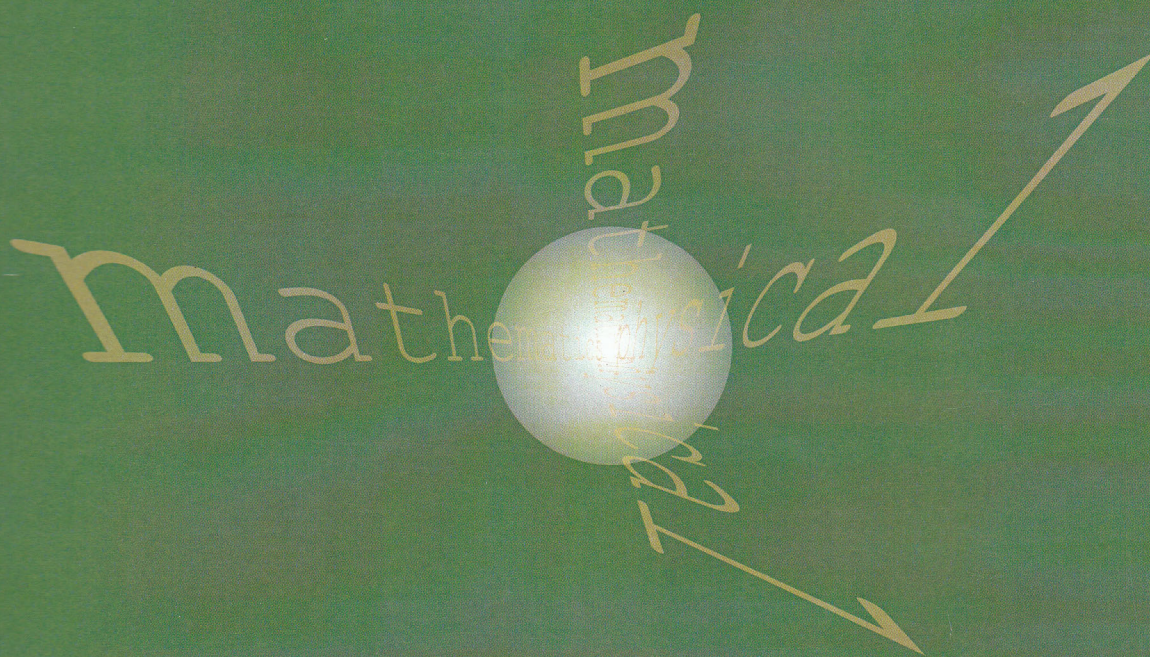


# Proceeding



## International Workshop & Symposium

on  
joint lesson study mathematics  
and adapted physical education  
for special education teachers



Colaboration between  
Yogyakarta State University  
CRICED Tsukuba University Japan  
and Directorate for Management of Social Education



## Introduction

Special Education is a dynamic field of study. Therefore, professionals who work in the field, especially teachers, should always seeking something new in order to develop educational services for students with special needs.

Collaboration, as part of teachers' professionalism should have a significant proportion in everyday practice. One of the practices is a lesson study. Lesson study is an innovation in instructional which the purpose is to develop process and outcomes of an instructional. The activity in lesson study includes plan, do and see.

In order to put collaboration into practice, Special Education Department Yogyakarta State University collaborated with CRICED Tsukuba University held a joint lesson study which involving special education teachers from Indonesia and Japan. The lesson study limited to mathematics instruction and adapted physical education.

The articles in this proceeding are supplementary papers contributed by participants of the seminar and workshops. Our expectation is that this proceeding can bring benefits in developing instructions for students with special needs and in turn it would increase students' competencies.

Yogyakarta, August, 2008

The Committee

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## INVESTIGATING ENTREPRENEURSHIPS SKILLS OF PEOPLE WITH AUTISM

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### Abstract

*The aim of this paper is to investigate entrepreneurships skills of people with autism. There are three main components that can be explored namely: knowledge, skill and value. This paper mainly focuses on the aspect of knowledge. The proposed motion on developing entrepreneurships skills of people with autism are (1) Developing instructional design of entrepreneurships training (2) Formulating entrepreneurships training for people with autism (3) Preparing relevant material and (4) Implementing effective entrepreneurships training for people with autism.*

**Keyword: autism, skills, training, entrepreneurships.**

### Introduction

Autism is a type of special needs. American Psychiatric Association (2000, as cited in Friend, 2005) asserts that autism is a term in which children and youth are characterized by severe impairment in social interaction, communication and often is accompanied by moderate or severe mental retardation. According to DSM IV (2000, as cited in Friend, 2005), autism must be identified when the child is not more than three years old.

