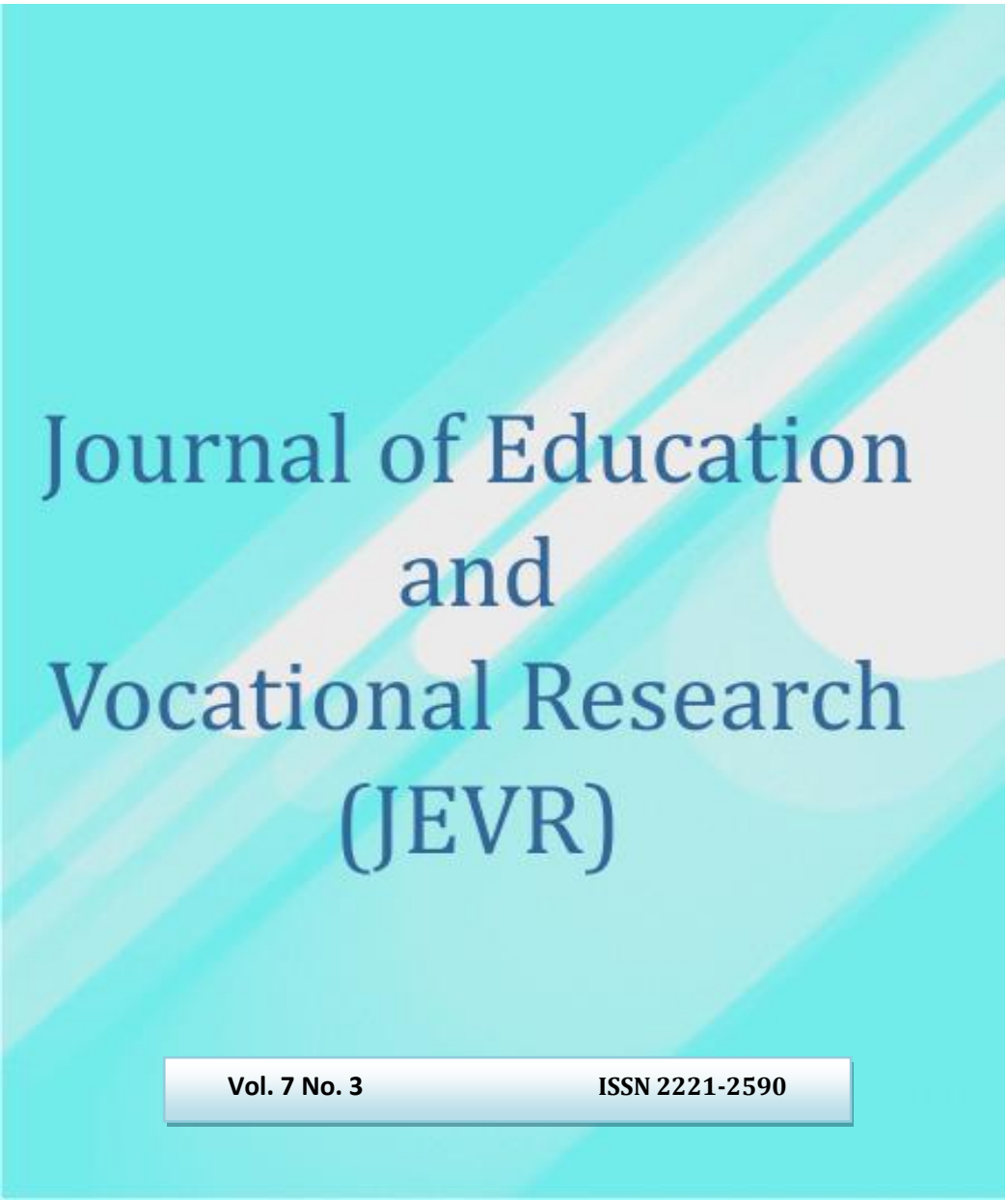

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Editorial

Journal of Education and Vocational Research (JEVR) provides avenue for quality research in the ever-changing fields of Education and Vocational Research and related disciplines. Work submitted for publication consideration should not be limited by any narrow conceptualisation of educaton and vocational research, but comprises interdisciplinary and multi-facet approaches to education and vocational theories and practices as well as general transformations in the fileds. Scope of the JEVR includes: subjects of educational technology, educational administration, educational planning, measurement and evaluation in education, developmental psychology, special education, distance learning, vocational education, technology-based learning, environmental education, business education, educational psychology, physical education, innovation, vocational training, knowledge management. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal, and that all listed authors approve its submission to JEVR. It is JEVR policy to welcome submissions for consideration, which are original, and not under consideration for publication by another journal at the same time. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. The current issue of JEVR comprises of papers of scholars from UAE, UK, Zimbabwe, Indonesia and Pakistan. Anonymous feedback using digital walls, vocational education and training in rural Zimbabwe, effectiveness of modern teaching methods, the contribution of teaching skill & learning skill to the competence achievement, effect of dimensions of service quality satisfaction & customer loyalty of Islamic bank and model of strengthening human resources are some of the major practices and concepts examined in these studies. Journal received research submission related to all aspects of major themes and tracks. All the submitted papers were first assessed by the editorial team for relevance and originality of the work and blindly peer reviewed by the external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance, and clarity for the purpose. Current issue will therefore be a unique offer, where scholars will be able to appreciate the latest results in their field of expertise, and to acquire additional knowledge in other relevant fields.

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PAPERS

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Anonymous Feedback Using Digital Walls: A Case Study

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Abstract: A common problem faced by many language teachers is students' fear from speaking in front of the whole class and making mistakes. Research showed that reticence to participate in class may influence students' language learning who may miss important opportunities for correction. This paper reports on students' reactions to the use of digital walls to provide anonymous oral feedback and to maximize students' participation. The students engaged in answering three-minute instructor-posed questions on their mobile devices using an application called Quick fire as found on www.spiral.ac. The anonymous answers were displayed instantaneously on the smartboard which allowed the instructor to provide the students with real-time feedback. The students answered 14 questions after eight weeks of instruction. At the end of the project, the students were invited to focus group discussions in order to delve into their opinions about using digital walls for providing feedback and encouraging class participation. Qualitative analysis of the students' comments indicated that they had a generally positive experience and that anonymous posting can foster students' engagement.

Keywords: *Digital Wall, Feedback, Participation*

1. Introduction

It is often frustrating when you ask a question in class and you do not get answers form all students or you get answers from the same students willing to participate. Students' participation is increasingly viewed as a sign of successful instruction. It allows the teacher to check students' understanding of the lesson and engagement with the material presented. It is also important for learners. It can foster a positive learning environment in which students feel confident. Students' participation has become the main goal of most teachers especially in technology-rich classrooms where students have ample opportunities for interaction and collaboration. While much has been written on ways to encourage participation using a variety of digital tools, little research has been conducted to examine students' beliefs about those tools. This paper reports on the finding of a study examining students' opinion about Quick fire, a free web application that enabled the students to post their answers on the smartboard.

Definition of participation: Participation is often equated with engagement. However, participation is only one part of the broader term engagement. According to Handel man, Briggs, Sullivan & Towler (2005) student engagement includes four factors: skills, participation/interaction, emotional, and performance. Participation can be written or oral. Often it is used to refer to discussion with the instructor or classmates. But it also means exchanging pieces of writing. As it comes in many forms, participations also has different purposes ranging from checking if the students meet the learning objectives to checking boredom and disinterest in the lesson.

