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# PROCEEDING OF INTERNATIONAL SYMPOSIUM ON THE TRANSITION FROM SCHOOL TO WORK

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GRADUATE SCHOOL
YOGYAKARTA STATE UNIVERSITY, INDONESIA
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# PROCEEDING OF INTERNATIONAL SYMPOSIUM ON THE TRANSITION FROM SCHOOL TO WORK

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# FOREWORD

This Symposium Proceedings volume contains the written versions of most of the contributions presented during the International Symposium on the Transition from School to Work and Its Impact on Later Lifetime Income. The symposium showcases relatively new work on variations in school to work transitions and how these affect the lifetime prospects of men and women, individuals from different social classes and across urban and rural areas. New work on skill mismatch, labor market outcomes and policy are also featured in the symposium.

This symposium is jointly organized by the Yogyakarta State University, Indonesia and Curtin University, Australia. The goal of this symposium is to facilitate a discussion of issues relating to the transition from school to work, its effects on lifetime income and the associated policy challenges both in Indonesia and elsewhere in the developing and developed world. The symposium also provides opportunities for researchers to disseminate and discuss their latest research, receive constructive feedback and establish a network for future collaborative research. The challenges, prospects and policy issues arising from the expansion of the education sector in Indonesia are discussed by our panel of esteemed guest speakers.

It is our pleasant duty to acknowledge the financial support from Curtin Business School and Graduate School Yogyakarta State University.

Finally, we would like to thank the presenters for their willingness to share their latest research and ideas. Without their efforts, this symposium would not be possible. Keep up the good work! We hope you enjoy the conference and have enjoyable stay in this cultural city, Yogyakarta, Indonesia.

Yogyakarta, February 9th, 2017

Losina Purnastuti, Ph.D.
(The Chairperson)

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# SCHOOL TO WORK TRANSITION PROGRAM FOR STUDENTS WITH PHYSICAL DISABILITY IN INDONESIAN SPECIAL SCHOOLS: TEACHERS' PERSPECTIVES

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Abstract

Using the Kohler Taxonomy (1996) as a framework, this research investigated current practices of transition programming for student with physical disabilities in special schools in Bantul, Yogyakarta Indonesia. The framework includes five main factors associated with evidence-based practice, (a) student focused planning, (b) student development, (c) family involvement, (d) interagency collaboration, and (e) a structured program. Four schools that enroll students with physical disabilities were selected as the research sites. The study adopted a case study design. Six teachers were selected from each school site; three classroom teachers and three vocational teachers. Data were gathered through focus group discussion. The findings indicate that the transition program is facilitated through vocational education that also includes teaching employability skills; however structured work experiences are not available for all students. Assessment is applied informally and is inadequately documented. The teachers play significant roles in planning the program, while student participation and family involvement in planning and evaluating IEP is very limited. Collaboration with government organizations occurs mainly through short courses, whereas collaboration with business involved mainly product marketing. Although the teachers recognized the importance of transition programs, their philosophies were poor articulated both in policy and the implementation. They claimed that they have adequate human resource capabilities but inadequate funding and infrastructures. This result implies that in order to generate a quality transition program, adequate focus should be placed equally among those five of the taxonomy' components.

Keywords: School to work transition program, students with disabilities, special school

## INTRODUCTION

Students with disabilities encounter several transition phases during their lifespans. This includes transition between home to multiple educations setting such as moving from home into early intervention center, and then progressing into early childhood education, primary school, secondary school and further education and training; transition from school to community such as to employment and independent living; and transition from segregated setting into more inclusive setting. Each of these transition stages has their own challenges. However, research demonstrates that the transition from secondary school to adult life is the most critical (Agran, Test, & Martin., 1994; Davies, 2014, Hardman & Dawson, 2010; Riches, 1996; Thoma, Baker, & Saddler., 2001; Trainor, Carter, Owens, & Sweeden., 2008) both from parents' and students' perspectives (Powers, Geenen, & Powers, 2009).

Literature suggests that post-school outcomes for students with disabilities remains in a poor state compared to their peers without disabilities (Beamish, Meadows, Davies., 2012; Blackorby & Wagner, 1996; Cameto, Levine, & Wagner., 2004; Taylor, 1998, 2000). Not only does the employment rate of people with disabilities remain low (Abdullah, Mey, Eng, Othman, & Omar, 2013; Australian Bureau of Statistics, 2012; Blackorby & Wagner, 1996; MoSA, 2011; UK Office for Disability Issues, 2011; US Department of Labor, 2014), their engagement in other areas of life is also limited.

Over the years, as a result of these outcomes, researchers, families, and educators have advocated for improvements in program provisions for delivering quality special education (Kohler, DeStefano, Wemuth, Grayson, & McGinty, 1994; Kohler & Field, 2003; Riches, 1996). The concern to improve post school outcomes for students with disabilities has resulted in countries such as the USA, the UK, and New Zealand authorizing legislation that requires transition services to be embedded in the student's education planning; typically the IEP (IDEA, 2004; Special Educational Needs and Disability Code of Practice: 0-25 years, 2015; NZ Ministry of Education, 2011). The interest in improving post school outcomes has resulted in the publication of empirical and theoretical studies on a best practice transition model (Kohler et al., 1994).

Although the literature provides a clear statement that transition programs should accommodate all aspects of life such as independent living, community participation, further education and training, and employment (Bassett & Kochhar-Bryant, 2012; Chadsey-Rusch, Rusch, & O'Reily 1991; Halpern, 1992; Wehmeyer & Webb, 2012), preparing students with disabilities for work endeavors is a major issue that needs to be addressed in transition programming in secondary school (Best, Heller, & Bigge, 2010; Crockett & Hardman, 2010a, 2010b). This is based on evidence of the advantages associated with being employed which include promoting overall quality of life, greater independence, self-determination, and political strength (Benz, Lindstrom, & Yovanoff, 2000). Therefore, improving employment outcomes for student with disabilities is critical in "building upon their social capital for effective community functioning" (Brewer, Karpur, Erickson, Unger, & Malzer, 2011, p. 3).

The importance of successful transition services has become a main goal of outcomes-based education (Sabbatino & Macrine, 2007). A study conducted by Knapp, Perkins, Beecham, Dhanasiri, and Rustin (2008) showed that the economic cost of unsuccessful transition programs is considerable. It not only affects students with disabilities personally, in that they cannot achieve effective employment status, but it also means missed opportunities to contribute to the economy, dependency on welfare benefits, and increased health costs and services. Furthermore, 60-90% of parent respondents wanted their children to gain employment after they graduated from secondary school (Blacher, Kraemer, & Howell, 2010). Using Kohler Taxonomy (1996) this research investigated the current investigate the current practice of school to work transition for students with a physical disability enrolled in special school in Indonesia.

## METHODS

This research used a qualitative approach. The approach enabled the researcher to understand and examine the issues contextually (Ary, Jacobs, Sorensen, & Razavieh, 2011; Merriam, 1998; Patton, 2002). A case study design was selected as the research was concerned with the process of discovery and placed strong emphasis on contexts (Merriam, 1998; Punch, 2014; Yin, 2014). This included the specific school to work transition programs, the schools, the teachers, the students, the families and their communities. Furthermore, a case study approach was appropriate when the researcher has little control over the events (Yin, 2014). Four special schools located in the Bantul District, Yogyakarta Indonesia (later named as SS A, SS B, SS C, and SS D) were purposefully selected to explore transition programs. This paper will focus on the teachers' perspectives of transition programming in Indonesia section of the data. Six teachers were selected from each school site; three classroom teachers and three vocational teachers.

## RESULT

***Student focused planning***

The decision on what students do, what activities and goals in the teaching plan, were mostly based on unsystematic and undocumented teachers' assessment.

The teacher participants described that even though at the beginning of school year, the students can choose vocational classes according to their interest from the provided classes, student participation in program planning was collectively decided among the students It is up to them to choose, but usually they will discuss with their classmates and choose the same class and, computer class is their favorites.

Student participation in the program's implementation was also limited. The teachers provided an example from the agriculture and cooking class.

***Student development***

There was strong evidence that assessment use was limited in the school and this was reflected in the interviews and documents. Even though the school claimed to follow the government regulation No 22 Year 2006 on The Content Standards, to have a ratio of 70% of vocational skills and 30% of academic skills in the curriculum, the implementation was not completely consistent.

The vocational skills only comprised 25% - 30% of the total ratio in the actual curriculum the school had structured. From the total of 40 units, vocational skills only accounted for 10-12 units.

Life skills instruction was specifically accommodated in the curriculum structure through 2 units of specific programs such as self-help and self-development, however teacher participant claimed that the parent more keen to see their children learn how to read and write compare to do life skills activities.

Employment skills instruction was facilitated in the school through a variety of vocational skills, however, from the list of available vocational classes, only certain vocational skills ran effectively, such as the art and computer classes.

Apprenticeships were available but limited in the school and did not apply to students with a physical disability. These were funded by the Department of Education, Youth and Sport at the provincial level. Access to support services as identified by participants was limited.

***Family Involvement***

There was strong evidence that parent involvement in the program was limited. Although, as explained in the planning strategies section, the parents expected to see their children live independently; the teacher participants pointed out that not many parents explicitly said that they want their children to enter employment. Most of the parents do not demand it. Furthermore, teachers observed that parents had different attitudes towards different type of vocational skills where computer skills received more positive attitudes compared to cooking.

*Interagency Collaboration*

The school has collaboration with various organizations such as businesses, universities and the hospital. The collaboration with business organizations was limited to students' apprenticeships; the collaboration with the two universities and hospital were limited to psychological testing and rehabilitation services. The teacher participants pointed out that the Department of Social Affairs at the district level also gave aid to some of the students personally, not involving the school.

*Program Structure*

At the school level of strategic planning, students who had graduated from the school and have not gained involvement in employment were welcome to participate in vocational class again at the school for a maximum of two years period. At the community level of strategic planning, the teacher participants identified the need for further training and apprenticeships as the school failed to accommodate the students in the school to work transition program.

The teacher participants expressed difficulties in teaching students with a disability emerged because they didn't have background in special education. Furthermore, leadership became main issues in one of the school where A teacher described it as not transparent. Even though there were various training courses offered by the Department of Education, Youth and Sport and other organizations to improve the quality of teachers' competencies, the teacher participants believed that the training opportunities were not distributed equally among teachers across the school.

## DISCUSSION

Student involvement in this study was limited to choosing vocational skills from an available list offered in SS A and SS B. In SS C and SS D students did not have the privilege to choose. The study revealed that the schools did not involve the student in program planning. The planning that did occur was based on the stereotype that the students are incapable of making decisions, and they did not have the initiative and capacity to be involved in program planning. This is not unique as it has been documented that special education teachers did restrict student involvement (Martin, Zhang, & Test, 2012).

In addition, as discussed in the work of Bannerman, Sheldon, Sherman, and Harchik (1990), the argument to restrict choice by students with disabilities includes assumptions that: (a) the person will make poor or dangerous choices; (b) the person will choose the least important over other significant important skills; (c) the person will be unaware of the availability of other choices; and, (d) the person will not make appropriate choices. A problem in teachers choosing is that they often fail to recognise the ability of students with significant disabilities; likely due to the nonconventional forms used to convey their preferences (Cannella, O'Reilly, & Lancioni 2005; Lattimore, Parsons, & Reid 2003). Restrictions on student participation can also be affected by limited preference availability (Wehmeyer, 2007) and cultural background (Agran & Hughes, 2005; Valenzuela & Martin, 2005; Zhang, 2005).

The data from this study demonstrates that use of assessment was limited in all schools to class placement at the beginning of the school year (Pierangelo & Giuliani, 2006) and, at the end of semester, a summative evaluation of student performance (Dorn, 2010). This finding contradicts best practice in transition which requires careful assessment before setting related transition goals and services (IDEA, 2004; "Kirby v Cabell County Board of Education," 2006; Kohler, 1996a; Kohler & Chapman, 1999; Kohler & Field, 2003; Levinson & Palmer, 2005; Neubert & Leconte, 2013). Furthermore, the quality of transition planning and services are defined by assessment validity and reliability ("Kirby v Cabell County Board of Education," 2006; Morningstar & Liss, 2008). This implies that without a proper assessment, schools fail to provide quality transition planning and services. A possible explanation for the limited use of assessment in all schools is related to inadequate teacher competencies (Suryadarma & Jones, 2013) and the unavailability of standard formats of assessment (Neubert & Leconte, 2013). Schools are given the flexibility to develop and conduct their own formats of assessment, however, lack of teacher competencies in assessment practices in the case study schools were evident.

The Indonesian government regulation requires all special schools to place greater emphasis on the vocational curriculum rather than the academic curriculum in order to prepare students for employment (BNSP, 2006). This regulation echoes the claim that preparing students with disabilities for work endeavours is a major issue in secondary schooling (Best et al., 2010; Crockett & Hardman, 2010a, 2010b). Furthermore, providing career and vocational education in secondary school is essential (Repetto & Andrews, 2012).

Employment skills instruction in all four schools was limited to providing job-specific skills rather than broader vocational skills. Literature suggests that the majority of students with disabilities are able to learn vocational skills (Beirne-Smith, Ittenbach, & Patton, 2002; Spooner, Bowder, & Richter, 2011; Wehman, Hill, Wood, & Parent, 1987). Employment skills instruction is not merely vocational skills, and should include work related behaviour and skills, and job seeking skills (Kohler, 1996a; Kohler & Chapman, 1999). All were poorly demonstrated in the case study schools. This echoes the literature that many students with disabilities do not obtain appropriate, employment related skills (Best et al., 2010; Crockett & Hardman, 2010a; Guy, Sitlington, Larsen, & Frank, 2008).

While all schools can access government funding for an internship program, it is very competitive and is limited to only one student per school. Students with physical disabilities are typically selected last for this scheme. It is believed that compared to the other types of disability, students with a physical disability are the least capable of participation in the internship program. This is not unexpected as the literature suggests that work experience opportunities for people with severe disabilities were limited (Burbidge, Minnes, Buell, & Oullette-Kuntz, 2008; Carter, Trainor, Cakiroglu, Sweden, & Owens, 2010; Kraemer & Blacher, 2001). Yet, regardless of the disability, research supports the relationship between work experience in high school and postsecondary employment (e.g., Benz et al., 2000; Karpur, Clark, Caproni, & Sterner, 2005; Luecking & Luecking, 2015; Rowjewski, 2002).

The lack of accessibility and access to information on employment, further training and education are among the failings of the limited support services that were identified by the research participants. Complexity of support services has been acknowledged as a hindering factor when it comes to transition services (Certo et al., 2003; Morningstar, Kleinhammer-Tramill, & Lattin, 1999).

The collaboration framework in all four schools can be characterized as unsystematic collaboration. The arranged MoUs between schools and businesses for the internship programs were unclear. Yet, organized collaboration is not only a critical element in ensuring effective transition (Conway, 2014; Karpur, Brewer, & Golden, 2014; Mpofu & Wilson, 2004; Spooner, Bowder, & Uphold, 2011), but it is also a predictor of improved post school outcomes (Noonan & Morningstar, 2012; Test, Mazotti et al., 2009). This finding is not surprising as the literature suggests that interagency collaboration has emerged as a vital area in need of improvement by schools (Strnadova & Cumming, 2014; Johnson, Stodden, Emanuel, Lueking, & Mack, 2002; Noonan, Morningstar, & Ericson, 2008).

Parent involvement in program planning and evaluation in all case study schools was limited. These findings is not surprising in regards to the Indonesian context, where it has been reported that parent involvement in education remains low, including in school decision making (OECD/Asian Development, 2015) and in education in general (Werf, Creemers, & Guldemond, 2001). Although these research projects were conducted in general education, the situation also applies in special education settings. Despite an increase in parents attending IEP meetings in secondary special education (Cameto et al., 2004), many parents did not feel they are fully included or appreciated in IEP or transition meetings (Luft, 2013).

An inadequate vocational education curriculum structure was common in most case study schools. The programs provided in the schools placed more emphasis on competence-based, rather than outcome-based, activities. This also included a lack of structure and practice for promoting student focused planning, student development, family involvement, and interagency collaboration. In most of the schools there was an unclear structure for school to work transition-focused education, and therefore students were not appropriately equipped with employment skills. A possible reason is the lack of commitment and system supports for transition focused education at the government, business, and school levels. This finding is not surprising as a program philosophy is often lacking in school transition programs (Kohler, 1998). More recent research conducted in Queensland, Australia also suggested that the practices of program philosophy were characterized by low levels of implementation and high levels of uncertainty (Beamish et al., 2012).

While the difference between strategic planning practices across the case study schools was due to differing teacher competencies, the unavailability of strategic planning at District and Provincial levels was due to a lack of: funding, personnel, and effective collaboration between related organizations.

Competent teachers are the key to successful transition programing (Anderson et al., 2003; DeFur & Taymans, 1995), yet the data from the current study highlighted a lack of qualified teachers. This included lack of qualifications in vocational education, and failure by teachers and principals to demonstrate important competencies in planning and implementing transition programs. Nevertheless, special education teachers are still being assigned as the main providers of transition services (Knott & Asselin, 1999). Unlike the USA that has transition specialists and vocational rehabilitation personnel, additional personnel who assist special education teachers in delivering school to work transition services (Morningstar & Clark, 2003), these complimentary services staff did not exist in Indonesia. This is adding a further challenge for special educators in delivering transition program.

Training in other important areas such as developing student-focused planning, student development, interagency collaboration, and family involvement were not available. Yet, transition related competencies are not merely about teaching vocational skills. Skills related to coordination, communication, and collaboration of transition services are among the top competencies needed for successful transition (DeFur & Taymans, 1995). Teacher professional development is believed to be have significant power in assisting teachers to recognise goals and shift the focus from current students' educational goals and performance to future oriented planning processes (Doren, Flannery, Lombardi, & Kato, 2013; Flannery, Lombardi, & Kato 2015).

## CONCLUSION AND IMPLICATION

This study has identified several key aspects in the implementation of school to work transition programs for students with a physical disability attending an Indonesian special school setting. In general, this study suggests that school to work transition programs in Indonesian special schools are limited in their ability to provide vocational skills and as a result of limited funding, funded work experience in business sites is not made available to students with a physical disability.

Engaging in employment activities is everyone's dream. However, this is difficult for individuals who have disabilities. A majority of individuals with disabilities experience difficulty in achieving post-school employment goals. School to work transition programs at the secondary level play an important role in preparing students with disability to engage actively in employment, whether it is supported or competitive employment.

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# ANALYSIS OF HUMAN RESOURCES INVESTMENT IN ECONOMICS EDUCATION STUDY PROGRAM

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Abstract

This research aims to understand how school to work transition of graduates of economics education study program (FE) UNY, types of their first work, how much their first income, and the feasibility of their human resources investment. This research is descriptive with a quantitative approach. The population of this research included graduates of economics education study program in the academic year of 2000 - 2009. The sample was done by using a snowball technique. There were 146 respondents as the sample of this research. Questionnaires and documentation were used to collect the data. For analyzing the data, this research used descriptive analysis. The results show that: (1) the average of school to work transition of the graduates is 2.9 months; (2) the types of their first work are as follows: 50,00 % graduates work as educators, 36,30 % work as civil servants and professional workers; (3) their average first income is IDR 2,503,334 per month; (4) the measurement using some investment methods in human resources is quite feasible, ranging from: (1) the payback period investment education is seven years and seven months, does not exceed the age of economical from investment; (2) based on a net present value, it is obtained a positive value of IDR 5,259,082; (3) the results of the internal rate of return of 13,09% more than its cost of capital of 12%, and the net benefit cost ratio is greater than 1. Human resources investment in Economic Education Study Program is therefore feasible.

Keywords: human resources investment, school to work transition, first work, first income, payback period, net present value, internal rate of return, benefit cost ratio

## INTRODUCTION

Education is the most important part of human development which is also known as human investment in the operational concept. Through human investment, a person or institution can improve market value from educated workers. An individual or an educational funding institution invests for workers in order that the workers will be more productive and relative to the cost of education. People who are trained will be productive economic players in real life and achieve potential to spur productivity industry. Hence, more educated people become more productive workers and show more productive national economic performance.

In economics, the term 'education' is defined as productive investment. It is a decision of individuals, organizations, or the government to invest in education with the view on greater benefits in the future. Education as human resources investment should be applied as principles and criteria in business. Investment analysis criteria such as net worth, the rate of internal return, and the period of investment returns, usually applied in business investments, but it can also be applied to human resources investment in the educational sector. The cost of education was issued for follow education and the income after graduated from analyzed using investment certain criteria. From the analysis, it can be seen whether the human resources investment in education is feasible or not.

The big investment in educational sector should be evaluated with an accurate analysis, whether these investments is feasible or not. By judging input which takes place or input issued and assess output resulting in education, will be compared are output produced commensurate with expenditure happened. To find this, we need to investigate the analysis and difficulties in its implementation especially in a developing country like Indonesia. Data and information related to available variables such as school to work transition, first salary, and length of study are very limited. As education is a human investment, it needs to be given investment with equal treatment as investment in business. When investment will return to how the investment rate of return has been done. It was needed to be the answer quantitatively. Expectations of society, universities should have walked based on market-oriented or enlisting had to be ready for society-oriented step on stage, considering the climate warms up in the future. On the second stage that college must focus on managerial organization customer satisfaction, consisting users, the intellectual, and the customer students (candidates). Therefore flexibility and privacy of the operating system, culture and structure college should be evaluated and restored.

Human resources investment analysis in higher education can be done by using several models, good static and dynamic, as payback period, the internal rate of return and net present value. In several models of investment analysis, human resources investment in higher education seems feasible. The shorter the methods payback period, the more feasible an investment can be implanted. By using the method net present value, the bigger the difference between total present value of proceed with a total present value of initial investment the feasible investment in education. Investment in education will be more feasible if the internal rate of return has bigger difference with cost of capital land and when analysis has been done.

Theoretically, education investment analysis is known as the concept of the cost and benefit (cost/benefit analysis) in which these two variable basics are reckoned. Estimating the cost of human resources investment in higher education is important because the concept of the costs includes not only the direct cost such as books, learning tools or money spent at college, but also the costs of forgone income for seeking education. For students at the university, forgone income is the biggest component of the entire cost of education. On the other hand, education benefit may not be perceived as directly, but will surely be felt later, because human investment is the effort to make their livelihood decent in the future.

In fact, Yogyakarta State University (YSU) has seven faculties, but only some of them implement a tracer study. Moreover, a faculty which has carried out a tracer study, it does not involve all its courses. Ironically, even none department has conducted an investment analysis of education in YSU. Education investment analysis is very important to conduct in order to measure how big the advantages of investment in education, for individuals, institutions, as well as the government. If these investments are feasible and profitable, the government needs to expand and improve quality and relevance. Then, if investment resources of education in the department is not feasible, it should be evaluated and restored. This research aims to develop a model of human resources investment analysis in higher education, especially in YSU, with following target output: 1. Developing an investment analysis model of resources to understand the extent of investment feasibility of education, and to keep the graduate database up-to-date. 2. Publication in a accredited national journal. As for additional output, the research is teaching materials to Human Resources Economics. The main focus of this research is to look at the feasibility of the investment of human resources in economic education department FE UNY with accompanying descriptive data.

## LITERATURE REVIEW

According to Simarmata (2002: 155), investment is interpreted as an activity which wants to put money safely to improve the capacity of the system of production or increase in asset capital. According to Fattah (2002: 39), investment was a sacrifice a number of value certain time them to obtain the value of (of repayment) future that albeit hope is greater than the value relation to cost of education, school thought that education is human investment. As an investment, then education impact in productivity of a country.

### *Human Capital Investment Definition*

According to Theodore Schultz (in Fitzenz, 2009), improving the welfare of the poor is not dependent on the land, equipment or energy but depends on knowledge. Human capital was a combination of the nature of (energy, attitude, reliability and commitment), ability to learn (talent, imagination, creativity and ingenuity and motivation to share information and knowledge). The concept of human capital by Becker (1975:41) applying logic economy to review an investment decision individual in the knowledge and work skills, career choices and other characteristics pertaining to work. The assumption is that each individual would choose work to maximize of current value (present value of economic benefits and psychological along his life, Hendrawan , 2012: 33).

Investment can be done not only in other businesses but also in the field of human resources. The principle of its investment in economics undertaking was sacrifice consumption when investment is conducted to gather the level of higher consumption later. The same as its investment in the business, so investment sacrificed is a sum of money that issued and the opportunity to get income during the process of investment. Investment obtained its return is the extent of income a higher to able to achieve the level of higher consumption. Investment like this called human capital. According to Becker (1975:41), human capital is that the human not only a resources but is capital that produces that loans are returned and every expenditure done in order to develop the quality and quantity of the capital are the activities of investment. According to Payaman (1998:58), human capital having two definitions, the first containing understanding business work or services that may be given in production process, and the second is related to the man who can work to grant the services of or business work. So, human capital is the value and or quality of a person or workers determine how potential person or power such work can producing in the economy especially produce goods and services.

### *Cost of Education*

Definition the cost in general is the size of monetary of goods and services issued or sacrificed to benefit now or the future for organization (Atkinson, Kaplan, and Matsumuro, 2007). In the context of education, what is meant by the cost of education is sacrifice issued of all resources owned a unit of education measured in money or other monetary unit to benefit education consistent with the objectives of a unit of the education. The cost of education is one of components instrumental input that is essential in the education. The cost (cost of having a wide scope, all types of expenditure) with regard to the implementation of education, both in the form of money and goods and effort can valued with money.

## METHODOLOGY

The population of this research included all graduates of economic education department from 2000 to 2009. The number of respondents was determined by snowball sampling and adequate level of the data needed in the analysis. As many as 146 graduates were involved in this research. Data collection techniques used in this research included documentation and questionnaires. For data analysis, this research used descriptive analysis. The research procedures were as follows: (1) Looking at the tracer before conducting the study (some data in the Central Carrier Development of LPPM UNY might be useful for this report); (2) Discussing related theories of how to improve investment analysis; (3) Obtaining data of the feasibility of human resources investment in economics education department; (4) Constructing graduate database and; (6) Reporting the results.

## RESULTS

### *Respondent Characteristics*

On the description characteristics of respondents described above, respondents elected of various characteristics that can be seen from sex and the years college. Of each characteristic showed the results, that respondents female graduates greater in number than male respondents. It was because how many of them Economics Faculty YSU are more dominant female than male, including in economic education department. Based on the calculation, long study graduates categorized into three categories, namely category three to four years, 5 years and more than five years. Of 146 respondents obtained data that there are as many as 80 graduates with study duration three to four years, forty-eight with 5 years and about 18 graduates with study duration more than five years. Based on this data can be concluded that graduates have the average took three to four years to complete the study an undergraduate degree. While, the grades categorized into three, namely the predicate satisfactory, very satisfied and 'cumlaude'. Of 146 respondents obtained data that there were as many as 5 graduates with the predicate satisfactory, 108 graduates with the predicate very satisfied and 33 graduates with the predicate 'cumlaude'. Based on this data can be concluded that the grade graduates averaging around between 2.76 and 3.50 and there are a few grade under 2.75. The waiting time in this research divided into three of which is 6-0 months, 7 to 12 months and more than 12 months. About the waiting time graduates described above obtained data that the average the wait graduates to get occupation is six months or in this category including those who have hiring before graduation. Seen from the waiting, graduates having high competitiveness.

Investment expenditure during college undergraduate distinguished into two namely expenditure for the purposes of supporting lecture and expenditure for the fulfillment of the necessities of life. Calculations of the results found that the largest expenditure issued in the first year and last, while expenditure smallest issued on year two. Registration costs at the time of the early college high enough to cause the expense high enough in the first year of lectures. For 2 years to four, the cost of PKL and study tour, the cost of a thesis project and cost in order to cause the presence of the graduation of expenditure that quite high in that year. While year to two to three and there are few activities laboratory work that costs not too high so that its expenditures not amounting to the first year and to the four.

An undergraduate degree is all receiving within the form of money received by graduates, covering an allowance of parents, scholarship received, revenue from work part time for college an undergraduate degree, and acceptance of other allocated for the purpose of lecture. Revenue from allowance parents, found that is only 1.37 % of the respondents who did not receive money fund of parents, because respondents is not having parents, or because have a desire for financially independent. The findings shows wide parts of economic school graduates still rely on parents as a source of revenue for college an undergraduate degree. 146 respondents who take sample, only there were as many as 28,8 % of respondents who is scholarship recipients, whether it is scholarship PPA, Bidikmisi or other scholarship. From the findings it can be concluded that is still a bit of a graduate who use scholarship opportunities offered from various sources for the various reasons, among other lack of information about procurement scholarship, not conforming to criteria determined by the best scholarship, not willing to register scholarships and others. Known that the majority of (58,9 %) the respondents worked for college whether it is working on a part time and full time. This shows that most of the time graduates use their spare time to work that earned more money. In table has been served data on income obtained from a sum basic salary, a bonus, position allowance, day allowance, salary to 13, vehicles, insurance and other income.

An undergraduate degree of various types work have outlined in table, known that as much as 54,11 % graduates get jobs first in accordance with their area of expertise that is as teachers and entrepreneurs. Thus can be concluded that economic school graduates having competitiveness lacking in get a job first in accordance with their area of expertise.

### *Payback Period Analysis*

Seen from the results of the calculation payback period, payback period is to produce all payback period average is 6.5 years. This shows that investment in economic education department is feasible.

### *Net Present Value Analysis*

Based on the discussion on a calculation net present value it can be seen that value net present value is positive, this shows that investment education in education economic study program is feasible.

### *Internal Rate of Return Analysis*

Value the internal rate of return described in the calculation on the internal rate of return, where the result more of its cost of capital (df 12 % and the investment is feasible)

### *Net Benefit Cost Ratio Analysis*

The net benefit cost ratio obtained from scratch valued is more than 1, this shows that the investments done feasible. Based on four methods feasibility on financial aspects used in judging investments from human capital investment can be seen in table 1.

Table 1. Highlight Feasibility Investment Analysis Study

| Measurement Method | Value | Criterion | Note |
|---|---|---|---|
| *Payback Period* (PP) | I. 7 years 7.7 months<br>II. 7 years 0.1 months<br>III. 6 years 11.6 months<br>IV. 6 years 10.9 months | Economics Age<br>I. 10 years<br>II. 10 years<br>III. 10 years<br>IV. 10 years | UE > PP feasible investment |
| *Net Present Value* (NPV) | I. Rp 5,259,082<br>II. Rp 30,293,966<br>III. Rp 32,311,974<br>IV. Rp 31,006,676 | NPV (+) | NPV + feasible investment |
| *Internal Rate of Return* (IRR) | I. 13.09%<br>II. 17.81%<br>III. 18.16%<br>IV. 17.93% | *Cost of capital*: 12% | IRR + feasible investment |
| *B/C Ratio* | I. 1.653<br>II. 2.03<br>III. 2.061<br>IV. 2.041 | *B/C Ratio* (+) | *B/C Ratio* + feasible investment |

## CONCLUSION

Based on the results and discussion, it can be concluded that the average of the waiting time of the graduates in the academic year of 2000-2009 is 2.9 months. Considering the types of their job, the graduates mostly work as educators (50%), private employees (36%), and entrepreneurs (4.11%). Meanwhile, the rest (9.86%) work as farmers and others. The average of first income of the graduates is IDR 30,040,003 (or IDR 2,503,334.00 per month). Educational investment in economics education department of FE UNY calculated use of some method of suggesting investment is feasible. With the payback method, the results show that investment is feasible or could be accounted for. This can be seen from the calculation on payback that the period is seven years seven months (smaller than an economical investment 10 years of age). Using the method of net present value result shows that the investment is feasible or can be accounted for. It can be seen that the results of the calculation of the net present value is positive IDR 5,259,082. Using the method of internal rate of return the result shows that the investment feasible or can be accounted for. It can be seen from the results of calculation of IRR 13.09% (more than the cost of capital Investment 12%) measured by number of Net Benefit Cost Ratio worth 1.635 (greater than 1), this indicates that the investments made feasible.

Accordingly, some suggestions can be made as follows: (1) Economics education department should improve the system of its graduate database in order that the information search of graduates required in the future will be easier; (2) It is necessary to have cooperation with graduates' institutions, both private and public, for the flow of information about the world work (demands and the needs of the data) can be exploited easily; (3) Further research with similar topics should increase the number of samples used (to make it more representative) and also develop different technique analyses.

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# THE OPPORTUNITIES AND CHALLENGES OF THE ABSORPTION OF SMK GRADUATE LABOR IN INDONESIA

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Abstract

This research aims to find out the opportunities and challenges of vocational school (SMK) graduate labor absorption in the work sector in Indonesia, in terms of (1) the trend of SMK graduate labor absorption in Indonesia in the last three years; (2) the trend of SMK graduate absorption in the next three years; (3) the comparison of labor absorption of high school (SMA) graduates and that of vocational school graduates in the next three years; and (4) the factors inhibiting and supporting the labor absorption of SMK graduates in Indonesia. The research method used was descriptive. The quantitative analysis was used to analyze the trend of SMK graduate labor absorption in the last three years, and to forecast the trend of SMK graduate labor absorption in the next three years, as well as to compare the absorption of SMK graduates and that of SMA graduates. The qualitative analysis was used to examine the factors inhibiting and supporting SMK graduate labor absorption. The data collection used the documentation technique to gather data and information from various official sources. The results showed that (1) the trend of SMK graduate labor absorption in Indonesia in the last three years shows an increase; (2) the trend of SMK graduate labor absorption in the next three years is projected to increase; (3) compared to SMA graduate labor absorption, SMK graduate labor absorption is lower; (4) the inhibiting factors include the ability and the opportunity to upgrade the competence of SMK graduates to match job market needs; curriculum and teaching at SMK; various regulations and bureaucratic behavior non-conducive to business development; and termination of employment relationships. The supporting factors include facilities to get loan and other assistance to spur industrial life. Therefore it is recommended that (1) SMK graduates not satisfied with their scholastic competence as the capital for looking for a job, but they are expected to be able to upgrade their own capabilities by themselves through courses and internships; (2) the government as the regulator needs to create a conducive business climate through the relevant policies which guarantee business assurance.

Keywords: Opportunities, challenges, absorption of labor

## BACKGROUND

Educational institutions and the work sector are two components that have a connection, even up to causal relationships. Educational institutions are the producers of human resources and the work sector is the users. As the producer of human resources, educational institutions are responsible for producing competent graduates who can meet the needs of the work sector. Graduates of educational institutions especially the students in educational institutions are expected to be able to perform the transfer of knowledge and technology to the society and to develop a productive business in life.

That the level of education is not directly related to independence in work performance has been shown in the BPS (Susenas, 2003), in which the level of independence of those who have not yet completed elementary school (SD) is 20.07%, that of elementary school (SD/MI) graduates is 19.71%, that of junior high school (SMP/MTs) is 18.08%, that of senior high school (SMA/MA) is 15.13%, and that of university (PT) is 6.14%. The number of workers/employees who don't/haven't finished SD is 22.56%, SD/MI is 28.59%, SMP/MTs is 39.2%, SMA/MA is 60.87%, and PT is 83.18%. This suggests that the higher one's education, the lower his/her independence and spirit of entrepreneurship will be.