According to IDEA (1990, as cited in Friend, 2005 p. 450):

Autism means a developmental disability significantly affecting verbal and non-verbal communication and social interaction, generally evident before age three, that adversely affect a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotype movement, resistance to environmentally change or change in daily routines, and unusual response to sensory experience.



Based on description above, autism can be seen as developmental disorder that manifest in developmental delayed, behavior problem, communication and social interaction difficulties. Those difficulties are highly likely concern whole individual with autism's life.

### **Characteristics of autism disorder**

Characteristics displayed by autistic people are:

- (1) The way of thinking differs from regular people
- (2) Having no emphatic and cannot predict other's response
- (3) Having difficulty in reading comprehensions
- (4) Some of them are having intense memory
- (5) They are visual learners
- (6) Having difficulty in social relationships
- (7) Cannot express their feeling appropriately

According to Friend (2005), characteristics of individual with autism can be categorized in three different areas namely: cognitive and academic characteristics, social and emotional characteristics, and behavior characteristics.

Cognitive and academic characteristics of autistic people vary one to another. However, majority of them are having mental retardation and those with asperger syndrome having average to above-average intellectual function. The characteristics include in cognitive and academic characteristics are rote memory, theory of mind, problem solving and motivation. Firstly, Rote memory is the ability to remember things without essentially knowing the meaning. Most of people with autism show that they have sharp memory about thing however they lack appropriateness of using them in the suitable contexts. Rote memory is useful if individual recognized the meaning and can use it in proper context. Rote memory has by an autistic people is disadvantage because it's lacking understanding. Secondly, characteristics display by people autism related to theory of mind. According to Myles and Southwick (1999 as cited in Friend, 2005, p. 458), problems in theory of mind can be seen when autistic people have difficulty in explaining their own behavior, predicting other's emotions or behaviors, comprehending other's perspective, understanding how behavior affect other's thoughts and feelings, participating in conversations, and distinguishing fact



from fiction. Thirdly, characteristic of people with autism in cognitive and academic areas is connected to problem solving skills. Many of individual with autism is only having one problem solving approach to a specific circumstance and consistently utilized it in different situation. Problem solving is often getting difficult when it comes to abstract and complex concepts. Fourthly, generating motivation of people with autism is another difficulty. Most of people with disabilities are only interested in minor activities or rewards. Furthermore, their interests are sometimes changing significantly and unpredictable.

Characteristics of social and emotional of individual with autism involved language disorder, unusual language use and immaturity. First, many of autistic people are having difficulty in language development. They are experiencing language developmental delay. Consequently, it will affect communication and social interaction skills. In addition, their language difficulties also exhibit in form of proxemics problem, that is they fail to know acceptable behavior in conversation such as distance and eye contact. Second, problem arises in social and emotional area is concerned with unusual language use. Most of individual with autism often do not communicate to obtain other's attention and they may not communicate for social purposes (Sheurermann & Webber, 2002 as cited in Friend, 2005). Third, autistic people are immature in terms of social behavior. They cannot understand situations and they often fail to give appropriate response to those situation.

Behavior characteristics of people with autism are related to four categories. They are: First of all, stimulus over-selectivity, that is autistic people only give attention to only one incorrect aspect of materials or tasks. Secondly, individual with autism are engaged with self stimulatory behavior such as forms of rocking, hand flapping and other repetitive or stereotype behaviors. Thirdly, autistic people are having difficulties in making generalization and lastly people with autism also having problem in sensory responses. Such sensory problems are tactile, vestibular, proprioception, visual, auditory, gustatory, and olfactory sense.



### **Causes of Autism Disorder**

There are a lot of theories that articulate the cause of autism. Autistic disorder may be caused by aspects related in pregnancy such as toxoplasmosis virus, herpes, hereditary, poison, antibiotic that kill good and bad bacteria in digestive therefore triggered microbes in intestine.

Other experts maintain that the causes of autistic disorder are (1) inherited by genetics (2) neuro-system disorder; research shows that 45% of people with autism experience dysfunction of lobes parietals (3) Digestive system disorder; (4) poisoned and (5) Sensory interpretation errors.

According to Friend (2005), researchers claim that autism might be caused by DNA factors, however, it is important to notice that research to date indicate that no single genetics factor is responsible for causing autism disorders. Gillberg and Coleman (2000 as cited in Friend, 2005) maintain that multiple generic factors seem to have relation with wide range of developmental malfunctions.