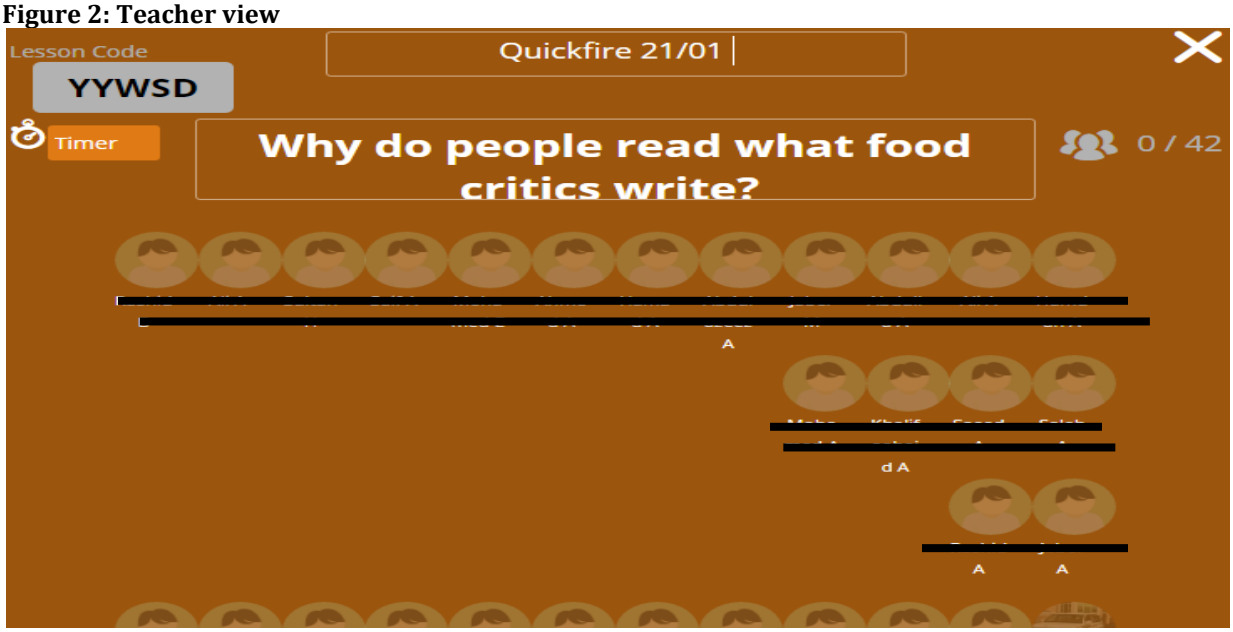
Influences on language learning: Researchers have long been concerned about lack of participation in the classroom. Many studies showed that lack of participation interferes with communication and with critical thinking skills (Davis, 1993; Fassinger, 1995; Weaver and Qi, 2005). A student who is reluctant to participate in class activities misses out important opportunities for practice and feedback (Weaver and Qi, 2005). Some other studies showed that students who participate actively in class have more favorable attitudes towards their instructors than students who do not participate (Crombie et al., 2003; Fassinger, 1995). Consequently, the student is more open to correction. Opponents of this view used it as a justification to include participation in class grading policies. Although some researchers are still in doubt about whether participation should be graded or not, most agree that it is an essential component of any learner-centered approach. The main reasons for reticence to participating in class are fear from error correction and anxiety (Horwitz, 2000).The way students ' output is treated plays an important role in their desire to participate. Some error correction techniques may destroy the students' confidence and self-esteem. There is an

agreement among researchers that teachers should be careful when correcting students' errors (Ferris, 2007). Various techniques such as focus on form and praise have been advocated.

With the advent of technology, the students are able to participate without fearing criticism or embarrassment. Barnes, Marateo & Ferris (2007a) provided a list of tools that can be used to enhance students' engagement including blogs, web quests, wikis, interactive games, etc... Writing on digital walls is one of the tools that can foster whole class participation. However, it is surprising that very little research has been conducted worldwide to investigate the benefits from and challenges in writing on digital walls. Working with students who often prefer not to speak even if they know the right answer, the researcher decided to explore ways to overcome challenges in participation by providing anonymous feedback. To meet this goal, the researcher used a free web application called Quick fire. The application allowed the teacher to ask a question and get responses from their students on their own devices; a timer can also be added to add an element of competition. The responses can be viewed on the teacher screen anonymously. By employing Quick fire as a tool to engage students, this case study attempted to show how new evolving tools can be used to create a motivating learning environment. The remainder of this paper is divided as follows: Section one describes the Quick fire application. Section two describes the setting, the participants and the methodology used. Section three presents and discusses the validity of the results. Section four, summarizes the article.

Figure 1: Student view

Figure 2: Teacher view



Quick fire – A collaborative tool: Using Quick fire is very simple. First, you have to go to http://spiral.ac/ and select login as teacher. You will be given the option to create an account via email, Google+ or Twitter. Students sign-up is also very simple. They need to go to www.spiral.ac and select student login. They will be required to search for their college and then type their first name, last name and a password. To make it easier for my students, I created an account for each one of them and on the first day of class I provided them with a username and a password. Starting from February, 19th, 2016 the administrators changed the student login so that the students simply type the lesson code every time they use spiral. *Figure 1* and *figure 2* illustrate the student and the teacher view of the Quick fire element in Spiral

The case study context: Participants for this study were 21 students enrolled in a university preparatory class at a university in Abu Dhabi. Their English skills were lower than average as they were placed in level two based on their scores at IELTS (3.5-4.5). They all had to attend the reading and vocabulary course. The course aims at developing the students' Lexile level and helping them to use the vocabulary in their writing and reading classes. Before the study, the course instructor engaged in reading and vocabulary activities for nine weeks. There were eight reading passages and for every reading the students had to answer four discussion questions. For this project, the students answered 14 questions using the Quick fire application. The students would be allowed to use their mobile devices to answer the questions and post them on the smartboard. After eight weeks of instruction, the students were invited to answer seven interview questions to better understand the effect of the digital tool on their learning.

2. Methodology

An action research approach provides some insights into the benefits and challenges of using the Quick fire application in the classroom. This study expected that using Quick fire application would not only provide the instructor with an opportunity to provide anonymous feedback, but also would allow the instructor to create a learning environment that encourages whole-class participation and engagement with the activities. In order to understand better the effect of the Quick fire application on the students' learning outcomes, a qualitative research methodology was adopted. For each reading, the researcher aimed to explore students' behavior as demonstrated in their posts. Interview questions elicited students' perceptions of using Quick fire in the classroom to provide further support to classroom observations. In addition, comparison of the results from the two sources yielded reliable evidence of the particulars of Quick fire use.

Research objectives

- To incorporate the Quick fire element to foster whole-class participation and to give real-time feedback.
- To investigate students' perceptions of using the Quick fire activities.

Data analysis: To determine the impact of Quick fire on students' performance and participation, students' posts written in the first four weeks were compared to the posts written in the second four weeks. Qualitative findings were triangulated with finding from the teacher's observations. To understand students' opinion about Quick fire, participants' interviews were transcribed and examined for recurring themes. Validity concerns were addressed primarily through the triangulation of data sources.

3. Findings

Observation of the students and examination of their posts from the first week till the eighth week showed several changes in students' performance and attitude to the digital tool. These changes are summarized below:

At the beginning of the project, the students provided short answers limiting their posts to a single word or a phrase. Some answers were either yes or no. As their language developed, the students' responses showed more complexity and they could answer in complete sentences. A screenshot as shown in *Figure 3* illustrates the progression in students' learning:

Figure 3: Sample students' answers

Another important change involved the interval between writing and posting. In week one and two, most of the students would answer immediately after reading the question. However, starting from the third week, most of the students preferred to wait and look at their classmates' responses on the smartboard. They would answer after they compare their answers with their classmates and sometimes could not answer because they run out of time. With regards to anonymity, students seemed to benefit from not seeing their names on the smartboard. They sometimes laughed at a post and started guessing the identity of the author. They also complimented the good answers as the instructor was constantly giving them feedback. The students clearly developed a sense of criticism towards themselves and their classmates. Furthermore, the aspect of anonymity in Quick fire often resulted in lowering the spirit of competitiveness. However, lack of competitiveness did not deter the students from editing their posts. It was clear that they did not want to be regarded as lacking. This might mean that they developed the ability to self-assess their learning.