The government of Indonesia since 2012 has been targeting the addition of vocational schools to 60-70 percent of the existing secondary schools up to the year 2020. This policy has made a real impact, and the BPS data in 2016 showed the distribution of working people in the last three years showed an increase as many as 10.52 million people in August 2014, 11.80 million people in February 2015, 10.84 million people in August 2015, 12.34 million people in February 2015, and 12.17 million working people in August 2016. The increase indicates a growing number of graduates of vocational schools in Indonesia from year to year.

Based on the above description, the question asked is: What are the opportunities and challenges of SMK graduate labor absorption in Indonesia? To solve the problem above, that some questions are formulated as follows: (1) What is the trend of SMK graduate labor absorption in Indonesia in the last three years? (2) What is the projection of the number of SMK graduate labor absorption in the next three years like? (3) What is the comparison of SMK graduate labor absorption and SMA graduate labor absorption in the next three years? (4) What are the inhibiting and supporting factors of SMK graduate labor absorption in Indonesia? The expected benefits of this study are: (1) providing scientific information regarding the opportunities and challenges of SMK graduate labor absorption in Indonesia; and (2) giving input to the government in general and schools in particular in order to evaluate the related policy of vocational education as well as in evaluating the curriculum and teaching processes at SMK.

## LITERATURE REVIEW

### *Opportunities*

The concept of opportunity in this discussion is closely related to an opportunity to try. Therefore this definition will refer to the definitions of business opportunities. According to Zimmerer (Wahyudi, 1996), business opportunities consist of creativity and innovation to solve problems and see the opportunities received each day. The main beneficial situation is in a business environment (Wahyudi, 1996:68). From experts' opinions above, it can be concluded that opportunities are the major opportunities that can be achieved through creative and innovative businesses by individual, group or organization because they can be beneficial.

### *Challenge*

A challenge is the main situation which is unfavorable in a corporate environment (Wahyudi, 1996:68). A challenge is also a state or condition which is not good, or a challenge is who has been/will be going on in/around the areas that could hinder the process of environmental management (Silalahi, 1995:108). From both expert opinions, it can be inferred that a challenge is a condition that can inhibit the efforts of individuals, groups or organizations that always comes from the outside.

### *Absorption of labor*

Labor absorption is a certain amount of labor that is used in a particular business unit, or the amount of labor that works in a business unit (Simanjuntak, 2002). Labor absorption is the admissibility of labors to do a job properly or the existence of a state that describes the availability of jobs for job seekers (Silalahi, 1995). From experts' opinions above it can be concluded that absorption of labor is the level of acceptance of labor in a work environment, such as a company.

## RESEARCH METHOD

The research method used is descriptive. The quantitative analysis is used to assess the trend of SMK graduate labor absorption in the last three years and to forecast SMK graduate labor absorption trends in the next three years, as well as to compare the amount of SMA graduate labor absorption and SMA graduate labor absorption in the next three years. The qualitative analysis was used to examine the inhibiting and supporting factors of SMK graduate labor absorption. The data collection used the documentation technique to gather data and information from various official sources.

## RESULTS AND DISCUSSION

### *The trend of SMK graduate labor absorption in Indonesia*

The data are limited to those gathered in the last three years in order to ease the projection of three years into the future when they are analyzed in the second and third parts, i.e. the trends of SMK graduate labor absorption in the next three years, in which the stretch of time must be the same.

Table 1. The characteristics of the working population in 2014-2016

| The Characteristics of The Population of Working | Unit | 2014 | 2015 | | 2016 | |
|---|---|---|---|---|---|---|
| | | August | February | August | February | August |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Highest education | | | | | | |
| High School | Million people | 18.58 | 19.81 | 19.81 | 20.71 | 20.41 |
| Vocational High School | Million people | 10.52 | 11.80 | 10.84 | 12.34 | 12.17 |
| Total | Million people | 114.63 | 120.85 | 114.82 | 120.65 | 118.41 |

Source: Central Bureau of Statistics, November 2016

The data in the table above, especially those of SMK show that from August 2014 to February 2015, the presence of the addition of as many as 1.28 million. However in February 2015 – August 2015 down 0.96 million. From August 2015 to February 2016 showed an increase of 1.52 million people and from February 2016 to August 2016 also saw an increase of 0.17 million. As a whole, the table shows the uptrend in the last three years.

***The trend of SMK graduate labor absorption in the next three years in Indonesia***

To get the data, the researcher made a projection by using data on the trend of SMK graduate labor absorption in the last three years. Then by using the formula of projection data, the researchers obtained the trend of SMK graduate labor absorption in the next three years. For the next calculation, the description is as follows:

According to the school-age population projection Formula (Usman, 2011:97), the results of the calculation are shown in Figure 1.

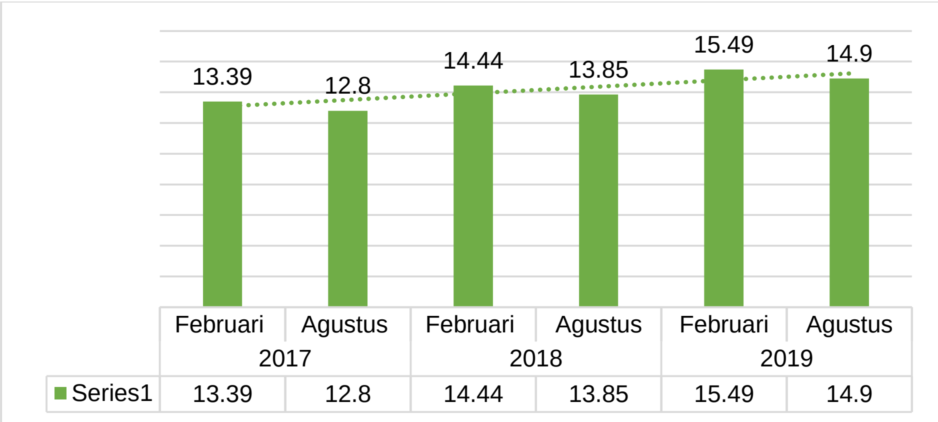


Figure 1. Projections of SMK graduate labor absorption in the next three years (Source: Author's Whim, 2016)

***Comparison of the amount of SMA graduate labor absorption and SMK graduate labor absorption in the next three years***

To obtain the data in question, then the data of the SMK projections in part two above need to be compared to the data projections of SMA graduate labor. Therefore the projection data of SMK graduate labor have been retrieved,  and the projected manpower data of SMA graduates in the next three years will be sought. To get the data, the researchers must make a projection by using the data trends of SMA graduate labor absorption in the next three years as presented in Table 1.

Like the analysis of part two above, the next analysis used the projection formula (to borrow the School-age Population Projection Formula developed by Usman, 2011:97). The results of the above calculation are shown in the chart Figure 2.

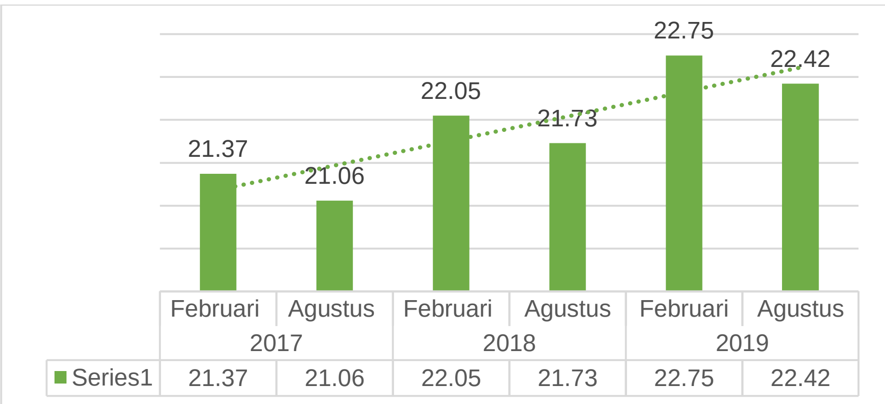


Figure 2. Projections of SMA graduate labor absorption in the next three years (Source: author's Whim, 2016)

Furthermore, the projection data of absorption of labor in the next three years between high school graduates and vocational school graduates are compared, as indicated in the table 2.

Table 2. Comparison of the characteristics of the working population projection according to level of education - high school and vocational school, 2017-2019

| The Characteristics of The Population of Working | Unit | 2017 | | 2018 | | 2019 | |
|---|---|---|---|---|---|---|---|
| | | February | August | February | August | February | August |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Education | | | | | | | |
| High School | Million people | 21.37 | 21.06 | 22.05 | 21.73 | 22.75 | 22.42 |
| Vocational High School | Million people | 13.39 | 12.8 | 14.44 | 13.85 | 15.49 | 14.9 |
| Total | Million people | 34.76 | 33.86 | 36.49 | 35.58 | 38.24 | 37.32 |

Source: author's Whim, 2016

The data above, where the projection of the amount of high school graduate labor absorption and vocational school graduate labor absorption in the next three years - the years 2017, 2018 and 2019, show the number of SMK's is still lower than that of high schools (SMK's). Though the amount of SMK graduate labor absorption continues to increase, the number of any high schools also increases.

***Inhibiting and supporting factors of SMK graduate labor absorption in Indonesia***

The Indonesia government's policy to give the portion of the establishment of vocational schools (SMK) up to 60-70% and high schools (SMA) up to 30-40% has resulted in the increase of the number of SMK's across Indonesia. Based on the data from the Ministry of Education and Culture (BPS, 2014), the number of SMK's in Indonesia in 2011/2012 was 10,256; in 2012/2013 it increased to10,673, and in 2013/2014 it increased to 11,726 schools. Whereas the number of senior high schools (SMA) in 2011/2012 was 11,654; in 2012/2013 it increased to 12,107, and in 2013/2014 it increased to 12,409 schools.

On the other hand, according to the BPS data (2015) about the number of unemployed high school and vocational school graduates during August 2014 – August 2016 show that the number of unemployed SMK graduates is greater than that of unemployed high school graduates; 12 percent of SMK graduates were unemployed, and 10 percent of SMK graduates were unemployed. It is ironic that the number of unemployed SMK graduates is bigger than that of the unemployed high school graduates. In fact, this is the kind of education that equips students with the skills to work after graduating. This condition is certainly a challenge for SMK's specifically and for the government in general.

Therefore, this section will describe the inhibiting and supporting factors of SMK graduate labor absorption.

1. Inhibiting Factors

   A number of factors that inhibit the absorption of SMK graduate labor in Indonesia, among other things, are the ability and chance of SMK graduates to up-grade their competency appropriate to the needs of the market. A survey conducted by Inapen (Roaming, 2015) in an informal institution shows that because the SMK graduates are assumed to have mastered knowledge and skills acquired in school, they don't think of upgrading themselves with skills not acquired at school. Unlike vocational school graduates, high school graduates consider that they are lacking competencies to compete in the workforce, so that they diligently follow courses, private lessons and seminars about employment.

   The question is whether the school is not oriented to learning methods with the atmosphere of the work situation in the company or the work sector. Inapen (2015) survey shows that although the school has tried whenever possible to make the atmosphere of the classroom or practicum room they approach the atmosphere of the workplace in accordance with their field of study, but the work sectors which are always dynamic at any time could not be followed and applied in schools.

   In addition to the factors of the ability and the opportunity to up-grade competence, the curriculum also needs to be seen as one of the inhibiting factors. For example, the research conducted by Jatmoko (2011), about the relevance of the curriculum of vocational school of light vehicle engineering to the needs of the industry sector in Sleman, concluded that, "the curriculum is in a relevant category, but there are several competencies that are not developed". So, in terms of its curriculum structure, vocational schools are already adjusting to the needs of the work sector, but the intended curriculum is not implemented due to various factors, for example, teachers and supporting equipment, and the limitations of the lab.

   Another inhibiting factor is the variety of regulations and bureaucratic behaviors that are not conducive to business development that small business owners often complain of government regulation and excessive bureaucracy. Administrative costs often siphon billions of dollars from small businesses every year. A larger company can meet a variety of requirements for forms and reports in a better way (Partomo and Soejoedono, 2004:22).

   Research by Egeten (2014:1), about the behavior of government bureaucracy in the Regency of South Minahasa in licensing services, shows that the behavior of the bureaucracy of the government in the licensing service shows a reality that is not good. This is caused by the behavior of the individual, group and organization.

   The last factor is the issue of the termination of the working relationship. The study conducted by Hidayat (2013) about the implication of the termination of employment for the employees at PT *Texmaco* Garden Sinthetics Kaliwungu shows that the limited quality of education and skills of the employees of PT Texmaco cause them to have difficulty to adapt themselves socially and economically after the termination of employment. Unemployment, a decline in the status and prestige, disintegration of the family, and the structural changes in daily lives result from the termination of employment among the labor victims of layoffs.

2. Supporting Factors

   The factors that can support include the facilities to get loans and other assistance to spur industrial development. The research by Afifah (2012) indicated that the credit of the Ministry of Cooperatives and Small Scale Enterprises can help improve capital to go without a sales turnover, profit, and the perpetrators of micro enterprises in Kelurahan of Pekunden Subdistrict, Semarang, Central Semarang.

Both the inhibiting factors and supporting factors provide challenges and opportunities for the graduates of vocational schools in Indonesia. The existing challenges need to be accepted by exploiting the existing opportunities. Based on the above data, the trend is that there are still a large number of SMK graduates who make a living as employees. Or the majority of SMK graduates still work for others and not yet self-sustaining. But by looking at the opportunities that are available, it would be nice if SMK graduates can opt for developing their businesses. When in school, they should already be provided with insights and skills to develop a business independently.

## CONCLUSION AND RECOMMENDATION

It was concluded that (1) the trend of vocational school graduate labor absorption in Indonesia in the last three years shows an increase; (2) the trend of vocational school graduate labor absorption in the next three years is predicted to increase; (3) compared to the absorption of high school graduates, that of vocational school graduates is still lower; (4) the inhibiting factors include the ability and the opportunity to upgrade the competence of vocational school graduates to match market needs, the curriculum and teaching at vocational school, various regulations, bureaucratic behavior that is not conducive to business development, and the termination of employment; (5) the supporting factors include the facilities to get loans and other assistance to spur small-scale industries.

Therefore it is recommended that (1) vocational school graduates not satisfied with their scholastic competence as the capital for looking for a job, they are expected to be able to upgrade their capabilities by themselves through courses and internships; (2) the government as the regulator needs to create a business climate through the relevant policies and guarantee business assurance.

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# BEYOND SKILLS: UNDERSTANDING GRADUATE EMPLOYABILITY BEHAVIOUR THROUGH THE LENS OF GRADUATE IDENTITY

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Abstract

In order to understand graduate employability it is necessary for employers and higher education institutes to look beyond lists of skills and graduate attributes. This paper discusses research undertaken in the UAE which drew on conceptualisations of socially constructed and emergent graduate identity to explore the employability behaviours, experiences and outcomes of Emirati graduates as they transitioned from education to work. Key findings included important links between graduate identity and national identity, and the gendered nature of identity positions adopted by the participants. The processes of resolving tensions arising from these interacting identities were found to be important in understanding the employability behaviours, experiences and outcomes of the study participants as they transitioned from higher education to work. The research contributes to developing understandings of higher education to work transitions in non-Western contexts and supports positional and processual models of employability.

Keywords: Employability Behaviour, Graduate Identity, Work Transition

## INTRODUCTION

This study grew from a desire to undertake research through which to deepen current understandings of graduate employability in the United Arab Emirates (UAE) and a dissatisfaction with the dominant 'skills approach' to this both in the UAE and in the West. Issues related to graduate employability are prominent in the UAE as the country faces the challenges of integrating its young nationals into an expatriate dominated workforce. However, research into these issues has been limited and has largely failed to move discussions forward or provide solutions (Kijo, 2011). By looking at employability through the lens of graduate identity, the study examines the transitions from education to work in the early career period of Emirati graduates

Linked to notions of a knowledge-driven economy, more protean, boundaryless careers and individualized life courses (McQuaid and Lindsay, 2005; Brown and Hesketh, 2004), the concept of *employability* has taken centre stage in understandings of the encounters of young people with the labour market as they leave higher education. However, while there has been a heavy focus on notions of employability "skills" and "attributes" in models such as that proposed by Hillaje and Pollard (1998), this study draws on other models which have explored social processes related to employability, highlighting subjective and relative aspects. In seeking deeper understandings of the employability strategies and lived experiences of young Emirati university graduates during their transitions from education to work, the research draws particularly on Holmes' emergent graduate identity framework (Holmes, 2001; 2013), and espouses the view expressed by Tomlinson (2013: 133) that 'identities constructed around work and career underpin future action orientations and the ways in which they personally and actively mediate the wider economic context'.

## CONTEXT OF THE STUDY

The United Arab Emirates (UAE) is a young nation with a local population of less than a million (UAE Yearbook, 2013). Formed in 1971, the UAE has experienced remarkable growth and development since its foundation, based largely on oil revenues (Vine, 2010) and facilitated by a large expatriate work force making up to eighty per cent of the population. Within the space of a few decades, the labour market and the education system have changed out of all recognition. In 1971, for example, only forty-six UAE nationals held degrees, obtained from universities abroad, and as late as 1980 half of men in the UAE were illiterate (Kirkwood et al, 1995). However, only thirty years later, in 2010, over thirteen thousand young Emiratis, of whom approximately sixty per cent were women, took up places in higher education (Vine, 2010) and it is estimated that fifteen to twenty thousand young Emiratis are entering the work force each year (Al Abed et al, 2008). With this shift in labour market demographics and policy, issues relating to the employment, underemployment, and unemployment of young nationals, have been receiving increasing attention.

These issues include the reluctance of young Emiratis to take up employment in the private sector and the low participation of women in the labour force. The public sector has been a traditional destination for many young Emiratis (also referred to as UAE nationals); however, with this sector becoming increasingly saturated (Vine, 2010), there has been increasing emphasis on preparing and encouraging young people to take up employment in the private sector, and the introduction of localization policies and programmes known under the umbrella term 'Emiratisation'. Female work force participation has been put at around 28 per cent, although in tertiary education female students outnumber young men (Samulewicz et al, 2012; AlMarzouqi and Forster, 2011; Randaree, 2009), constituting an enormous investment for the country with low economic return.

In order to gain insights into these and other issues, the study addressed the following research questions:

1. How is Emirati graduate identity conceptualized and understood by UAE graduates and employers?
2. How do Emirati graduates manage their graduate identity, as it relates to their employability, in their transition from education into the labour market?

Implicit in both of these questions is an examination of the ways in which their graduate identity, related to their employability, interacts with the socio-cultural and labour market context. The first of the questions focuses on exploring the meanings that young Emirati graduates construct around their status as graduates. What does it mean to them to be a university graduate? What is the value to them of the credential? What other elements are present in their conceptualisations of graduate identity? Although the primary focus is on the ways in which Emirati graduates conceptualise their graduate identity, data was also sought from employers in order to compare and identify any mismatches and differences of understanding. The second question is concerned with the ways in which Emirati graduates manage their graduate identity in their interactions with the labour market, in terms of their employability strategies, and how they experience their transition trajectories and outcomes. The proposition underlying my study is that graduate identity, could provide a useful concept for seeking insights into graduate employability and transitions from education to work in the UAE.

Studies investigating employability beyond lists of skills and attributes provided the initial theoretical impetus for this study. In particular, Brown and Hesketh's research into graduates' approaches to their employability and of employers' ways of evaluating graduate job seekers (Brown and Hesketh, 2004) supports a view of employability that goes beyond the skills and attributes 'possession' approach (Holmes, 2013), and explores employment outcomes in terms of cultural capital and positional conflict theory. Holmes (2001) model of emergent graduate identities modalities provides a framework for further understanding the interaction processes involved in graduate-labour market encounters. Particularly useful for this study is the notion that graduates *claim* and try to *warrant* their graduate identity to employers, who then affirm or disaffirm the claim by awarding or not awarding a graduate-level position. Holmes' work (2001, 2013) on emergent graduate identity modalities is further illustrative of a growing recognition in employability research of the subjective dimension of employability (Brown *et al*, 2003) and an understanding that young people's work-related identities and dispositions 'derive from wider aspects of their educational and cultural biographies, and these exercise some substantial influence on their propensities towards future employment' (Tomlinson, 2012: 422).

## METHODOLOGY

The methodology employed in the study is a qualitative, ethnographic approach drawing on multiple case study design features. This design was chosen to facilitate in-depth exploration of 'a contemporary phenomenon within its real-life context' (Yin, 1994:13) where the phenomenon is graduate employability behaviour in the UAE. The main method of data collection was interviews with young Emirati graduates and with recruiters/selectors from organisations employing Emirati graduates. The participants included twelve Emirati higher education graduates and representatives from five organisations in the UAE that employ Emirati graduates. An episodic-type interview format (Flick, 2009) was used to elicit both narrative accounts of the participants' graduate identities (Lawler, 2014; LaPointe, 2010) and lived experiences and also semantic knowledge of the issues under examination, specifically those related to Emiratisation. The interviews were carried out face-to-face, by telephone and by email. The process consisted of one main interview for each participant, preceded and followed by email correspondence as deemed necessary. A largely inductive approach was applied to analysis of the data, drawing on constructivist grounded theory techniques (Charmaz, 2003) and thematic analysis, and using theoretical concepts drawn from the literature on identity and employability to make comparisons across cases.

## DISCUSSION

Five themes emerged from the data with respect to they ways in which the young Emiratis in the study understood their graduate identity: the idea of 'completing' through possesion of the credential, achieving and maintaining a sense of vocation, developing personal attributes, experiences gained through being at university, and notions of social engagement and citizenship through being a graduate. These themes were similar to the concepts of graduate identity held by the UAE employers in the study, with a notable difference being concerned with the last theme. The notion linking being a good citizen with being a graduate was highly salient to the graduates and was a fundamental factor in their choice of subject and career but did not figure at all in the employers' understandings of what it means to be a graduate.

As well as the notion of 'being a good citizen', the subject and career choices of the graduates were influenced by a lack of cultural capital in some cases and characterized by individualized narratives in which the graduates adopted strategies of 'following' their siblings, trying different institutions and courses, and responding pragmatically to opportunities offered. Their ways of making decisions were consistent with Hodkinson & Sparkes (1997) notion of pragmatically rational decision-making as they reflexively adapted to circumstances and constraints while making use of resources, particularly sources of knowledge, available to them.

Compared to Brown and Hesketh's model of *personal capital* (Brown and Hesketh, 2004), the concept of *graduate identity* as it emerges in the present study appears closely related but structured differently. The graduates in the present study tended to use, as Brown et al (2003) suggest, a 'discourse of skills and attributes mirroring the language of university documents' (Brown et al, 2003: 316 – 7) to describe their graduate identity; however, considering the graduate identity approach offers a richer, deeper and more nuanced description of what Emirati graduates bring to their encounters with the labour market.

Conceptually, the actions of *claiming* and *warranting* graduate identity in Holmes' (2001) model of emergent graduate identity appear to be close to Brown and Hesketh's (2004) notion of positioning and employability strategies on which their ideal typology of *players* and *purists* is based. However, consistent with other cross-cultural research in this area (Wang and Lowe, 2010) the *claiming* and *warranting* strategies used by the participants in the present study do not fit Brown and Hesketh's (2004) ideal typology of *purists* and *players.* In Brown and Hesketh's typology (2004), *purists,* base their approach to employability on meritocratic grounds such as having a high GPA and a good record of participation in extra-curricular activities, while *players* base their approach on presenting themselves in a way to fit the requirements of a job or culture of an organization even if this means adapting their values and attitudes. A previous cross-cultural study (Wang and Lowe, 2011) found that this typology did not fit well in the different socio-cultural context of the graduate labour market in China and, similarly, the approaches of the graduate participants in the my study do not meet the descriptions of the types. While some of the graduates in the present study were quite strategic in their approach to finding a job, none of them could be described as '*players*'; rather, they all took, to varying degrees, a '*purist*' approach believing in being authentic in their presentation of their 'selves' and taking a meritocratic view of their chances in the labour market.

In the present study, Holmes' (2001) model of emergent graduate identity modalities was used to analyse the transition strategies, experiences and outcomes of the study participants. Using this model, four patterns of trajectory were identified: direct, in which the graduates left university and immediately were appointed to a graduate level position; progressive, in which the graduates transitioned through a series of jobs before attaining a graduate-level position; arrested, in which the graduates attempted a progressive route but had remained in a non-graduate level position; and non-starter, where a graduate remained unemployed five years after leaving attaining her degree. The decisions taken and strategies employed by the graduates appeared to be influenced by their understandings of their graduate identity and of the ways in which this linked with other identities. In particular, the notion of being a good citizen through being a university graduate created links with their national identity and their understandings of being a good Emirati, which in turn created links with their gender identity. While providing motivation to participate in the labour force, this linking of graduate and national identities also involved tensions and conflicts by invoking rules and resources associated with the identities. Processes of adjusting and aligning these identities and their associated meanings and expectations were apparent in the claiming and warranting behaviours described by the graduates. Several of the female graduates, for example, spoke about needing to work in a 'safe', 'comfortable' environment in order to safeguard their 'reputation' and one described dropping out of university for a period because she though it was incompatible with being a good Emirati wife. The male graduates were aware of carrying financial responsibilities to their families and of time pressures in completing their studies and progressing in their careers while this was absent in the accounts of the female graduates. In fact, two of the graduates chose to 'rest' for a year after graduating and stay home. Linking graduate identity with national identity was also associated with understandings of 'westerners' as the 'competition' in the labour market and suggestions of discrimination. Although the UAE government has put into place a number of policies advantaging Emiratis in the labour market, there was some negativity about these and a feeling that Emiratis should be in management positions and should not have to accept lower level jobs. Several of the graduates associated taking lower level positions with notions of social shame, a strong notion in Emirati society. Lastly, the graduates talked about the role of tribal affiliations as a factor in their employability.

## CONCLUSION

As Jackson (2014) notes, the notion of graduate identity is still at the stage of conceptualisation in the literature. This study, therefore, contributes to this process with findings that show how this identity is conceptualised by Emirati graduates, and employers, and how it relates to the graduates' employability and mediates their employability choices, strategies and experiences. As a 'testing out' of an identity approach, and specifically Holmes' emergent graduate identity approach (Holmes, 2001; 2013) as a framework for researching graduate employability and labour market experiences in diverse socio-cultural contexts, the findings of the study demonstrate that this approach can lead to rich, socially nuanced understandings of graduates' interactions with the labour market.

The graduates in the study undertook considerable identity work in making decisions related to employability, such as choice of major, deciding on which jobs to apply for and to accept, and in producing their graduate identity in an appropriate form for the purposes of making their identity claim, and warranting it, to the labour market. In some cases, repackaging skills and attributes was necessary, in others issues related to the work environment had to be taken into accountThis was in addition to having to align their graduate identity claims with the expectations and understandings of employers. The findings show the tensions and conflicts that the graduates had to navigate in order to reach an employment outcome that met their identity needs. From this it can be seen that the process of identity reconciliation and alignment is fundamental to employability, and particularly to the graduate identity claims that the graduates make to the labour market. Holmes (2001) refers to the notion of double warranting where graduates have to support their claim to graduate identity to more than one gatekeeper. The findings of the present study support this and suggest that graduates in the UAE have to claim and warrant their graduate identity in many ways to many different stakeholders.

The adoption of Holmes' (2001, 2013) claim-affirmation model of emergent graduate identity as a framework for this study enabled contextually sensitive issues to emerge while also facilitating comparison with research carried out in other contexts, particularly the UK. The UAE higher education system appears to be largely based on Human Capital Theory (HCT) assumptions which hold that individuals will be selected for jobs based on their human capital (skills and knowledge) and that they will invest in higher education to the extent that they perceive a return on their investment in terms of economic capital (Becker, 1976); however, the findings of the present study suggest that approaches based on HCT are inadequate for understanding the complex understandings and relationships that Emirati graduates have with the labour market and that an emergent graduate identity approach offers a useful framework for investigating these issues.

***Recommendations Arising from the Study***

Three key practical recommendations arise from the study. First is a clear need for career counselling and work readiness programs in preparation for the transition to work and for these to move beyond a focus purely on skills. Understandings of graduate identity and the way in which it interacts with other identities need to be explored. Secondly, the findings confirm Holmes' (2001 ) conceptualisation of extra-curricular activities as a way of rehearsing graduate identity. Participation in these activities provides opportunities to develop knowledge, skills and 'ways of being' that are recognisable to employers as graduate attributes. It also provides warranting in that graduates can describe real performance and achievements from these activities. The graduates in the study who participated most in these kinds of activities were those who made quick and easy transitions to work. Similar to extra-curricular activities, work placements and internships provide opportunities to rehearse and warrant graduate identity. However, they also allow employers to see students performing as graduates in their organisation and provide an opportunity to employers of recruiting with minimal risk that a candidate may not perform as hoped. Lastly, organisations recruiting graduates need to develop understandings of graduate identity and its influence on graduate employability behaviour when designing recruitment and selection processes and when designing jobs, organisational structures and career paths.

The findings of the study also suggest a number of questions to be addressed in further research. First is the question of how individual graduate identity changes as a result of labour market experiences in the longer term. This study identified five themes related to understandings of graduate identity at the time of the transition to work and the ways in which graduate identity was presented or claimed. It would be informative to investigate these longitudinally. A second question concerns how student identities are socially constructed and how these relate to graduate identities and employability. Holmes' (2001) claim-affirmation model of emergent identity could be extended and tested as a possible theoretical framework for this.

A further area for useful study would be into possible differences in the way graduate identity is conceptualised, produced and managed between graduates from federal, single nationality, gender segregated HEIs and other types of HEI (e.g. international local campus, private Emirati, overseas universities). A replication of the present study with graduates from other types of university could be carried out in order to investigate the effects of different university environments and academic approaches. Finally, an important question concerns how employers (recruiters and selectors) evaluate and categorise graduate applicants? As the data from employers in the present study was limited, a study replicating the participant observer approach used by Brown and Hesketh (2004) to investigate graduate interviews would generate interesting and useful data in this area.

***Concluding Remarks***

This study provides a scholarly contribution to the scarce knowledge in the area of graduate employability as they transition from education to work in the UAE. The study also has value as a cross-cultural study contributing to understandings of the role and influence of contextual factors on graduate employability through the use of a graduate identity framework. It is important that the social processes involved in graduate employability continue to be investigated beyond a narrow focus on skills and beyond assumptions of equal access to opportunities in education and work.

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# NATIONAL EXAM ITEMS' CHARACTERISTICS ANALYSIS THROUGH RASCH MODEL: ASSESSMENT IMPLICATIONS

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Abstract

Assessment, as an integral part of teaching-learning, determines the quality of the job seekers at the market place. Since assessment uses measurement tools, when that tool is a test, its items characteristics have to be of good quality. This research aims: (1) to know the test items characteristics of the Mathematics subject matter National Exam, (2) scrutinize to which extent was that exam items' fit, (3) calculate the State Senior High School National Exam takers' ability in answering the Mathematics subject matter exam items, school year 2015-2016, Ende District. The Data used are that Exam takers' answers and the data source is the Center of Educational Assessment (Puspendik)/ Republic of Indonesia. A saturated sample was used, that is the whole PACKET 3324 (comprising 115 exam takers' answer sets) was analyzed. This research is a quantitative one, using Ex post facto approach. The documentation data collection technique was used. For the Exam items' characteristics analysis technique, the Rasch Model was used with the help of Winsteps software version 3.73. After the analysis of the 40 National Exam items through Rasch Model, the results are that 70 % of exam items, i.e. 28 items are in the "Average" category. Regarding the Item Fitness, only 3 exam items (7.5%) out of 40 are "fit" and the remaining items (37 items, i.e. 92.5 %) do not "fit" the model. For examinee's ability, there is only one examinee, i.e. 0.87 % whose ability in answering correctly the Maths Exam is in the "High" category; 90 examinees or 78.26 % of the sample are in "Average". These results reveal partly that something has been wrong either with the assessment system of these exam takers, or the ability of Ende District students' is average. This also suggests how their performance can be at the workplace and attests how that transition from school to work or high education level has not been fully successful. The employers' standards might not allow those students to get their expected job/role.

Keywords: National exam, Rasch Model, Test item characteristics, school to work transition, assessment

## INTRODUCTION

In the current era where employers expect of their recruits to be skillful in the 21$^{st}$ century skills, one might have presumption that some of those skills are not classroom-learning related. Students themselves might think that 21$^{st}$ century skills will be added after being done with high school, undergraduate program, etc. However, all are almost classroom- or school-based.

It should better to brush the reader with empirical findings about the 21$^{st}$ skills. To begin, Chong (2014) in *Advanced English Dictionary,* defines skills in clear terms: it refers to "an ability that has been acquired by training" or "ability to produce solutions in some problem domain." So, skill is related to ability, and the latter can be of cognitive or psychomotor kind. The 21$^{st}$ skills are believed to serve a great role in individuals' careers. According to *Partnership for 21st Century Skills*: *Framework for 21st century learning* (2011) in Kaufman J. (2013: 79), mostly needed 21$^{st}$ skills are critical thinking and problem-solving skills, communicative skills, information and media literacy skills, contextual learning skills, and an ever-important collaboration skill.

In the same perspective, DiCerbo (2014: 502-503) almost mentions the skills like those in Kaufman (ibid), but there are additional spices such as grouping the very skills into categories: 21st skills grouped in (1) Ways of thinking (e.g Creativity and innovation and Critical thinking,etc), (2) Ways of working (e.g Collaboration /teamwork), (3) tools for working (e.g ICT literacy), (4) Living in the world (e.g Personal and social responsibility).

Since Ng and Feldman (2009: 93) recognize that education has a broad contribution to the job performance and that Guskey (2003) has admitted that a well-suited assessment improves learning, one might little assumedly put that assessment is the core to job performance. To be more concrete, Ng and Feldman (2009) demonstrate how education provides both declarative and procedural knowledge. By declarative knowledge, the two authors refer to a sort of expertise as far as facts, rules, and principles are concerned, while the procedural one is about applying the declarative knowledge in a given context of problem solving. These two forms of knowledge are initially accessed to formally or non-formally, and assessment methods like quizzes, tests, writing assignments, and other more that teachers might hold weekly, monthly or each three month are likely to improve students' learning, (Guskey, 2003:6). So supposedly, the assessment techniques aforementioned can develop the two types of knowledge.

Still in the domain of educational assessment and its direct or indirect contribution to job performance, authentic assessment (in contrast to traditional assessment) is promising in the eyes of some assessment theorists and practitioners. It would be better first to define what authentic assessment is all about. However, two experts' views are to be mentioned subsequent to their high relevance to the topic.

The first view is by Mueller (2014) in Suarta et al. (2015:47) who defines authentic assessment as a form of assessment in which learners demonstrate competence, or a combination of knowledge, skills and attitude to complete an essential task in a real-world situation. Based on this, one can simply put that authentic assessment urges students to make use of their competence or to combine what they already know with existent skills just to solve a real-world problem.

Djemari Mardapi (2012: 166-167) also accounts for what authentic assessment really is. The education expert stipulates that in this form of assessment, learners present or do a given assignment [...], the critical thinking is built in the way that students are assessed based on their ability to "construct" or "apply" knowledge in a real-world setting, the evidence of what students are able to is live/direct, i.e. can be observed and this turns authentic assessment to a learner-centered one.

