 96$  | Identification | 32  | 21   |
| $67 \leq X < 81$  | Introjection   | 12  | 8    |
| $X < 67$          | External       | 18  | 12   |
| Total             |                | 159 | 100% |

**Table 2.** Aspect of intrinsic motivation.

| S/N | Indicator   | Mean |
|-----|-------------|------|
| 1   | Competence  | 2.63 |
| 2   | Relatedness | 2.25 |
| 3   | Autonomy    | 2.43 |

have intrinsic motivation perform an activity with the aim to achieve satisfaction in the form of pleasure or challenge, not because of external things, pressure, and appreciation. Meanwhile, according to Santrock (2000), intrinsic motivation is the internal motivation to do something for the purpose itself. According Djamarah (2002) referring to intrinsic motivation, it is the motives that occur actively or functioning and does not need to be stimulated from the outside, because in every individual, there is an urge to do something. This intrinsic motivation arises when they feel that their activities are fun, interesting, meaningful, or consistent with their values, so they feel that their thoughts and actions are determined by themselves or can be called self-determined (Deci and Ryan, 2000; Sheldon et al., 2003).

The overview of more specific aspects of intrinsic motivation on gifted students is shown in Table 2.

Based on the data in Table 2, it can be seen that the level of achievement aspect of intrinsic motivation have not reached an optimum level yet. The highest aspect is the aspect of competence achieved by students with the level of achievement at 2.63; the aspect of autonomy with the level of achievement 2.43; and the lowest aspect is the aspect of relatedness with the level of achievement 2.25.

Competence can also be defined as the need for a person to have a power to control and control the action undertaken. Individuals can satisfy the need for competence if he feels responsible for a competent action. A positive feedback can effectively satisfy the individual's need for competence.

Autonomy can also be interpreted as a person's need to freely integrate the actions carried out with the private person without being attached or controlled by others.

Factors such as rewards or threats can decrease the individual's need to autonomy on his actions. While conditions such as free choice or knowing the individual feelings can increase the satisfaction of the needs of autonomy.

Relatedness can be interpreted as a relationship with others that is the need for someone to feel the feelings of joined, connected, and togetherness with others.

A summary of the indicators of intrinsic motivation for gifted students are as follows: (1) feeling competent in learning activities (perceived competence) with the level of achievement of 51.48%; (2) endeavour to learn (effort) with the level of achievement is 60.49%; (3) convinced that learning to benefit themselves (value) with the level of achievement, 83.29%; (4) have the support of teachers in learning with the level of achievement, 62.57%; (5) having the support of friends in the study with the level of achievement, 59.00%; (6) have the support of parents in the study with the level of achievement, 60.73%; (7) enjoy learning activities conducted (enjoyment) with the level of achievement, 58.29%; (8) the absence of depressed feelings when learning (absence of pressure) with the level of achievement, 57.43%; (9) feeling the freedom to learn (perceived choice) with the level of achievement, 70.40%.

The referring indicator of exposure can be determined by the lowest to highest achievement in sequence are: (1) feel they have the competence in learning activities (perceived competence); (2) the absence of depressed feelings when learning (absence of pressure); (3) enjoy learning activities conducted (enjoyment); (4) have the support of friends in learning; (5) has the support of parents in the study; (6) tried hard to learn (effort); (7) has the support of teachers in learning; (8) feel they have the

freedom to learn (perceived choice); and (9) believes that learning to benefit themselves (value).

## Conclusions

In general, the picture of children's motivation in school as gifted organizer at the level of intrinsic and integration means that the behaviour of gifted children is based on personal interest and pleasure in activities. From the aspect of motivation, this portrays aspects of competence and autonomy have an average score higher than relatedness; meaning motivation awakened by a gifted children that have confidence in their daily activities without depending on the environment.

## CONFLICT OF INTERESTS

The authors have not declared any conflicts of interests.

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