After eight weeks, participant reported their opinions about the project. The researchers held group interviews with the students and asked them seven open-ended questions. Analysis of students' comments revealed interesting differences between the students in their experience of using the Quick fire application. About half of the students (49 %) reported that they enjoyed the tool. This was not surprising as it was clear from the observation that the students were not so excited about the application. Below is a screenshot that portrays their reactions to spiral:

Figure 4: Students' reactions to the use of Quick fire

When further questioned about what they enjoyed most when using Quick fire, the students reported various reasons.
Student # 21. It's interesting because I can see my answer on the smartboard.
Student # 4. I like using my phone in class.
Student # 20. I look at my friends answer.
Student # 1. I can talk with my friend.

The analysis of the open comment questions offered some useful guidelines on the benefits gained from using the Quick fire application and the challenges encountered. The students agreed that although at the beginning the set-up of an account was time consuming, they believed that logging in became much easier as they had to enter the same lesson code after their initial set-up. Five students mentioned having technical difficulties as they were unable to post their responses. Below are some comments:
Student # 6. The reason why I don't like this app is that I can't post. I press many times but it is not working.
Student # 14. It did not work on my phone.
Student # 17. I can't post my writing.

Among the benefits of Quick fire, the students mentioned the ability to receive timely feedback and edit their posts based on clear teacher feedback. They seemed to value revising their posts and felt that they had a growing understanding of what the instructors expected from them. Some comments received from learners in the open comments section are as follow:

Student # 21. Anonymous posting is a good way to write anything that comes to my mind.
Student # 4. I look at all those posts and say nobody will say if my post was good or bad.
Student # 20. When you send me a well-done message I show it to my classmates. And it is nice to see my answer on the wall.

It is interesting that students liked the tool because their identities were hidden. This finding indicates that the Quick fire application lowered students' anxiety. Therefore, it is helping them to be more engaged in the reading and vocabulary class.
The collaborative aspect of the application was also an emerging theme in the students' comments. Many students reported that they enjoyed reading their classmates' answers. Although they did value reading each other's responses, they could not decide if they should copy their classmates' answers or not.

Student # 12. I don't know if the one who wrote this sentence is a good student or not.

Self-assessment was more important than learning from peers. In fact, there were more positive comments about being able to revise their errors than about the collaborative aspect of the tool. Clearly, the students perceived that feedback from the instructor was more important than feedback from their peers. The results from the open-ended questions supported the results from the observation and examination of students posts. All students seemed to enjoy using Quick fire as a new digital tool. They recognized the benefits and the challenges involved. Although they liked the anonymous aspect of the tool, they were not so influenced by its collaborative aspect.

Discussion and Implications: The results showed that the students had an overall positive experience with the Quick fire element of spiral. While some students reported several challenges involved in using this tool for learning, this finding could be normal as it was a new experience and they needed time to practice using the Quick fire element. Despite those challenges, only two students reported that they did not see the value of using Quick fire in the classroom. The majority of the participants emphasized that the application offered them a number of advantages. First, the students reported that it allowed them to revise their writing and this was a valuable self-assessment tool. Second, many reported that posting their writing anonymously lowered their anxiety and allowed them to be more comfortable in class. These findings are also in line with the literature suggesting that students are reluctant to participate because they do not like to be corrected in front of their peers. Although the Quick fire questions were not graded, from observation, there was a clear improvement in students' writing evidenced by the increase in the length of their posts. The study could be improved by including students' grades and assigning participants to conditions rather than intact classes.

4. Conclusion

Overall, this small-scale study shows some useful findings about the use of digital walls in improving whole-class participation and in providing timely anonymous feedback. The results suggest that students enjoyed posting their answers on a digital wall and gained insights into their thinking. These preliminary findings highlight aspects that can hinder or help participation. Future studies are warranted to assess students' posts and to understand the relationship between students' posts and their learning.

Appendix A

Interview questions:

- Did you enjoy spiral.ac? What did you enjoy the most about using spiral.ac?
- Has posting your answer on the smartboard helped you understand the lesson better?
- Has posting anonymously helped you write better answers?
- Did you enjoy reading your classmate's answers?
- Were you classmates' answers helpful?
- How easy was it to log in?
- How easy was it to post your answer?

References

Barnes, K., Marateo, R. & Ferris, S. P. (2007a). Teaching and Learning with the Net Generation. *Innovate Journal of Online Education*, 3(4). Retrieved from: http://www.innovateonline.info/pdf/vol3_issue4/Teaching_and_Learning_with_the_Net_ Generation.pdf.

Crombie, G., Pyke, S. W., Silverthorn, N., Jones, A. & Piccinin, S. (2003). Students' perceptions of their classroom participation and instructor as a function of gender and context. *The Journal of Higher Education*, 74, 51-76.

Davis, B. G. (1993). Tools for Teaching. San Francisco: Jossey-Bass.

Fassinger, P. A. (1995a). Professors' and students' perceptions of why students participate in class. *Teaching Sociology*, 24, 2533. (ES)

Ferris. (2007). Preparing teachers to respond to student writing. *Journal of second language writing*, 16, 165–193.

Handelsman, M. M., Briggs, W. L., Sullivan, N. & Towler, A. (2005). A measure of Promoting College Student Course Engagement. *The Journal of Educational Research*, 98, 184-191.

Horwitz, E. K. (2000). It ain't over 'til it over: on foreign language anxiety first language deficits and confounding of variables.

Roblyer, M. (2003). *Integrating Educational Technology into Teaching*. (3rd ed.) Upper Saddle River, NJ: Merrill Prentice Hall.

Weaver, R. R. & Qi, J. (2005). Classroom organization and participation: College students' perceptions. *The Journal of Higher Education*, 76, 570-601. (ES).

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Vocational Education and Training in Rural Zimbabwe: Attitudes and Opinions of Students, Teachers and Education Inspectors: The Case of Murewa District

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Abstract: The 2008 global economic crisis has seen young people's career and employment prospects dwindle, particularly for those based in rural areas. Governments in both industrialised and developing countries are considering vocational education reform to meet nations' employment and economic needs. Despite renewed interest in VET, the sentiments of students and teachers remain largely unexplored. This study investigated the views and attitudes of students, teachers and education inspectors towards VET in rural Zimbabwe. The findings revealed divergent views. It emerged that most students did not necessarily have negative views of VET, but they were put off by the low status, lack of choice and the lacklustre delivery of VET. Teachers and students alike were sceptical about the role of VET in securing employment. This study will contribute to the on-going review of Zimbabwe's education system and will inform school managers and policy makers on curriculum development and culture change in rural communities and schools.

Keywords: *Attitudes; perceptions; students' educational aspirations; vocational education and training*

1. Introduction

Vocational Education and Training (VET) in past and present times has gone through periods of high regard and episodes of scepticism. In developing countries such as Zimbabwe, Ghana and South Africa VET has been characterised by low status and poor attitudes in comparison to academic subjects. This study explores views and attitudes of students, teachers and education inspectors whose voices are rarely heard in educational policy formulation. The value placed on practical subjects (vocational-technical subjects) in comparison to academic subjects will be assessed. The study analyses data from a Murewa district case study research carried out between November 2012 and August 2013. Zimbabwe gained independence from Britain in 1980 and the new majority government immediately set out to redress the social and economic imbalances of the colonial era. The rural areas formerly known as Tribal Trust Lands or Native Reserves were significantly underdeveloped in comparison to urban areas in terms of infrastructure and economic prosperity. The government embarked on rural development programmes and at the core of these programmes was the desire to promote industrial development in the rural areas through setting up industrial and developmental zones known as 'growth points'. Growth points were designed to be economic nuclei for industrial development. Thirty six years after independence, the growth points have not yielded the desired industrial growth and the gap between rural and urban areas had widened. Rural based young people consequently, have remained marginalised with a high rate of unemployment. Many rural young people who do not progress to tertiary education have limited opportunities to make a living in the rural areas. Without a viable industrial base and economic opportunities, coupled with a failing agricultural industry, rural underdevelopment and youth unemployment are bound to continue unabated. This paper is based on a research study that sought to establish or re-establish the role of vocational training in rural Zimbabwe.