Another aspect worth underlining is that authentic assessment has got a series of methods that a teacher has to handle given the class size, students' level of study and ability. Teachers also smoothly use authentic assessment methods with an aim of aligning both teaching-learning activities, tasks, and then the assessment method chosen. Diversification of assessment techniques in authentic assessment is demonstrated in the choice offered to teachers. The latter might choose to use students' classroom presentations, classroom discussions, individual assignments, group assessments, quizzes, Examinations, students' portfolios, students' self- and/or peer-assessment, projects, and performance assessment, (Yusuf, 2015).

To prepare a smooth and good students' transition from school to work or higher level studies, some countries and states have already come out with good projects. For example, Cohen (2008: 22) and Bangser (2008: 9) report about the American Diploma Project, where both state governors, education officials (at the K–12 and college levels), business executives, and many others unanimously worked on the issue about how to align high school curricula with the collective expectations of postsecondary education and work. This means the stakeholders in this issue apprehended the jeopardy it brings to the youth when no alignment is set between high school learning advanced level education, and work industries' standards. If such an alignment fails, it is consequently a complete fiasco as far as insuring students' successful transition from school to work is concerned. Analysis of both authors' work shows that the very stakeholders shared the same views that there be an effortful step forward so that on the one hand high tests school that students take really serve as readiness tests for college and workforce, and that standards, knowledge and skills required for success after high school should be aligned, (Bangser, 2008: 9; Cohen, 2008: 22).

It should be noted that a high alignment between classroom/school assessment and students' future expected role/work can push those learners to develop some sort of ability to identify or mirror themselves in the work or feel positive aspirations of the work role, Ng and Feldman (2007: 117).

A more complete link between assessment and the most useful 21$^{st}$ century skills on the one hand, and between those skills and the job performance is debated in Kaufman (2013: 81-83). The author shows the exercises that can foster 21 skills expected of work or job seekers in 21$^{st}$ century. Many of those exercises can be part of the tasks given in some authentic assessment methods.

Kaufman also advocates of a TFCS (21$^{st}$ First Century Skills) Approach that can be integrated in the daily classroom instruction, tasks, and assessment. The author also advocates for multiple education where Educational institutions or departments, industry executives, and Science Foundations are expected to collaborate for the sake of ensuring the students' future options good unfolding. The collaboration might be about offering mentorship, industry's availability for students' internship, and science foundations' offer for students' apprenticeship, (Kaufman, 2013: 80).

The central problem in this study is that there is little alignment or streamlining between school assessment and job industries hiring standards. From the very problem already stated, it can be derived a series of questions that this research seeks to answers: (1) what is the relationship between school assessment and job/work industries? (2) How can school assessment and work industries' expected job seekers' skills be aligned? (3) What are the characteristics or implication of a good test?

## METHOD

This research is a quantitative one, using *ex post facto* approach. The documentation data collection technique was used. The primary data used in this research are the state senior high school answer sheets of Mathematics Exam Takers' Answer, school year 2015-2016, Ende District. The data source is the Center of Educational Assessment (Puspendik)/Jakarta, Republic of Indonesia.

The population in this research is 115 students who took the 3324 Mathematics Exam Packet. Response data and patterns that served as the sample are those from 15 high schools students, Ende District.

For the Exam items' characteristics analysis technique, the Rasch Model was used with the help of Winsteps software version 3.73. Rasch Model measurement principles are probabilistic based, (Sumintono and Widhiarso, 2015: 35): which means that the probability to answer a test item depends up on the exam taker's ability and item difficulty levels. Through the use of Rasch Model, some information can be obtained: item difficulty, item fit, and the examinee's ability.

It should be noted that the item difficulty index used in this research spreads over [-2; +2] interval, (Djemari Mardapi, 2012). Item fit intervenes to assess whether the exam item (s) normally measures or no. According to Boonel et. al (2014), the criteria to determine good item fitness are as follows:

1. Outfit mean square (MNSQ) value: $0.5 < \text{MNSQ} < 1.5$;
2. Outfit Z-standard (ZSTD); $-2.0 < \text{ZSTD} < 2.0$;
3. Point Measure Correlation (Pt. Mean Corr) value: $0.4 <$ Pt. Measure Corr $< 0.85$. What's more, although the ability level/scale in logit measure spans from $-\infty$ to $+\infty$, the common one was used, i.e. -2 to +2.

For the sake of clarity, it is better to determine the theoretical criteria that become reference in categorizing difficulty index and examinee's ability respectively in Difficult/High, Average/Average, and Easy/Low.

Such categories are made under normal distribution assumption, following (Djemari Mardapi, 2012: 161) comments. Those criteria are:

Table 1: Difficulty Index and Examinee's Ability Categories

| No | Interval | Category |
|---|---|---|
| 1 | $X > \bar{X} + SD$ | Difficult/High |
| 2 | $\bar{X} - SD \leq X \leq \bar{X} + SD$ | Average/Average |
| 3 | $X < \bar{X} - SD$ | Easy/Low |

## RESULTS AND DISCUSSION

### *Item Difficulty Index*

After the analysis of the 40 National Exam items through Rasch Model, the results are that 12%, i.e. 5 exam items are in "Difficult" category while 70 %, i.e. 28 exam items are in the "Average" category. The remaining exam items, that is 17.5% (7 items) are in the "Easy" category. This is well-recapitulated in table 2.

Table 2: Item Difficulty for Packet 3324 Maths Exam

| No | Item Difficulty Index | Total | % |
|---|---|---|---|
| 1 | Difficult | 5 | 12.5 |
| 2 | Average | 28 | 70 |
| 3 | Easy | 7 | 17.5 |
| Total | | 40 | 100 |

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***Item Fit***

Based on the categorization criteria determined above, the analysis results are that only 3 exam items (7.5%) out of 40 are "fit" and the remaining items (37 items, i.e. 92.5 %) do not "fit" the model. This simply means that the very 37 items do not perform at the intended measurement. This also implies that the whole Pack 3324 Maths Exam fails to carry a proper measurement. The following is more illustrative:

Table 3: Item Fitness for Pack 3324 Maths Exam

| No | Fitness | Total | % |
|---|---|---|---|
| 1 | Fit | 4 | 10 |
| 2 | Not Fit | 36 | 90 |
| Total | | 40 | 100 |

***Examinee's Ability***

Based on the results after analysis, there is only one examinee, i.e. 0.87 % whose ability in working successfully on the Maths Exam is in the "High" category; 90 examinees or 78.26 % of the sample are in "Average" or middle category, while 24 examinees (20.87 %) have low ability, i.e. they are in the "Low" category. As it is clear to a bare eye, the examinee's ability in doing the Packet 3324 Maths Exam is average as many examinees are listed in the "Average" category based on the number of items they got right. The table below details what needs to:

Table 4: Examinees' ability in answering correctly

| No | Ability Level | Total | % |
|---|---|---|---|
| 1 | High | 1 | 0.87 |
| 2 | Average | 90 | 78.26 |
| 3 | Low | 24 | 20.87 |
| Total | | 115 | 100 |

## CONCLUSION

Based on the analysis and discussion above, the information got from Packet 3324 senior high Mathematics subject matter National Exam, it should be concluded that the difficulty level of the exam is in the average category because most exam items (70%) are of average difficulty index. Concerning examinee's ability, many examinees are listed in the "Average" category based on the number of items they got right. Only one examinee has an ability that is categorized in "High". This explains the reason why this exam items' fitness is low or quasi-inexistent. Ability and item fitness are related and if only one examinee answered correctly many items, there is failure of such an exam to measure. This non-fitness of the exam is contextual and location-related as it is assumed that the same exam can have a different item fitness characteristic in a different area.

These results reveal partly that something has been wrong either with the assessment system of these exam takers, or the ability of Ende District students' is average. This also is indicative on how those examinees' performance can be at the workplace. It might also a partial indicator of how those learners' transition from school to work or high education level has not been fully successful. The employers' standards might not allow those students to get their expected job/role. This might end in a non-career, a case where individuals move from job to another seeking for some financial added value but get none due to the fact that they do not fulfill conditions for well-paying jobs. Such individual might end in developing no linear job skills and no job satisfaction.

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# CALCULATING THE UNIT COST OF EDUCATION USING ACTIVITY BASED COSTING (ABC) MODEL FOR VOCATIONAL HIGH SCHOOL IN YOGYAKARTA SPECIAL PROVINCE

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Abstract

After successfully implementing the compulsory education program of nine years, the government continued the mandatory program to study at the level of secondary education, high school, vocational and the equivalent in 2013. This 12 year-mandatory program gives access to people to get secondary education. Considering the Financial Standard in Permen no. 9 year 2009 which has never been adapted until now, it is very important to finance this mandatory program. As the implementation of the new curriculum 2013, activities in education also change, and so does the cost standard which also need to be reformulated with a financial model based on the activity. The purpose in this research is to know the cost of a unit of vocational education in the Yogyakarta special province which factual issued by each unit education (vocational). The ultimate goal of this research is to set the amount of the cost of a unit conforming to the standard to support the establishment of the quality of education in vocational high schools. The calculation of the unit cost in SMK done on the model of activity based costing. Activity based costing (ABC) helps reduce the distortions caused by the allocation of the cost of previous traditions. Vocational high schools or often called as SMK are schools whose programs are designed for different skills or majors according to potential or available resources in a certain region. Each school has characteristics affecting its funding system.

Key Words: Activity Based Costing, SMK, cost of education

## INTRODUCTION

After successfully implementing 9 year-compulsory education, the government continued for a 12 year-mandatory program in 2013 for high school education, vocational school (SMK ) education and equivalent (Kemendikbud, 2012). A 12 years old, all the age of secondary education will have access to secondary education (high school, vocational schools, and equivalent). Financing standards in Permen no 9 years 2009 until now has never been adjusted, hence this study is very important in order to prepare the funding for reasonable 12 years program. Let alone by the enactment of new curriculum 2013 activities also changed their education cost, so that standards need to be formulated with the model based on financing activities (*activity based costing*). The government needs immediately plan tuition fees for high school and equivalent resources supply secondary education a unit of education and educational assistance for learners from poor bringing implication cost. All the medical continued should calculated that it is estimated fund need to run reasonable 12 years programs. To all of us is needed detailed information about the cost of a unit of secondary education good for the units (education), middle school and equivalent to allow students from poor go to school in secondary education.

To plan cost of education, the state requires factual information relating to the cost of education each school and every student called for a unit of education (unit cost). The cost of analysis is extremely important for education planner. This is because analyzing the cost of the unit is the efficient use of fund sources at school, advantage of investment education and equity spending the community and the government to education. In addition, it can also are healthy how alternative policies in an effort to improve or increase in education system. Gasskov (2000) suggested that in general vocational education funding mechanism must reflect the principle that education or training is a service and participants education or the training must carry the cost of the education system. The skills expected education or vocational training is to produce personal benefits (private return) and socially (social return) positive. Personal benefits can be seen from the impact of (outcome) the school graduates after getting work and income larger than the less educated or training. While social benefits of education or vocational training will be felt by other members of the community relating to the acquisition of knowledge and skill graduates in society.

In line with this, the study is done to count and also aware of the cost of a unit of vocational education in technological school. According to Gill (2008) the average unit cost of vocational school (SMK) is 40 % higher than public secondary school. Based on the data, average operating costs of non personnel vocational school (the course technical expertise building) is larger 49,10%. (Permendiknas no. 69 year 2009). From both statement appears that the financing of vocational education need large fund. Hence the use of education funds in SMK technology need planned carefully and systematic based on learning activities in accordance with the demand the formation of student ideal competency and quality. Funding the education system in SMK especially in the fields of expertise technology and industry needs to be done to get effective and efficient funding. Analysis of the costs education in this report is written with micro approach that bases bill calculation the allocation expenditureeach component of education used by students. Variable in this research is focused on cost components a unit of education covered the cost investment (personnel investment and non personnel), operational costs (personnel and nonpersonalia), and the cost of personnel tuition.

In PP No. 19 Tahun 2005 on national education standards explained that the school planning should be based on the minimum service standard (SPM) and national education standards (SNP) are that development access for the quality improvement of secondary education met the target expected so besides the cost of a unit of in general, researchers also tried to account and analyze the cost of a unit of education based on these minimum service standard and national education standards. Of analysis of the costs with the activity based costing is expected to cost of can be included the cost of vocational education in the province of DIY. Research on financing is always important because relating to the obligation of community for education to his family and obligations the government budget for education. The regarding the cost of education is expected to the government has a criterion (under) to determine assistance in the education in that next government period role as the education according to the constitution 1945 can be done and compulsory can be increased to 12 years.

## LITERATURE STUDY

A guide to the calculation of operational costs a unit of education (BOSP) and the formulation of policy in 2008 explained that the cost of education measured as a charge a unit of cost of education per year per student. According to Asrori Ardiansyah (2011), the cost of a unit of per student is size to describing how money allocated to school as effective for the benefit of students in seek the education. By as the costs a unit of is obtained by taking into account the number of students in each school, so size the cost of a unit of considered substandard or proper if it is compared between schools that with each other. Unit cost education is the average cost issued to implement cost per student per year.

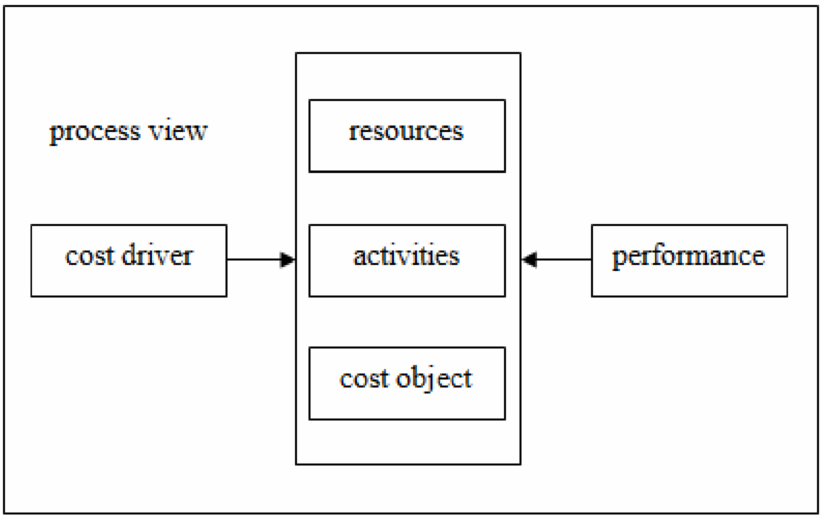
A unit of the cost of this is a function of the size of the expenditure as well as many school students. Thus, a unit of these expenses can be known to the path of dividing the entire amount of expenditure school every year by the number of students school in the year concerned. Andreas Senjaya (2011) stated that in the basic concept of education financing there are two important things that need to be examined or analyzed, namely the cost of education overall total cost and unit costs per student. Nanang Fattah (2004) said the cost of a unit at the school level is aggregate cost of education the school level either sourced from the government, parents and the society to effectuate education in one year lessons. Unit cost per student is a measure which describes how money allocated schools effectively to the interests of pupils in educated. Because of the cost of education obtained by taking into account the number of students on each unit of education, so the size of the cost of considered standards and comparable between a single education each other. Analyses of a unit of the cost of education in relation to other influence factor can be done by using a unit of education as a unit analysis. By analyzing the cost, allowing to know efficiency in the use sources of units education, advantage of investment education, and equity public expenditure, the government to education.

According to Akhmad Sudrajat (2008), accumulated or a sum total cost of the education system divided the number of students be known the cost of a unit of (unit cost). The unit cost meant here is units cost per student. The cost per student have four meaning. First, the cost per student is seen from the recurring cost. Second, the cost per student is seen from the capital cost. Third, the cost per student seen from accumulated or the sum of recurring cost with capital cost. Fourth, the cost per student seen from recurring cost, capital cost, and all cost directly by students need for education. Thus, a unit of per student who studied full of time student not difficult to calculated. The calculation done by adding all shopping or money spent by institution (total institution expenditures) in the implementation of the education duties divided by the number of regular students (full time student) in certain years, including they provided to his needed in own operating education. Abbas Ghozali (2012) said that when the cost of education per unit education charged per years, it all costs procurement resources education that benefits more than one the year put together years by means of divide by year use the resources. When the cost of education per unit education per year is divided by The number of students so called the cost of education per unit education per year or called cost per unit education students.

Vocational education is “learning how to work”, vocational education has been an effort to improve technical competence and to raise an individual’s position in society through mastering his environment with technology. Additionally, vocational education is geared to the needs of the job market and thus is often seen as contribution to national economic strength. Meanwhile, Gosskov (2000) defines vocational as the mandate of vocational school and manifold training. The vocational education and training system should deliver both foundation and specialist skills to private individuals, enabling them to find employment or launch their own business, to work productively and adapt to different technologies, tasks and conditions.

### *Activity Based Costing*

Activity based costing system is an accounting system a focused on activities performed to produce product/service. Activity based costing provide information regarding activities and resources needed to execute the activities. Activity is any an incident or transaction that is triggering a fee (cost the driver, act as the causes of in the expenditure a charge in organization). In the ABC system, the cost of find out to activity and then to a product. ABC system assumes that which is consume resources is not products, but their activities (Mulyadi, 2006).




Source: Hansen dan Maryanne, 2005

## METHODOLOGY

The research is empirical policy by a quantitative approach through survey to analyze the cost of vocational education technology in Yogyakarta. This assessment uses the descriptive analytic. Description is the fact such as the school yard and surroundings. Description of schools and the environment could also seen as approach of multiple case studies. Both that point of view used in the outline in this assessment. While a tool analysis developed using the policy study, conceptual study and study of empirical.

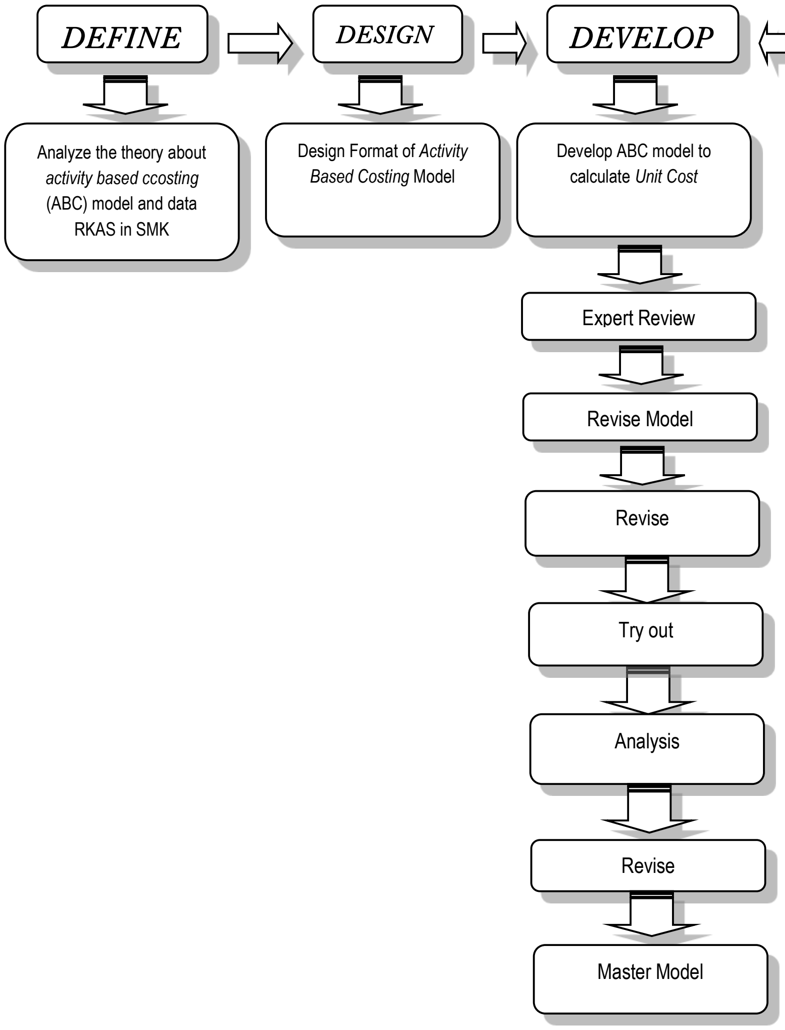



Figure 1. Stage of Research

The population of the research is all vocational school (SMK) technology in Yogyakarta Special Region. Research who uses the survey usually the determination of sample clusters stratified purposive sampling, for this research consider of school status (standard, SSN, RSBI) both private and public. As for the sample determined by each districts about three SMK. In this research will use two types of data on, namely primary and secondary data. Data collection method used is: the questionnaire, documentation, and focus group discussion (FGD). FGD will be conducted in each district by involving elements: the education office, the principal school and the school committee by the total number of FGD participants about 12 people.

## RESULT

### *Designing Activity Based Costing Model*

According to Marx model be defined as a procedure that is worn as a reference to continue empirical research who discusses an issue. In this research there are two ABC models developed for the calculation of unit cost of education in SMK. Of two models developed in this research phase years to be tried out in a limited manner in 9 SMK on a scale broad. With CIMOSA model (*Computer Integrated Manufacturing for Open System Architecture*) business process divide by 3 levels, as follow:

Table 1 Three Activity Levels in SMK

| Scope | Description | Explaining |
|---|---|---|
| *Managerial Process* | Pertaining to implemented activities the management (POAC). | the determination of vision the mission and the purpose of school<br>the preparation of strategy<br>monitoring and evaluation (MONEV) |
| *Core Process* | Pertaining to the main activity of which is of learning and teaching and student | identified the needs and product development<br>transforming and meeting the needs of products<br>the process of its marketing<br>the additional process |
| *Support Process* | Pertaining to the activity of which is of supporting the main activity | HR developing process<br>procurement processes infrastructure<br>the administrative process and financial<br>maintenance processes |

1. Identified Cost Object, Direct Labor Cost, Direct Material Cost, and Overhead Cost

Table 2 Cost Object, Direct Labor Cost, Direct Material Cost, and Overhead Cost

| Scope | Description | Explaining |
|---|---|---|
| *Cost Object* | The accumulated costs of the activities | Teacher |
| *Direct Labor Cost* | Personnel who were directly involved in education. | Teacher and staff |
| *Direct Material Cost* | The cost of direct used consumed in education | Supplier and tools |
| *Overhead Cost* | The cost of indirect raw materials, indirect labor costs, and the other indirect cost. | The expense of maintaining infrastructure, the slight improvement infrastructure, and other costs that cannot be traced directly the effects on output |

2. Identification Expense Category, Cost Driver, and Cost Component

Tabel 3 Expense Category, Cost Driver, and Cost Component

| Scope | Description | Explaining |
|---|---|---|
| *Expense Category* | That is spending for finance business activities vocational school that is ..Consists of fixed cost and variable cost | Routine material: expenditure on medical supplies, subscriptions power services and other. Expenditure material development: provision of materials teaching, hr development, task of procuring practice on each package expertise and others |
| *Cost Driver* | Factors that cause change the cost of activities | The number of students , the total number of teachers, the frequency of activities, the frequency of maintenance and frequency of improvement |
| *Cost Behaviour* | Namely pattern absorption cost influenced by the types of cost driver | Fixed cost, for example incentives, subscriptions resources services and others of variable cost for example medical supplies, lab work, stationery, the multiplication of examination questions and others |
| *Cost Component* | the components budget / fees absorbed by activities | Honorarium / incentives for teachers and staff , the test, the participants new students, basic training leadership, stationery and schools, subscriptions resources and services, workshop for curriculum and others |
| *Activity Centre* | a unit of entity organization by which the activity held | Each school |

3. The formation of ABC model to be applied in counting unit cost each expertise package

Based on a number of stages have been identified and were analysed can be described that activities has been described in the definition of routine expenditure and development expenditure depicted in the 3 levels of activity described in each cost drivers that has been set , can be described model encumbering activities the objects to cost.

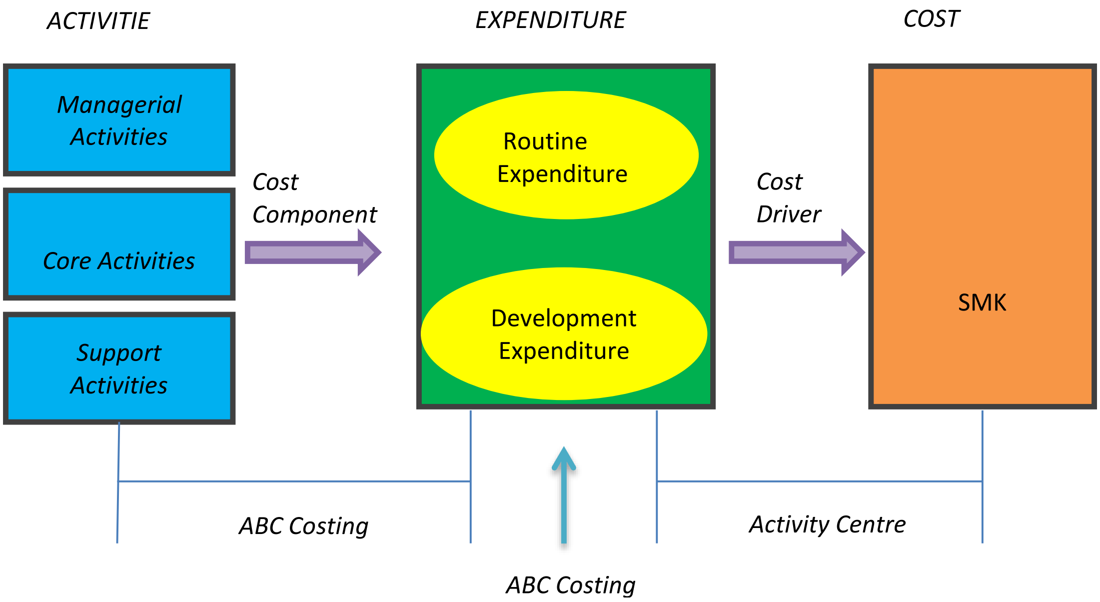



Figure 2. ABC Model

From observation and data collection obtained, the identification of expense category, cost driver, and cost component in table 4 as follow:

Tabel 4. *Expense Category, Cost Driver*, dan *Cost Component*

| Scope | Description | Explaining |
|---|---|---|
| *Expense Category* | Spending for finance business activities vocational school | The routine: shopping medical supplies, subscription services and other resources Spending development procurement material: material, hr development, equipment practice on every package expertise and others |
| *Cost Driver* | The cause change the cost of activity | The number of students, the number of teachers, the frequency of activities, the frequency of maintenance, and frequency improvement of facilities. |
| *Cost Behaviour* | The absorption of costs pattern that influenced by the type of cost driver .Consists of the cost of fixed and variable cost | Fixed cost, for example contract incentives, subscriptions power services and others variable cost. For example medical supplies lab work, stationery, doubling test and others |
| *Cost Component* | Components budget / fees absorbed by activities | Honorarium / incentives, the test, the participants new students, basic training leadership, stationery and schools , subscriptions resources and services , workshop for curriculum and others |
| *Activity Centre* | That is a unit of entity organization by which lasted activity | Certain SMK |

## CONCLUSION

This research has developed two models of unit cost of the calculation of education in SMK in Yyogyakarta Special Province. From the results of the evaluation of experts on average for all the aspects regarded as two models developed in the category of very good and useful for implemented. In order to apply two models the calculation of unit cost with activity based costing, already produced peripherals, namely two a template to compute unit cost.

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# EDUCATIONAL BACKGROUND AND RETURN TO EDUCATION BETWEEN MALE AND FEMALE IN INDONESIA

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Abstract

Indonesia has problem in labor participation between male and female. Male school attainment rate are relatively higher than female for 25+ which is female are less educated than man. Female participation in labor force is also relatively lower compare with male. This research examines the return to education and educational background between male and female on their lifetime income. Data used in this research is longitudinal data from Indonesia Family Life Survey from 2000-2014. This study analyze three factors affecting lifetime income: years of experiences, length of education, and education background. The education background is divided into two variables to evaluate the effect of vocational school and madrasah participation on lifetime income compare to the main school type to analyze the different of school type participation on lifetime income. This paper use fixed effects analysis to omit endogeneity in the model. This research finds that male gets higher income from experiences and female gets higher from years of education.

Keywords: educational background, return to school

## INTRODUCTION

Indonesia was ranked 92 out of 145 countries in the Gender Gap Index 2015[1] means that Indonesia was relatively left behind for gender equality. The phenomenon shows there is still much problems on Indonesian labor market especially for education and labor force participation. Some problems of education issues is female, male primary attainment rate (% aged 25+), female, male secondary attainment rate (% aged 25+), female, male tertiary attainment rate (% aged 25+) respectively are 70:79, 40:49, and 8,8. That ratio shows that nowadays, female in the labor force is less educated than man.

Other indicators is ratio for female to male participation in labor force shows 0.62, and overall economic participation and opportunity scores is 0.59. These indicators shows that women with relatively less educated than man has smaller participation rate in labor force. Since education is one of important factor contributing to jobs and earnings, there should be an evaluation to this conditions. This research want to examine the effect of education and lifetime income in Indonesia across gender to derive the important of education for male and female. The education evaluated in this study is not only years of school participation, but also educational background.

There are large number of studies studying effect of education and educational background on lifetime income. Many of studies estimate the effect of educational background on lifetime income which is much of them studies the effect of vocational school to lifetime income. Since Indonesia has 2 category school: 1) vocational and main school and 2) madrasah and main school. These two

[1] Global Gender Gap 2015, World Economic Forum

category based on curricula on school. Vocational school use more applicative curricula than main school that many of previous study already examine of that effect. Madrasah that is ruled is under Departemen Agama has its own characteristic and curricula. This study want to examine the effect to income.

Other things that make this research interesting is the measurement of estimation for male and female, so we can predict how much return to education for male and female. The effect of educational background to lifetime income for male and female, and other related variable contribute to lifetime income for male and female. By dividing two groups of estimation, we could evaluate the difference between male and female.

## FACTOR CONTRIBUTING TO LIFETIME INCOME

There are many factors affecting income, one of them is experience. Higher experience of works someone have, higher expected income he gets. There are many previous studies analyze these effects. Bartlett (1978) studies show that there is significant correlation between experience and wage. Altonji and Shakotko (1987) evaluate the relationship of experience using tenure job seniority to wage rise. This study finds that there is effect of tenure on wage although the partial effect is small. Lemieux (2006) support Altonji and Shakotko argument that there is effect of experiences on wages, but just a small effect. The effect of experience, could be non-linier to measure marginal effect of years of experiences. Bartlett (1987) and Lemieux (2006) use non-linear method to analyze the effect of experiences on wage.

Other variables affecting income is education. Education is getting knowledge from school that in the future can be applied in the real world. Years of participation in school associated with higher knowledge someone has. There are two types of analysis use to analyze the effect of education on wages. The first is measuring years of education participated (Dechenes (2007) and Bonjour et al (2003)) and other is level of school enrollment (Deolalikar (1993) and Lemieux (2006)). Years of education have positive effect on wage. To measure years of education effect linear and non-linear model can be used, but In this study, non-linear model is prefer to be used to examine marginal effect of return to education.

Education is not only about years of schooling but also educational attainment including educational background on school type enrollment. One of the most discuss is the difference wage of participating in vocational training or main schooling. Grubb (1993) analyze the effect of proprietary school on wage controlling vocational education through men and women. This study result that vocational training has positively significance effect on wages for male and female. Study in Indonesia for vocational training did by Newhouse and Suryadarma (2011). Newhouse and Suryadarma find that vocational graduate's wage premium for women is greater than man. Another findings conclude that in Indonesia, men facing large wage penalty by attending vocational school.

Other school type that can describe the effect of schooling on education is community based schooling. Grubb (1993) studies shows that there is positive significant effect of attending community school. I can't find study about these in Indonesia. Since Indonesia has two type school based on regulatory control and religion-based curricula, there should be a study to examine how these type of school affect lifetime income.

Marital status of worker also have an effect to lifetime income. Some studies about marital status on wage have been discussed by previous research. Hill (1979) finds that married worker get wage premium compare than other. Korenman and Neumark (1991) finds that married man receive higher performance rating than single men, so married man gets higher salaries. Krashinsky (2004) found that marriage status is not important causal effects on earnings. In this studies, marital status placed to be control variable.

Some factors stated above are overall factors. This study has to examine all above factors contributing to lifetime income for male and female. Studies about gender gap have been analyze for many years. Hersch (1991) analyze the difference between male and female in hourly wages. Study about gender differences in Indonesia have done by Deolalikar (1993), Gallaway and Bernasek (2002), and Newhouse and Suryadarma (2011). Deolalikar (1993) studies founds that males have lower return to secondary and tertiary schooling than females. Newhouse and Suryadarma study does not use dummy to look for the differences between male and female. They use grouping for men and women to estimate the differences between male and female. Their study also did by non-random sorting to explain test score and parent educational background.

Considering all of factors had explained in this study, the goal of this research is analyze factors affecting lifetime income including years of education, years of experience, educational background, and marital status. These variables effect estimate in group estimation for male and female to know the difference between male and female.

## DATA AND METHODOLOGY

The analysis in this study uses longitudinal data analysis using Indonesia Family Life Survey sample data from 2000-2014. Indonesia Family Life Survey data covering about 85% Indonesian population in 13 provinces. Data used in this research derived from Book K and Book 3A to get employment data, sex data, and school type data.

Variables use in this study consist of 2 variable, annual income as dependent variable and 3 other variable as independent variable. Independent variables consist of 3 groups. First group is work group consist of years of experiences and control variables: weekly hours worked and types of work. Second group is education group covering years of education and school type covering vocational school type and madrasah. Third group is marital status as control group.

$$linc_{it} = \beta_0 + \beta_1 exper_{it}^2 + \beta_2 exper_{it} + \beta_3 educ_{it}^2 + \beta_4 educ_{it} + \delta_1 voc\_sch_{it} + \delta_2 voc\_sch_{it} + \delta_3 work\_type_{it} + \delta_4 marr\_stat_{it} + e_{it}$$

Primary variable use is Income, education, experience, and educational background. Income used in this research is last 12 months income derived from book K and book 3a including wage and profit. Variable income in log model is used to reduce variations from the data that there is extremely high income and extremely low income. Experience specification is years of experience someone get in current job. Vocational type of school is used to measure the difference return to education between someone enroll in vocational school in his last school or not. Madrasah is used because the rare of studies analyze the effect of madrasah to return to education.

Control variables in this study consist of 3 variables: hours worked, work type, and marital status. Hours worked shows normal hours of worked in primary job. Work type shows type of work done consist of: self-employed, self-employed with unpaid family, self-employed with employees, government worker, unpaid family, casual worker in agriculture, and casual worker in non-agriculture. Works types are used to show the difference of wage across type of works people does. Marital status consist of unmarried, married, separated, and divorced. Marital status used to show the difference of marital status on annual income.