Another theory of the cause of autistic disorder suggests that people with autism have been found to have abnormalities in the cerebellum (Friend, 2005). According to her, autistic people have fewer cells, higher cell density or less volume compared to people without autism.

The cause of autism related to the way parent nurture their kids has long been proven untrue. However, most professionals agree that this factor can affect the number and intensity of symptoms (London & Etzel, 2000 as cited in Friend, 2005). Another theory that has been proven incorrect is the connection between immunization and autism.

### **Entrepreneurships potency in individual with autism**

At least there are three main components that need to be observed in order to investigate the entrepreneurships skills in autistic people. They are knowledge, skills and value. Before discuss more about three aspects mentioned above, a description about entrepreneurships are proposed. According to Kasmir (2006), entrepreneurships is an ability to create a work. Ability to create something needs creativity and innovation to always find something new and different. In the end,



such creativity and innovation should positively contribute the society. Suryana (2006) states that entrepreneurship is an ability to create value-added by a process of resource management such as developing technology, finding new knowledge, and increasing quality of a product or service. Soemanto (2002) asserts that entrepreneurship is a courage, substance and power to fulfill the needs and solve the problem with strength that lie in individuals.

In this article, what means by entrepreneurship of people with autism is an ability to create a work that can facilitate them to have a level of affluence.

The aims of entrepreneurship according to Kasmir (2006) are for friendship and relation, pleased other people, encourage new costumers, maintain previous costumers, build and maintain relationships. For paper purposed, the aims of entrepreneurship for people with autism are:

1. Maintain motivation, attitude and behavior
2. Apply knowledge, management, and creativity to develop an occupation
3. Friendships and relations
4. Pleased others people
5. Encourage new costumers
6. Maintain previous costumers
7. Build and maintain relationships
8. Build courage, substance and power on problem solving

The benefits of entrepreneurship as stated by Kuswara (2005) are (1) Helping other people in proportion to individual's ability (2) Improving employment and decreasing unemployment (3) Giving example of hard-work, diligent without ignoring religious obligation (4) Giving example to the society as a conscientious individual (5) Generating development in community (6) Educating people to become hardworking, independent, discipline, and honest in their occupation (7) Educating society to be efficient, economical, and un wasteful.

In line with the merits of entrepreneurship proposed by Kuswara (2005), developing entrepreneurship skills in autistic people aim to not only giving advantages to individual with autism but also giving advantages to society.



Suryana (2006) asserts that the role of entrepreneurships can be seen from two different points of view namely as a micro and as a macro. From the micro's points of view, entrepreneurs have two roles that are innovator and planner. As a planner, an entrepreneur should find and create something new such as new product, technology, process, idea, organization, etc. As a planner, the roles of an entrepreneur are to plan a new effort and work, plan a strategy, utilize idea and opportunity to reach success, and create new organization. On the other hand, the macro's point of view agrees that the roles of entrepreneurships are to generate wealth and prosperity, and to create work opportunities.

Corresponding to the role of entrepreneurships suggested by Suryana (2006), the roles of developing entrepreneurships skills in people with autism are to generate autistic people's ability to produce, invent, adapt technology, methods, idea, effort, organization, and work for their finance independent.

The proposed model to developing entrepreneurships skills of autistic people involved four main components namely the characteristics of identity of entrepreneurs, the expectation of entrepreneurs' characteristics of autistic people, planning and managing finance, and utilize resources. The proposed model is shown in figure 1 below:

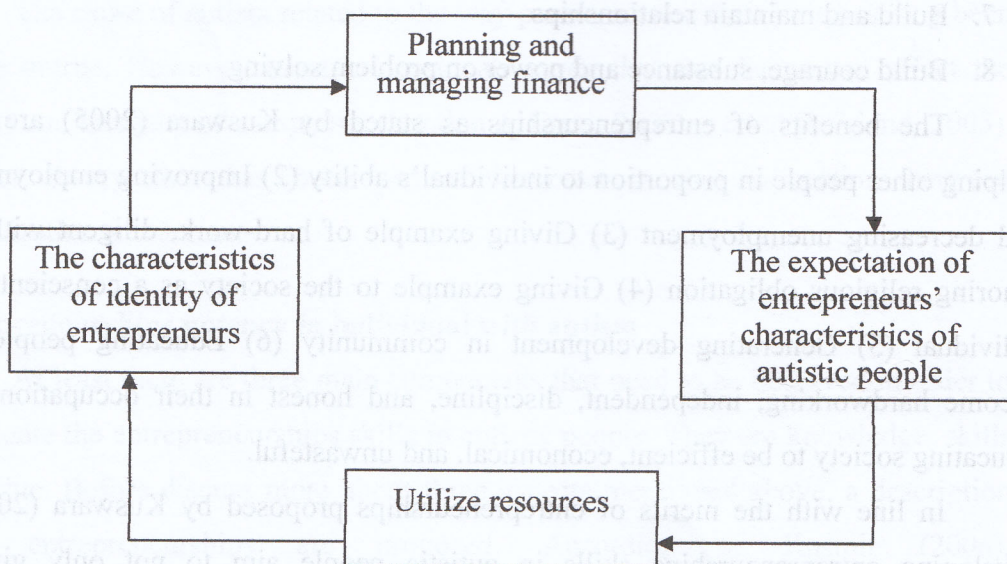


Figure 1:  
The proposed model to developing entrepreneurships skills of autistic people



A proposed model of training of entrepreneurship for people with autism is also included. The model consist of three major aspects namely pre-training, training and post-training. In order to give more clearly information, a figure 2 on the proposed model of training of entrepreneurship for autistic people is shown below:

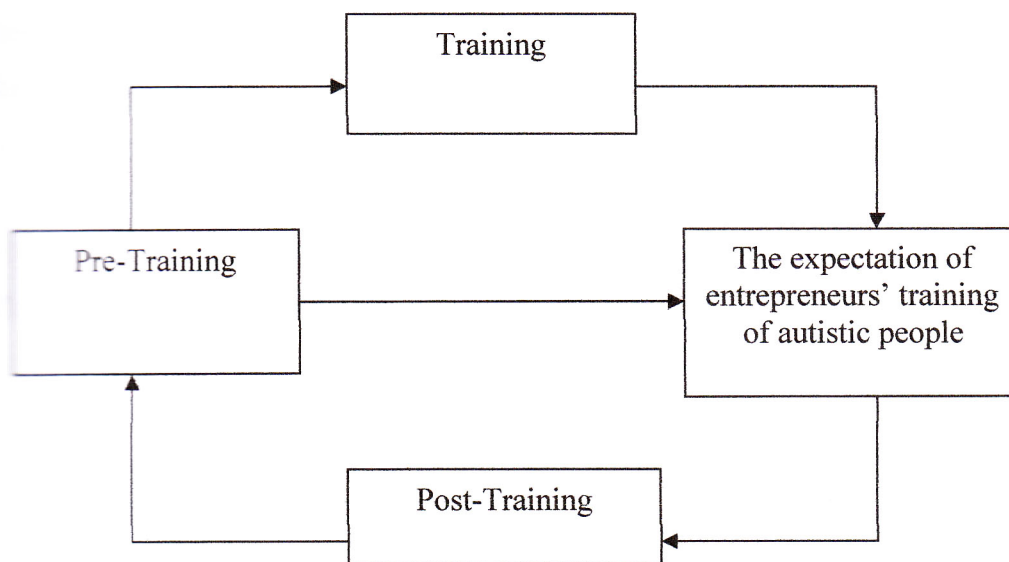


Figure 2

The proposed model of training of entrepreneurship for autistic people

### Conclusion

1. Autism is a term in which children and youth are characterized by severe impairment in social interaction, communication and often is accompanied by moderate or severe mental retardation
2. Characteristics displayed by autistic people are: (1) The way of thinking differs from regular people (2) Having no emphatic and cannot predict other's response, (3) Having difficulty in reading comprehensions (4) Some of them are having intense memory (5) They are visual learners (6) Having difficulty in social relationships (7) Cannot express their feeling appropriately
3. The causes of autistic disorder might be (1) Inherited by genetics (2) Neuro-system disorder (3) Digestive system disorder (4) poisoned and (5) Sensory interpretation errors.



4. The proposed model to developing entrepreneurship skills of autistic people involved four main components namely the characteristics of identity of entrepreneurs, the expectation of entrepreneurs' characteristics of autistic people, planning and managing finance, and utilize resources
5. The proposed model of training of entrepreneurship for people with autism consist of three major aspects namely pre-training, training and post-training
6. Because of the vary of characteristics of autism disorder display by people with autism, careful thought on investigating and deciding which autistics people that can be included in the training are needed.

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