The economic hardships that Zimbabwe faced between 2000 and 2008 gave rise to increased poverty and unemployment, and the rural areas were badly affected. Rural young people were hit hardest. Many rural young people who fail to achieve five Ordinary Level (O level) subjects cannot progress to further education or training leaving them stuck in the villages without means to a livelihood. This situation has prompted the Zimbabwe government to rethink and consider a review of the education system. Politicians and academics in Zimbabwe are calling for the resurrection of the Caiaphas Nziramasanga Presidential Commission of Inquiry into Education and Training which was launched in 1999 to review the education system. After consultations with educational experts, industrialist and charitable organisations, the Nziramasanga Commission recommended radical changes to the education system, the curriculum, the examination system and the funding. Among other recommendations, the commission proposed:

- focussing on developing skills in information and communication technologies;
- introducing vocational education in primary school and vocational training in secondary school;
- providing careers guidance and counselling;
- paying particular attention to underprivileged children, girls, and disabled people (Nziramasanga, 1999).

Regrettably, most of the Nziramasanga Commission's recommendations have not been fully implemented. The former Zimbabwe Education Minister, Coltart and UNESCO-IBE (2010) concurred that the Zimbabwean curriculum was urban based and academically skewed at the expense of the socio-economic needs of the country and those of young people. Coltart lamented the post-independence focus on academic education at the expense of vocational education. This paper seeks the perceptions of students, teachers and education inspectors for policy makers to consider in the review of the education system.

What has been known on the subject and key contributions of this study: Studies on vocational education in Zimbabwe by different scholars found that Zimbabwe's education system required revitalising. Mupinga, Bunnet and Redman (2005) citing Munowenyu (1999) argued that the Zimbabwean school curriculum was inadequate in preparing young people for the world of work. Munowenyu (1999) called for the introduction of basic vocational education in schools in order to produce 'skilled and confident problem-solvers'. UNESCO-IBE (2010) criticised the urban based curriculum for failing to address the country's socio-economic needs and advocated that it should be reviewed. Over 300,000 young people leave school, college and university every year in Zimbabwe but fail to secure employment. This failure to meet the country's and young people's needs, coupled with declining interest in practical subjects, among other issues, have raised politicians' and academics' concerns over the effectiveness of the education system.

This study sought to contribute to a better understanding of young people and teachers' attitudes towards VET in present-day rural Zimbabwe. The study aims to address some gaps in knowledge identified by politicians, policy makers and academics in the field. A leading politician and former Education Minister, Coltart, raised the issue that primary and secondary school students hardly make any decisions for themselves, instead they rely on their parents for career decisions. A study by Nherera (1994) showed that parents had negative attitudes towards VET and this in turn, influenced young people's attitudes. The career decisions that young people make are therefore not based on professional advice. The Skills for Scotland: a lifelong skills strategy (2007) highlighted the need for research on changing attitudes to VET. In the same vein, Edward, Weedon and Riddell's (2008) called for qualitative research using interviews to:

- seek young people's learning experiences during the transition from school to employment or further education;
- explore young people's attitudes to vocational learning;
- explore parental influence on young people's choices and;
- seek teachers' views of VET.

This study responded to the recommendations by IIEP (2006), UNESCO-IBE (2010), Zimbabwe Education Minister, Coltart (2011), Edward, Weedon and Riddell (2008), OECD (2007) and Rojewski (1997) inter alia. The study contributes new contextual knowledge on attitudes, cultural and institutional experiences of rural vocational learners in rural Zimbabwe. The place of VET and issues affecting young people's career choices were investigated from the perspective of both educators and students. The study offers evidence of differences in views of students, teachers and education inspectors regarding VET. Findings from the study further contribute to understanding of the impact of the lack of Information Advice and Guidance (IAG) for rurally based students. Unlike previous studies that focused on secondary and post-secondary school students alone, this study involved both primary and secondary school students. The place of VET in rural Zimbabwe and attitudes towards it were the main focus of this study in the backdrop of increased rural to urban migration, emigration and economic decline. This study brought to light the plight of primary school students who are leaving primary school ill-prepared for secondary education due to limited knowledge of the range of subjects on offer at secondary school. In this study rural young people had high aspirations for prominent jobs in big cities or other countries despite their deprivation. The current study found that it was not much about VET but it was the status and delivery that affected attitudes negatively. This study thus generated new information that is instrumental to the review of the Zimbabwean education system.

Definition of Vocational Education and Training: The term Technical and Vocational Education and Training has been adopted by UNESCO to define formal or informal learning experienced in educational institutions, or in the work place (Catts, Falk and Wallace, 2011). Bello, Danjuma and Adamu (2007) described VET as education that provides practical skills, attitudes, understanding and knowledge of particular occupations in different sectors of economic and social life. In light of this characterisation, this paper explores rural Zimbabwean students' and educators' views of VET.

2. Literature Review

Development of VET in Zimbabwe: VET in Zimbabwe during the colonial era was fostered, on one hand, by white Missionaries who wished to raise standards for black people, and on the other, by a colonial government that wanted separate development for blacks (Chinyamunzore, 1995). The colonial government deliberately organised the education curriculum to protect whites from black competition (Chinyamunzore, 1995; Nherera, 1994). In the 1960s the colonial regime introduced a vocationally-oriented secondary school curriculum, the F2 stream, parallel to a more respected academic-oriented F1 stream (MOHET 2005). The F2 stream catered for 35% of the 50% black primary school leavers who were classed as less academically oriented (Mupinga, Burnett and Redmann, 2005; Chinyamunzore, 1995). F2 graduates had no prospects for further education or training, instead they were expected to utilise acquired skills back in their rural areas (MOHET, 2005). The colonial curriculum was therefore racially divided and consequently, reviled by black people (Shizha and Kariwo, 2011). Soon after independence the new black majority government abolished the despised F2 system in 1981. Due to its colonial legacy VET was perceived as retrogressive thus the 1980s saw a reduction in emphasis on VET (Chinyamunzore, 1995). Though emphasis shifted back to VET in the 1990s, there remained a general preference for academic education (Maravanyika, 1990). Recent trends in Zimbabwe have shown a dramatic expansion of academic education in comparison to VET. Since 1989 the number of universities has increased from one university enrolling 2000 students to 12 universities enrolling 40,000 students (Kariwo, 2007). Despite the remarkable growth of university provision many young people either fail to meet the entry requirements or cannot afford the tuition fees. Kariwo (2007) found that over 8,000 students annually qualify but fail to enter university.

Vocational Education vs. General Education: VET advocates argue that it produces particular human capital with specific skills needed by industry (Oketch, 2007; Tilak, 2002). Conversely, general education backers uphold its ability to create adaptive universal human capital capable of responding to economic and labour needs (Tilak, 2002). Other scholars have acknowledged the complementary roles of VET and general education. Bello, Danjuma and Adamu (2007) argued that good general education including literacy and numeracy is a prerequisite for successful VET delivery. Present-day employers are demanding occupational skills, together with good basic academic skills (Bello, Danjuma and Adamu, 2007).

Attitudes towards VET: Historically, VET has been viewed negatively by students, parents and society in general (Lai and Maclean, 2011). The OECD (2010) stated that despite its potential to create opportunities, VET was greatly undervalued. Oketch (2007) found that young people and their families in Ghana, Senegal, Seychelles, Tunisia and Zimbabwe, viewed VET as inferior and meant for less academic pupils. Similarly, African Union (2007) and Mureithi (2009) found that many people viewed vocational qualifications as less prestigious and associated them with students who had failed to achieve socially and academically. In this vein, Edward, Weedon and Riddell (2008) recommended more research into the impact of cultural and institutional factors on young people's access to VET.