Table 1. Variable Specifications

| Variable | Specification |
|---|---|
| Linc | Logarithm form of annual income |
| Educ | Years of education (years) |
| educ2 | Years of education square (years$^2$) |
| exper | Years of experience (years) |
| exper2 | Years of experience square (years$^2$) |
| voc_sch | Vocational school type of last school attend (1 if last school type = vocational school, 0 if other) |
| madrasah | Madrasah school type of last school attend (1 if last school type = madrasah school, 0 if other) |
| work_type | Dummy variable type of work consist |
| marital_status | Dummy variable of marital status |

## RESULTS AND FINDINGS

Table 1 shows the estimation result of the model. Estimations shows in this paper is fixed effects panel estimation to omit unobserved heterogeneity and other time invariant endogeneity. In this case, I get the example of religion affect someone to attend madrasah. Someone that is not Islam, he cannot attend madrasah. Religion is time invariant in this observation, for 6875 sample from 2000-2014. This argument is enhanced with Hausman test that show the best effect for this estimation is fixed effects.

Overall effect of educational background mainly are statistically significant and they are consistent for male and female except Madrasah that has positively significance for male and not for female or overall effects. Male get higher return for attending madrasah for about 0.28% higher than not attending madrassah school type. Vocational School has negatively significance effect to percentage of income, which's means someone that attend vocational school get income penalty about 0.51% compare to non-vocational school. For male, the wage penalty for attending vocational school is just 0.37%, lower than female penalty 0.81%.

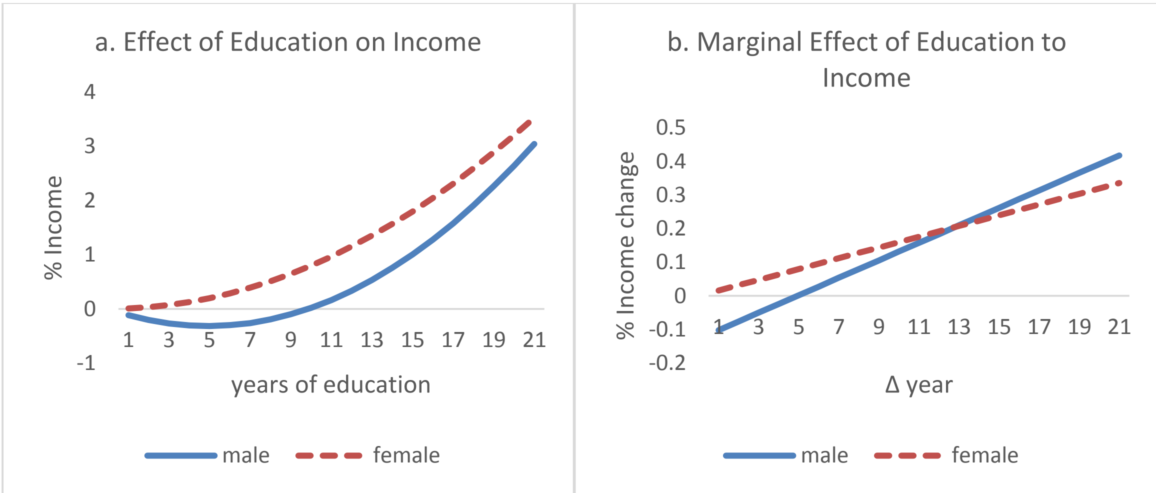
Table 2. Estimation Result of Log Income

| Dependent variable: Log Income | overall | male | female |
|---|---|---|---|
| **Education** | | | |
| Years of education square | 0.012*** | 0.013*** | 0.008** |
| | (0.002) | (0.002) | (0.003) |
| Years of education | -0.110*** | -0.128*** | -0.052 |
| | (0.028) | (0.033) | (0.059) |

| Dependent variable: Log Income | overall | male | female |
|---|---|---|---|
| Vocational school | -0.508*** | -0.371*** | -0.805*** |
| | (0.075) | (0.089) | (0.137) |
| Madrasah | 0.185 | 0.278* | -0.058 |
| | (0.106) | (0.127) | (0.192) |
| **Work** | | | |
| Total hours worked | 0.001* | 0.0007 | 0.001 |
| | (0.0004) | (0.0005) | (0.0005) |
| Years of experience square | -0.0003*** | -0.00019** | -0.0004*** |
| | (0.00006) | (0.00007) | (0.0001) |
| Years of experience | 0.038*** | 0.033*** | 0.049*** |
| | (0.003) | (0.003) | (0.005) |
| Self-employed | 0.073 | 0.203 | -0.893*** |
| | (0.127) | (0.167) | (0.248) |
| Self-employed with unpaid family | 0.338** | 0.505** | -0.761** |
| | (0.126) | (0.166) | (0.251) |
| Self-employed with employees | 0.606*** | 0.720*** | -0.387 |
| | (0.169) | (0.205) | (0.369) |
| Government worker | 0.401** | 0.353 | -0.091 |
| | (0.153) | (0.192) | (0.302) |
| Private Worker | 0.204 | 0.353* | -0.821*** |
| | (0.129) | (0.167) | (0.239) |
| Unpaid family worker | | | -0.901** |
| | | | (0.305) |
| Casual worker in agriculture | 0.570*** | 0.761*** | -0.554 |
| | (0.160) | (0.203) | (0.305) |
| Casual worker not in agriculture | 0.795*** | 0.887*** | |
| | (0.145) | (0.179) | |
| **Marital Status** | | | |
| Unmarried | -1.728*** | -2.189*** | -0.959** |
| | (0.251) | (0.400) | (0.369) |
| Married | -0.401 | -0.637 | -0.379 |
| | (0.236) | (0.389) | (0.315) |
| Separated | -0.228 | -0.62 | -0.031 |
| | (0.256) | (0.427) | (0.339) |
| Divorced | 0.223 | -0.27 | 0.429 |
| | (0.252) | (0.416) | (0.334) |
| **Constant** | 15.123*** | 15.444*** | 15.457*** |
| | (0.295) | (0.445) | (0.484) |
| $R^2$ | 0.1903 | 0.1987 | 0.203 |
| Observations | 6857 | 4836 | 2021 |

Notes: * p<10%, **p<5%, ***p<1%; numbers in parenthesis show standard error

The effects of years schooling can't be interpret with just the numbers of coefficient, which is in this model I use non-linear model to analyze the years of schooling because of the difference effect of per years of education. To know the effect of years schooling, we must derive the equation per years of schooling (*Δ log income/Δ years of schooling*), which is equal to *0.026(years) - 0.13* for male and *0.016(year) - 0.052* for female. Graphic 1a shows the effect of years of education on income.




Graphic 1. Effect of Education on Income

From the graphic 1a, female has higher return to education compare to male that indicate female gain more from school. For the marginal effect in graphic 1b, female also have higher return per years of schooling until about 12 additional years. Per 13 additional years, male has gain more than female from school attending. These two graphic show us that overall, female has better return to schooling, means that female should give an incentive to attend school to get higher income.

Work attainments for overall group, experience has significance effect both for years of experience square and years of experience. Total hours work has significant effect that means per additional hours per week, annual income will raise up to 0.001%. Control variable type of works has their own effect. Self-employed income is not different with other types of work. Self-employed with unpaid family get higher income about 0.34% than other types of work. Self-employed with employees gain 0.61% higher income than other types work. Government worker get 0.40% salary than others. Casual worker in agriculture and non-agriculture both have the same effect, respectively about 0.57% and 0.80% higher than other types of work. Unpaid family worker is omitted in the estimation due to collinearity.

For every sex group, hours don't have significant effect on annual income. Self-employed don't have significantly difference than other types of work for male, and get income 0.89% lower than other types. Self-employed with unpaid family gain 0.51% higher income than other for male and 0.76% lower than others for female. Self-employed with employees gain 0.72% higher than other for male, but does not have significantly different for female. Government worker does not have any different in income for male and female. Female as private worker gets 0.82% lower income than others type. Male as private worker gets 0.35% higher income than other types. Unpaid family worker gets 0.90% lower income than others. Casual worker in agriculture gets 0.76% higher income

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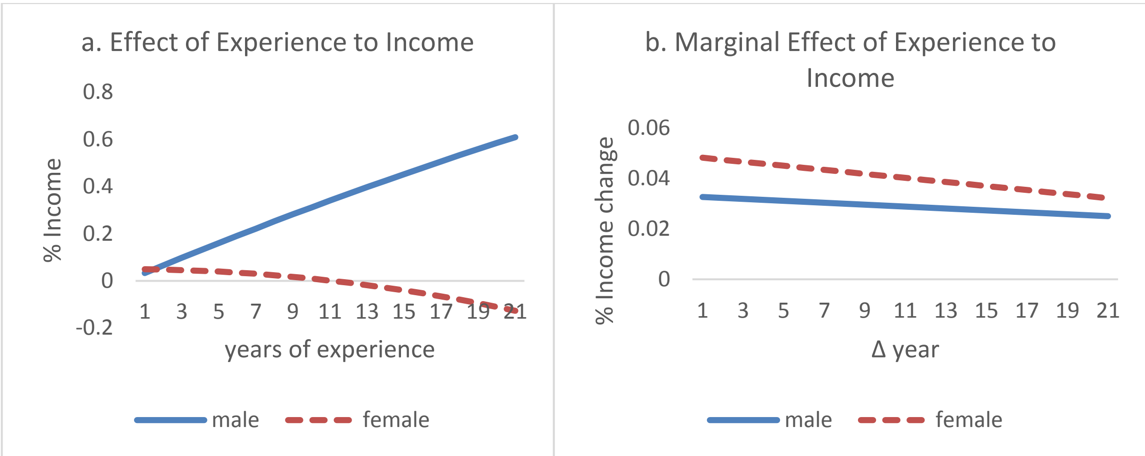
for male but does not have any different for female. Casual worker non-agriculture gain 0.89% higher than others for male, but does not different for female. Unpaid family for male and casual worker non-agriculture for female is omitted because of collinearity.

For male and female, years of experience have significant effect. To measure the effect of years of experience, we should derive the estimation. The result are *-0.00038(year) + 0.033* for male and *-0.0008(year) + 0.049* for female. Graphic 2 show us the effect of experience to annual income. Graphic 2a show that return to annual income from experience for male is higher than female. Although return to male annual income is greater than female, but female get more premium from per additional year of experiences. The result shows that male gain higher from experience, but female gain higher per additional year. Something interesting from this findings is male gain more from experience and female gain more from education.




Graphic 2. Effect of Experience on Income

Marriage status as control variable just have unmarried status to be negatively significant. For overall group, male, and female. For overall, someone who has not married gets 1.73% lower than other status. For male, unmarried people gets 2.19% lower than other and for male, unmarried people gets 0.96% lower income than others. Married, separated, and divorce status don't have significant effect on annual income.

## CONCLUSIONS

This research finds that female relish the higher return on education than male. The effect of works experience if positively significant and male have higher return on annual wage per additional year on works experience than female. Education background have significant effect on annual wage. Overall, the effect of vocational background have negative impact on annual salary and it is the same on male and female labor. Madrasah has no significant impact for female labor and has positive effect on male labor. The conclusions derived from this research are (1) return on education on female is higher than male, (2) year of experiences of male have higher impact than male on annual salary, (3) labor that have vocational background have the lower salary than others and it is consistent both for male and female, and (4) Madrasah does not have significant effect on females annual salary female and have positive effect on males annual salary. These finding shows that female should attend more years of schooling to gain more on lifetime income.

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# FOREIGN LANGUAGE SKILLS AS AN ASSET OF GLOBAL COMPETITION FOR FRESH GRADUATES OF PADJADJARAN UNIVERSITY

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Abstract

Globalization makes countries border disappeared. These interaction and integration process give some benefits for people around the world to work and make some corporations. One of the abilities supporting the globalization is foreign language skills, the one of factors in work that support workers' future career. That skills can make the workers have good communication ability to face future competition, create more relations with other people in the world, and even have more opportunities to work with multinational corporation. In relating to this era, this research describes about the influence of foreign language skills for fresh graduates from Padjadjaran University, Indonesia, in facing the global competition in labor market, particularly after the establishment of ASEAN Economics Community. The study focused on the influence concerning school-to-work transition of fresh graduates from Padjadjaran University. The aims were to know the impact of foreign language skills to the lifetime prospects. The employed method in this research was qualitative descriptive, using random sampling method. The research data was obtained by distributing a questionnaire addressed to the Padjadjaran University graduate students. The criteria applied were Padjadjaran University students graduated in 2015-2016 who have worked or works in a company or institution. Questions in the questionnaire leaded on exploring the information related to influence of foreign language skills to employment opportunities, job performance quality, and career sustainability in the future. The results show that the role of foreign language skills for Padjadjaran University graduates in work world is very large, either directly or indirectly. Direct benefits are obtained when the realm of the work is related to the international sphere, while the indirect benefit obtained when foreign languages are used as a support to increase knowledge and relationship. The result also said that some companies do not facilitate training so the workers must independently learn and practice the language themselves. Overall, all participants, including those who cannot get the benefits of their foreign language skills for their work world, admit that foreign language skills, especially the ability to speak English as an international language, is valuable in order to persistently survive and excel in the increasingly fierce global competition nowadays.

Key words: foreign language skills, fresh graduates, globalization, labor market competition

## INTRODUCTION

Globalization, which negates the limitation of time and space between one country and another, makes all interactions among institutions and even among individuals become much easier. All the ease in the age of globalization are also clear subtly demanding society, especially labor, to enrich themselves inevitably with various qualified skills. This high competitiveness even can be said to be a necessity for the citizens of Indonesia after the implementation of the ASEAN Economics Community, a single market approved by the countries in ASEAN.

ASEAN Economics Community does not only open the limitless trade in goods and services, but also the labor market professionals. This policy requires the public to be able to compete with more competitors, both from their own country and from foreign countries. If society is still not ready or they still have low competitiveness, the possibility for them to be dragged by globalization will be even greater. They will have difficulty in fulfilling the needs of life. Even those who can take advantage of globalization to further enrich them can gradually colonize the others in society economically.

In order to survive in this global competition, people who want to be success through selection that only those most competent would move forward and survive must meet certain competency standards. One of the capabilities that are useful in this period is the foreign language skill. Now, more and more foreign companies set up their business in Indonesia. Foreign ownership or international concept attached to the companies is not rare to be the reason for the insertion of foreign language proficiency requirement for prospective employees, in order to communicate and be able to do well in the job. Some national companies also have entered the requisite of foreign language skills for workers. One aim is to expand the network with parties of foreign countries.

Globalization and ASEAN Economic Community does make the tight labor competition experienced by all the ages; however, as in productive period, more young people still obtain the most impact of them. Based on the background of globalization, ASEAN Economic Community, and the highest order of the need for foreign language skills, particularly in the world of work, the researchers will examine the influence of foreign language skills for the lifetime prospects of Padjadjaran University graduates.

## LITERATURE REVIEWS

### *Globalization and ASEAN Economics Community*

Globalization is a motive of global competition. People live in the world with no border region. This condition makes high competition around countries, because everybody can participate to compete each other, especially in business. Kang-Kook (2014:111) defined globalization as the phenomenon, which has integrity in national economies and effect for development global level of international movements such as goods, services, labor and capital [1]. Not only globalization, another aspect takes a part for competition. In order to survive, people should have some qualified abilities or skills. Van Roekel (2010:1) said that global competence refers to ability from person, who have knowledge and global issue in-depth. Then, they can learn and work with people with different cultural backgrounds. There are four basic elements, international awareness, appreciation of cultural diversity, proficiency in foreign languages, and competitive skills [2].

Indonesia is one of countries that faces ASEAN (Association of Southeast Asian Nations). Kawai and Naknoi (2015:10) said that ASEAN has become an important production base in multinational from Japan, USA, Europe, and Asian firms [3]. Indonesia and other countries in ASEAN corporated in economics field named AEC (ASEAN Economics Community). Dosch (2015:2) said that AEC has four pillars, there are single market and production base; competitive economic region; equitable economic development; and integration into the global economy [4].

***Human Resource and Skill in Fresh Graduate Students***

Quality of human resource can measure with level of formal education, as higher level, its impact in work. According to Bowlby (1998:46), education is a key to make successful transition from school to work. Research shows that the more education, the less numbers of unemployed [5].

Human resource related with services; it challenges people to change and improve their work in better ways. Then, [corporations have human resource management] to give an effort for strengthen business. Boxall and Purcell in Pepper, Richardson, and Walker (2013:1) explains the concept about four components for workforce performance as a function, first capabilities, which employees need to carry work such as knowledge, skills, and aptitudes. Second is motivation, which employees require to encourage perform for best abilities. Third, work organization, the way for employees to structural and work well. And last, employment relations, the program, policies, and practices improve employees with employers [6].

Although formal education gives knowledge to people, but still, skill is also required for people to get job and work in cooperation. Vanpatten and Benati in Taie (2014:1972) refers the concept of skill as ability to do than basic competence and mental representation [7]. Barney in Buta (2015:156) said that company has many advantages when they get human resources that their rivals in market doesn't have [8].

As Fresh graduate students, young generation is educated people with knowledge and experience on its studies. Based on Statistics Indonesia (BPS/Badan Pusat Statistik Indonesia) in 2014-2016, there are 11.090.000 students from university or 9,36 percents in August 2016 from all level formal educations, who work in Indonesia [9]. This happens because as Wellington in Robles's view (2012:453-454), besides technical skills as part of excellent educational, students also need soft skills early in their academic programs before they spread on business career [10].

***Communication and Language Skills in Work***

According to Aasheim, Li, & Williams in Zhang (2012:155), besides Information and technology (IT), college graduates also should attain skills such as teamwork, conflict management, and communication. Communication has second ranked from seventeen skills based on importance soft skills by 348 IT Managers [11]. Particularly in communication, there is intercultural communication. Gudykunst (2002:1) explains that there are two keys concept from intercultural communication: communication and culture between individuals of different culture [12]. Language and culture are close to each other, thus students learn culture by take or use language from its region. Whorf in Littlejohn and Foss (2009:606) define that communication with language makes humans human [13]. Language is not only as a media, but also as an important instrument. Language areprimary and unique in human for communicating like share ideas, express intentions, and get information according to Powers (2013:2) [14]. Suriasumantri in Setyawati (2013:299) even explains language have important role in human life, but they are consist it like ordinary activities such as breathing and walking [15]. On the other hand, Grenier (2015:3) explains that language as an economic variable based on four ideas, first reflecting communication in economic activities between buyers and sellers to understand each other. Second, language and culture connected, it describes person who has language knows the environment work. Third, language contributed to human capital, then it can develop to be productive skills. And last, advantages from using language depend on number of other people speak it. It effects to make relation around the world and can compete with multinational company [16].

## METHODOLOGY

In this study, the researchers analyze the effect of foreign language skills for fresh-graduate students from Padjadjaran University, Indonesia, in facing global competition in labor market, mainly since ASEAN Economics Community has been legalized. The object of this research focuses on school-to-work transition of Padjadjaran University fresh graduate students. The employed method is descriptive qualitative method. The data is taken via online questionnaire in Google form with random sampling method. The criteria applied are Padjadjaran University students graduated in 2015-2016 who have worked or works in a company or institution. The questionnaire content then leads on exploring the information related to influence of foreign language skills to employment opportunities, job performance quality, and career sustainability in the future.

There are 65 respondents participated in this research. All of the data are classified into 4 groups, based on the amount of the complex in Padjadjaran University: Social Complex, Medical Complex, Agro Complex, and Science Complex.

## ANALYSIS AND DISCUSSION

Many people, especially young people take the standard test(s) of foreign language proficiency to measure their ability in foreign language(s) they need. The phenomenon reflects what Van Roekel said that proficiency in foreign languages is indeed one of basic elements in facing the global competition. Furthermore, the standard tests actually can indicate the tendency of people in learning foreign languages.

When asked about the foreign language proficiency test that has been done, most of the fresh graduate students from Padjadjaran University, those who are graduated in the period 2015-2016, answered that they have done TOEFL test. That result demonstrates that although there are many foreign language can be mastered in association to face the global competition, English is still be considered as the language needed for fresh graduate students from Padjadjaran University in all of complexes.

**Table 1: TOEFL Score of The Fresh Graduates (%)**

| Score \ Complex | Social | Medical | Science | Agro |
|---|---|---|---|---|
| **350-400** | 16,2 | | 33,3 | 12,5 |
| **401-450** | 16,2 | | | 12,5 |
| **451-500** | 21,6 | 35,7 | | 25 |
| **501-550** | 16,2 | 42,9 | 66,7 | 25 |
| **551-600** | 5,4 | 21,4 | | |
| **601-650** | 2,7 | | | |
| **Total Response** | 29/37 | 14/14 | 6/6 | 6/8 |

Table 1 above shows that all of the respondents from all of the complexes, except the Social one, were better considering the English language as the language that need to be mastered, while Social Complex students will consider other languages to be also mastered beside English. A total of 55 out of 65 respondents have taken the TOEFL to determine their ability in speaking English. As many as 10 people consisted of one person from Social Complex who have followed IELTS; 3 people who have never taken a foreign language proficiency test (2 people from Agro Complex and 1 person from Social Complex); and a number of 6 people from the Social Complex who have taken the test non-English foreign language (Japanese, French, German, and Arabic).

**Table 2: Foreign Language Skill Requirement for Applying A Job (%)**

| | Complex | | | |
|---|---|---|---|---|
| | Social | Medical | Science | Agro |
| **In requirement** | 70,3 | 50 | 83,3 | 50 |
| **Just in consideration** | - | 14,3 | - | 12,5 |
| **Not in requirement** | 29,7% | 35,7 | 16,7 | 37,5 |
| **Total response** | 37/65 | 14/65 | 6/65 | 8/65 |

Although most respondents are more conscious for their English proficiency, in fact, equal to or more than 50% fresh graduate students in every complex of Padjadjaran University admitted that foreign language skill is needed when applying for a job. For Social complex students, 70.3% of total respondents said that foreign language skill is in the requirement when applying for a job, Medical complex and Agro complex students - both of them admitted for 50%, and the last is Agro complex students admitted for 83.3%.

**Table 3: The Influence Scale of Foreign Language Skill in Working World (%)**

| Scale / Complex | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Social** | 2,7 | 2,7 | 27,1 | 32,4 | 35,1 |
| **Medical** | - | - | 35,7 | 21,4 | 42,9 |
| **Science** | - | - | 16,7 | 50 | 33,3 |
| **Agro** | 12,5 | - | 12,5 | 37,5 | 37,5 |

Besides the effect of foreign language skill to apply a job, it also influences job performance quality. The result above shows variant answers and different scales from fresh graduate students of Padjadjaran University. Only few of the respondents thought that foreign language skill influence in the working world is not too important. As many as 2.7% of Social complex students and 12.5% of Agro complex as well give a scale of 1 for the influence of foreign language skill in a job. Another low scale from respondents is 2, reaching 2.7% from Social complex respondents. Scale 3 to 5 are given from all the complexes and the results are good enough because the vote is more than twelve percents from each complex. The scale 3 to 5 is mostly given by the fresh graduates who get direct benefit from foreign language skill in their job performance. The direct benefits are obtained when the realm of the work is related to the international sphere, while the indirect benefit are obtained when foreign languages are used just as a support to increase knowledge and relationship.

**Table 4: Fresh Graduates who Get Training from Their Company (%)**

| Kind of Training \ Complex | Social | Medical | Science | Agro |
|---|---|---|---|---|
| **Seminar** | 8,1 | | | |
| **Workshop** | | | 16,7 | 12,5 |
| **Course** | 13,5 | 14,2 | | |
| **Others** | 13,5 | | | |
| **Do not get any** | 64,9 | 85,7 | 83,3 | 87,5 |

Even though foreign language skill influences in the working world, companies did not facilitate the employees to evolve their foreign language skill. Besides companies wanted their employees being able in speaking foreign language to give countenance to companies facing the global competition, more than 50% of respondents in each complex at the Padjadjaran University never received training specifically on the company where they work. As for other forms of training provided by the company on the survey of this research are in the form of English club, coaching from the competent department, management training, language training, or in the form of non-formal guidance given by the superiors.

## CONCLUSION

Globalization influences human to be able to associate with different culture from different areas in the world. This phenomenon makes people should have to face a global competition. Particularly, Indonesia, with high population, can have the best quality of human resources from fresh graduate students, who have higher education and skill.One qualified ability for the best quality human resources is for instance foreign language skill. Most of fresh graduates students in Padjadjaran University in every complex agree, that foreign language skill is an asset for their career in the future. The need of this language skill proficiency in this globalization era is also create a reason for some companies to make a requirement of foreign language skills to their employees. Almost of the respondents in this research regard English as the most needed language to be learned by the fact that they have ever done english test, such as TOEFL or IELTS. However, mostly respondents declare that they did not get any foreign language training in their workplace; they have to get the ability themselves. Besides for taking a better job, some of participants use it for learning some knowledge from books written in foreign language and learn the language as a preparation for the next higher level education.

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# THE INFLUENCE OF HIGHER EDUCATION ON STUDENT'S EXPECTATION OF ACCOUNTING PROFESSION

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Abstract

The development of business and economics globally spread around the world including Indonesia create a rapidly growing industry sector. This development increases the needs of professional accountants in Indonesia and will continue to grow in line with business and economic growth. IAI (Indonesian Accounting Association) data in 2014 showed the number of accountants who are registered as members of IAI about 15.940 people. In the other hand, data showed an increase number in accounting graduates from universities in Indonesia. The number of accounting graduates in 2010 reached 35.304 graduates, which has increased dramatically from the previous year which reached 24.402 graduate in 2009, 25.649 graduates in 2008, 27.335 in 2007 and 28.988 in 2006. Comparison data between accountant number and the number of accounting graduates shows that not all accounting graduates work as a professional accountant, on the other hand the requirements of professional accountants remains high. This indicates there is an imbalance between the needs of accountant and the availability of accountant can be produced by higher education. This condition raises the question of inequality of the number accounting graduates are still not able to meet the needs of a professional career, not only in terms of quantity. It is noticed that students build their professional expectation during education. For many accountants who had worked, the university became a factor that is influencing their expectations in the workplace.

Accounting education in higher education has been a significant factor impacting its students on their workplace expectation. This research investigates the influence of university accounting studies have on student's expectation of the accounting workplace. This study aimed to explore the effects of accounting education against expectations of accounting students to professional accountant workforce. The "Met Expectation Hypothesis" (MEH) use in this study to explore the expectations of accounting students during the education process and the fulfillment of these expectations when enter the workplace as accountant. This study uses survey-based methodology for accounting students and graduate students. The survey is based on three main indicators (ie: job satisfacition, reward and responsibility). These indicators developed into an instrument designed to explore each of the variables. The three main indicator drawn for 21 indicators the study and expanded into 50 item of questionaire. Respondents in this research classified into 3 groups, ie: junior accounting students, senior/ finale years accounting students and graduate students who entered the workplace.

The results of this study indicate that the expectations for the accounting profession for junior students occupy the highest expectations, then had a decreasing trend for senior accounting students and increased again when the work became an accountant in the workplace. Although the results showed this difference was not significant between groups of respondents, but this pattern shows that accounting education has impacted the expectation of the students about accounting profession. The result show that senior student feel the accountant workplace are less likely to be met compared to junior students.

Keywords: Accounting Education, Met Expectation Hypothesis, Accounting Profession

## INTRODUCTION

Data in 2014 showed the number of accountants who are registered as members of IAI (Indonesian Accountants Association) only about 15 940 people. This figure is still below the number of accountants comparing to other contries in south east Asia region. Malaysia, reached 30.236 professional accountants, Philippines had 19.573 accountants, mean while Singapore had 56.125 and Thailand had 27.394 accountants. Considering as the largest population, then obviously the ratio of the number of accountants compared by the total population in Indonesia is ranked lower. This figure also shows that supply of professional accountant in Indonesia will be rivaled by the professional accountants from other countries which were able to provide a larger workforce. On the other hand, data showed there were an increase in accounting graduates from universities throughout Indonesia. The number of accounting graduates in 2010 reached 35.304 graduates, which has increased from the previous year which reached 24.402 graduates in 2009, 25.649 graduates in 2008, 27.335 in 2007 and 28.988 in 2006. This opposite facts shows that lower proportion of accounting education graduates choosed to become professional accountants

Mc Murtrie (2014) found that students who study accounting in college formed expectation for the work life after their formal education. For many accountants who had worked, the university became factor that affects their expectations in the professional world. The study shows that students who have been working felt that expectation of accountant are lacking from students who have not worked in the same field. The research indicated that students who have worked feel that expectation of the accountant's work less met rather than of students who has not worked. The extent to which expectations are met will have a big effect on the level of job satisfaction as accountant. Accountants who have low job satisfaction is considered to withdraw from work, because this job does not fulfill the expectations about the work life. From this perspective, the role of education responsible to identify the expectations of the students and expected to be able to provide education strategies that will mitigate these effects.

Education process in university is a major factor affecting the expectation of new accountant's work life. This study aimed to explore the effects of accounting education in University on expectations of accounting students in the working world. This study used "Met Expectation Hypothesis" (MEH) to explore the expectations of accounting students during the educational process and the fulfillment of these expectations when they face a career in work life.

The research questions in this study are:

1. Is there a difference between the expectations of the accounting profession students and graduate students of accounting education?
2. Is there a difference between the expectations of the accounting profession students and graduate students of accounting education?

The purpose of this study are: 1. Analyze the differences in expectations of the accounting profession of junior accounting students, the senior accounting students and the effect of accounting education in university against expectations of accounting students to the world of work. 2. Analyze the expectations of accounting students during the educational process and the fulfillment of these expectations when undergoing a career in the world of work.

## LITERATURE REVIEW

Research conducted on this field shows that the process of university education will enable the students to manage expectations of the workforce professionalism. This process becomes important when the expectations of students will affect their career choices and job satisfaction. The process would be crucial when students' expectations will affect career choices and work satisfaction. Education in University for accounting students had similar phenomenon. The fresh graduates who entered the work life, most of them did not have previous work experience. This condition lead to perspective that the learning process at the university became a major contributing factor in build the expectations of the accountant profession. This study explore the effect of the learning process of accounting students at university with the reality experienced by graduates who have worked in the professional of industry.

***Job Satisfaction***

Rhode (1997) stated that job rotation arises because employees choose available alternatives jobs that will maximize the satisfaction of the expected, or the difference from the expected satisfaction over dissatisfaction. Consequently, when people have expectations of jobs and careers that are not met by the reality, then they will choose another job. From the perspective of the employer, the factors that affect job satisfaction will help the manager to manage the issue of employee's turnover. It becomes important to realize that the loss of job satisfaction does not necessarily lead to employee turnover. It begins with job satisfaction could lead to a decrease in productivity, increased absenteeism, increased turnover of employees' and is ultimately going to make employees leave their chosen profession (Porter and Steers 1973; Mobley 1977: Mobley, Horner and Hollingsworth 1978; Fairbrother and Warn 2003). Hiltebeitel and Leauby (2001) tested the migration patterns of the accountant who has worked for the first time in the accounting field. They found that young public accountants were tend not to switch jobs rather than the accountants in other sectors. But they tend to change jobs to work as an accountant if they were in other sectors.

Greenhaus, Seidel and Marinis (1983) showed relationship between the expectations of individuals in the workplace and the level of experienced job satisfaction. From the perspective of new accountant who entered the work for the first time, research showed that there is relationship among students' expectation, job satisfaction dan intention of job rotation. Rhode dan Gordon (1973) concluded that the expectation of newly accountant who entry the work is different from the senior accountant.

Research conducted by Reed and Kratchman (1989), Carcello, Copeland, Hermanson and Turner (1991), Ferguson and Hatherly (1991), DeZoort, Lord and Cargile (1997) were comparing student's expectation when entering the jobs in accounting againts the realities and the result showed that there is a gap between them. This condition explained the reason why the new accountant feel suffered with their new job.

Research shows two main factors that explain the influence of expectations of students to the world of work. First, in many cases, expectations students identified at the end of their period of study so that students has little gain an understanding associated with the effect of an influential study on expectations. Second, the perception of reality that are used in education based on the view that accounting does not always present a reality that they imagine when they enter the workforce.

### *Met Expectation Hypothesis*

Many theories that can be used to explain the problems faced by new employees and in particular the tendency to change jobs. Examples of these theories, for example: Cognitive Dissonance theory (Festinger, 1957; Festinger and Carlsmith 1959), Self Image theory (Tom, 1971; Sirgy 1982; Markus and Worth 1987; Nasby 1997; Mehta 1999), Un-programmed Decision making (Soelberg 1967; Sheridan, Richards and Slocum Jr. 1975), Vroom 's Expectancy theory (Mitchell, 1974; Sheridan et al., 1975), and The Psychological Contract (Rousseau, 1989; Robinson, Kraatz and Rousseau, 1994).

These theories this study using a model based on Vroom's expectations and the psychological contract theory supports the thesis that the employees' job satisfaction would manage if the relationship they have with the employer will meet the expectations that they hope will be realized. Greenhaus et al. (1983) and Dean et al. (1988) showed that the differences in expectations of reality has an impact on satisfaction. Job dissatisfaction will emerge when their expectations are not met by the jobs they fill. This is in accordance with the Met Expectations Hypothesis, which is able to bridge the issues between the expectations of work and job satisfaction.

led Porter and Steers (1973) describe "Met Expectation" as: The concept of fulfillment of expectations is seen as the gap between the way of view of someone who entered the world of work in both the positive and negative perspective with the experience and what she hoped to experience. The use of “Met Expectation Hypothesis” in this study is expected to explain why the two employees who are facing the same reality but with different expectations will experience different levels of satisfaction.

The main components were analyzed in this study using the approach taken by Irving and Meyer (1994) distinguishes three main constructs used to define expectations: comfort, respect and responsibility. These three components are described as:

1. Comfort, is the rate at which people expect to experience a comfortable work conditions.
2. Award, the rate at which individuals expect to receive an award in the form of intrinsic and extrinsic rewards
3. Responsibility, the rate at which people expect to get a critical role in the organization.

These three component become indicators that developed into a research instrument. The use of three components drawn from the MEH test expectation accounting student working world with the aim of being able to analyze the effect of a college education on students' expectations and the potential impact on job satisfaction as they work.

## RESEARCH METHODOLOGY

This study used a survey research instrument in the form of a questionnaire. The research instrument was developed from three indicators of employment expectations of the accounting profession, namely: the convenience of work, respect and responsibility. The population in this study was active in student and graduate students Accounting Studies Program Accounting Study Program.

Students sampled in this study is the semester students 1, 3, 5 and 7. The first and third semester students are grouped in the beginning of the semester the student group (junior students). 5th and 7th semester students are grouped in group final semester students (senior students).

Data collection method used in this research is done by purposive sampling in accordance with the purpose of research. The distribution is done by using two ways: through an online questionnaire and through direct distribution. Online questionnaire is intended to shorten the time of data collection on graduate students. Distribution of online questionnaire done by sending the short message service and email to graduate students by referring to the faculty graduate students data as much as 367 graduate students. Then, direct distribution is done at the beginning level students and students at the end of 200 questionnaires.

Analysis of the data in this study is using a statistical model analysis of variance (analysis of variance). Model variance analysis used in this study due to determine the significance of differences in the average effect of accounting education in universities among a sample group of students (both the initial level and final level) with the graduate students and students of the initial level to the final level of the expectations of accounting students to the world of work.