The role of teachers and the family: Among the factors influencing students' decisions to enrol on courses family members, peers, teachers and careers advisers were found to play significant roles (Edward, Weedon and Riddell, 2008). Many students depend on parents, siblings and friends for advice on career choices (Edward, Weedon and Riddell, 2008). A study by the Edge Foundation revealed that 35% of parents were prejudiced against VET. The Edge Foundation study also found that one in five young people felt that they had been ill-advised by their parents (Edward, Weedon and Riddell, 2008). An investigation into parental influence is therefore pertinent.

Statement of the Problem: The fact that over 300,000 young people who leave school, college and university cannot secure employment in Zimbabwe is a national tragedy. The government nonetheless continues to expand academic education at the expense of VET. The lack of interest in VET was evidenced by the low uptake of practical subjects in recent years. In 1996 it was reported that 167,937 candidates sat O level examinations in practical subjects compared to 682,090 in academic subjects (Mufanechiya and Mufanechiya, 2011). In 2013 only 211 candidates registered for music, 4874 for food and nutrition, 1533 for computer studies, 3633 for business studies and just 43 for home management (Nleya, 2014). Despite this scenario the government has over the past decade paid lip service to the recommendations made by the 1999 Nziramasanga Commission of inquiry into education which recommended experiential learning to develop desirable traits and competences (Mupondi and Munyaradzi, 2013). Education ministers have in recent years called for a review of the country's education system.

Research Questions: The research topic for this paper is:
Vocational Education and Training in rural Zimbabwe: attitudes and opinions of students, teachers and education inspectors: The Murewa District Case Study.

The study will provide answers to the following research questions:

- What is the contemporary role of VET in Zimbabwe?
- What are the views and attitudes of young people, teachers and education inspectors towards VET?
- Do students' attitudes change during the transition from primary to secondary school?
- What impact do historical and cultural influences have on students' aspirations and the status of VET?

Context and Rationale: Zimbabwe is among many African countries that have been caught up in an economic meltdown with a huge impact on the youth. Boateng (2012) stressed the importance of transforming VET in line with developments in the job market. However, knowledge of youth attitudes and aspirations vis-à-vis training and careers is limited. Bennell et al. (1999) acknowledged the scarcity of contemporary inquiry into VET in Africa which makes this study a worthy contribution. Internationally, VET has struggled to define and promote its status against academic subjects. Cedefop (2011) maintained that VET has been viewed as a second best option which carries a social stigma in a number of countries. In 2010 the United Kingdom government tasked Professor Wolf to conduct a review of VET. Wolf (2011, 6) proclaimed that VET has for a long time been seen as 'the poor relation of academic learning.' In Zimbabwe VET has generated considerable interest among academics and politicians. Shizha and Kariwo (2011), Mupinga, Bunnet and Redman (2005) and Chinyamunzore (1995) concurred that the role of VET in Zimbabwe needs to be redefined. The Minister of Education Coltart (2011) regretted that Zimbabwe's post-independence education system was too academic and fell short of meeting the needs of the youth. Despite the clamour for change in VET, the teachers delivering VET and the students receiving the instruction are not being consulted.

This study is particularly important at a time when Zimbabwe has been subject to considerable social, political and economic turmoil since 2000. Zimbabwe was once dubbed the bread basket of Africa producing a range of crops, livestock and minerals. Political instability and subsequently economic crisis has seen the economy shrinking by approximately 50.3 % (UNESCO, 2015). Many companies have closed down. These developments have led to a sharp rise in poverty, unemployment, infrastructure collapse and a haemorrhage of human resources (UNESCO, 2015). UNESCO (2015) estimated that 3 to 4 million untrained, trained and experienced personnel have left Zimbabwe for neighbouring countries. Despite the fast shrinking employment market, academic and university education continues to be the government's priority while VET remains underfunded and peripheral. It should be noted though that the academically skewed education policy has raised Zimbabwe's literacy rate to great heights. UNESCO reported that Zimbabwe has an estimated literacy rate of 92 % - 97% representing the highest in Africa (Munjanganja and Machawira, 2015). Paradoxically, Zimbabwe also has the highest unemployment rate in the world. The unemployment rate was estimated at 80% in 2005 rising to 95% by 2009 (CIA World Factbook, 2016; Statista, 2016). An analysis of the plight of young people caught up between a national jeopardy and a constantly changing vocational sector is a worthy contribution to the VET agenda. As Zimbabwe's policy makers and educators seek to overhaul the education system to address young people's aspirations and the country's labour needs, this study particularly offers different perspectives for policy makers' consideration. The study raises important issues

regarding the dissonance between teachers and education inspectors regarding VET delivery. The research makes recommendations for addressing the status of VET, attitudinal change and careers guidance for students. This paper is an empirical contribution to ongoing discussions on the role of VET in Zimbabwe. The findings from this study will apprise educational policy makers on the views of students and educators as well as the institutional and cultural status quo of VET.

3. Methodology

The case study approach was selected for its ability to gather in-depth information within the delineated unit of Murewa district. Qualitative case studies offer prospects for the exploration and description of phenomena in situ via multiple data sources (Baxter and Jack, 2008). The phenomenon under investigation is attitudes and opinions of VET. The case is students, teachers and education inspectors from Murewa district. Murewa is one of the nine rural districts of Mashonaland East Province. Zimbabwean rural schools follow more or less the same school curriculum and the students share common socio-economic backgrounds. The Murewa district case could therefore provide useful insights into nationwide views. The case study approach combining various methods of data collection was ideal for capturing human experiences to answer the research questions. A quantitative or qualitative method alone would not provide a full understanding of the views and experiences under investigation.

Sampling: Flyvbjerg (2006) emphasised the need for careful selection of cases in order to increase the outcomes of a study. Students were recruited from those who were studying practical subjects and thus possessed first-hand experience of VET. I also selected practical subject teachers and education inspectors who had an understanding of VET curriculum and delivery. Schools that offered a range of practical subjects were also selected to get an appropriate level of information to answer the research questions. The full sample comprised 90 students from three secondary schools, 59 pupils from three primary schools, six practical subject teachers and two education inspectors. The two inspectors were the only practical subject inspectors in the district. The practical subjects included woodwork, fashion and fabrics, food and nutrition, agriculture, building studies and technical graphics. The students were aged between 11 and 17.

Data Collection: Research data was collected using questionnaires which achieved a 100% response rate. Focus group discussions were then conducted with consenting students. Focus groups were useful for gathering information on collective views and generating a better understanding of participants' experiences and why they held particular views (Morgan, 1998). Semi-structured interview schedules, audio-recorded interviews and open ended questions were used to unravel the research questions.

Data Analysis

Qualitative data analysis: The research processes of this study were inspired by systematic approaches to data collection and data analysis. Fink (2000) applauded Kvale's (1996) seven stages of the research process: thematising, designing, interviewing, transcribing, analysing, verifying and reporting. The interviews were transcribed into word documents and uploaded into NVivo for coding and identifying themes. Emerging themes from focus groups and interviews were noted and categorised using the open code method (Fink 2000). Commonalities and discords across interviews were then identified and collated.

Quantitative data analysis: Quantitative data from the questionnaires was uploaded into SPSS statistics software. Descriptive statistics were used to analyse data from the questionnaires. Comparisons and unities between primary school and secondary school students' responses were plotted on tables as percentages. Inferential statistics in the form of t-test analysis were used to compare students' interest in subjects. Independent-samples t-tests are used to compare the mean score on some continuous variable, two different groups of people or conditions (Pallant, 2013). I used the independent-samples t-test to explore gender differences in students' interest in all subjects offered. The two variables used were gender and interest in subjects.

Limitations and Delimitations: All research methods have merits and demerits. The chosen case study approach has often been criticised for lack of generalisabilty. However, the strengths this approach derives

from multiple data collection methods have equally been undervalued. The use of various data collection methods in this study was crucial in establishing credibility and trustworthiness of the results. Flyvbjerg (2011, 306) argued that case studies are ideal for theory development; providing detailed examination of hypotheses; analysing historical explanations; and developing new questions for investigation. The Murewa case study was strategically selected to increase the reliability and validity of the data. Schools in Murewa district share similar infrastructure and socio-economic backgrounds with rural schools in the rest of the country. These similarities therefore make the findings of this case study applicable and transferrable to other districts. Besides, increasing the number of districts and schools was unlikely to yield any new data.

Theoretical Framework: This study drew inspiration from Functionalist, Conflict and Symbolic Interactionist theories. Functionalists highlighted education's role in sorting and separating students on the basis of merit. Talcott Parsons, Kingsley Davis and Wilbert Moore called this social placement where schools channel the most capable people into the most important occupations to meet societal needs (Margolis, 2002). While functionalists view education's role as that of creating order in society, conflict theorists see education as preserving privileges of the elite and subduing the lower classes into subservient workers (Thompson 2013). The process of training pupils to accept their social class is referred to by conflict theorists as the hidden curriculum. Samuel Bowles and Herbert Gintis (1976) cited by Kentli (2009 p.85) expressed that the hidden curriculum consists of silent but powerful messages that schools send to students about their 'intellectual ability, personal traits, and the appropriate occupational choice.' Symbolic Interactionists maintain that people establish meaning through symbols such as cultural norms and values and act in accordance with their own understanding of those symbols (Sandstrom et al., 2014). Symbolic interactionist theory places emphasis on how student attitudes, dispositions, perceptions, and performance are influenced by teacher expectations (Sandstrom et al., 2014). Thus, the verbal and non-verbal messages that teachers communicate to students have profound impact on their attitudes. Schools are therefore fundamental agents of socialisation through the formal curriculum which includes reading and writing, and the hidden curriculum (Barkan, 2013). Among the several agents of socialisation the family is the most important agent of socialisation for children (Barkan, 2013). Parental traits such as choices, actions, and levels of involvement in their children's education transmit beliefs, mind-sets, and values that shape children's perceptions, abilities and attitudes (Patrikakou, 2008). Family background was consequently a desirable aspect of this study. On the basis of this framework appropriate research questions and suitable data collection methods were selected.

4. Findings

Nherera (1994) established that students and parents in Zimbabwe preferred academic education to vocational education due to its historical legacy. Twenty years on, this study presents fieldwork findings on contemporary perceptions of students who by and large have little or no colonial rule misgivings apart from what their parents may impart to them. Family educational background was a strategic starting point for understanding young people's thoughts.

Parents' level of education vis-à-vis students' educational aspirations: Family background has been found to have a strong bearing on young people's attitudes and career choices. Students were asked to indicate their parents' highest educational level. The results showed that 36% held university degrees, 16% had A levels, 43% had O levels and 5% primary or junior certificate education.

Students' educational aspirations: It can be argued that the high levels of parents' education had a bearing on students' desire for university education. Students' responses to the question - Up to what level do you want to continue with your education? - revealed that 92% of students aspired for university. Students had no intentions of exiting education after O or A levels and only 3% had their sights on VET as illustrated in table 1. These results affirm Davis-Kean and Schnabel's (2001) findings of the close relationship between parental education and children's aspirations.

Table 1: Students' educational aspirations

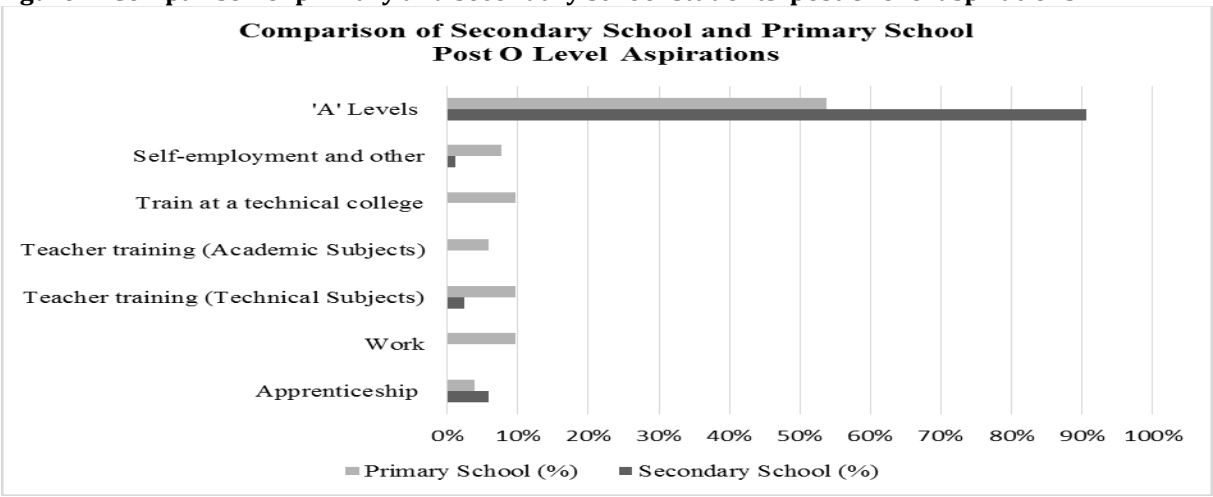
Educational Level	Number	%
O Level	2	1%
A Level	5	4%
Vocational/Technical College	4	3%
University	129	92%

More information was sought by asking students - What do you want to do after your O levels? The responses to this question affirmed students' high educational aspirations. In primary schools 54% aspired for A level. It was interesting to note that in primary school 10% wished to train at technical colleges and another 9% were interested in training as technical subject teachers. However, when the same question was presented to secondary school students, there was a shift of interest with 91% aspiring for A levels, 0% for technical training and just 2% interest in training as technical subject teachers as shown in table 2 and figure 1.

Table 2: Students' post O level aspirations

What do you want to do after your O Levels?	Primary school students	Secondary school students
Work	9%	0%
Apprenticeship	4%	6%
Teacher training (Technical Subjects)	9%	2%
Teacher training (Academic Subjects)	6%	0%
Train at a technical college	10%	0%
Self-employment and other	8%	1%
'A' Levels	54%	91%

Figure 1: Comparison of primary and secondary school students' post O level aspirations



Primary school students showed more interest in technical training, self-employment and seeking work after O levels than secondary school students.

Primary School students' interest across all subjects offered: Mathematics, science and English were the most popular subjects amongst primary school students. Students did not respond to agriculture and accounts. When asked in focus groups why they did not rank accounts, students explained that they did not know much about the subject. It was however different with agriculture where students were clear about the subject, but explained that farming was what they had grown up doing so they wished to pursue more prestigious careers.

Another striking revelation was low interest in physics and chemistry which scored 67% and 45% dislikes respectively. Students were aware that these were science subjects but explained that they did not understand the differences between them. Metalwork was also unpopular with 44% of participants not so sure about their interest in the subject. It was disclosed in the focus groups that lack of knowledge about subjects was the main reason for 'somewhat interested' responses by primary school respondents.

Secondary school students' interest in all subjects: Secondary school respondents as shown in table 4 were more interested in academic subjects than practical subjects. Apart from English literature all academic subjects were popular with students. English, mathematics, science, computers and geography ranked highest while metalwork and woodwork were the least liked scoring 74% and 69% dislikes respectively. This was an interesting outcome given that metalwork and woodwork have the potential for small scale business enterprise or rural employment/self-employment. Agriculture which is the mainstay of the rural economy had 38% of participants having a lukewarm feeling towards the subject. Nevertheless, 50% of the secondary school students were very interested in agriculture.