## RESULTS AND DISCUSSION

### *Results*

Testing research instrument consisting of validity test instrument using bivariate Pearson with the provisions of the value of r arithmetic ≥ r table as valid and instrument reliability test using Cronbach Alpha with the provisions of the Alpha value it generates compared to the index must be greater than 0.6 (Sugiyono , 2011). The pilot test showed that of 50 grains statement item questionnaire contained 38 items declared valid and reliable, while 12 other questionnaire items declared invalid. This is because the research instrument is an instrument of foreign adoption, so there are some things that are considered incompatible with the situation in Indonesia. The next stage, the researchers conducted questionnaires distribution to Junior Students (1st and 3rd semester) and the Senior Students (5th and 7th) at the Faculty of Economics, University of Yogyakarta Accounting Studies Program. The distribution of questionaire also delivered to graduate students. The respondents for the samples was eliminated the student respondent data were ever used as a pilot test.

The distribution is done by using two ways: through an online questionnaire and through direct distribution. Online questionnaire is intended to shorten the time of data collection on graduate students. Distribution of online questionnaire done by sending the short message service and email to graduate students by referring to the faculty graduate students data as much as 367 graduate students. Then, direct distribution is done at the beginning level students and students at the end of 200 questionnaires.

Some of the assumptions that must be met in the ANOVA statistical models include the normal distribution of data, variance or homogeneous manifold (Homoscedasticity), each independent sample (random or random), the components of the model are mutually added. Testing normality of the data in this study using One Sample Kolmogorov-Smirnov, as well as the normal distribution of data can be declared if the significance value greater than 0.05. Results of testing the normality of the data indicates that the data beginning students, final year students and graduate students have a normal data distribution with a significance value of 0.200.

Homogeneity of Variances test is performed the applicable ANOVA model assumption, to determine whether the samples have the same variance. Testing variance or scedasticity be declared if the significance of test of homogeneity of variances greater than 0.05. The test results demonstrate the significant value of 0.731 scedasticity for beginning students and final year students as well as the significant value of 0,260 for students (initial and final level) and graduate students. It shows that the variance or variance from the sample is homogeneous and can be analyzed using ANOVA statistical models.

Table 1. ANOVA

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 223.940 | 2 | 111.970 | 3.312 | .038 |
| Within Groups | 7504.789 | 222 | 33.805 | | |
| Total | 7728.729 | 224 | | | |

Testing analysis of variance is done after all the test requirements are met. Testing analysis of variance can be expressed when the significance of the ANOVA test showed a value of more than 0.05. In this study, we found that:

Junior students with final-year students have a significance value of 0.035 ANOVA. This means that there are differences in the average effect of accounting education at the college between the initial level students with their final year on expectations of accounting students to the world of work.

Junior students, senior students and graduate students have a significance value of 0.038. This means that there are differences in the average effect of accounting education in universities among groups junior students, senior students and graduate students on expectations of accounting students to the world of work. Furthermore, analysis of Post Hoc LSD method showed that there are significant differences at a significance level of 0.05 or 5%.

Table 2. Post Hoc Test

| | | Mean | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| (I) Faktor | (J) Faktor | Difference (I-J) | Std. Error | Sig. | Lower Bound | Upper Bound |
| JS | SS | -2.061* | .924 | .027 | -3.88 | -.24 |
| | Graduate students | -2.064* | .956 | .032 | -3.95 | -.18 |
| SS | JS | 2.061* | .924 | .027 | .24 | 3.88 |
| | Graduate students | -.002 | .981 | .998 | -1.94 | 1.93 |
| Graduate students | JS | 2.064* | .956 | .032 | .18 | 3.95 |
| | GS | .002 | .981 | .998 | -1.93 | 1.94 |

*. The mean difference is significant at the 0.05 level.

## DISCUSSION

The results showed that expectations for the accounting profession at the beginning of the semester students have the highest expectations. It is possible for students this semester is still enthusiastic to join the educational process in the college who previously followed the educational process in high school. Expectations were high this indicates that the beginning of the semester students have the optimism of their selection to participate in education for those that enable them to gain expertise in the field of accounting.

This study also shows that the expectation of the accounting profession for the senior students has decreased. Aspects considered affecting the decline of these expectations is the increased difficulty of the courses taken, the boredom of the learning process in college, as well as their understanding of accounting, the better to make them tend to be skeptical about the gap between education and the real world in their ability to enter professions accounting.

Graduate students accounting program showed increased expectations for the accounting profession. This shows that when entering the real world in the field of accounting profession, they are quite confident and sure that the supplies they had brought for higher education in the department of accounting will enable them to seize the opportunity and success in the work world.

## CONCLUSION

The test results showed a significant difference on the expectations of the accounting profession. This difference there is in the entire group of samples, namely: the beginning of the semester students, the final semester students and graduate students of accounting education courses. This study shows the process of forming expectations on education of students for the accounting profession.

This study argues that the process of university education will enable the students to form expectations of the accounting profession. For this study provides suggestions as follows:

1. The learning process should motivate students to form positive expectations about the profession that will be undertaken in the future.
2. The curriculum is designed to reduce the gap between education and employment needs. Thus students will find that the process of education to enable them to obtain optimal provision to achieve the profession in the world of work.
3. The implementation approach teaching and learning process should be more up to date on the needs of the market, considering the accounting is applied science. The learning process is also expected to be more oriented to the real world accounting profession so that students are able to form expectations about the prospects of a better profession.

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# EXPLORING THE DETERMINANTS OF INTRINSICT INTEREST AMONG UNDERGRADUATE ACCOUNTING STUDENTS

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Abstract:

The purpose of the study is to identify the determinants that are closely associated with intrinsic interest among accounting undergraduate students. Based on Theory Planed Behavior (TPB), individual intention is affected by intrinsic interest, external interest, parental influence, anticipated conflicts and self-efficacy. Due to intrinsic interest is pivotal in determining major of the study among the students, this study aims to reveal association of the intrinsic interest with the rest factors as mentioned in Theory Planed Behavior (TPB)

Descriptive statistical analysis and correlation analysis were applied in this study. The data was generated through questioner instruments using seven point Likert scale. The study involved 136 samples of undergraduate accounting student at Universitas Padjadjaran. Reliability and Validity test were conducted to make sure the items of questions are valid and the internal consistency are present. There are five independent variables in this research namely Intrinsic interest, extrinsic interest, self-efficacy, parental and peer influence and anticipated conflict.

Results indicate that extrinsic interest and self-efficacy are positively and significantly associated with intrinsic interest of undergraduate accounting student with value of Pearson correlation coefficient (r) 0.379 and (r) 0.443 respectively. Meanwhile, Parental and Peer influence and anticipated conflict are negatively associated with intrinsic interest of undergraduate accounting student with Pearson correlation coefficient (r) -0.161 and -0.311 respectively. The magnitude of correlation for anticipated conflict is significant, however, for parental and peer influence was found not significant

Keywords: Accounting, Intrinsic, subjective, extrinsic, self-efficacy

## INTRODUCTION

Accounting study program is one of the most popular study program among high school students who want to continue their education at the universities. The fact of popularity of accounting study program can be identified from the applicants of accounting study program each year both private and state universities. In social studies, accounting study program is frequently in top position in terms of number of applicants. The factors that make accounting study program to be one of the most favorite study program in social science is still lack of information. Plenty of argumentation such as easiness to get job, high income expectation, positioned as prestigious field of study are frequently mentioned to be background of choosing accounting as majoring. However, there were still lack of empirical evidence based on academic research. Therefore, there is a need to investigates further the behavior intention among accounting students in terms of their decision to choose field of study.

Successful in pursuing study in higher education is heavily depending on student perceives toward the subjects. If the students have negative perception towards the subjects, the motivation of the students to conduct the study is predicted low and it will lead to risk of failing to complete the study. In other hand, if the students have positive perception toward the subjects, possibility to achieve high academic achievement and complete the study faster is high. Positive perception toward the subject refers to intrinsic interest, which is perceive of student towards subject that creates pleasure and enjoyment in the tasks performed and exists internally within the individual (Ahmad et al, 2014). It is important to understand intrinsic interest among students due to its pivotal role in determining key success of students in pursuing study at the higher education institutions. Intrinsic interest has also been shown to be an important aspect in the quality of student learning (Entwistle and Ramsden, 1983; Jackling and Calero, 2006)

Curriculum accounting study program is normally dominated by quantitative subjects. Senior high school students who are applying accounting study program are expected to have a good capability of quantitative. In other words, to be successful in pursuing study in accounting study program, the student must be strong in mathematics. Normally, the student who are not passion in mathematics will avoid the study program that are dominated by quantitative subjects. This phenomenon lead to curiosity to understand among accounting student about their decision to choose accounting study program. Understanding determinants of intrinsic interest among accounting undergraduate student will give information about background of the student toward their decision of choosing accounting study program as majoring.

Theory of Planned Behavior (TPB), a social psychology theory, developed by Icek Ajzen in 1991 describes that behavioral intention of individual is influenced by factors namely intrinsic interest, extrinsic interest, parental influence, anticipated conflict and self-efficacy. This study is trying to associate intrinsic interest with the rest of factors based on Theory of Planned Behavior (TPB) in situation of choosing majoring among student of undergraduate accounting study program. By exploring motives of choosing accounting study program and its association with intrinsic interest, we can predict perceives of the students toward accounting study program based on its determinants. Since intrinsic interest is positive perceived toward accounting study program, this study is relevance to predict possibilities of the student will success in the future based on their motives of choosing accounting study program. Furthermore, the results of the study will give useful information for teachers who are giving counselling to their students in terms of choosing field of the study at higher education institutions.

## LITERATURE REVIEWS AND HYPOTHESIS DEVELOPMENT

### *Theory of Planned Behavior (TPB)*

Theory of Planned Behavior (TPB) is a theory that explains behavioral intention of individual in terms of decision making. TPB is developed Icek Ajzen in 1991 and very popular among social psychology scholars. TPB describes that there are three main factors that determine intention: attitudes, subjective norms and perceived behavioral control. An attitude is a person's opinion about whether a behavior is positive or negative, while "a subjective norm is a perceived social pressure arising from one's perception". A subjective norm describes the social pressure an individual feel to perform or not perform the behavior at hand. Perceived behavioral control is beliefs of individual that he or she able to complete or finish something. An attitude itself is driven by two factors, behavioral beliefs and evaluation of behavioral outcomes. Meanwhile, subjective norm is driven by normative beliefs and motivation to comply.

Attitude in TPB is behavioral beliefs and behavioral outcome. Behavioral belief is perceiving positive or negative coming from individual that influence intention. Meanwhile, evaluation of behavioral outcomes is individual intention merely based on calculation of the outcome that will be achieved if the intention is conducted. Behavioral beliefs in TPB is factor that influence individual intention based on individual consideration. Behavioral beliefs in the context of decision of choosing majoring is perceive likeness or interesting towards the subjects that will be learned. meanwhile, behavioral outcome is based on positive expectation that will be achieved in the future such as job opportunity, financial rewards and carrier path. in Behavioral belief and evaluation of behavioral outcome in other literature are frequently called as intrinsic interest and external interest respectively (Ahmad et al, 2014 and Law and Yuen, 2011).

Subjective norm is second factor that is believed influencing behavioral intention of individual based on TPB. Subjective norm in TPB is individual intention to do or not to do something is due to consideration from other people and avoiding conflict with them. Other people in TRA refers to peoples that are very close to individual who make intention. Those people are family (parent, brother and sister, and other member of family) and people who are considered as important person such as peer. choosing majoring field of study based on advice, parent want or influence of close friends are common among high school students. Subjective norm is clearly factor that influence behavioral intention of individual that is not from internal consideration, but from external consideration. It refers to decision to do something by following parent expectation or just following someone trusted.

Perceived behavioral control refers to people's perceptions of their ability to perform a given behavior. It is assumed that perceived behavioral control is determined by the total set of accessible control beliefs, i.e., beliefs about the presence of factors that may facilitate or impede performance of the behavior. As Ajzen (1991) stated in the Theory of Planned Behavior (TPB), knowledge of the role of perceived behavioral control came from Bandura's concept of self-efficacy. The concept of self-efficacy is used as perceived behavioral control, which means the perception of the ease or difficulty of the particular behavior. It is linked to control beliefs, which refers to beliefs about the presence of factors that may facilitate or impede performance of the behavior.

TPB in social psychology study is believed as a theory that useful to explain various behavioral of individual (Sable et al., 2006). TPB is frequently recommended as framework for examining variables such as career choice, ethical decisions, consumer behavior (Cohen and Hanno, 1993). The TPB characterizes human behavior as rational. Thus, it predicts that a student's intentions to choose a major will be strongly related to his or her attitude and subjective norms concerning that major (Law and Yuen, 2011). Understanding intercorrelation among factors in TPB is interesting to get clear picture associated with decision of student in choosing accounting as majoring of the study. In this research, five factors mentioned in TPB will be analysis with intrinsic interest as central object of investigation.

***Intrinsic Interest***

Based on TPB, behavioral belief or intrinsic interest is factor that influence behavioral intention of individual based on consideration of perceive positive or perceive negative of individual. Intrinsic factors are associated with the attitude, beliefs, interests, or satisfaction obtained from pursuing something, such as creative, interesting, or intellectually challenging work (Law and Yue, 2011). Intrinsic interest in the context of choosing accounting as majoring f is reflected in the behavior such as student's interest, likeness or curiosity toward accounting subjects of accounting study program. It is believed that intrinsic interest is fundamental associated with student's decision to choose accounting as majoring. Accounting study program is dominated by subjects with quantitative approach. Therefore, without any intrinsic interest, it is least possibility that the student will choose accounting as majoring.

Argumentation that intrinsic interest is fundamental in terms of decision to choose majoring supported by many researches. Research finding reveals that intrinsic interest is playing important role in career decisions made by accounting students (Linden, 1987; Adams et al., 1994; Felton et al.,1994). Adams et al (1994) who are conducting research about undergraduate student in terms of choosing their majoring found that intrinsic interest toward accounting subject is major factor that influence their decision. Related process of learning, Intrinsic interest has also been shown to be an important aspect in the quality of student learning (Entwistle and Ramsden, 1983; Jackling and Calero, 2006).

Entwistle and Ramsden (1983) found that students with high intrinsic interest were able to recognize and solve problems at a more complex level, and overall developed a longer lasting knowledge of a subject. Intrinsic interest has been found to be a significant determinant of students' decision to major in accounting (Jackling and Keneley, 2000; Law and Yuen, 2012). Similarly, in terms of career choices among accounting students, intrinsic interest has also been determined as a significant predictor (Jackling and Calero, 2006; Sugahara and Boland, 2009)

***Extrinsic interest and Intrinsic Interest***

TPB explains that individual attitude toward intention is affected by evaluation of behavioral outcomes. It refers to calculation of the benefits that will be achieved if certain action is conducted. Extrinsic interest lies in the appeals of separate returns or outcomes such as monetary rewards, job opportunities, high salary, and recognition (Ahmad et al, 2014). Extrinsic interest may explain the phenomena of number of applicants of accounting study program that is mostly always on top position in social studies. Demand of graduate of accounting study program in job markets shows stable even increasing. Additionally, compensation for accounting profession is relatively higher compared to others social program graduate. Those extrinsic interests may influence the decision among high school student to choose accounting as majoring for their university education.

Study conducted by Felton et (1994) and Ahmed et al (1997) indicates that extrinsic factor such as salary and job opportunity are important factors that influence decision about career. More specifically, compared to non-accounting students, accounting students have been found to place more importance on extrinsic interests (Felton et al., 1994; Ahmed et al., 1997; Tan and Laswad, 2006, Jackling and Keneley, 2009; Byrne et al., 2012). In Hutaibat (2012), undergraduate accounting students preferred a career in public accounting compared to management accounting due to the related extrinsic interests (job opportunities and income). Mazni and Zamzulailai (2006) also found that Malaysian accounting students placed opportunity of advancement, office atmosphere, and expected future salary as the most desired attributes of public accounting firms

Haswell and Holmes (1988), Horowitz and Riley (1990) found that income and salary are on big three position as consideration among student who are choose to choose accountant as career. Ahmed et al ( 1997) also found that financial factor has explanatory power to explain reason why the student want to work as CPA. In terms of decision to choose accounting study program, Tan and Laswad (2006), Saemann and Crooker (1999) found that financial reward is variable that play important role among student who are choosing accounting as majoring. Based on the literature describes above, the hypothesis is proposed as follows:

*Hypothesis 1. Student's extrinsic interest is positively and significantly associated with Student's intrinsic Interest toward accounting subjects*

***Self-Efficacy and Intrinsic Interest***

The concept of self-efficacy is rooted in Bandura's social cognitive theory. It refers to the conviction that one can successfully execute the behavior required to produce the outcome. The concept of self-efficacy is used as perceived behavioral control, which means the perception of the ease or difficulty of the particular behavior. It is linked to control beliefs, which refers to beliefs about the presence of factors that may facilitate or impede performance of the behavior. Self-efficacy refers to an individual's belief in his/her capabilities to successfully engage in certain behaviors to attain certain desired goals (Bandura, 1986). Self-efficacy has been found to affect a range of diverse behaviors such as decision making, amount of efforts, perseverance, stress, and depression, among others (Schunk, 1991; Petrovich, 2004). Studies that directly linked self-efficacy and accounting students' intentions to become accountants have yet to receive ample attention, creating a gap in the literature. Therefore, there is a need to study deeper the association of self-efficacy and motivation to study accounting.

Thus far, two studies have examined self-efficacy in predicting students' intentions to pursue a career in accounting, specifically Hayes and Credle (2008) and James and Hill (2009). In Hayes and Credle (2008), self-efficacy has been found to be positively related to students' decision to join the accounting profession. Comparably, in James and Hill (2009), the low self-efficacy has been deduced as the possible contributor for the shortage of African-American accountants in the USA. Accounting study program is dominated by subjects that require capabilities in quantitative. Normally, study program that are containing rich of quantitative approach will be avoided by those who not interested in it. Only student who have self-efficacy or student who are believing on their capabilities, will choose accounting study program as majoring. Based on explanation mentioned above, proposed hypothesis is formulated as follows:

*Hypothesis 2. Student's self-efficacy is positively and significantly associated with student's intrinsic Interest toward accounting subjects*

***Parent and Peer Influence and Intrinsic Interest***

Involvement of families and peer in decision to choose majoring is common among high school student. Normally, they don't have any clear picture about higher educations and carrier. Therefore, any information from external or another person will be valuable. In social psychology, peers, family members, relatives, and teachers form a referent group who creates the social pressures for or against one's intentions and behaviors. One's perception of this social pressure is termed as subjective norms (Ajzen, 1991). Pearson and Dellman-Jenkins (1997) found that parental influence had an impact on a student's selection of a college major. Silverstone and Williams (1979) found that 26 percent of female chartered accountants in England and Wales considered parental influence to be a factor in career choice. A US study (Allen, 2004) concluded that important referents such as parents influence the decision of students to major in accounting in university.

Parental influence is mainly regarded as belonging to the subjective norm construct in the Theory of Planned Behavior model (Cohen and Hanno, 1993; Felton et al., 1994). Significant referent groups that have been found to influence accounting students' career intentions include parents (Auyeung and Sands, 1997; Law and Yuen, 2012; Byrne et al., 2012), peers (Auyeung and Sands, 1997), and teachers (Auyeung and Sands, 1997; Byrne et al., 2012). According to Law and Yuen (2012), the influence of subjective norms could be more significant among Asian students who tend to place higher values on familial opinion in their decisions. Even though influence of parent and peer is common in deciding majoring, however, it will not create automatically perceive intrinsic interest toward the subjects among the student. If the decision to choose majoring is influenced by other person, not sourcing from student self, the possibility of perceive negative toward subject is high among the student. Therefore, proposed hypothesis is the formulated as follows:

*Hypothesis 3. Parent and peer influence of the student is negatively and significantly associated with intrinsic Interest toward accounting subjects*

***Anticipated Conflict and Intrinsic Interest***

Weer et al. (2006) defined anticipated work-family conflict as "students' perceptions of the potential for conflict or interference between their work and family roles after they embark on their careers. Career development literatures have suggested that students tend to alter their future careers due to the anticipated conflict (Livingston et al., 1996; Conlon, 2002; Markle, 2004; Weer et al., 2006; Cinamon, 2010), including choosing a career with lower anticipated conflicts. The influence of anticipated conflict on accounting students' career intentions, thus far, has been neglected in previous studies although work-family conflict has been found to exist within the accounting profession (Elloy and Smith, 2003; Byrne and Pierce, 2007; Aizzat and Khor, 2008) and has been associated with turnovers in accounting firms (Pasewark and Viator, 2006).

Career development literature explains that university students tends to decide their future career profession due to avoiding conflict with their family or taking the lowest risk of conflict Career development literatures have suggested that students tend to alter their future careers due to the anticipated conflict (Livingston et al., 1996; Conlon, 2002; Markle, 2004; Weer et al., 2006; Cinamon, 2010), including choosing a career with lower anticipated conflicts. If the motive of choosing majoring is not based on personal interest, rather than avoiding conflict with respected person, the student will have a high possibility of perceive negative towards accounting subjects. Therefore, we can propose hypothesis as follows:

*Hypothesis 4. student's anticipated conflict is positively and significantly associated with intrinsic Interest toward accounting subjects*

## METHODOLOGY

### *Analysis*

The research applied bivariate correlation analysis to examine whether the proposed hypotheses are accepted or rejected. Correlation analysis is the process of studying the strength of that relationship with available statistical data. Proposed hypotheses are two independent variables; therefore, bivariate correlation analysis is suitable analysis method. Coefficient correlation of Pearson Product Movement was applied in this research. The proposed hypothesis is accepted if the direction of correlation in hypothesis is in line with the direction of correlation based on statistic calculation. SPSS software version 23 was used in this research to assist analysis the data.

### *Measurement, Validity and Reliability*

Variables latent Intrinsic interest, external interest, self-efficacy, parent and peer influence and anticipated conflict were measured using 7 point Likert scales. The scale 1 is representing "Strongly Disagree" and the scale 7 is representing "Strongly Agree". To make sure that each item of questions is valid, validity test was conducted. Validity is the extent to which a test measures what it is supposed to measure. Item of question is valid if the Correlation Product Movement (r) > (r) Table. Furthermore, reliability test was also conducted to identify the consistency of the measurement. Reliability is the degree to which a test consistently measures whatever it measures. The construct of measurement is reliable if the value *cronbach's alpha* > 0.7 (Sekaran, 2003)

### *Sampling Method and Data Collection*

Purposive sampling method was applied in this research. The argumentation of using purposive sampling is due to the research want to capture respondents that are newly registered as student of accounting undergraduate program. Therefore, purposive sampling is sampling method that are considered fit with the purpose of the study. The data was collected using questioner instrument and distributed directly to the students of accounting undergraduate program. Instrument of questionnaire was shorted based on its completeness in answering the questioner. The questioners found incompleteness were removed from list of data.

## RESULTS

### *Descriptive Statistic*

The study was conducted at Universitas Padjadjaran for accounting undergraduate program. Total number of sample is 136 students, consisting of 48 male students (35%) and 88 female students (65%). The composition of sample shows unbalanced between male and female. It is caused due to majority of accounting undergraduate program dominated by female gender. The details distribution sample based on the gender is depicted in Table. 1

Table 1. Distribution of Sample by Gender

| Gender | Male | Female | Total |
|---|---|---|---|
| Number | 48 | 88 | 136 |
| Percentage | 35% | 65% | 100% |

Sample distribution in terms of year of study is dominated by student who are on second year of study (46%) and third year of study (44%). Meanwhile, sample identified in fourth year and fifth year is only 9% and 1% respectively. The selection of the sample is suitable with the purpose of the study, which is capturing accounting undergraduate students who are on the entry level. The study is about understanding motivation of accounting undergraduate student choosing accounting as majoring of the study, therefore, choosing entry level student is fit with purpose of the study. The detail distribution of sample based on the year of study is depicted in Table 2.

Table 2. Distribution of Sample by year of study

| Year of study | Second Year | Third Year | Fourth Year | Fifth year | Total |
|---|---|---|---|---|---|
| Number | 62 | 60 | 12 | 1 | 136 |
| Percentage | 46% | 44% | 9% | 1% | 100% |

***Analysis Intrinsic Interest***

There are three item questions to measure construct variable latent intrinsic interest. Test of validity item questions indicates that all the item questions are reliable (r-Value > r-Table). Therefore, all of item questions are representing measurement for variable latent intrinsic interest. In terms of reliability or consistency measurement, the statistic result shows that there is consistency of measurement (Cronbach's α > 0.7). The detail of validity and reliability test of Intrinsic interest is depicted Table 3.

Table 3. Intrinsic Interest Validity and Reliability

| Intrinsic Interest | r-Value* | r-Table** N=40 | Mean | Cronbach's α |
|---|---|---|---|---|
| Accounting subjects are interesting | 0.806 | 0.167 | 5.022 | 0.838 |
| Likeness towards accounting subjects | 0.815 | 0.167 | 4.904 | |
| Accounting subjects are challenging | 0.652 | 0.167 | 5.845 | |

*Pearson Correlation

**Product Movement, Sig.0.05, two-tailed

Analysis from item questions show that the accounting students who are choosing accounting as majoring found their intrinsic interest heavily is due subject of accounting is challenging (Mean 5.845 of maximum 7.0). The students put a value moderately to accounting subject interesting (Mean 5.022 of maximum 7.0) and likeness toward accounting subject (Mean 4.904 of maximum 7.0). It means that intrinsic interest among accounting student toward accounting subjects heavily that they feel challenged to study accounting majoring rather than likeness toward the subject or attractive power of the subject itself. It can be interpreted that probably most student who are choosing accounting as majoring are influenced by curiosity to study something they never experienced before. It is supported by the facts that, the number of accounting students significantly are not from social study, but from science. Accounting students who are not experience in studying accounting in high school, due to their program is science, will choose accounting study program as majoring due to they feel accounting subject is challenging

***Analysis Extrinsic Interest***

Measurement of extrinsic interest is using three item questions and all the questions show validity to measure construct latent variable extrinsic interest (r-Value > r-Table). In terms of reliability or consistency of measurement toward the construct, statistical test result shows that construct measurement is reliable (Cronbach's $\alpha > 0.7$). The detail of validity and reliability test of extrinsic interest is depicted Table 4.

Table 4. Extrinsic Interest - Validity and Reliability

| Extrinsic Interest | r-Value* | r-Table** N=40 | Mean | Cronbach's α |
|---|---|---|---|---|
| Graduate from accounting study gives big opportunity in Job market | 0.886 | 0.167 | 5.948 | 0.903 |
| Accounting profession is promising in terms of financial reward | 0.928 | 0.167 | 5.602 | |
| Accounting profession provides clear carrier path | 0.935 | 0.167 | 5.794 | |

*Pearson Correlation

**Product Movement, Sig.0.05, two-tailed

Analysis from content of the questions indicates that by study accounting as majoring, they will get benefits from it in terms of opportunity to get job in job market (Mean 5.948 of maximum 7.00), financial reward (Mean 5.602 of maximum 7.00) and carrier path (Mean 5.794 of maximum 7.00). It implies that student of accounting program is motivated to study accounting due to high expectation of outcome that they will get after graduate from the program. They have a motivation to study accounting to secure their future in terms of finding job, income and carrier path. This finding may be explanation towards phenomena of favoritism accounting study program among applicants who want apply at the university for social science. Positive expectation among applicants after completing the accounting study program, leads them to apply accounting as majoring

***Analysis Self Efficacy***

There are seven item questions to measure construct variable latent self-efficacy. Test of validity item questions indicates that all of the item questions are reliable ( r-Value > r-Table). Therefore, all of item questions are representing measurement for variable latent self-efficacy. In terms of reliability or consistency measurement, the statistic results shows that there is internal consistency of measurement ( Cronbach's $\alpha > 0.7$). The detail of validity and reliability test of Intrinsic interest is depicted in Table 5.

Table 5. Self-Efficacy - Validity and Reliability

| Self-Efficacy | r-Value* | r-Table** N=40 | Mean | Cronbach's α |
|---|---|---|---|---|
| Capability to handle problem in unexpected situation | 0.817 | 0.167 | 5.227 | 0.889 |
| Capability to find solution of the problem | 0.873 | 0.167 | 5.110 | |
| Capability to find solution from own initiatives | 0.811 | 0.167 | 5.125 | |
| Capability to stay calm in facing a problem | 0.576 | 0.167 | 4.647 | |
| Self-confidence to achieve stated goals | 0.714 | 0.167 | 5.492 | |
| Belief that anything can be achieved with hard work | 0.843 | 0.167 | 5.757 | |
| Never give up and trying hard work in facing any obstacles | 0.830 | 0.167 | 5.588 | |

*Pearson Correlation

**Product Movement, Sig.0.05, two-tailed

Analysis from the questioner shows that the respondent as accounting undergraduate program have high value in self-efficacy. It implies that student who are choosing accounting as majoring have personal characteristic self-confident and beliefs that they have capability to complete the study. Accounting study program is dominated with the subjects with quantitative approach. Those who are not having sufficient quantitative capabilities will find hard to complete the study with good academic achievement. Based on items questions depicted in Table 5, the respondent indicates having high value of self-efficacy with mean above 5.00 of maximum 7.00 except question for capability to stay calm in facing a problem. It can be concluded that accounting undergraduate students are characterized as induvial who have high value of self-efficacy or individual that have a self-confidence to face any challenge and problem with hard work.

***Analysis Parental and Peer Influence***

Measurement of parental and peer Influence is using three item questions and all the questions shows validity to measure construct latent variable (r-Value > r-Table). In terms of reliability or internal consistency of measurement toward the construct, statistical test result shows that construct measurement is reliable (Cronbach's α > 0.7). The detail of validity and reliability test of parental and peer Influence is depicted Table 6.

Table 6. Parental and Peer Influence Validity and Reliability

| Parental and Peer Influence | r-Value* | r-Table** N=40 | Mean | Cronbach's α |
|---|---|---|---|---|
| Choosing accounting program due to parents' want | 0.812 | 0.167 | 3.022 | 0.799 |
| Choosing accounting program due to parents' advice | 0.853 | 0.167 | 3.639 | |
| Choosing accounting program due to influence of peer | 0.478 | 0.167 | 2.772 | |

*Pearson Correlation

**Product Movement, Sig.0.05, two-tailed

The findings from the questioner instrument show that majority of accounting undergraduate choosing accounting as majoring is due low influence from other person (family and peer). Even though factor parent's advice indicates quite moderate influence (Mean 3.639 of maximum 7.00), however, in general, influence from peer and family is low. It is consistent with the finding in intrinsic interest and self-efficacy, that majority of undergraduate accounting choosing their majoring based on factor from own student consideration. Interest toward accounting subject and expectation of outcome that they will get are mostly influenced by own student perception. Meanwhile, self-efficacy indicates that the accounting student are individual who are independent and self-confidence. They are not influenced by families or peer to decide their majoring but merely decision based on rational thinking and manifestation of individual who have character high self-efficacy.

***Analysis Anticipated Conflict***

There are three item questions to measure construct variable latent anticipated conflict. Test of validity item questions indicates that all of the item questions are reliable ( r-Value > r-Table). Therefore, all of item questions are representing measurement for variable latent anticipated conflict. In terms of reliability or consistency measurement, the statistic results show that there is internal consistency of measurement (Cronbach's $\alpha > 0.7$). The detail of validity and reliability test of anticipated conflict is depicted Table 7.

Table 7. Anticipated Conflict – Reliability and Validity Test

| Anticipated Conflict | r-Value* | r-Table** N=40 | Mean | Cronbach's α |
|---|---|---|---|---|
| Choosing accounting majoring due to avoiding conflict with families | 0.884 | 0.167 | 2.169 | 0.881 |
| Choosing accounting majoring to make happy families | 0.944 | 0.167 | 2.720 | |
| Feeling uncomfortable having carrier profession not matching with families' expectation | 0.867 | 0.167 | 2.602 | |

*Pearson Correlation

**Product Movement, Sig.0.05, two-tailed

Analysis from questioner of anticipated conflict is in line with the finding in influence from parents and peer. Mean of each item questions are below 3 of maximum 7. It implies that majority accounting undergraduate student choosing majoring is due to little involvement of perceived avoiding conflict with their family. The student more orientation toward their self rather than thinking about avoiding confrontation with their family if their decision to choose majoring not in line with family expectation. This finding is consistent with findings as previous mentioned about self-intrinsic interest, external interest, self-efficacy and parental and peer influence.

*Hypothesis Testing*

Hypothesis testing was analyzed using correlation statistic procedure. Correlation analysis was conducted with bivariate correlation method with Pearson correlation coefficient and two tailed test of significance. The result of the correlation among independence variables is presented in Table 8

Table 8. Pearson Correlation Matrix

| | Intrinsic Interest | Extrinsic Interest | Self-efficacy | Parental influence and Peer | Anticipated Conflict |
|---|---|---|---|---|---|
| Intrinsic Interest | 1 | | | | |
| Extrinsic Interest | 0.379** | 1 | | | |
| Self-efficacy | 0.443** | 0.485** | 1 | | |
| Parental influence and Peer | -0.161 | 0.114 | 0.107 | 1 | |
| Anticipated Conflict | -0.311** | 0.006 | 0.006 | 0.690** | 1 |

**. Correlation is significant at the 0.01 level (2-tailed)

Based on the correlation matrix depicted in Table 8, then we can interpret the proposed hypothesis as summarized in Table 9.

The summary of hypothesis testing shows that only hypothesis three is not accepted. The rejection is due to magnitude of significance is not as predicted. It means that there were slightly influence from parent and peer that play role in terms of determining majoring among student of accounting undergraduate program. However, in terms of the direction of prediction, the hypothesis is accepted. Therefore, we can conclude that extrinsic interest and self-efficacy among undergraduate accounting students are positively significant associated with intrinsic interest of the students toward accounting subject. In other hand, decision to choose accounting majoring due to influence from parent and peer and anticipated conflict is negatively associated with interest intrinsic. It means that, the student accounting program will find that accounting subjects is not interesting, not challenging and not to be liked if their decision to choose accounting majoring due to aspects influence from parent and peer and effort to avoid conflict with families

Table 9. Summary Hypothesis Testing

| Hypothesis | r-Value | Conclusion |
|---|---|---|
| H1. Student's extrinsic interest is positively and significantly associated with student's intrinsic interest toward accounting subject | 0.379** | Accepted |
| H2. Student's self-efficacy is positively and significantly associated with student's intrinsic interest toward accounting subject | 0.443** | Accepted |
| H3. Parental and peer influence is negatively and significantly associated with student's intrinsic interest toward accounting subject | -0.161 | Rejected |
| H4. Anticipated Conflict is negatively and significantly associated with student's intrinsic interest toward accounting subject | -0.311** | Accepted |

**. Correlation is significant at the 0.01 level (2-tailed)

## CONCLUSIONS

Based on the results of this study, it can be drawn some conclusions. First, intrinsic interest among accounting student towards accounting subject is closely associated with extrinsic interest. Positive expectation toward outcome that will be obtained in the future after graduate from accounting study program leads to perceive interested, likeness and challenged to study accounting subjects. Students behave positively toward process of education (feeling interesting, likeness and challenging), due to they know that it will benefit them if they conducted properly. Even though there is positively and significantly association between intrinsic interest and extrinsic interest, however, there is still lack of understanding whether those factors are causal. Therefore, in the future, there is a need to study further causal relationship between intrinsic interest and extrinsic interest.