Table 3: Primary School students' interest across all subjects offered

From the following list, show your level of interest in each of the subjects			
SUBJECT	**1. Not interested**	**2. Somewhat interested**	**3. Very interested**
English Language	2%	16%	83%
Mathematics	4%	4%	93%
General Science	5%	13%	82%
Shona vernacular Language	5%	17%	78%
Bible Knowledge	0%	25%	75%
History	11%	18%	71%
Fashion and Fabrics	7%	21%	71%
Woodwork	13%	17%	71%
Food and Nutrition	4%	27%	69%
Geography	11%	22%	67%
Technical Drawing	8%	33%	58%
Textile & Design	8%	44%	48%
English Literature	7%	57%	36%
Building	26%	39%	35%
Chemistry	45%	27%	27%
Physics	67%	8%	25%
Metalwork	31%	44%	25%
Accounts	0%	0%	0%
Agriculture	0%	0%	0%

Practical Subjects

Another area of interest was the significantly large percentage of 'somewhat' responses among primary school students across all practical subjects particularly in metalwork, textile and design, food and nutrition, technical drawing and building. The limited knowledge of these subjects was largely due to lack of adequate careers guidance. When asked whether they had attended any careers advice sessions at school the results were as illustrated in table 5. The 54% of primary school and 48% of secondary students who answered yes indicated that the careers advice was mainly through a careers' day where presenters from industry and big firms came into the school once a year. A notable 32% of secondary school and 46% of primary school students had not received careers advice.

Analysis of all participants' interest in all subjects by gender: The SPSS t-test for equality of variances was employed to compare the average level of interest in subjects between boys and girls and to determine whether females had a stronger preference for a subject than boys. The independent-samples t-test made it possible to compare two unrelated groups (in this case females and males). A Sig. value for Levene's test which is equal or less than 0.05 Sig (2-tailed) means that there is significant difference between boys' and girls' interest in a subject as detailed below. If the value is above 0.05 (e.g. 0. 06 or 0.10) it means there is no significant difference between boys' and girls' interest in the subject (Pallant 2013).

Table 4: Secondary school students' interest in all subjects

From the following list, show your level of interest in each of the subjects			
SUBJECT	**1. Not interested**	**2. Somewhat Interested**	**3. Very interested**
English Language	0%	10%	90%
Computers	0%	12%	88%
Mathematics	5%	10%	85%
Geography	2%	18%	80%
History	2%	22%	76%
Accounts	0%	25%	75%
General Science	6%	20%	74%
Chemistry	10%	17%	73%
Physics	11%	18%	72%
Shona	6%	30%	65%
Bible Knowledge	25%	11%	64%
Agriculture	13%	38%	50%
Fashion and Fabrics	43%	13%	45%
Textile & Design	40%	19%	40%
Technical Drawing	39%	22%	39%
English Literature	33%	33%	35%
Building	41%	25%	34%
Food and Nutrition	43%	29%	29%
Woodwork	69%	20%	11%
Metalwork	74%	20%	6%

Practical Subjects

Table 5: Attendance to careers advice sessions

Have you attended any careers advice sessions at your school?				
	Primary School	**Secondary School**	**Primary School (%)**	**Secondary School (%)**
Yes	32	43	54%	48%
No	27	47	46%	52%
Total	59	90	100%	100%

Table 6: Levene's test of interest in all subjects by gender

Subject	**T-test for equality of means Sig. (2-tailed)**	**Statistically significant differences Yes or No**
English	.077	No
Literature	.018	Yes

Shona	.143	No
General science	.757	No
Physics	.587	No
Chemistry	.146	No
Biology	.167	No
Geography	.437	No
Mathematics	.631	No
History	.117	No
Bible knowledge	.351	No
Metalwork	.243	No
Fashion and fabrics	.000	Yes
Textiles and design	.009	Yes
Food and nutrition	.000	Yes
Woodwork	.466	No
Technical drawing	.065	No
Building	.129	No
Agriculture	1.000	No
Accounts	.629	No
Computers	Could not be computed to standards deviations of both groups are 0	

The t-test analysis revealed that there was statistically significant difference in interest in fashion and fabrics, textile and design, food and nutrition and literature. Girls had more interest in these subjects than boys indicating that the gender stereotypes associated with practical subjects still exist.

Students' views on the usefulness of practical subjects: After capturing the students' interests, their views on the usefulness of practical subjects were sought. Students were asked to indicate how useful they felt practical subjects were in fulfilling the goals listed in Table 7 below. The results indicated that primary school students were more convinced than secondary school students that practical subjects were very useful for preparing them for employment. Conversely, fewer primary school students felt that practical subjects were very useful in developing positive attitudes towards manual work or self-employment.

Table 7: Comparison of primary and secondary students' views on the usefulness of practical subjects

Primary School			
How useful do you think practical subjects fulfil the following goals?	**Not useful**	**Somewhat useful**	**Very useful**
(a) Preparing pupils for employment	2%	17%	80%
(b) Preparing pupils for apprenticeship	0%	77%	23%
(c) Developing a positive attitude towards manual work	25%	40%	35%
(d) Preparing pupils for self-employment	10%	51%	38%
(e) Applying theoretical knowledge practically	5%	21%	74%
Secondary School			
How useful do you think practical subjects fulfil the following goals?	**Not useful**	**Somewhat useful**	**Very useful**
(a) Preparing pupils for employment	6%	41%	53%
(b) Preparing pupils for apprenticeship	6%	59%	36%
(c) Developing a positive attitude towards manual work	9%	19%	72%
(d) Preparing pupils for self-employment	9%	25%	67%
(e) Applying theoretical knowledge practically	4%	26%	70%

Overview of Focus Group Discussions

Primary school focus group responses: The majority of primary school students expressed high regard for practical subjects. They felt that practical subjects were crucial for life skills. Most primary school students believed that the practical nature of the subjects made them more interesting than academic subjects. Some felt that practical subjects were very useful for securing employment. Others expressed that they did not like them but felt that practical skills could be useful in retirement or when faced with unemployment.

Secondary school focus group responses: There were mixed views among secondary schools students. Some students were more optimistic about the prospects of practical subjects than others. Students had strong views about how schools and employers viewed practical subjects negatively. They wanted schools to treat practical subjects seriously by offering adequate equipment. Others wanted them to be introduced at primary school. They stressed the need for skilled teachers and expressed displeasure at the denigration of practical subjects. Other students acknowledged that they had low regard for practical subjects due to the low status that was accorded to them. Students disliked practical subject allocation methods based on low academic ability. They disliked the lack of uniform subject allocation criteria. Due to complexities caused by limited resources, teachers tended to use the most convenient methods of selection. Students also expressed dissatisfaction over the limited range of practical subjects; lack of choice; the limited time allocation; and the poor motivation of teachers. Contrary to previous studies that claimed that young people dislike practical subjects, this study has shown that it's not about the subject per se, but how the subject is portrayed, packaged and sold to students.

Teachers' Perceptions

The status of practical subjects: Teachers were disheartened by students' lack of interest and what they perceived as the government's lukewarm commitment to VET. The teachers expressed that:

- Vocational subjects are lower status since most people prefer white-collar jobs.
- Pupils in rural secondary schools shun VET because of how they are taught.
- Practical subjects are considered as auxiliary subjects. Whilst the government has somehow adopted the Nziramasanga Commission's recommendations, not much is being done on the ground.
- Unqualified teachers are still teaching technical subjects.

The issue of unqualified teachers who were teaching practical subjects was a bone of contention expressed by students and education inspectors. Teachers echoed students' concerns over the lack of choice. A teacher suggested that practical subjects must be introduced at A level to raise their profile. This was seconded by another teacher who stated that after introducing food science at A level, students' and teachers' attitudes at their school improved considerably.

Education Inspectors' Perceptions: The first inspector was highly optimistic that the vocational curriculum provided viable pathways for the majority of school leavers who do not proceed to university. The second inspector conversely felt that the expansion of universities was not in sync with the reality that the majority of school leavers in Zimbabwe do not progress to university. The second inspector observed that:
Not every child is academically gifted. There are some who are technically inclined and therefore, I think it took the government sometime especially after the Nziramasanga Commission to go back and advocate for vocational training…

The inspector advocated for early introduction to practical subjects in order to give learners primary opportunities to experience the subjects. The inspector further supported the idea of schools of excellence with specific inclination to particular subject areas. The inspector added that:
The colonial F2 system had its advantages although people disliked it because it was done for the colonialists' benefit. However, after independence those people who had been educated in the F2's were absorbed into road construction, agriculture, building and so on.