Second, student's self-efficacy of the accounting student is positively and significantly associated with student's intrinsic interest. The finding has two implication of interesting information. first one, the finding is kind of revealing personal characteristic among undergraduate accounting students. The result indicates that mostly undergraduate accounting students have high value of self-efficacy. High value of self-efficacy means that individual is characterized as person that confidence to their capabilities in doing something or facing a problem. second one, the finding reveals that decision of choosing majoring is associated with personal character of individual. Individual who choose majoring of study categorized as difficult and challenging, most of them have high value of self-efficacy.

Third, influence of parents and peer is negatively associated with intrinsic interest. The finding indicates that if decision to choose majoring of study based on other person influence, it will cost perceived interest toward the subjects. Due to intrinsic interest is fundamental in learning process, therefore, the student should not always follow parents or peer advice. The parents must give a freedom to their children in terms of choosing majoring in higher education institution. Absence student's intrinsic interest have possibility to demotivation in study process, even risk of dropping out from the university.

Fourth, anticipated conflict is negatively and significantly associated with student's self-interest. It implies that student who are choosing majoring of study due to avoiding conflict with their parents and family, the possibility of having risk in learning process is high. Risks such as demotivation of the study, poor academic achievement and the worst, dropping out are potentially occurring. Therefore, in terms of choosing majoring, the student should not sacrifice their own interest in order to make happy parent or families but just follow their interest.

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# DEVELOPING AN INSTRUMENT (KI-2) TO ASSESS HIGH SCHOOL STUDENTS' SOCIAL ATTITUDE IN A PHYSICS LAB

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Abstract

The purpose of this study was to develop an accurate, valid and reliable assessment instrument of social attitude of learners (KI-2) in the physics lab. Moreover, it also provided high school physics teachers with easy assessment for learners' attitudes who were observed during physics lab. This study uses research and development broadly through three stages: the initial development, validation and testing. The early development stages include the preparation of the content outline and items, items assessment done by peers, and instrument validation conducted by education experts and physics practitioners with an index of 0.894. The instrument form for observation sheet consists of 24 items, along with the assessment rubric and its scoring. After validation, the instrument was then tested on 462 students. Politomus trial data was analyzed using SPSS to determine the reliability and Lisrel to do CFA Program to test match (fit) models to determine Goodness of fit index. The results showed that the reliability coefficient of Cronbach's Alpha magnitude of $0.824 > 0.6$. While the determination of Goodness of fit index uses four parameters, namely 1) Kai empirical squared $= 258.12 < 492$; 2) Significance (p) $= 0.28518 \geq 0.05$; 3) Root Mean Square Approximation (RMSEA) $= 0{,}010 \leq 0.08$; and 4) Goodness of Fit Index (GFI) $= 0.96 \geq 0.90$. Based on this, the instrument is reliable and qualified Goodness of Fit, so the instruments can be used.

Keywords: social attitudes, physics lab

## INTRODUCTION

Education is a process of humanization in principle, the process of perfecting humanity that runs continuously. This means that education has a profound meaning because they talk about the inherent dignity and of human values. Human beings are filled with purpose in his life, so that people will act in accordance with the wishes and abilities. In fulfilling the desire of the human senses to make a conclusion, for it requires a knowledge and experience in order to achieve goals not met many difficulties. School education is a strategic place to gain knowledge and experience. Many learned in school subjects, such as science, science is knowledge about the natural world that is divided into several areas: biology, physics, and chemistry (Tipler, 1998: 1).

On learning of physics, "laboratory" is an important place inseparable. In the framework of teaching the natural sciences, "laboratory" is a general name for activities based on observations, tests, and experiments done by students. It is hard to imagine learning to do science, or learning about science, without doing laboratory or fieldwork (Trumper, 2003: 645). Furthermore Santiboon, (2012) stated that the laboratory activities can help learners understand abstract concepts, motivate learners to explore materials related to the topic in the classroom, developing the ability to work together and develop a critical attitude of learners. In general, laboratories are exercises with a primary focus on the verification of established laws and principles, or on the discovery of objectively knowable facts. In laboratories, students gather the data without comprehending the meaning of Reviews their actions (Unal & Ozdemir, 2013: 29). So a laboratory or lab activities there are basically two kinds of lab-based verification and lab-based discovery or invention-based verification. Lab work aims to prove the concept, principles, and laws have been obtained from theory in the classroom.

***Competency Assessment Attitude***

An explicit definition of attitude Appears to be a minimum prerequisite for the development of valid measurement procedure (Fishbein & Ajzen, 1975: 5) .Furthermore Fishbein & Ajzen (1975: 6), define most investigator would probably agree that attitude can be Described as a learned predisposition to response is consistently favorable or unfavorable with respect to a given object. Base some expert opinion on the above, it can be concluded that the attitude is the tendency of a person in response to an object, the response can be positive or negative, on an object or problem, the tendency can survive long enough.

The object can be anything around the learner, in the form of objects such as physics teachers, classrooms, in the form of non-object, for example, the subject matter of physics, material physics lab physics approach to learning, teachers' teaching styles. More Fritz (2008: viii) states that "Attitude involves not only how we see the world around us, but how we interpret situations Also, circumstances, and the actions of others. In other words, if your outlook is to be meaningful, it must take into account how others react to it. Your attitude stems from within. If you think you can change it from negative to positive, you have taken the first step to do so. You have the capacity to control your thoughts. Building a positive attitude begins with having confidence in yourself. Reinforces Confidence ability, doubles energy, mental buttresses Faculties, and increases power. A positive attitude is meaningless without interaction".

Based on the above definition, it can be concluded that, the attitude is influenced by how we interpret the situation, and the actions of others to react. The attitude comes from within, if we can change from a negative attitude to a positive attitude, means we have the ability to control our thoughts. Building a positive attitude starts with having the confidence, the conviction will strengthen the capacity and increase power.

Attitude also as an expression of values or philosophy of life that is owned by someone. A positive attitude creates the climate for success and sets the stage for potential winners to actually win (Fritz, 2008: 105). The attitude in question in this research is the attitude of the students related to the physics lab. So students who have a positive attitude towards physics lab, will not feel bored in doing practical even physics lab will try to implement the best possible way, so as to maintain the skills related to the physics lab.

The attitude in question in this research is the attitude of the students related to the practicum physics, which includes elements of: 1) honest, 2) discipline, 3) responsibility, 4) mutual cooperation, 5) polite and courteous, 6) confidence (Depdikbud , 2015: 31-33). There are several ways that can be used to assess the attitudes of learners, including through: 1) observation, 2) self-assessment, 3) assessment of peers (Department of Education, 2015: 8-13). In this study, the assessment by observation.

Observations are widely used to measure the behavior of individuals or an activity of learners that can be observed, for example, during the discussion, during the learning process, physics lab, reading poetry and so forth. Wrightstone (2006: 117), states that "Observation is a direct method of sampling behavior in a social situation and as such, perform a vital services as a tool evaluation.

Through the use of observation, and objective description of individuals in their actual interrelationships with other and with Reviews their environment may be secured ".

Based on the above explanation, it can be concluded that the observation is a method of sampling a person's behavior directly in social situations, as an evaluation tool. Through observation, the reciprocal relationship between learners and learners with the environment can be preserved. Further Powell & Steele (1996: 1) say that "Seeing and listening are key to observation. Observation provides the opportunity to document activities, behavior and physical aspects without having to depend upon people's willingness and ability to respond to the question. Observation is an essential element in good teaching and program development. In evaluation, it can be used to benchmark and descriptive data is secure during initiation program and to document program activities, processes and outcomes".

Important keys in an observation are seeing and listening. Observation basically documenting an activity, behavioral and physical aspects without having to rely on the willingness and ability to respond to people's questions. In the evaluation, the observation can be used to capture comparable data and descriptive for the initiation of the program and to document program activities, processes and outcomes.

Observation is a technique of continuous assessment conducted by using the senses, either directly or indirectly by using the guidelines observations contain a number of indicators observed behavior (Department of Education, 2013: 4) .In this study will be carried out direct observations of behavior of learners for conducting physics lab. The criteria for instrument observations: 1) to measure aspects of attitude required on core competencies (KI) and the Basic Competency (KD), 2) in accordance with the competence to be measured, 3) load the attitude indicator that can be observed, 4) easy or feasible to use , 5) can record the attitudes of learners (Kemenag, 2014: 7). KI and KD according to the 2013 curriculum attitude aspect in this study consisted of five competencies, working together, curiosity, discipline, environmental care and honest.

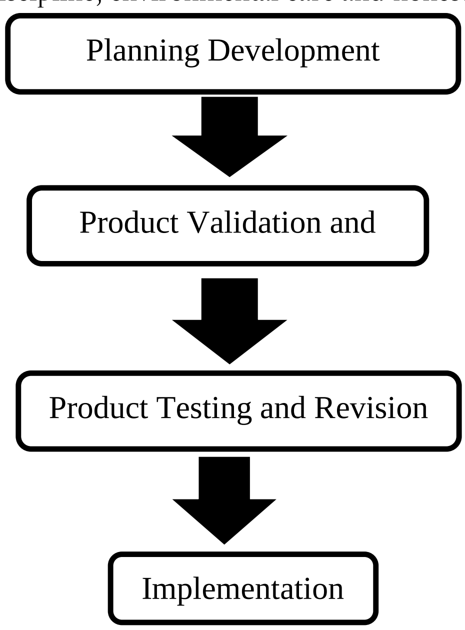


Figure 1. Development of Instrument Procedures

*Rubric*

A rubric is usually a one- or two-page document that lists the criteria for a specific assignment and describes varying levels of quality, from excellent to poor. "Instructional rubrics" are rubrics that have been explicitly designed to support as well as to evaluate students' learning (Goodrich Andrade, 2000).

Rubrics can help to encourage higher order thinking in learning too. The descriptions accompanying each level of quality in a rubric serve as a guide for actions students can undertake in the initial stages of their preparation for an assignment (Beng,2012:3)

## DEVELOPMENT OF INSTRUMENT PROCEDURES

The development procedures should be modified more simply into 4 main steps, namely: 1) planning development, 2) product validation and revision, 3) product testing and revision, 4) Implementation. These four steps can be explained in Figure 1.

## RESULT DEVELOPMENT OF INSTRUMENTS

*Attitude Instruments*

| No | **Observed Aspects** | 1 | 2 | 3 |
|---|---|---|---|---|
| **A** | **Confident** | | | |
| 1 | asked the teacher | | | |
| 2 | answered questions from the teacher / friend | | | |
| 3 | express opinions or proposals | | | |
| 4 | bold presentation to the class | | | |
| **B** | **Cooperate / Mutual cooperation in terms of** | | | |
| 1 | check the completeness of equipment / materials | | | |
| 2 | stringing tools | | | |
| 3 | analyzing data | | | |
| 4 | make conclusions | | | |
| **C** | **Discipline** | | | |
| 1 | entered the lab on time | | | |
| 2 | jacketed lab neatly | | | |
| 3 | not joking during practicum | | | |
| 4 | collects lab results on time | | | |
| **D** | **Responsibility** | | | |
| 1 | cleaning lab equipment | | | |
| 2 | cleaning tables practicum | | | |
| 3 | restore tools / materials lab in place | | | |
| 4 | picking up trash around the lab table (if any) | | | |
| **E** | **Honesty** | | | |
| 1 | records the data of what their | | | |

| No | Observed Aspects | 1 | 2 | 3 |
|---|---|---|---|---|
| 2 | did not cheat other groups | | | |
| 3 | create custom graphical observation table | | | |
| 4 | make conclusions based on the results of analysis | | | |
| **F** | **Polite** | | | |
| 1 | greet, smile and say hello | | | |
| 2 | respect the teacher / mentor lab | | | |
| 3 | appreciative peers | | | |
| 4 | to thank if it gets help | | | |
| Total | | | | |

Information:

1: Good One

2. Good

3. Less Good

Results Confirmatory Factor Analysis (CFA) instrument of social attitudes of students can be seen in Figure 2 below.

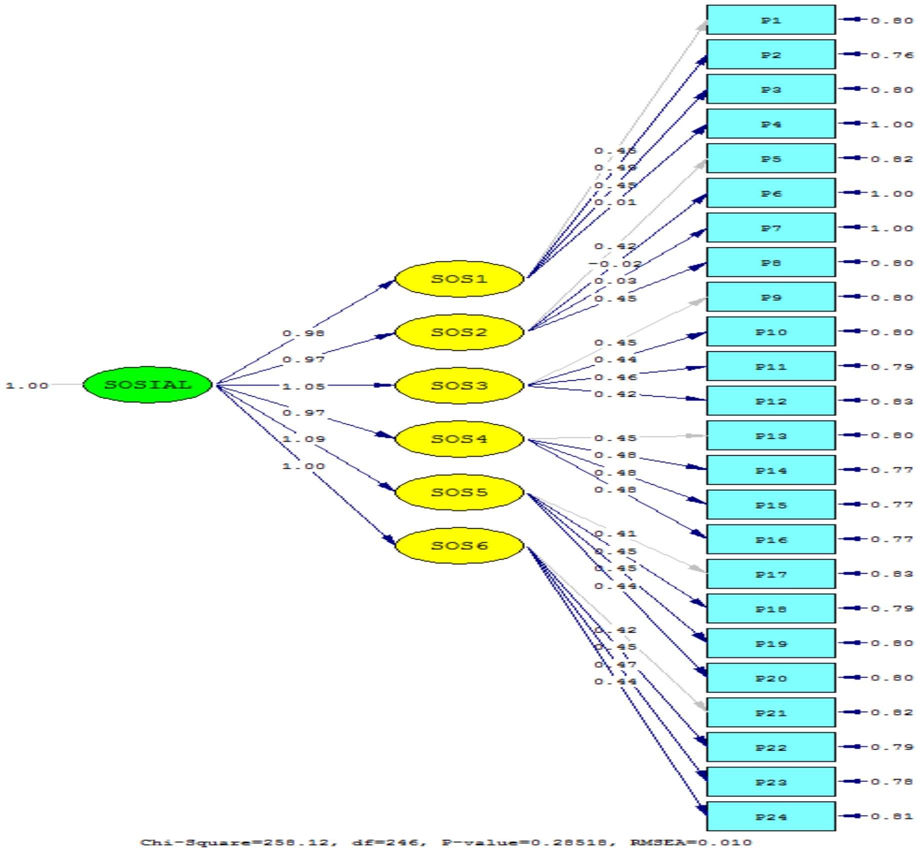


Figure 2. CFA Model for Social Attitudes Learners

Confirmatory Factor Analysis (CFA) was used to test the suitability (fit) measurement products, namely compatibility between the theoretical concepts of measurement products and empirical data. Based on the analysis above, CFA Goodness of fit index can be made as shown in the following table.

Table 2. Try-out of Goodness of fit

| No | Goodness of fit index | criteria | result | status |
|---|---|---|---|---|
| 1 | Empirical Chi square | Chi square < 2 db | 258,12<492 | ok |
| 2 | Significance (p) | $\geq 0.05$ | 0,28518 | ok |
| 3 | Root Mean Square Approximation (RMSEA) | $\leq 0.08$ | 0,010 | ok |
| 4 | Goodness of Fit Index (GFI) | $\geq 0.90$ | 0.96 | ok |

***Reliability of Instruments***

Table 3. Reliability Instruments Index

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 462 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | Total | 462 | 100.0 |

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .824 | 24 |

Based on Table 2. Test Goodness of fit and Table 3. Reliability Instrument Index cant concluded that the instrument of social attitudes of learners already have Goodness of fit is good and decent for measurement.

## CONCLUSION

1. Results of the instrument or product development in this study of attitudes of learners' observation sheet for carrying out the high school level physics lab.
2. Development of instruments through a) FGD, validation of the contents of the instrument proved by expert judgment passed by formula Aiken, b) reliability of the instrument is estimated using Cronbach Alpha, and c) test the suitability models make use of Confirmatory Factor Analysis (CFA).
3. Instruments attitudes of learners consists of seven aspects, namely 1) honest, 2) discipline, 3) responsibility, 4) mutual cooperation, 5) polite and courteous, 6) confidence, each aspect has 4 indicators.
4. Based Instruments social attitudes of learners are eligible and fit for measurement.

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# THE LITERACY OF SPATIAL THINKING ON GEOGRAPHY LEARNING MATERIALS FOR EQUIPPING STUDENTS WITH ENVIRONMENTAL UNDERSTANDING

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Abstract

This article presents aspects of spatial thinking in geography materials particularly intended for grade X of Senior high school which consists of seven basic competencies. The concepts of spatial thinking refer to Gersmehl and Gersmehl which consists of 11 concepts to understand the variations of objects, phenomena, potential, existing problems in the surface of the earth and attributes, character and its characteristics. The aspects of spatial thinking on Geography learning materials for grade X was resulted from the study through research and development that performed content and construct validation by an expert of geography material, an expert of evaluations, and the practitioner/teachers of geography. The validation was analyzed descriptively based on the categorization of the assessment score distribution. Results of the study show that aspects of spatial thinking on the materials of geography for grade X for each basic competence can be developed referring to the concept of Gersmehl and Gersmehl (2006) which include location, condition, connection, comparison, aura, territory, hierarchy, transition, analogous, patterns, spatial associations. These aspects are adapted on geography learning materials based on basic competences knowledge of geography (KD-3). The description of the integration aspect of spatial thinking on geography learning materials can be used as one of the bases for literacy of spatial oriented geography learning sources. The understanding of the concept of space, the cognitive processes that are carried out, and the use of tools/media representations in learning may enhance the students' understanding on environmental conditions comprehensively in real life.

Keywords: learning, spatial thinking, geography, environment

## INTRODUCTION

Geography as a subject in Senior High School (SMA) tries to find and understand Indonesian spatial phenomena or symptoms with all its characteristics in diversity as a space of living of the nation identity and a change in science and technology. Alastair Bonnett, (2008: 5) states that geography emphasizes the existence of an integrated spatial linkage. I Made Sandy (1988: 6) adds that a holistic approach through the study of spatial, territorial, ecological and systems as well as historical describe and analyze the pattern structure, interrelated function and processes, interaction, interdependence and mutual relationship of a series of symptoms, appearance or occurrence of human life. The two statements are inline with the rational of geography presented in 2013 curriculum stating that geography includes aspects and earth processes, the causal relationship between spatial factors, humans and the environment directed to contribute to the development at a local, regional, and global level. Lambert and Morgan (2010: 73) focuses geography as a science that examines the location and organization of space activities of human beings on earth.

Conceptually, the idea is in line with the understanding of the spatial thinking concept. The characteristics of spatial thinking according to Jo and Berdnarz (2010: 50) include the ability that involves knowledge and understanding of spatial concepts, applying knowledge with flexible capabilities, skills and habits of thinking to utilize tools, and provide a reason to solve problems and make decisions. Spatial thinking in geography can be invested systematically in the learning program as a multidisipilinary learning to provide an understanding of variety of objects, phenomena, potential, problems that exist on earth and its attributes, character and its types, especially the Indonesian physical circumstances and social interaction that exist.

The phenomenon in the field of education encountered by Sri Edi Swasono (2014: 33 and 62) tells that the awareness of geography students are still low, they mostly do not know nation identity space such as the boundaries of Indonesia from Sabang to Merauke and from Miangas to Rote Island. Sri Edi Swasono adds that the condition is a form of academic poverty which produces ambivalent human elite who have low awareness of ideology and nationality (2014: 63). Ketut Prasetyo (2013: 117) says that young people still do not know the names of the big island, the name of the big cities, and mountains in Indonesia. Ketut recommends the need to evaluate the method and approach of learning geography at high school level.

The data of the preliminary research which utilizes a questionnaire directed to 27 teachers of Geography in Yogyakarta on 1-4 October 2015 show that an average of 41% geography teachers rarely use spatial thinking component and an average of 16% never do so in the learning process in every basic competition of grade X. This condition implies that geography learning still emphasizes on the ability of conceptual and procedural of preliminary knowledge and do not yet lead to the factual and metacognitive aspects related to the materials being taught in Geography. Arum research results Darmawanti, et al (2013: 242) describes that the mastery of the material, structure, concept and mindset of scientific geography teachers (professional competence) in the city of Yogyakarta as a barometer of education in Indonesia is still 24% including in the category of poor.

Nursid Sumaatmadja (2001: 9) states that the elaboration of the concept, subject, and discussion of geography materials should be adjusted to the level of students' psychological development hierarchically. Mohan et.al (2015: 10) describes that geography is complex disciplines which focuses on the characteristics, relationships, and spatial patterns of human activity and nature. Geography teaches culture, geopolitics, natural systems, distribution and use of resources, and mapping of spatial data to better understand the world.

Geography curriculum in education should integrate aspects of spatial thinking in geography teaching materials. The essential materials of geography for grade X in the geography curriculum describes "Literacy and Skills of Geography" and "Physical Geography" which include: 1) A basic knowledge of geography and its application in everyday life, 2) The dynamics of Earth as a living space, and 3 ) The dynamics of geosphere and their impact on life.

The author identifies that the essential materials based on the scope of geography subjects for each Basic Competency (KD) knowledge consisting of seven points as presented in table 1. Based on the table 1, the number of Basic Competence knowledge and skills of Grade X consists of seven basic competencies which are varied therefore the general materials which are developed are also different. The gradation of the depth of material on every Basic Competence shows the thinking process from general to specific. The higher the grades, the more specific and deep of the materials will be taught.

Table 1. The main subjects of Geography Lesson at Senior High School

| Basic Competency | The main subjects of Geography Lesson for grade X |
|---|---|
| 3.1 and 4.1 | • A basic knowledge of geography |
| 3.2 and 4.2 | • The steps of Geography research |
| 3.3 and 4.3 | • Introduction to Earth |
| 3.4 and 4.4 | • Dynamics of the lithosphere and its impact on life |
| 3.5 and 4.5 | • The dynamics of the atmosphere and its impact on life |
| 3.6 and 4.6 | • The dynamics of the hydrosphere and its impact on life |
| 3.7 and 4.7 | • The distribution of flora and fauna of Indonesia and the world |

Heffron and Downs (2012: 17) emphasize two key perspectives to understand and study the geography, namely: spatial and the ecological perspective. They add that "Geography is concerned with the spatial dimension of human experience (space and place). …Understanding spatial patterns and processes is essential to appreciating how people live on Earth. (2012: 17). This tells that geography is related to the spatial dimension of the human experience in the form of space and place. The author asserts that understanding spatial patterns and processes is vital to appreciate how human live on earth. Cresswell (2006: 30) points out that something that is absent in the spatial approach is a sense of values and meanings that can be embedded in mobility, so that the spatial construction is needed. The same opinion is stated by Hagget (2001: 763) and Bernadz (1994: 18) which mentions that "geography is an integrative discipline that brings together the physical and human dimensions of the world in the study of people, places, and environments", this definition implies that geography seeks to study nature, humans are integrative and mutual relationships between people, places, and environments. In this context, geography can be a bridge of thought and actualization of the social sciences to the natural sciences, in addition to understanding the dynamics of culture, society and economy. Inline with Heffron and Downs ideas and Cresswell criticism, the National Research Council's (2006: 116) informs that spatial thinking underlying intellectual structure of standard geography shows the possibilities and power for embedding spatial thinking in geography learning.

Some experts have tried to formulate a taxonomy of spatial thinking using different basis. Each has a basic taxonomy, for instance Gersmehl and Gersmehl (2007: 183) taxonomy is based on neurological mode, while Jo and Bednarz (2009: 72) developed a taxonomy based on spatial complexity. Jo and Bednarz, (2009: 73) asserts that in geography, the concepts such as location, distribution, region, pattern, distance and spatial association are considered important to be taught using spatial thinking. Some selection of spatial thinking concepts based on the experts are presented in Table 2.

Lee (2011: 17) argues that although the term and core concepts that they use are different, there are some similarities that are easy to find at each taxonomy of spatial thinking that they explain. The taxonomy formulated by Gersmehl and Gersmehl is simple and easy to be taught with the help of geospatial technologies, including the use of remote sensing imagery. The weakness is that there is no concept scale as an important concept in the context of spatial thinking. The concept of Golledge et.al (2008: 285-308) is more complete but it tends to direct the users on the ability of using maps (cartography and GIS), such as buffer, overlay / dissolve, projections and transformations that can only be performed by utilizing GIS. Jenelle and Goodchild (2010: 1-13) concept seems to be simplier and different from the concept of Golledge, where the concepts of Jenelle and Goodchild are not only using a map. The concept of the environment, regional and spatial dependence can be understood through multiple media, such as maps, imagery, and field observations.

Based on a brief overview above, the authors intend to develop aspects of spatial thinking on geography teaching materials of grade X that can provide appropriate confirmation and comprehensive information on the quality of geography learning process at Senior high school. Spatial thinking as the basis for learning geography has not become a foundation for the development of geography learning design at Senior high school. Teachers still find difficulties in integrating spatial thinking on geography teaching materials that they teach. The fact needs to be thoroughly studied so that it may lead to the development of spatial thinking aspects of geography teaching materials for grade X of Senior High School.

Table 2. The concept of *spatial thinking from* Gersmehl and Gersmehl (2007), Golledge et al. (2008), Janelle and Goodchild (2009)

| Gersmehl and Gersmehl | Golledge et al. | Janelle and Goodchild |
|---|---|---|
| Condition | Identity | Object and Field |
| Location | Location | Location |
| Connection | Connectivity | Network |
| | Distance | Distance |
| | Scale | Scale |
| Comparison | Pattern Matching | |
| Aura | Buffer | |
| Region | Adjacency, classification | Neighborhood and Region |
| Hierarchy | | |
| Transition | Gradient, Profile | |
| Analogy | | |
| Pattern | Coordinate | |
| | Pattern, arrangement, distribution, Order, Sequence | |
| Spatial association | Spatial Association, Overlay/ Dissolve, interpolation, Projection, Transformation | Spatial dependence, spatial heterogeneity |

Sources: Lee dan Bednarzd (2012: 17)

Scientific contributions of the study include describing the aspects of spatial thinking in geography teaching materials of grade X. The understanding of geography in the perspective of spatial thinking literacy becomes the theoretical foundation for developing the aspects of environments care. To make these expectations and to provide a common understanding of the mankind challenges in the future, the materials that should be considered and taught to future generations include being wise in using natural resources, fostering harmonious social relations, and promoting environmental preservation. Geography perspective on the dynamics of the physical environment and the community will be viewed from the aspect of spatial integration and interdependence of good space between places or between scales. This perspective can be realized in the form of real or abstract (or representation) either visual, verbal, mathematical, digital, or mindset (cognitive).

## RESEARCH METHODS

This paper is a research paper. This author uses Research and Development Method of Borg and Gall (2003: 782) consisting of ten steps which are simplified into three stages, namely the introduction, design and development, and implementation. The aspects of spatial thinking were validated by experts on Geography educational materials, measurement/evaluation, and geography teachers. Aspects that are validated consist of content validity and construct validity. They include: 1) the accuracy of the contents, 2) clarity of instructions, 3) clarity of structure and completeness of the instruments, 4) language, and 5) grammar, and 6) implementation.

## RESEARCH FINDINGS

In the introduction stage, a preliminary study was conducted to collect grand theories and studies that are relevant with the assessment of spatial thinking on geography materials. After that, the framework constructs of spatial thinking aspects adopted from the study of Gershmel and Gershmel consisting eleven concepts were designed, then, these aspects were adapted to develop the geography teaching materials for grade X.

The initial drafts of the development of spatial thinking aspects in Geography for grade X materials were compiled by authors by considering the selection of the content through the collection of materials focusing on the content of the materials. The initial assessment of the products was carried out by employing six experts on learning evaluation and five experts on Geography subjects, namely lecturers of geography education department. The feasibility assessment was conducted by testing practitioners or 22 geography teachers who spread across 19 Senior High Schools.

Based on the assessment results of the products that have been designed, both experts state that the the draft of the assessment instruments for spatial thinking aspects on geography material is "feasible" to be tested or used in the field based on the revisions and the comments given ". The results of the above assessment were revised by considering the comments, suggestions and quantitative assessment. The conclusions of the two experts were followed up by testing geography teachers as a basis for developing an appropriate geography teaching model based on objectives stated in the curriculum.

The try out which was directed to 22 geography teachers from 19 schools aimed to measure the feasibility of product development of spatial thinking aspects on geography materials based on the accuracy of the content, clarity of questionnaire instructions, clarity of structure, completeness of evaluation models instruments, language and Grammar, and implementation. Based on categorization of data, the greatest relative frequency is 77.275%. The assessors state that the products developed belong to the excellent category, and other assessors 22.73% mostly say that the evaluation model of spatial thinking on geography materials is included in the category of "good" and there are no poor or even worst categories. This suggests that the products of spatial thinking aspects on geography materials for grade X is "feasible for use" as one of the bases for developing learning resources and materials which are relevant with the current high school geography curriculum.

### *Aspects of Spatial Thinking on each basic Competence of Geography Grade X*

National Research Council of the United States (2006: 12) and Jo and Bednarz (2010: 51) define spatial thinking as "a collection of cognitive skills comprised of knowing concepts of space, using the tools of representation, and reasoning processes". Some definitions of the spatial conception have constructive thinking, supported by three elements: the concept of space, the tools of representation and reasoning process. Uttal (2000: 285) states that the spatial depiction can be done through a cognitive reflex which influences the systems of symbols and is realized in the form of maps or spatial thinking abilities. Jones. et.al (2010: 359) describes further that the visualization of an object at different sizes require construction and deconstruction of mental ability to feel the actual visuals that may be more complex. The raw Information existing in the sensory experience (for example, see an object or photo) must be contextualized in terms of scale and relative orientation and then linked to the canonical representation.

The taxonomy of spatial thinking proposed by Gersmehl is used as an instrument due to the following reasons: first, it has been through a research on aspects of cognition and spatial thinking in which both have a relationship explicitly, clearly and are properly documented. Second, the purpose of spatial thinking taxonomy is to guide geography learning in a systematic and logical way. Third, Gersmehl taxonomy has been developed and expanded with examples of how these concepts are applied in the learning activities (Gersmehl 2008; Gersmehl and Anthamatten, 2008). The results of the analysis of integrating the concept of spatial thinking of Gershmel and Gershmel on Geography materials for grade X stated in the curriculum of 2013 is presented in the table 3.

The essence of spatial thinking in geography competence presented in Table above teaches spatial thinking for students to take a holistic approach through spatial representations of real-world objects in which there is information on the earth's surface, below the surface of the earth, waters, marine and lower atmosphere. The implementation of geography learning in spatial thinking perspective is not an addition to the curriculum, but rather as "a missing link" in defining the curriculum. National Academy of Sciences (NAS) states that the Integration and infusion of spatial thinking can help achieve existing curricular objectives. Spatial thinking is another lever that enables students to achieve a deeper and more insightful understanding of subjects across the curriculum (2006: 26). NAS (2006: 3-4)adds that the goal of integrating spatial thinking in learning to produce generations who (1) have a habit of spatial thinking, (2) practice spatial thinking using information they obtain, and (3) adopt a critical attitude through spatial thinking.

Table 3. The integrating the concept of spatial thinking of Gershmel and Gershmel on Geography materials for grade X stated in the curriculum of 2013

| *Spatial Thinking skills* | Indicators | | | | | | |
|---|---|---|---|---|---|---|---|
| | KD 3.1 | KD 3.2 | KD 3.3 | KD 3.4 | KD 3.5 | KD 3.6 | KD 3.7 |
| Location | Show the description of absolute location and climatic relative phenomena | Show the right inset on the maps. | Write down the astronomical location of the research sites. | Show the latitude which consists of four seasons characteristics | Show the layer location of Si Al and Si Ma on the earth layers. | Show the atmospheric layer where the rain occurs. | Show the areas where there is a greatest evaporation process. |
| Condition | Explain the geographic approach on several phenomena of geography, | Show the profile graph correctly on the slope map.. | Explain the overview of the research areas such as geography, social, economic, cultural, etc. | Explains the origin of the universe development using the existing theories. | Explain the type of rock that make up the earth's crust. | Explain an example of weather phenomena that occurs in the troposphere. | Explain the processes that occur in the hydrological cycle. |
| Connection | Explain a phenomenon of geography using the concepts of geography | Calculate the real distances on a map, For example the distance of town A and town B on the map is 4 cm, the scale of the map is 1: 40.000. | Explain the kinds of geography supporting knowledge about a particular map. | Show examples of evidence that the earth rotates. | Explain the process of recycling cycle phenomenon of magma rock, sedimentary, metamorphic rocks, and magma processing. | Explain the process of temperature changes that occur from the troposphere to the stratosphere. | Explain the effects of the evaporation amount that occurs in the sea on the high humidity in the air. |
| Comparation | Explain the phenomenon of geography in a certain region and other regions using geographic approach. | Describe the development of the industry correctly on the physical condition of two regions. | Explain a comparison of the measurement of air temperature in the rooms and in the out door. | Compare the process of forming each layer of the earth. | Look for differences of each rock type. | Compare the difference of the function of the layer (mesosphere) and (thermosphere) for life on the earth's surface. | Compare the differences in the occurrence of rain on land and at sea. |
| Influence | Describe the effects of | Describe the effects of recording | Describe example of Geography | Describe the effects of tectonic | Describe the effects of tektonism | Describe the effects of | Explain the effects of high and low |

| *Spatial Thinking skills* | Indicators | | | | | | |
|---|---|---|---|---|---|---|---|
| | KD 3.1 | KD 3.2 | KD 3.3 | KD 3.4 | KD 3.5 | KD 3.6 | KD 3.7 |
| | geography phenomenon somewhere on people's lives | time on the results of remote sensing. | studies in geography research methods in ecology approach. | plate movement on the formation of the earth's surface. | in a particular place on the morphology of the place. | temperature changes on the possibility of weather that happens. | evaporation of the precipitation produced. |
| Region | Give examples of country which has similar physical appearance. | Delineate land use patterns on the satellite image. | Explain the study of the same research problems between cities in Indonesia. | Givie examples of areas which are part of the continental shelf and oceanic plates. | Classify the types of volcanoes in Indonesia based on the formation of volcanoes. | Find altitude differences that affect the characteristics of the layers of the exosphere and the thermosphere. | Explain the similarities between the characteristics of the territorial waters of the Pacific Ocean and the Atlantic. |
| Hierarchy | Explain the phenomenon of a country based on location, resources, etc. in regional life | Explain the benefits of satellite images for the everyday life. | Explains the stages of the study of geography | Explain the phenomenon of mountain formation in Java based on location, resources, etc. | Explain two movement of magma (magma intrusion and extrusion) associated with volcanism. | Explain the process of rain formation! | Explain various factors that influence the amount of rainfall in a region. |
| Transition | Show the morphological changes that occur as a result of erosion activity in the upstream and downstream | Show the size changes in forest area of Kalimantan in 2000 and 2010 based on the image. | Describe the changes in the city image within two periods recording. | Explain the morphological changes that occur as a result of tectonic plate motion in Sumatra and Java. | Show the processes that cause earthquakes occur at the Earth's surface. | Explain the differences and characteristics of clouds based on its height. | Show the comparison of the quality of ground water in rural and urban areas. |
| Analog | Identify the types of plants suitable to grow in areas with an altitude of over | Explain the symbols based on the appearance on the map. | Make a paper on the salt-producing areas in Indonesia and its | Shows other continents that have the same characteristics as | Identify the factors that affect weathering in various places. | Identify any country in the world which has a similar climate. | Describe the climatological and meteorological |

| *Spatial Thinking skills* | Indicators | | | | | | |
|---|---|---|---|---|---|---|---|
| | KD 3.1 | KD 3.2 | KD 3.3 | KD 3.4 | KD 3.5 | KD 3.6 | KD 3.7 |
| | 600 meters dri dpal according to Junghun. | | geographical conditions. | the volcano on the island of Java. | | | processes in the hydrological cycle |
| Pattern | Analyze the image, analyze settlement pattern which cluster on the sources of life. | Identify patterns that exist in the image stream. Eg trellis flow patterns exist in the structure of the folds. | Explain and draw a model of urban development for X city. | Analyze the Pacific fire ring track and find a point of earthquakes in the same period. | Analyze soil conservation techniques based relief | Explain and describe the process of rain formation | Explain the short hydrologic cycle and the factors that influence it. |
| Spasial association | Show a map symbol on the flow pattern of rivers and lakes in the same area | Associate things that show the appearance of the harbor. | Find the cause of flood in the X region and the evidence on the ground. | Look for the distribution pattern of volcanoes in Indonesia and the world by using the symbol of active volcanoes in the world. | Find different types of soil and group them into 12 classes of soil texture!. (Sand, loam, clay, dust) | Explain the examples of phenomenon that occurs in the troposphere. | Explain a comparison of the water needs in the agricultural areas and industrial areas. |

Sources: results of analysis

The Table implies that the Indonesian spatial context which presents the diversity of Earth's surface area as a place of living for human with natural and social aspects as well as the interaction, interrelations between the aspects of spatial thinking become an object that must be understood by the students. They can use a multidisciplinary approach by employing spatial perspective which will result in geographic areas that have difference characteristics at the same object, phenomenon, pattern, problems, potentials, which exist on the earth. Indonesia, with all its characteristics and diversity is understood as a space of the nation identity and a change in science and technology. The generated content of spatial thinking suggests that education must recognize the close relationship between action and thought, between experiments and reflections.

Based on the perspective above, the topics or materials of geography do not only introduce the scope, the object of study, principles, concepts, and approaches of geography, but seek to provide spatial thinking literacy and geography skills that include basic knowledge of geography and its application in everyday life in each environment. The environmental interactions which include the condition of Indonesia, the distribution of Indonesia's natural resources, and natural disaster mitigation and adaptation based on the value of local knowledge and sustainable development must be possessed by learners when learning geography. Other abilities that are expected include applying spatial thinking for students in order to be able to think critically and are able to overcome problems in their respective communities in relation with a room change, damage and impact of conservation efforts and various changes due geosphere processes both in the context of local, national, and global. Students are able to create and update the physical environment and the social environment as a resource that can be utilized as much as possible for human welfare which is managed wisely by upholding the values of tolerance towards cultural diversity of the nation. The literacy of information, technology, media, and communication can be applied as geography analytical tool for decision making both at the local, national, and international levels. At the end, students can collaborate and communicate to develop relations (connections) in between the space either in the form of people, goods, and services in national and international environmental to demonstrate patriotism, proudness as Indonesian, and responsible for the integrity of the Republic of Indonesia based on Pancasila and the 1945 Constitution.

## CONCLUSION

The indicators that show the evidence of spatial thinking in geography materials of grade X for each basic competency can be developed by adapting the concept of Gersmehl and Gersmehl (2007). The aspects of materials can be adapted based on geography basic competence, so that aspect of spatial thinking for each material is different. The results of this development can be used as one of the bases of geography spatial oriented learning resources as the core identity and effort to prepare the learners who know, understand, and provide solutions to the problems of the environment.

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# CONTENT VALIDITY OF CREATIVITY INSTRUMENT OF PLAYING FOOTBALL OF SPORT SOCIAL SCHOOL STUDENTS OF REAL MADRID YOGYAKARTA STATE UNIVERSITY

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Abstract

The objectives of this research are: 1) to determine the validity of the content of each item of creativity instrument to play football of students of SSO Real Madrid UNY through Aiken index; 2) to determine the mean validity of the contents of each indicator creativity play football Real Madrid UNY students SSO; and 3) to determine the mean content validity indicator of SSO Real Madrid UNY student creativity playing football

The subjects were lecturers and coaches of SSO Real Madrid Faculty of Yogyakarta State University. The instrument used was the measuring instrument of creativity to play football which consisted of three indicators, namely: 1) fluency; 2) flexibility, 3) and originality.

The results of the research are: 1) the validity of the content of each item instrument includes: (a) Fluency in creativity to play football, the lowest at 0.89 and the highest at 0.94; (b) Flexibility in creativity to play football, the lowest at 0.94 and the highest at 0.89; (c) originality in creative play football, the lowest at 0.89 and the highest at 0.99; 2) The average content validity of indicator 'fluency' in creativity to play football is 0.93, the average content validity of indicator 'flexibility' in creativity to play football is 0.90 and the average content validity of indicator 'originality' in creative play football is 0.9; 3) Average content validity for creativity in playing football is 0.922.

Keywords: *validity, creativity, instrument*

## INTRODUCTION

Qualified athletes mean those who have innate potential (talent) in accordance with the demands of the sport and they are ready to develop in order to achieve the peak performance. The peak achievement is the result of the entire efforts of coaching program in a certain period as a combination of the training process that is systematically designed, in stages, continuous, repeated and gradually increasing (Ari Asnaldi, 2007). Experience has shown that athletes who are talented and want to train properly can achieve peak performance. This suggests that the ability and motivation of self-owned greatly affect an athlete's performance.

High levels of performance in the football game is the result of multiple factors such as physical, motor skills, mental ability and the ability of high physical work, efficiency tactics and techniques. It can be seen from the achievement of good performance of world-class football player that is the result of the interaction of a number of factors. It can be concluded that success in football is affected by the achievement of a player proficiency in psychology, physiology, and physiquel. Creativity is part of the football playing skills to play football.

Talent is a basic ability that determines the extent of the success of an individual to acquire skills or knowledge when individuals are given certain exercises. A talented footballer, if given football ground exercises would easily masters the skills of football. With the talent conformity with accepted practice that someone will produce the optimal achievement, so talent illustrates the special dexterity of someone who can be developed further. According to Handayani (2010) conception of giftedness that until now widely used in the identification of talent in Indonesia is "Three-Ring Conception" of Renzulli (2002) which states that giftedness is built on three interrelated components which consist of: (1) the ability in above average (above average ability), (2) creativity (creativity), and (3) commitment to the task (task commitment).

Development of good athlete candidates can be done by optimizing one's aptitude both psychological and physical, that can be found by football player in accordance with the characteristics of the psychological and physical condition. Accurate information is required to describe what is owned by a person in accordance with his talent so hopefully we will get talented individuals according to sports including football.

Progress in the field of measurement and evaluation is expected to be found instruments that can be used to predict a person's ability and achievement in certain sports. It can support to work effectively in identifying and selecting candidates for talented athletes in certain sports including football so hopefully lead to the achievement of optimal acquisition.

The development of football talent instruments has also been conducted by several researchers, for example, Singh (2002) concerning football playing ability test construction which was based on seven indicators of football skills, namely: kicking (passing and shooting), dribbling, receiving, feinting, and Singh (2006) on test research talent based on four variables, namely: (1) The basic skills of football which is composed of 10 indicators, namely: Passing for accuracy, kicking for distance, shooting in the goal, dribbling, receiving, feinting, heading, tackling, ball sense, and playing ability; (2) motor skills, namely: speed, coordination, endurance, flexibility, and strength; (3) Psychology, namely: personality, intelligence, achievement motivation, and group cohesion; and (4) Physiology, namely: resting heart rate, vital capacity, aerobic capacity, and anaerobic capacity. Research conducted Sayed, Samira, and Farideh (2007) research on talent identification in football players aged 10-12 years. This research analyzes the profile anthropometric, physiological profiles, and ability specific to football. The data in the research was obtained through anthropometric variables (weight and height); physiology (speed, agility, and agility) and capabilities specific to football (passing, and shooting).

The research instruments of talent scouting that should be based on research of expert judgment in depth about what factors are the dominant factors in determining talent not a person, it is true that these factors also suitable for talented children, so that the studies conducted should be optimally able estimating a person's particular talent in the sport of football.

Based on some facts above, the research is based on the assumption that the research on football instrument talent turns always progressing or a different understanding of the variables used to construct the instrument. This research tries to unravel again, whether the variable and its indicators include things above or nothing else, it is necessary to do research on the instrument talent scouting that describes the real condition of the individual both aspects of physical and psychological, or more particularly in the sport of football, so with this research is expected to produce an instrument that can help find talent that ultimately knowable individual talents in the field of football by scientific studies which can be accounted for.

The absence of standardized instruments resulted football talent necessary to develop a useful test to determine giftedness of children in football. The existence of this instrument is expected to obtain tools that can uncover about the child's talents both qualitatively and quantitatively.

The instrument is a tool used to collect information in the form of knowledge or skills of a person. These instruments measure the indicators for the creativity of football talent in the form of observation sheet that covers three aspects: (1) flexibility in creativity to play football; (2) fluency in creativity and play football; (3) originality in creativity to play football.

In order to determine whether this research instrument meets the criteria as a good instrument or not, the research requires the validation by experts. Validation required for the device measuring instrument can measure creativity play football. This research is oriented on content validity, because it deals with the ability of the instrument to describe precisely those aspects that encourage creativity play football person. Step validity of the content are translated into detailed aspects that form the lattice and described indicator. Furthermore, the instrument validation process of creativity to play football based on the opinions exspert judgment, whether the test items represent the variables.

## LITERATURE REVIEW

In general, significant creativity is the ability to create something new. According to Utami Munandar (2009) creativity is the ability reflecting the fluency, suppleness (flexibility), and originality in thinking, and the ability to elaborate an idea. Julius Chandra (1994) outlines that creativity is the mental ability and various types of typical human skills that can give birth to disclosure of unique, different, original, totally new, beautiful, efficient, effective and appropriate. By Jawwad (2004) creativity is the ability of thinking to achieve results that varied and new, as well as allow it to be applied, either in the fields of science, sports, literature, and other areas of life are abundant. High Creativity is the ability to formulate new ideas and apply them as a solution to solve the problems (Renzulli, 1997). It can be concluded that creativity is fluency, flexibility and originality in thinking someone to create something new, give ideas or new ideas and the ability to see new relationships (elaboration) between elements preexisting applied as a solution or solving a problem.

The emergence of creativity in a person is influenced by several factors. According to Rogers in Munandar Utami (2009) factor that promotes the creativity of a person consists of (a) major motivating factor in itself (intrinsic) and (b) the encouragement of environmental (extrinsic).

### *Encouragement of In Yourself (intrinsic)*

Every individual has the impulse within him to realize its potential for creativity (Roger in Munandar Utami, 2009). According to Rogers in Zulkarnain (2002) internal conditions that can drive someone to be creative include the following: (1) openness to experience, (2) the ability to assess the situation in accordance with one's personal standards, and (3) the ability to experiment with conceptual concept.

Openness to experience is the ability to receive all the resources of his life experiences by accepting what their defense without any effort, and the rigidity of the experience, as well as openness to the concept as a whole. The ability to assess the situation according to personal benchmark is a person's ability to judge things based on their own perception, while the ability to experiment with concepts is the ability to form a combination of things that had been there before.

***The Encourace of the Environment (Extrinsic)***

Environment that can affect one's creativity can be family environment, school, and community (Utami Munandar, 2009). According Utami Munandar (2009) environmental conditions that can develop creativity characterized by (1) the psychological security, psychological security formed through a process of interrelated that accepts people as they are with all the advantages and limitations, cultivate an atmosphere in which there is no external evaluation, and provide understanding emphatically; (2) psychological freedom, psychologically-free environment provides the opportunity for individuals to be free in expressing his ideas.

In addition to intrinsic and extrinsic encouragement factors, according to Harlock (1993), the emergence of creativity is influenced by gender, socioeconomic status, birth order, family size, urban environment vs. rural environment, and intelligence. Someone with high creativity has psychological characteristics/personality that is significantly different from those who are less creative. The different characteristics are in the level of intelligence, motivation, ways of thinking, attitudes towards themselves and the environment, as well as temperament.

According to Rochmat Wahab, characteristics of a person who has a high level of creativity is as follows: a) fluency, flexibility and originality in thinking, b) open to experience (receptive to what is new and different in mind, action, and the products themselves and others) , c) curious, speculative, and adventure, a desire to face the risk of both in thought and action, d) sensitive to the characteristics of the idea and something detailed and aesthetic, and e) the attitude of daring to take steps or decisions by ordinary people at high risk; while according to MacKinnon's (1964: 360) indicative of a person has high creativity demonstrated by the originality of thought and something new (freshness) approach in solving the problem, the construction of ingenious, the ability to regulate the proper procedures, and a talent for designing the fulfillment of the main demands of effective and original , According Guildford (1967) the characteristics of children who have the creativity, namely (a) the smooth thinking (fluency of thinking), (b) the flexibility of thinking (flexibility), (c) elaboration (elaboration), and (d) originality (originality).

***The Fluency of Thinking***

Someone who has a high creativity of thinking abilities tend to be divergent. The ability of divergent thinking is the ability of individuals to seek various alternative answers to a question or problem. People who have the ability in divergent thinking indirectly have fluency in thinking, where fluency of thinking is the ability to generate a lot of ideas quickly. In the fluency of thought, the emphasis is on quantity, not quality.

***The Flexibility of Thinking***

It is the ability to produce a number of ideas, answers or questions varies. Someone with flexibility of thinking can look at things from the viewpoint of different, look for alternatives or different directions, as well as being able to use a variety of approaches or ways of thinking. Creative child is a child that is flexible in thinking. They can easily abandon old ways of thinking and replace them with new ways of thinking.

***Elaboration***

It is the ability to develop ideas and add or elaborate the details of an object, idea or situation so that it becomes more attractive.

***Originality***

It is the ability to spark unique ideas or the ability to spark original thought. Instruments developed creativity is able to see the four features or capabilities. But of course creativity instrument were adjusted according to the field or talent to be searched.

Creativity in sport is defined as the ability to think smooth, supple and original in creating an idea that is unique, different, original, new, beautiful, efficient, and meaningful so as to find a new way of solving the problems encountered in the field of sports occupied , Fluency created the idea as part of creativity in the field of sports can be either the ability to master many basic techniques with the right moves, holding many ways to overcome the opponent play, do the exact timing during play. Dexterity as part of the creativity in the field of sports in them is seen in terms of the ability to put the position on the field, always focus during a match, ready to play, able to work with the team, and the game team is able to give and receive feedback well, while originality as part of creativity in sport among visible in terms of ability in the game creation techniques, techniques which are unique in technical skills, techniques are seldom done by others, and the ability feinting during the match.

Creativity in the sport can be seen or detected by identifying the indicators, namely by assessing fluency, flexibility and originality of a person at the time of exercise. The evaluation was conducted in terms of the observations in the form of observations and questionnaires for the assessment of fluency, flexibility and originality of a person in the exercise.

According to Webster's New World College Dictionary (2010) Football is a game using a ball by two teams, usually of eleven players, in a field with a wicket on both sides: the ball moves by being kicked or using parts of the body except the hands and arms, while according to the American Heritage Dictionary : football is: the game is played on a rectangular field with goal nets on each side where the two teams, each consisting of eleven players try to put the ball into the goal with a kick, header, or use parts of the body except the hands and arms. The goalkeeper is the player who may touch or play the ball with the hand or arm.

According Soekatamsi (1995: 11) the purpose of each team or teams are trying to put the ball into the opponent's goal as much as possible and try to keep the opponent's attack to protect his goal in order not to concede the ball with sportsmanship, and do not conflict with applicable regulations.

From the above descriptions, it can be concluded that football is a team game played by two teams with each consisting of eleven players. The ball is played with kicked, headed and using other body except the goalkeeper may use his arms and hands in the legal area. Principles of play that is, trying to put the ball into the opponent's goal as much as possible and try to thwart the opponent's attack to protect or keep the goalkeeper does not concede the ball.

Football is a game that is challenging both physically and mentally, the player must perform skilled movements under game conditions with limited time, physically and mentally more while facing an opponent. Players had to run a few meters in a game and to respond to some changes to the game situation quickly, the player's ability to meet these challenges determines the appearance on a football pitch (Josep, 1999: VII). To be able to play good football needs regular exercise and programmed. There are several factors playing exercises to improve football skills which include physical exercises, techniques and tactics. According Soekatamsi (1995: 31) physical exercise includes training speed, accuracy, strength, flexibility, agility, balance, endurance, and coordination.

Exercise techniques include techniques without the ball like: running and changing direction, jumping / jumping and movement trickery without the ball or feinting body, while the technique with the ball include: kicking, receiving the ball, heading, herding, feinting, steal the ball, throw-in and techniques keep wicket. For tactical exercise that attack and defense, the principle of the collective team play and cooperation. Football players who have a good basic technique will be able to play the ball well too (Soewarno, 2001: 7). In addition to having good technical football player should have good tactics anyway in order to play football properly.

To be able to play good football player must master the technical skills to play football. These football technical skills will support basic skills of playing football. According Hargreave & Bate (2010: vi) the basic technique and skill to play football there are five, namely: (1) controlling the ball, (2) passing, (3) dribbling, (4) shooting, (5) heading, (6) goalkeeping , According to research Singh (2006) on the construction of football talent using several indicators, such as: "passing, kicking for distance, shooting, dribbling, receiving, feinting, heading, tackling, ball sense and playing ability", while research Singh (2002: 16 ) includes "dribbling, kicking (passing and shooting), receiving, heading, feinting and tackling". While elements of the football skills, such as dribbling and passing have been included in the field tests, assessment of the skill to play football has received little attention. As said Hoopkins, et al. (1994: 213), that the measurement of the ability to play has two alternative procedures, namely: a test of skills through a simulated test item and rating capabilities by experts in real game situations. Test skills through simulated item, or in other words that can be standardized, easier and provide objective measurement of the ability to play. The essence of a good sport skills tests include: reliabiltas minimum acceptable, easy and accurate in scoring, and provide diagnostic interpretation of a test.

According to Aji (2009) to obtain the content validity, test items should reflect the skills that are important in a particular sport. At first must be identified components critical skills by appealing to the experts to certain sports in order to obtain the critical components those certain sports. Other steps can also be done by holding the observation itself into the field to see a game, such observations are meant to see what skills are often done by a player in a game, basic skills, certain frequently displayed a player on the field are important components that should be included as an important component in a test.

Research of Faris Aulia (2010) identifies the components of football skills, based on the observation football matches by students of the State University of Malang can be obtained rank based on rating often arise, namely: dribbling (177 times), passing (163), controlling (129 times), heading ( 48 times), and shooting (13 times). Reilly (2003: 42) also has validated a series of skills tests, which include: test passing, shooting (shooting), slalom dribel, and dribel straight. The tests are designed specifically to help identify and see the talent of young players.

Creativity is an ability that is very significant in the process of human life. Creativity is not just luck but it is hard work to realize. Failure for a creative person is simply a confounding variable for success. He will try again, and try again until successful. Creative people use their knowledge and make the leap that is possible; they looked at everything with new ways. Gordon & Vos (2000: 185) says that, "An idea is a new combination of old elements. There are no new elements, only new combinations ". According to Renzulli (1997) creativity is fluency, flexibility and originality of thought. It is openness to experience, accept what is new and different (even irrational) in thoughts, actions, and products from themselves and others. It is also being curious, speculative, adventurous, and "mental play" willing to take risks in mind and action, even to the point of the infinite. Creative people are sensitive to detail, having aesthetic characteristics of ideas and things and willing to act and react to external stimuli and his own ideas and feelings.

From the opinions above, it can be concluded that creativity is combining ideas / old idea to bring something new. Increase creativity is an integral part of most programs for gifted children. If we review the program or the target of student learning, creativity is usually referred to as a priority, creativity enabling new discoveries in science and technology, as well as in all fields of human endeavor. One of the major conceptual to the research of creativity is the notion of creativity as a trait inherited / inherited by people who are extraordinarily talented.

This research uses creativity as one of the indicators to measure the psychological and physical football athlete talent for creativity is innate potential inherited from the parents.

The test is an instrument of the performance of the individual, while the assessment is a process to determine a person's status as the criteria used. Measurement function is to determine the ability or skill, prepare the ground for progress, diagnose weaknesses, and foresees the possibility in the future (Bompa, 1994: 85). According to Wiersma & Jurs (2008) evaluation is a process that includes measuring and testing which contains decisions on value, evaluation is a measuring and evaluating activities, so the evaluation has a broader scope than the measurements and testing.

Assessment and measurement are two different things. Assessment requires the measurement and the measurement must be followed by a vote to get the meaning. Measurement is the process of gathering information. Measurements in principle emphasis on problems obtaining quantitative data with errors are as small as possible. According to Safrit & Wood (1999: 11), measurement as the process of assigning numbers to properties of objects, organisms, or events to some rules. It must be possible to define the attribute in quantifiable terms.

The measurement results should have an error as small as possible. The error rate is related to the reliability of measuring instruments. Good measuring tool to give consistent results when used repeatedly, as long as the ability is measured not changed. Measurement errors are random and systematic. Random errors caused by physical and mental conditions measured. Systematic error caused by the measuring instrument, the measured and measure (Djemari Mardapi, 2004: 14-15).

There are several principles that should be considered in the preparation of test and evaluation tools in order to obtain the test and evaluation tool is good and right. A test can be said to be good as a gauge must meet the criteria / main principles of the preparation of test and evaluation. In order for the test results reflect the real condition of the measured object, the tests used should be a good test. The test is said to be good if it can provide the data associated with the right. According to Miller (2002: 55-63) and Ismaryati (2006: 13-36) a good test if they meet the requirements of validity, reliability, objectivity and practicability. The validity of the research states the degree of accuracy of measuring devices to browse or research measured the true sense. Validity is essential in finding quality tests. According to the American Educational Research Association, American Psychological Association, and the National Council on Measurement in Education in the Standards for educational and psychological testing, (1999) validity refers to the degree of facts and theories that support the interpretation of test scores, and is the most important consideration for the development of tests , The validation process includes the accumulated scientific evidence as the basis of measurement for the purpose of interpreting the scores (1999: 9). Another expert opinion stating the validity of the measuring instrument is the extent of the measuring instrument able to measure what should be measured (Allen and Yen, 1979: 97; Saefuddin Azwar, 2007: 45). Validity can be grouped into three criteria, namely: 1) the validity of the criteria; 2) The validity of the content, and 3) construct validity (Lawrence, 1994; Retnowati, 2010). Validity is an integrated evaluative policies about the extent of empirical facts and theoretical reasons support the adequacy and appropriateness of inferences and actions based on test scores, and associated with the precision of measurement.

Validity of the content is intended to measure the extent of a grain of instruments used include the entire contents of the object to be measured. Content validity of the instrument in this research was conducted using a rational analysis of whether the items in the grating instrument describe the indicators of the measured variable of each instrument consisting of: 1) fluency in creativity to play football; 2) flexibility in creativity to play football; 3) originality in creativity to play football. Beads of giftedness instrument using the formula Aiken from scoring six experts in the field of football. Aiken validity of the calculation results as Table 1.

## RESEARCH METHODS

Sources of information in this research are six SSO coach Real Madrid UNY as assessor or observer creativity instrument playing football. Type of this research is quantitative data obtained from 1) a written test in the form of creativity to play football which consisted of 15 item. Device measurement instruments playing football creativity consists of 1) a written test to measure fluency in creativity to play football; 2) a written test to measure flexibility in creativity to play football; and 3) a written test to measure creativity originality in playing football. Data Analysis Techniques determining the validity of the content of this research instrument using the formula Aiken (Djemari Mardapi, 2016; 44) as follows:

$$V = \frac{\sum_{i=1}^{c-1} \mathrm{i}\, \mathrm{n_i}}{\mathrm{N}\,(\mathrm{c}-1)}$$

Where:

c = is the number of categories
i = weight for each category
ni = number of panelists who chose the category i
N = Number of Panelists

## RESEARCH RESULT

According to Aiken (1985: 134) content validity coefficient value of six (6) persons Assessor (rater) to four (4) categories of answers is quite good if the validity coefficients obtained minimum of 0.78. Overall gained an average of 0.92 thus all grains instruments task commitment has met the criteria. Aiken validity of the calculation results as table 1.

Table 1. Aiken Index Analysis Results Item Creativity Play Football

| **Fluency** | | **Flexibility** | | **Originality** | |
|---|---|---|---|---|---|
| Item | Result | Item | Result | Item | Result |
| 1 | 0.944 | 1 | 0.944 | 1 | 0.889 |
| 2 | 0.944 | 2 | 0.889 | 2 | 0.889 |
| 3 | 0.944 | 3 | 0.889 | 3 | 0.944 |
| 4 | 0.889 | 4 | 0.889 | 4 | 0.944 |
| 5 | 0.944 | 5 | 0.889 | 5 | 1 |
| Rerata | 0.933 | Rerata | 0.9 | Rerata | 0.933 |
| **Total Average** | | | | | **0.922** |

Table 1 shows that the content validity index using the coefficient obtained Aiken mean fluency in playing football by 0933, flexibility of 0.9, and the mean originality of 0933, as well as the overall average of 0.922 creativity play football. Based on the value of the conversion coefficient validity Aiken, all items are better because the instrument is said to have obtained validity coefficient value of more than 0.78.

## CONCLUSION

Based on the analysis of data, the conclusions can be presented as follows.

1. The validity of the content of each item instrument includes: (a) Fluency in creativity to play football, the lowest at 0.89 and the highest at 0.94; (b) Flexibility in creativity to play football, the lowest at 0.94 and the highest at 0.89; (c) originality in creative play football, the lowest at 0.89 and the highest at 0.99;
2. The average content validity of indicator 'fluency' in creativity to play football is 0.93, the average content validity of indicator 'flexibility' in creativity to play football is 0.90 and the average content validity of indicator 'originality' in creative play football is 0.9;
3. Average content validity of creativity to play football 0.922

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# LEADERSHIP MODEL IN MUHAMMADIYAH TO CREATE INDEPENDENCE SCHOOL

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Abstract

One of features in Muhammadiyah independence schools is having an ability to optimize the achievement of educational goals, good potential and resources. The schools are also supposed to be able to produce high quality graduates with following qualifications: (1) performing regular prayers (al-Islam), (2) being literate in Al-Qur'an, (3) having good nationalism, (4) having high academic achievement, 5) mastering a foreign language, and (6) being literate in information and technology. In order to accomplish the program, a significant factor namely a school leadership is necessarily needed. By having such a school authority, Muhammadiyah schools will be able to create independency conditions. This research is part of a dissertation on R&D (research and development). This research involved four junior high schools in Yogyakarta including SMP Muhammadiyah 1 Gamping, SMP Muhammadiyah 1 Minggir, Muhammadiyah 2 Kalasan, and SMP Muhammadiyah 3 Depok. The data were collected through interviews, questionnaires, and documentation. The data were then analyzed by using following techniques: (1) inferential analysis Cronbach Alpha for the data reliability. (2) EFA techniques, (3) CFA. The results showed that leadership accomplishment gives contribution to the independence of Muhammadiyah schools. There are three models of leaderships that can be applied in Muhammadiyah schools namely strategic leadership, transformational leadership, and learning-centered leadership. All three models of leadership are beneficial to establish the independence of Muhammadiyah schools as shown in the t-test score of 1.96.

Keywords: leadership, independence of schools, muhammadiyah

## INTRODUCTION

Muhammadiyah education is holistic, integrative and exemplary based on the integration spirit of five awareness namely devoted, humanists, naturalists, mundane, and beyond. The awareness indeed are the educational philosophy of Muhammadiyah that is created through a process of education visionary and targetted at the development of human relationship among the educators, learners, educational institution and family. The five awareness consist of: 1) human relationship with God which known as *ta'abbudi* (*'alaqah ta'abbudiyah*) to spawn learners who are sincere, devoted, and pious; 2) relationship between fellow human beings which is defined as the relation and interaction within equitable and kind (*'alaqat al-adl wa al-ihsan*); 3) human relationship with the universe which is interpreted as *taskhir* and *ta'mir* (curtsy and burgeon) as *khalifatullah,* who cannot exploit and decay; 4) human relationship with the life of the world which is interpreted as a test and competition (*'alaqah ibtila' wa munafasah),* and highly competitive; 5) human relationship with the afterlife in which interpreted as a form of accountability (*'alaqah mas'uliyyah*) in front of human and God.

In this way, a Muhammadiyah school has a responsibility to prepare forces, leaders, educators, and the employers of the people. It also aims to produce graduates who have *akhlaqul karimah* profile, intelligent, and skillful with advanced quality of survival in the globalization era. To achieve these objectives, the program of muhammadiyah is therefore to develop school autonomy as required in the long-term policy framework of Muhammadiyah (Muhammadiyah vision in 2025). This framework has been set out in four phases: the first phase (2005-2010), the second phase (2010-2015), the third phase (2015-2020), and the fourth phase (2020-2025). In the second phase (2010-2015) mentioned in point (b), improvement and development of a broad charitable efforts and independent ... and etc, which are then translated into development programs in item (15) develop and strengthen the independence of Muhammadiyah education … and etc) (Majelis Dikdasmen PWM DIY, 2015: 337-341).

Independence in Muhammadiyah schools means that the school has ability to optimize the achievement of educational goals, potentials and available resources. In order to produce high quality graduates, the implementation of studies is focused on developing the potential of learners. Mohammad Ali & Marpuji Ali (2005: 158-160) states that the normative output of Muhammadiyah schools have the following qualifications: 1) performing regular prayers (al-Islam), 2) being literate in Al-Qur'an, 3) having good nationalism, 4) having high academic achievement, 5) mastering a foreign language, and 6) being literate in information and technology.

To accomplish that program, the school authority in Muhammadiyah schools should be able to create school independency conditions. Independence means having good ability in school management, curriculum development, improvising teaching methods, improving evaluation, recruiting educators and non-educational, fundraising, building sustainable infrastructure, improving academic quality, creating quality culture, and etc. According to Everard *et al*., (2004: xii) there are at least two approaches to establish school independency, they are effective school and quality school in which leadership is the decisive factor.

Muhammadiyah schools have a motto "*amar makruf nahi munkar*" which differs considerably from other schools. Suraiya Ishak (2011) asserts that there are four leadership characteristics of *amar makruf nahi munkar*. First, it is based on *ubudiyyah* or high faithfulness to God. Second, it educates the human being to become good human being (leaders and members). For that reason, the leaders must maintain himself as an exemplary human being and be the first example for every good individual in the organization. The leader also needs to educate the members to continue the virtuousness. Third, it avoids the evil. The leader should always keep away from the evil and creating an organization that can evade followers in committing a crime. Fourth, it generates good outcome for all parties including the good things in the world and the hereafter.

Hence, this paper raises one of the four constituent components of independence of Muhammadiyah schools which is part of the dissertation research about the development of evaluation model on muhammadiyah school independence in Sleman region. This paper focuses on which types of leadership models to be applied in order to develop self-reliance on Muhammadiyah schools.

## METHODOLOGY

This research is part of R&D dissertation research. It followed a model designed by Richey and Klein (2007: 76-77). There were four steps in the process, including (1) model development; 2) model internal validation; 3) model external validation; and 4) model use. It also followed a model by Cennamo & Kalk (2005: 7). There were five phases of development, namely Define, Design, Demonstrate, Develop, and Delivery. The subjects of research were school authorities including the board of institute, headmasters, teachers, employees, and students of four junior high schools namely SMP Muhammadiyah 1 Gamping, SMP Muhammadiyah 1 Minggir, SMP Muhammadiyah 2 Kalasan, and SMP Muhammadiyah 3 Depok.

The data were collected through interviews, questionnaires, and documentation. The data were then analyzed by using techniques including: 1) inferential analysis: 2) Cronbach Alpha for the data reliability. 3) EFA techniques and CFA.

## FINDINGS

The independence of schools is a concrete manifestation of excellence which is processed in good quality management, strong, and reliable so it can be an outstanding school that coveted by the community. As stated in the Baldrige National Quality Program (2009-2010: 1), there are seven categories of outstanding schools namely; (1) leadership, (2) strategic planning, (3) customer focus, (4) measurement, analysis, and knowledge management, (5) workforce focus, (6) process management, and (7) results. The implementation of Baldrige concept would give advantages to develop the school quality such as; (1) flexibility use in both education and business, (2) focuses on process and results, (3) establishing clear and comprehensive criteria, (4) all variables can be measured by the same criteria, (5) the criteria quality development are sufficiently holistic and contextual.

Thus, the existence of school independence is the result of the accomplishment of a standardized school criterion. Arcaro (1995: 1) describes four essential components of the standardized school criteria, they are; 1) having a commitment to change. 2) having good understanding of the school condition. 3) having a clear vision in the future that has been set (whole community in the school). 4) having a plan to implement the standardized school criteria. Zamroni (2007: 91-92) states that there are two levels to improve the quality of schools includes, namely: 1) in the bureaucracy level. In this level, there must be an effort of quality improvement in order to form of clear policies and programs as guidance for quality improvement in schools and classrooms. 2) in the school and classrooms' level. In this part, the school focuses on the quality improvement especially in teaching and learning process, so that most of students would achieve high academic achievement.

Ditjen Dikdasmen (Nugroho Agus Santoso, 2012) states that the school improvement will not be separated from the following principles: (1) conducted in schools, (2) can be carried out in the presence of good leadership, (3) based on data and the fact that both qualitative and quantitative measures, (4) empowers and involves all the elements that exist in the schools, and has a goal that the school can give satisfaction to students, parents, and community. Tucker and Slate (2002: 19) explains that the involvement of a high school principal in the school-based management decisions has an impact on the development of the school.

Maguad (2003) also explains that the influence factors in implementing MBS, such as: (1) leadership, (2) strategic quality planning, (3) human resource utilization, (4) quality assurance of products and services, (5) quality results, and (6) customer focus and satisfaction. Gaspersz (2005: 225) describes the use of a strategic approach are: (1) the elements in management quality, (2) the principles and concepts of management quality, and (3) a process strategy improvement.

Based on the survey in 2014 and 2015 about the criteria of school independence, the parents exclaimed that schools which are qualified if they have good criteria, for instance: 1) the principal's leadership; 2) having supportive learning process; 3) having qualified and competence teachers; 4) having good school management; 5) having sufficient infrastructure (quantity and quality) to support education; 6) having good school development program; 7) having the competitive graduates (student learning outcomes); 8) accommodating good academic environment and atmosphere; 9) having recognition and reward for academic and non-academic matters; 10) supporting innovation and creativity of each individual at the school; and 11) the support from the committee/parents/community in the growth and development of the school. The leadership factors become the focus on his article to construct a theory, as summarized in Table 1.

Table 1. Construct Theory of Constituent Components of School Leadership

| Component | Subcomponent | Indicator |
|---|---|---|
| Leadership | *Strategic leadership* | 1. Giving directions |
| | | 2. Breaking down strategies |
| | | 3. Fusing human resources |
| | | 4. Determining some point for intervention |
| | | 5. Developing skill strategic |
| | *Transformational leadership* | 6. Affirming direction |
| | | 7. Building human resources |
| | | 8. Revitalization of work structure |
| | *Learning centered leadership* | 9. Changing education system |
| | | 10. Modeling, monitoring, dialogite |
| | | 11. Showing leader characteristics |

Source: Zamroni (2007: 41).

The construct of leadership theory is then elaborated into research instrument components. To figure out about the quality of the instruments and the items attached to the leadership components instrument, it is important to conduct reliabilities and validity testing. The results are as follow:

### *Test Reliability Leadership Component*

The reliability testing instrument is conducted with Cronbach's alpha. If Cronbach's alpha coefficient index ≥ 0.7 means the result is reliable. The components of leadership which is tested includes three subcomponents, namely: strategic leadership (Sl) 5 items, leadership transformation (Tl) 5 items, leadership and learning center (Lc) 4 items. The total items for each component of leadership are tested is 14 items. The total respondents are 70 in small-scale trials.

The reliability test results of the overall leadership components using Cronbach's Alpha is coefficient of 0.965. This means that each component of the leadership of the instrument is reliable since criteria Cronbach's Alpha reliability coefficient reaches index ≥ 0.7. The reliability test per subcomponent of leadership is presented in Table 2.

Based on the Table 2, it can be seen that all the subcomponents that build the construct theory for the leadership components has a coefficients index greater than 0.7of. Thus, the three subcomponents, namely strategic leadership (Sl), transformation leadership (Tl), and the learning center leadership (Lc) meet the reliable criteria.

Table 2. Results of Analysis Instruments Component Reliability Leadership

| Num | Subcomponent of Leadership | Coefisien Cron.Alpha |
|---|---|---|
| 1 | *Strategic leadership* (Sl) | ,900 |
| 2 | *Transformation leadership* (Tl) | ,887 |
| 3 | *Learning center leadership* (Lc) | ,882 |

***Validity Leadership Component***

Table 3 shows that the data for each leadership components of has the eligibility to be processed further and all of the items are declared invalid. The proven average performance index of *kaiser-meyer-olkin measure of sampling adequacy* (KMO-MSA) > 0.5 and the *bartlett's test of sphericity* (BTS) index is < 0.05. Furthermore, the index of *anti-image correlation* (AIC) for each item is > 0.5, and the most important is that the index *factor loading* on each item RCM instrument above average > 0.5 (Imam Ghozali, 2011: 55 ). This means that none of the items should be eliminated on those three indicators, namely: strategic leadership, leadership transformation, learning center leadership of the principal leadership.

Table 3. Feasibility Index and Index Instruments Validity Item Component Leadership

| Comp. | KMO-MSA | BTS | Indicator | Items | AIC | RCM/ FL | Note |
|---|---|---|---|---|---|---|---|
| *Leadership* | ,863 | ,000 | *Strategic Leadership* | Sl1 | ,831 | ,885 | Valid |
| | | | | Sl2 | ,855 | ,829 | Valid |
| | | | | Sl3 | ,845 | ,860 | Valid |
| | | | | Sl4 | ,893 | ,826 | Valid |
| | | | | Sl5 | ,904 | ,827 | Valid |
| | ,840 | ,000 | *Transformation Leadership* | Tl1 | ,812 | ,786 | Valid |
| | | | | Tl2 | ,852 | ,829 | Valid |
| | | | | Tl3 | ,857 | ,839 | Valid |
| | | | | Tl4 | ,856 | ,844 | Valid |
| | | | | Tl5 | ,822 | ,853 | Valid |
| | ,814 | ,000 | *Learning Centered Leadership* | Lc1 | ,827 | ,839 | Valid |
| | | | | Lc2 | ,828 | ,856 | Valid |
| | | | | Lc3 | ,799 | ,879 | Valid |
| | | | | Lc4 | ,804 | ,864 | Valid |

The leadership component test results are supported by three subcomponents with fourteen indicators were scattered on each subcomponent are: (1) strategic leadership subcomponent ("Sl") are translated into the 5 indicators (Sl1, Sl2, Sl3, Sl4, and SL5); (2) subcomponent transformational leadership ("Tl") are translated into the 5 indicators (Tl1, Tl2, Tl3, Tl4 and Tl5); and (3) subcomponent learning-centered leadership ( "Lc") are translated into the four indicators (Lc1, Lc2, Lc3, and Lc4). The test results shown by using confirmatory factor analysis (CFA) for the leadership components can be seen in Figure 1.

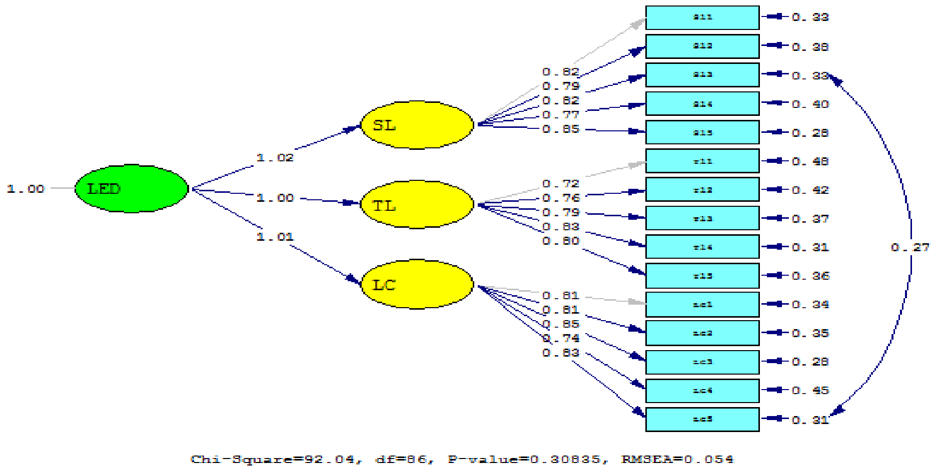


Figure 1. Standardized Test Results Solution Components Leadership

Based on Figure 1, there is a correlation between the ability to integrate the school community with the dialogic ability. After seeing the error covariance between Sl3 (the ability to integrate the school community) with Lc5 (dialogic ability) then the result is a chi-square ($\chi^2$), which was already smaller than 2df, now even added a smaller number (92.04 <2 (86)), the probability of $\chi^2$ already eligible greater than 0.05 (p = 0.30835), and root mean square error is approximately smaller than 0.08 (RMSEA = 0.054). Theoretically, it is possible.

This means that not every principal will have a balance ability to integrate the school community using dialogic ability. To determine the load factor (factor loading) for each subcomponent and indicators of the leadership can be seen in Figure 2 below (factor loading is the contribution indicator of subcomponents, components and subcomponents):

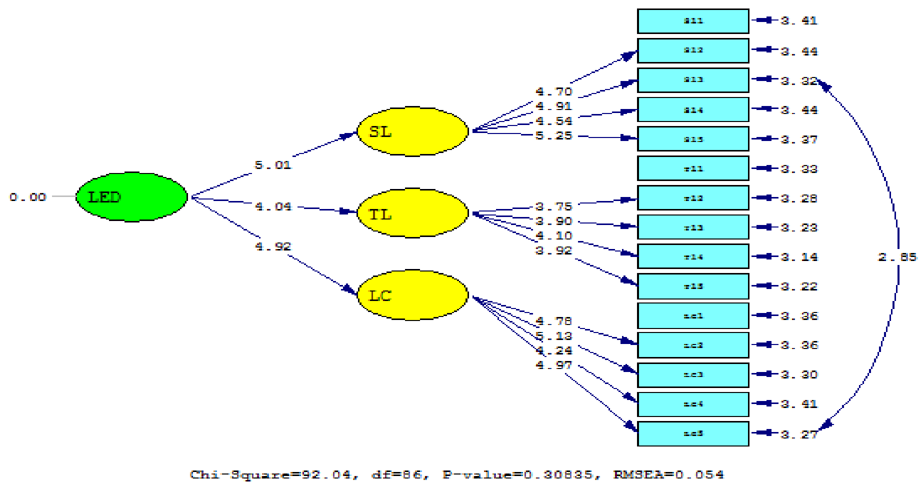


Figure 2. Modified t-values Component Leadership

Figure 1 explicates the contributions of indicators on each subcomponent, respectively: 1) the indicator contributions to the subcomponents Sl each 0.82 (Sl1), 0.79 (Sl2), 0.82 (Sl3), 0.83 (Sl4), and 0.80 (Sl5 ). 2) the indicator contributions toward each subcomponent is Tl 0.72 (Tl1), 0.76 (Tl2), 0.79 (Tl3), 0.83 (Tl4), and 0.80 (Tl5). 3) the indicator contributions to each subcomponent is Lc 0.81 (Lc1), 0.81 (Lc2), 0.85 (Lc3), 0.74 (Lc4), and 0.85 (Lc5). While the contribution of each subcomponent towards each component is 1.02 (Sl), 1.00 (Tl), and 1.01 (Lc). Based on Figure 2. The results t test (t-values) indicates that all of the indicators with existing subcomponents, and all subcomponents with existing components already meet the significant criteria ($t > 1.96$).

## CONCLUSION

Muhammadiyah school independence cannot be separated from the influence of the implementation of leadership in the school. There are three models of leadership that can be applied in Muhammadiyah schools including strategic leadership, transformational leadership, and learning-centered leadership. All the three leadership models will contribute to the school leadership in establishing the independence of Muhammadiyah schools as shown in the t-test score of 1.96.

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# THE INFLUENCE OF PROJECT BASED LEARNING MODEL WITH JOURNALISM PROJECT ORIENTED IN LEARNING WRITING NEWS TEXT

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Abstract

The purpose of this study was (1) to describe project based learning model with journalism project oriented in learning to write a text message, (2) to determine differences in learning outcomes of students who study with the model project based learning project oriented journalism with conventional learning. The method used in this study was an experimental method to design one group pretest and posttest design. The instrument used was a test writing news. It was obtained that the average value of students before action (pre-test) is 66.85, while the average value of students after the action (post-test) is 72.07. Testing the hypothesis t = 3.07 consulted with t table at significant level 5% = 2.02. Because t value > t table, the null hypothesis (Ho) is rejected. The condition shows that the learning model project based learning (PPA) project-oriented journalism affects the ability to write a text message SMPN 1 Kerumutan student, Pelalawan, Riau Province.

Keywords: Project Based Learning, Journalism Project, News Writing

## INTRODUCTION

Writing skills are language skills the highest degree of difficulty compared to other language skills. This is in line with Tarin' s statement (1995, p.4) that is said to be difficult writing skills because these skills requires a person to present graphology, the structure of the language and the words that the author's intention understood by the reader. Alwasilah, (2007, p.10) confirms the importance of mastering writing skills for students. With good writing skills, according to a person can spread the ideas, views, opinions, ideas or feelings about things in a productive, attractive, and easy to understand. However, the skill of writing is the most difficult language skills mastered because writing is a very complex cognitive processes (Mahsun, 2013, p.13).

News Text article is one of several kinds of writing that must be mastered by students, both in the education curriculum unit level (SBC) as well as in the curriculum in 2013 (National Curriculum). Writing news text is important for students to practice critical thinking and systematic. Students demanded to be able to draw on ideas, information and analyze a fact to be a writing that can be enjoyed by readers.

The facts found in the school is, the lack of time students in practicing writing. Based on the observations, the average student learn to write only when no material to write in the classroom. Moreover, the students are busy with other activities, without any attempt to practice writing. The lack of this writing exercises so one of the causes poor writing skills of students. Students, who are actively writing, also complained about the lack of media to accommodate their creativity. Wall magazine conventional board felt not too exciting for the students, because of the lack of wall magazine readers. In addition, there is no pride for students who actively write, if their writing is only attached to the wall magazine. This suggests that students need a media representative that their writing can be more appreciated and read by many people.

Teachers need to know a method and media were able to improve students' writing. Media representative and creative teaching methods considered eliminating the boredom towards learning to write news. The use of instructional methods and media are expected to improve student learning in the learning process, which in turn will enhance learning outcomes.

The author will try to implement the project model of journalism in learning to write text. The method is combined with project learning model of journalism, to make it more attractive to students and teachers. Learning model projects selected for rated provides opportunities for students to hone their writing skills through activities outside the classroom. This is very important, because according to the author, as well as any method of teaching writing, it will not make students skilled if only to make the students practice writing during lessons in class. While the selection of projects for consideration of the lack of media journalism writing in schools, and to hone the students' social sensitivity. Humanly speaking students also need recognition for their work. After a hard and long effort, the writings of the students should not only be read by the subject teachers only. Student will be more motivated if his writings read by many people. The more people who read his work, would be high-level his satisfaction and make student more motivated to practice writing. Products produced journalism students from learning project is a school bulletin.

Based on this background, the problem in this study was (1) how the *project based* learning models *learning* project oriented journalism in learning to write news text in SMPN 1 Kerumutan? and (2) are there differences in learning outcomes of students who study with the model *project based learning* project oriented journalism with conventional learning at SMPN 1 Kerumutan?

The purpose of this study was to (1) describe the model learning *project based learning* project oriented journalism in learning to write a text message in SMPN 1 Kerumutan, and (2) to determine differences in learning outcomes of students who study with the *Project Based Learning* Model with journalism project oriented and conventional learning in SMPN 1 Kerumutan.

## THEORETICAL FRAMEWORK

*Project Based Learning* is one of the models suggested its use in curriculum in 2013, in addition to the model *of Problem Based Learning* (PBL), *Discovery Learning* and *Inquiry.* This model uses a project or activity as a learning medium (Kemendikbud, 2013, p.42) .PBL requires students to carry out exploration, appraisal, interpretation, synthesis and utilization of information to produce various forms of learning outcomes (Kemendikbud, 2013, p.42). With the form of such activities, certainly very PPA requires the active participation of students in the learning process. While Sani (2014, p.171) reveals that the learning project is a model of student-centered learning, is interdisciplinary and long-term. It also expressed Mahsun (2014: 135) that project-based learning is defined as an activity that relies on efforts to carry out an activity / work with specific objectives and have the completion of the firm.

Based on expert opinion it can be concluded that the PPA is an instructional model that involves students actively in activities to plan, implement and evaluate a learning project. Kemendikbud (2013, p.46) make up the learning process model of *project-based learning* in three stages, starting with the preparation, implementation and evaluation phase ended.

Etymologically the word comes from French journalism is "journ" which means the records or daily reports. In short, journalism means that the activities associated with the recording or reporting on a daily basis. According to the dictionary Journalism means of activities to prepare, edit and write for a newspaper, magazine, or other periodical. According to the Encyclopedia of Indonesia Journalism is a profession that seeks the presentation of information on the incidence and or daily life on a regular basis, using the means of publishing there. Journalism is the "activity" or "activities" search for, collect, collate, process / writing, editing, presenting and disseminating news to the public through mass media channels (Sumadiria, 2008, p.4). In the dictionary of journalism, defined activities to prepare, edit and write for a newspaper, magazine or other periodical (Assegaf, 1983, p.9, Sumadiria, 2008, p.2).

Text news is carrying reports about the information in the form of facts or opinions that are considered important and interesting and has been scrutinized so useful for many people. In other words, the news is considered as the report of the fastest on facts or new ideas are correct, interesting or important for most audiences, through the medium of periodicals such as newspapers, radio, television or media *on-line* Internet (Sumadiria, 2008, p.64) , Based on the material contents of news can be grouped into (1) news statement of opinion, (2) economic news, (3) financial news, (4) political news, (5) news social, (6) education news, (7) the news laws and justice, (8) news social, (9) criminal news, (10) sports news, (11) the news of war, (12) scientific news, (13) entertainment news, and (14) the news *of human interest* or attraction humane (interest human).

## RESEARCH METHOD

This study uses a quantitative approach with a quasi-experimental method and *model of a one-group pre-test post-test design.* Experimental research is a systematic and logical method to look at the conditions that controlled study, by manipulating a treatment, stimulus or under certain conditions, then the influence or change caused by manipulation (Shamsuddin &Vismaia, 2006, p.169).

Subjects of this study consisted of two groups: the experimental group and the control group. The experimental group was given special treatment, namely the application of the journalism project learning model. Then do the initial test and final test to determine the extent of students' ability to write a text message. While in the control group did not apply special treatment, or simply carry out conventional learning model (learning taking place in the school). Initial tests and final tests remain to be implemented in the control group to determine students' ability to write a text message.

The populations in this study were students of class VII-1 and VII-3 at SMPN 1 Kerumutan. Samples are parts and the number and characteristics possessed by this population (Sugiyono, 2014, p.118). Samples in this study were divided into experimental class and control class. Researchers specify the class VII-1 into the experimental class and class VII-3 to grade control. Determination of the sample in this study is based on *sampling* techniques *nonprobability. Nonprobability sampling* is a sampling technique that does not allow or equal opportunity for each element or member of the population to be selected into the sample (Sugiyono, 2011, p.119). Therefore, researchers took two top class (high pretest value) as samples in this study.

The data generated from text news production students are assessed to measure the ability to write text. The ability to write news text is measured through five aspects of evaluation aspects, those are; (1) title, (2) lead; (3) news agency, (4) the use of diction, and (5) the use of grammar.

Normality test is done to know whether the data pre-test and post-test the ability to write news text normal distribution or not. In this study, statistical analysis researchers using SPSS version 17 *for windows,* with step-click *descriptive statistics,* then *analyze* and *explore.* By examining the use of such a move would result normality test and test homogenates of data belongs. Conditions applied when using statistical test of the hypothesis that the application, either Ho or Ha. Such provisions if tilapia l Sig Data $\geq \alpha$ ($\alpha = 0.05$), then Ho is accepted. Vice versa, if the value of the data Sig $\leq \alpha$ (*$\alpha = 0.05$*), then Ho is rejected or, in other words Ha accepted. And the calculation results if the results are normal distribution is then used statistical parametric statistics, but if the result is not normal then do not homogeneity but continued with non-parametric statistical tests.

## RESULTS AND DISCUSSION

Implementation of the project model of journalism in learning in class writing news text begins with learning steps *project based learning* (PPA). Such as (1) the exposure of learning objectives, (2) determine the projects to be undertaken, (3) develop a deadline, (4) projects, (5) the presentation, and (6) evaluation. The project, which project by students in learning is writing news text, presented in a tangible product such as school bulletin. However, in the discussion of the project to be worked on, the mechanism used is the mechanism journalistic adjusted according to the situation, the conditions and the ability of learners. The steps of journalistic work that will be carried out as follows:

1. Determination editor in chief
2. Determination editor
3. Meetings projection
   a. Setting a theme of coverage
   b. Establish a resource
   c. Set a deadline
4. News writing
5. Editing news
6. Layout / layout
7. Print out the manuscript / correction
8. Print
9. Evaluation

Written material students in the activities of this project in the form of a text message *(news),* though different themes, among groups with one another. News theme tailored to the availability of the page, which was previously set. The types of these pages include: rubric practical knowledge, literature, biography, extracurricular, religious and hobbies section).

This experimental study designed using *one group pretest posttest design.* This design uses one group of students were given two tests the initial test and final test after application of project-based learning model. Classes are treated is a class VII-1 by the number of 40 students.

This study aimed to see if the project-based learning model has positive influence on the ability to write a text message to implement the measures planned learning. Then the data processed according to the value of the student organization of data processing. The results of data processing are tested with normality, homogeneity and hypothesis testing. Data normality test variables X1 shows L arithmetic<L table 0.1283 <0.1401. Data variable X2 also shows L arithmetic<L table 0.0882 <0.1401. This proves that the data variable X1 and X2 normal distribution. Homogeneity test based on the F distribution table at significant level $\alpha = 0.05$ dk numerator and dk denominator 40, obtained F arithmetic, F table is 1.69 and 1.49. It can be concluded that F arithmetic > F table, i.e. 1.49 > 1.69.

This shows that the otherwise homogeneous sample of the population so as ineligible for the homogeneity test the hypothesis testing Thereafter t arithmetic * t table 3.02> 2.04. Thus, Ho is rejected and Ha accepted. This proves that the project-based learning model positively influences the text writing. It really helps students to solve problems by contrasting discussion of ideas and concerns.

It arises when students are given more opportunities to take responsibility for their work ranging from planning to implement and evaluate their performance, so any new things can be constructed by the students along with the knowledge they already have before. Students are given the opportunity to construct knowledge for next group individually assist students to actively express their ideas and add to the students' skill in communicating. Seen as accountable for the results of each project group and when there is a shortage of the results of the group's performance will better help them understand new things.

Students are taught to appreciate the advantages of the other groups, private groups admit mistakes and accept the shortcomings of other groups. Project-based learning model helps students to be able to obtain and utilize all the resources that exist around them for designing and working on their projects. In general, the weakness of project-based learning is the duration of the study, which covers the cycle of the project from planning, scheduling, and work on the project until the results of the performance.

Project-based learning model also makes learning more active, innovative, and creative applicative equip students in writing the text. After the work group of students directed independently to write a text message, helped by the project-based learning model. Starting from making the set a theme, set the speakers, set deadlines, interviewing, writing, editing, until the news script went to print (printout).

Project-based learning model would produce a work of students' learning. Products produced in this project learning are a bulletin which consists of six sections, among others: (a section of practical knowledge, literature, biography, extracurricular, religious and hobbies section).

## CONCLUSIONS AND SUGGESTION

Based on the analysis of research data and testing hypotheses about the influence of journalism project based learning strategies to the ability to write a text message seventh grade students of SMPN 1 Kerumutan can be concluded as follows. (1) The ability to write a text message using project-based learning model of journalism students of class VII SMPN 1 Kerumutan classified categories with an average value of 72.07. (2) The application of project-based learning strategies positively affects the ability to write a text message of class VII students of SMPN 1 Kerumutan.

The author recommends the application of the model of journalistic project is not only on the material to write text. But can also be done on the teaching of writing other text types both in the curriculum and the curriculum in 2013 (national curriculum) such as writing text narration, exposition, and others. One thing that should be noted teacher before applying this model is working mechanism and technical mastery of writing in the world of journalism.

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# PROJECT BASED LEARNING MODEL ORIENTED IN PEOPLE'S ECONOMY TO IMPROVE THE STUDENTS' ENTREPRENEURSHIP MOTIVATION IN SENIOR HIGH SCHOOL 1 (SMAN 1) GUNUNG SAHILAN KAMPAR

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Abstract

There were two main purposes of this article. The first is to describe the project-based learning model oriented in people's economy and the second is to describe the improvement of students' entrepreneurship motivation. This is qualitative descriptive research conducted at SMAN 1 Gunung Sahilan, Kampar, Riau Province. The chosen subjects were students, teachers and school principals. The data collection methods were questionnaire, interviews, observation, and documentation. The results showed that the project-based learning model oriented in people's economy not only provide the subject matter to the students but also the empirical experience of entrepreneurship through utilizing the potential of local economy. Furthermore, such findings of the project-based learning model oriented in people's economy can improve students' entrepreneurship motivation of SMAN 1 Gunung Sahilan. Data from the questionnaire figured out 60.5% of students have high motivation for entrepreneurship, 28.5% of students have high enough motivation for entrepreneurship, and meanwhile the rest 11% have less.

Key words: project learning, motivation, entrepreneurship

## INTRODUCTION

Ideally, a developing country must own entrepreneurship as many as 5% of the total population that could become the nation's competitive advantage. Responding to today's competitive business world and the future that relies on knowledge and intellectual capital, the development of young entrepreneurs need to be directed at groups of educated young people (intellectual) in order to be eager for the nation's competitiveness. One of parties that must obtain a strong foundation in entrepreneurship is students who want to enroll at college. One factor driving the growth of entrepreneurship in a country lies in entrepreneurship education. The issue is how to motivate entrepreneurship among students and the factors that influence the motivation or students' intention to choose a career in entrepreneurship after graduation later.

From a number of prior studies on someone's motivation for entrepreneurship, it can be concluded that personal entrepreneurial intentions are highly influenced by a couple of factors, both internal and external. Internal factors come from the individual itself and this can be a character trait, as well as socio-demographic factors such as age, gender, work experience, family background and others. While external factors come from outside of the individual and this can be elements of the surrounding environment and the contextual conditions. If it is associated with students in the school environment, the environmental aspects of the community, learning environment, teachers, and teaching methods will play a significant impact on students' entrepreneurship motivation.

Based on several ideas cited in previously, this research focuses on determining the effect of project based learning method in growing interest of students' entrepreneurship. Project learning is associated with people's economy potential from the local area, in order to foster students' socio-economic values. In more detail, the objectives of this study are (1) to describe the steps of project based learning oriented in people's economy in class XII SMAN 1 Gunung Sahilan, and (2) to assess the behavior of students' entrepreneurship motivation after getting involved in the project-based learning model oriented in people's economy.

## THEORETICAL FRAMEWORK

Method has a very important role in the learning process. The method is even believed to be one factor in the success of learners. This is what underlies the importance of mastering the ideas from experts about teaching methods for educators. Rusman (2011, p.23) reveals that one of the educator's ability related to professional competence is a broad knowledge related to what the field of study or *subject matter* being taught, as well as the ability to apply various methods and learning strategies. Related with the importance of teaching methods, Bruce Joyce et al (2011, p.7) reinforces that perspective. The implementation method of a lesson will have great impact on learners in educating themselves. Referring to the experts' opinions, terminologically, a method is a plan of presenting the material thoroughly and specifically it has a systematic sequence-based approach (Iskandarwassid & Sunendar, 2015, p.30). Whereas the Big Indonesian Dictionary (third edition, 2000) provides different perspective of what is actually a method. It is defined as a way of working system to facilitate the implementation of activities only to achieve set of targets. Methods are more procedural and systemic because its aim is to facilitate the execution of a job (Iskandarwassid, Sunendar, 2015, p.56).

*Project Based Learning* is one of the models suggested its use in curriculum 2013, in addition to the model of *Problem Based Learning* (PBL), *Discovery Learning* and *Inquiry.* This model uses a project or activity as a learning media (Kemendikbud, 2013, p.42). This kind of project requires students to undertake the exploration, appraisal, interpretation, synthesis and utilization of information to produce various forms of learning outcomes (Kemendikbud, 2013, p.42). With the form of such activities, it is certainly hoped to gain very demanding project learning for students to demonstrate active participation during the learning process.

Sani (2014 p. 171) addresses that the learning project is a model of student-centered learning, is interdisciplinary and long-term. It also expressed Mahsun (2014, p. 135) that project-based learning is defined as an activity that relies on efforts to carry out particular activities with specific objectives and have clear completion.

Based on several experts' opinion, it can be concluded that the project based learning is an instructional model that involves students actively in activities to plan, implement and evaluate learning project. Kemendikbud (2013, p.46) arranges the learning process of *project-based learning* model in three stages, starting with the preparation, implementation and evaluation phase ended. The next steps of project-based learning consist of (1) preparation, (2) implementation, and (3) evaluation. The preparation phase consists of (1) determine the projects, (2) design the steps of project completion, and (3) develop a project implementation schedule. The implementation stage consists of (1) completing the project with the facilitation and monitoring educator, and (2) present or publish the result of project.

Phase evaluation is conducted by reviewing the project implementation process and assessing result to know the achievement of the project objective. An entrepreneur is a person who is free and has the ability to live independently in running his operations or businesses or even his own life. He is free to design, specify manage, and control all his efforts (Suryana, 2003, p.12). Otherwise, entrepreneurship is an attitude, spirit and ability to create something new that is extremely valuable and useful for themselves and others.

The essence of entrepreneurship is the ability to create something new and different through creative thinking and innovative actions also to create opportunities in facing life's challenges. In particular, entrepreneurship is the nature, characteristics, and the character of the individual trait who has high willingness to realize innovative ideas into the real world.

People’s economy is the economic system designed on the strength of people's economy (Sumawinata, 2004, p.161). This kind of people’s economy is economic activities that provide opportunities for people to participate in, hence, it can be done and be well developed. People’s economy is the idea of way, nature and purpose of development with the main objective is the improvement of its people who generally live in rural areas. Meanwhile, According to Prof. Dr. Mubyarto People’s economy system is an economic system based on kinship principle, people’s sovereignty and show actual partiality on people's economy (Sumawinata, 2004, p.161)

In practice, people's economy can be explained as well as the economic networking that connects the centers innovation, production and business independence of society into an information technology-based network for the establishment of a network of domestic market and business community. The concrete form of the people's economy is the establishment of business centers in various regions as the chain drive networks capable small economy. Motivation is a driving force of one's heart to do or to achieve particular interest. Motivation can also be regarded as a plan or desire to success and avoid failure of life. Entrepreneurship motivation is attention, excitement and willingness to conduct independent businesses based on ability, strength and skills possessed (Rachmawati, 2000, p.15).

Likewise in the learning process, students also need the motivation for the achievement of learning goals. According Daryanto (2012, p.10) important concepts of learning motivation is related to the duties of teachers obliged to raise the students’ motivation, he/she is highly eager to learn. Motivation can arise in individuals and can occur due to the influence from outside him/her. (1) Intrinsic motivation arises because of the individual itself without any coercion or encouragement from others, in other words of their own accord. (2) Extrinsic motivation arising because of external influences on individual trait, either because the invitation, errands, coercion from others so with this condition eventually he/she wants to do something or learn. There are several strategies that can be used by teachers to foster student motivation (Sumiati, 2009, p. 21). (1) explain the purpose of learning to learners, (2) giving a gift, (3) create a climate of competition, (4) give praise, (5) provides for punishment, and (6) evokes the urge to learn.

## RESEARCH METHOD

This study used a descriptive approach of qualitative case study, because the researcher is interested to explore in depth to a program of activities. The case study is an investigation of series of activities to describe and analyze the intensive and detailed symptom or particular social units, such as individual, group, community or institution (Wiyono, 2007, p.77). Syamsudin & Damaianti (2007, p.15): people, events, settings, and documents; (2) the goals are explored in depth as a totality in accordance with its background and each context. The researcher in this study acts as the key instrument that get direct involvement into the field. The researcher collected data from the actual circumstances. Based on data from the field, the researcher will directly draw the conclusion. This research was conducted in SMA Negeri 1 Gunung Sahilan, Kampar, Riau Province. The data source is divided in two, (1) internal school and (2) external school. Internal school include: Principal, teachers and students. External data sources from the school are kind of entrepreneurial activists in Gunung Sahilan and surrounding areas. Data collection procedures were performed, observation, interviews, and documentation.

Furthermore, the data analysis was performed with data reduction, data *display,* and data verification. The results of data analysis subsequently checked its validity through the extension of observation, increased diligence in research and triangulation. The process of collecting data in this study occurred through several phases: the preparation phase, the implementation phase, and final reporting phase.

## RESULTS AND DISCUSSION

The research was conducted in class XII SMAN 1 Gunung Sahilan on the standard competency material to understand the draft of accountant cycle in trading company. Basic competence learnt is to make an overview of accountant cycle in trading company. One indicator as learning focus is to draft a working paper in trading company in the form of observational reports. Learning implementation of this project consists of three stages, starting from the preparation, implementation and evaluation.

### *Preparation*

Teacher explains the material that is learnt, followed by project assignment instructions that come with certain requirements, including the provision of time. Further steps Project Based Learning are as follows:

1. Determining project
   Students with the help of the teacher choose a theme / topic to produce a product (observation report). A generated product will adjust to the subject matter at the time of learning, observation reports trading company. Determining the products well adapted to the task criteria, taking into account the student's ability and resources / materials / tools available.
2. Designing step completion
   In this activity, students identify parts of the product to be produced, steps, and techniques to resolve these parts until the final product is achieved. Beginning traders of people's economy set the target report, observation time, the duration of observation, the material question of observation, until the activities to be undertaken when the observation took place.
3. Draft the project implementation schedule

In which it is preparing stages of the project taking into account the complexity of the steps and techniques of settlement products as well as the specified time teachers.

***Implementation***

1. Completing projects with the facilitation and monitoring educator that seek or collect data / material and then process for preparing / realize by parts until the final product is produced.
2. Presenting / publishing the results of the project, which presents the product in the form of discussions, exhibitions or publications (magazine walls or internet) to obtain feedback from other students, educators, and community.

***Evaluation***

It includes reviewing the project implementation process and assess the resulting product to know the achievement of the objectives of the project. The process of the project is assessed in each stage starting from preparation phase, implementation and final stage.

At the preparation stage, the teachers see how students define the product (project) that will be created, setting the pace of implementation and scheduling implementation. At the implementation stage, teachers assess how students observe the field and then present their work in the classroom. The learning model oriented in people's economy project does not only provide the subject matter to the students but also the empirical experience of entrepreneurship through utilizing the potential of local economy. Students who participate in practice will feel and know the people's entrepreneurial activity conducted by local entrepreneurs.

Entrepreneurship motivation can be seen from the results of questionnaires and behaviors of students during the field observations. Some of the students' behavior describing entrepreneurship motivation can be summed up as follows.

1. Having clear vision and purpose
   Motivated students could be seen from the clarity of its objectives in carrying out the observation, so they do the reported things very well.
2. Being initiative and always proactive
   Students motivated by entrepreneurship can be seen from the initiative and proactive behavior while working on learning projects.
3. Being achievement-oriented
   Enterprise students tend to perform better than the other groups during the preparation of the project and also the project presentations. It can also be attributed to the assumption that students have the motivation in entrepreneurship because the learning project being worked on is to be entrepreneurial.
4. Being hard-working
   Endeavors conducted during the learning by employers will be valuable for the students while making observations. They can learn hard-working values performed by the employers.
5. Being responsible for all activities performed
   Students who have high motivation will highly understand and comprehend exactly what they are doing. This results in their understanding and the responsibility of the students.
6. Having commitment to the various parties

Entrepreneurship is one of the activities involving many parties in the implementation. Therefore, in order to achieve the goal, students should be able to earn others' trust in plenty ways.

7. Developing and maintaining good relations with all parties
   Students can develop and maintain good communication and relations directly with the business and also various parties. Students who have high entrepreneurship motivation will start practicing to maintain and establish good relationships with various parties.

Based on the data obtained in prior, it can be concluded that the project-based learning model oriented in people's economy can improve the students' entrepreneurship motivation of SMAN 1 Gunung Sahilan. Data from the questionnaire and the student's behavior showed that 60.5% of students have high motivation for entrepreneurship, 28.5% of students have high enough motivation for entrepreneurship, while the rest 11% have less motivation for entrepreneurship.

## CONCLUSIONS AND SUGGESTION

The project based learning model oriented in people's economy was implemented in the first half of class XII. The basic competence aims to make an overview of accountant cycle in trading company. One indicator that focuses on learning is to draft a working paper in trading company in the form of observational reports. Learning implementation of this project consists of three stages, starting from the preparation, implementation and evaluation phase ended. Entrepreneurship motivation occurring in the learning process is in addition to the desired of learning outcomes. Some indicators of the emergence of entrepreneurship motivation are (1) having a clear vision and objectives, (2) being initiative and always proactive, (3) being achievement-oriented, (4) being hard-working, (5) being responsible for all the activities that they are running, (6) having a commitment of various parties, and (7) developing and maintaining good relationships with various parties. The project based learning model is suggested as one of the alternative ways for teachers in the classroom. In addition to the demand of students' independency, this model will help students to gain practical experience in the field that provides empirical motivation and creativity.

The study only focused on motivational aspects that arise as a result of the learning process, while the quantitative aspects of learning outcomes, creativity and others are still far ignored. This opens up an opportunity for teachers and other researchers to conduct advance research projects related to learning models, with the same material or even other materials.

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