Inspectors' views on teacher proficiency: The inspectors felt that teachers' interest and practical skills in a subject had a huge impact on student motivation. According to the inspectors, school inspection visits

revealed that some teachers lacked the practical skills which made it difficult for them to impart the skills to their learners. The first inspector observed that:
I think negative attitudes have been brought about by the calibre of teachers who are not competent… for example, a teacher taking kids year after year with a 0% pass rate…pupils are not going to come to that subject. But in schools where teachers are producing good results you find more numbers of students registering for practical subjects.

The second inspector concluded that:
… for any success in vocational training you must have a flair for it, you must love it.
Besides the results, the teacher must sell the subject.

The inspector also recommended that teacher training colleges should enrol trainees who have studied the practical subject in secondary school to ensure that they have the basic skills and interest in the subject.

Discussion: UNESCO-IBE (2010) found that Zimbabwe's urban based curriculum was not fit for purpose. Correspondingly, educators and politicians in Zimbabwe concur that the education system is not meeting the economic needs of the country. The sentiments of students and teachers captured in this study have not only confirmed the failings identified by UNESCO, but have also revealed ingrained inconsistencies and inequalities within the Zimbabwe education system.

The views and attitudes of students, teachers and Education inspectors towards VET: There is evidence to suggest that teachers' motivation and competency influence student attitudes. An instructor needs to be proficient at the job to be able to instruct the learner effectively. In some cases teachers did not only lack the practical skills, but they were not qualified to teach the subject. Consequently, motivation, quality, standards and safety were being compromised. A dichotomy of views emerged where the inspectors and students held teachers responsible for poor results and negative student attitudes. The inspectors criticised teachers for incompetence and failure to market practical subjects. The teachers complained about the lack of adequate equipment and argued that practical subjects were unmarketable in the face of 'superior' better-funded academic subjects. The teachers were convinced that the misfortunes of VET were engrained in the whole education system where there was inequitable allocation of resources. According to the teachers, lack of resources, lack of choice and limited opportunities for progression were chiefly responsible for VET's poor image. In addition, parental attitudes made it very difficult for them to motivate students. According to the teachers, the situation was exacerbated by the lukewarm attitude paid towards work experience and careers guidance by school managers and the Ministry of Education. The above issues prevailing in schools have a profound effect in shaping attitudes towards VET.

Students' attitudes of VET during the transition from primary to secondary school: This study found that attitudes tend to differ between different age groups and different school environments. Primary school students' perceptions differed from those of secondary school students. The evidence suggests that the number of practical subjects on offer in a school influenced the general attitude and status of practical subjects. Schools that offered more practical subjects had more positive responses than those that offered a limited number of practical subjects. It can be argued that the more students are acquainted with practical subjects, the better the attitudes. It can also be argued that the presence of more practical subject teachers provides positive role models. Primary school students were more positive about practical subjects than secondary school students. It can be deduced that there are differences in attitudes towards practical subjects between primary and secondary school students. These attitudinal changes can be attributed to differences in school culture and learning environments. This study puts forward the argument that the hidden curriculum in secondary schools plays a significant role in shaping students' attitudes to practical subjects. The sentiments expressed by secondary school students, teachers and the education inspectors exposed a deep-seated culture of apathy towards VET in secondary schools. None of the participants was willing to accept responsibility for the state of affairs. Thus, when primary school children enter secondary school they are instantaneously exposed to a contentious environment that transforms their attitudes towards VET.

The primary school students explained in focus groups that they were not familiar with some science and practical subjects. The lack of awareness of such subjects for students who were in their last grade of primary

education indicates limited exposure and lack of adequate information and guidance. Evidently, students were leaving primary school without sufficient preparation for secondary education which has a major impact on the choices they make. Many students find themselves overwhelmed by the sheer number of new subjects at secondary school. Students have to make a huge leap to studying a combination of new subjects including practical subjects. It was apparent that lack of knowledge or exposure to particular subjects contributed to poor attitudes or lack of interest. Students indicated in focus groups that they did not like subjects like metalwork because they did not know how useful they would be in future. The fact that most practical subjects except home economics are not talked about in primary school means that students get to learn about them at secondary school. As a result, what might be perceived as negative attitudes towards VET may in fact be unfamiliarity rather than disdain.

Secondary school students' responses illustrated that their comments about practical subjects were not necessarily negative. Instead, they wanted improvements in teacher attitudes pointing out that some teachers were disinterested and unskilled. The students clamoured for choice, adequate time and material resources together with courses that could lead to employment. The students yearned for exposure through work experience and school industrial trips. For VET to gain respectable reputation, it must be a subject of choice. Students are likely to succeed when doing subjects they choose and enjoy. Information is the currency of choice, thus careers advice and guidance is vital to give students insights into viable options and choices for the future. Evidently, lack of exposure stifles young people's imagination and the desire to venture into science and vocational fields. The responsibility for the apathy that surrounds VET is complex and cannot be attributed to a single cause or person. The differences in opinion revealed a disconnection between education inspectors and the teachers. The teachers' plight has brought to the fore issues relating to practical subject results, curriculum aptness along with teacher training and teacher supervision implications. The second class status accorded VET struck a chord with both teachers and students who were bewildered by the little value ascribed to VET in comparison to academic education. The education system is therefore unwittingly perpetuating inequalities between professions and replicating colonial prejudices of VET.

The impact of historical and cultural influences on young people's aspirations and the status of VET qualifications: This study has revealed institutional bias against practical subjects. While the abolition the F2 was aimed at integrating vocational and academic education, the education system remains polarised. One teacher lamented that at his school students with lower academic ability were registered for practical subjects while the more able students were enrolled for commercial and science subjects. The historical belief that practical subjects are suited for less academically inclined students still prevails in schools. The education system's hidden curriculum therefore perpetuates the categorisation of students.

The contemporary role of VET in rural Zimbabwe: The review of literature revealed that the last decade saw an unprecedented expansion of university education giving people the impression that university qualifications were the main vehicle for social mobility. While universities are vital for skills development, technology transfer and creation of new knowledge, it can be argued that they are not everyone's choice. Despite the increase in numbers of universities they still cannot absorb all school leavers. With an exponential increase in unemployment, options for young people including university graduates are very limited. Zimbabwe needs to broaden the skills base through widening participation in VET in order to develop new industries.

Making VET a respectable and viable option: The research has highlighted the quagmire that teachers face when placing students in classes. Due to limited resources devising a fair and effective subject allocation criterion is difficult. Both students and teachers felt that the allocation of practical subjects to students with low ability contributed to poor results. This sets in motion a vicious cycle where poor results reinforce students' perceived low ability which in turn leads to the subjects being degraded. Teachers are under pressure to produce high grades which leads to a tendency to focus on academic subjects and teaching to the examinations. Thus rote learning is being promoted at the expense of experiential learning. The status of any product, service or line of business depends on its usefulness, relevance and the value people bestow upon it. The issue of relevance had resonance with both teachers and students. 'Make VET relevant', was one secondary school participant's stark remark. Teachers and students alike felt that the practical subjects on offer were not relevant to their aspirations. Both primary and secondary school students did not feel that

practical subjects were useful for preparing pupils for apprenticeships or for developing a positive attitude towards manual work. It is therefore not surprising that 97% of participants would rather seek white-collar jobs in cities or other countries. The education system is consequently failing in its function to transform children into productive members of society.

Implications for Policy and Practice

Implications for school managers: There are significant challenges for school managers to recognise the significance of interactions that coalesce to shape students' attitudes and career aspirations. The findings from this study point to the need for school managers to:

- invest in professional careers guidance for students including trips and shop floor experience programmes;
- de-stigmatise practical subjects and remove gender stereotypes in VET;
- promote positive school ethos to raise the status of practical subjects through equitable selection criteria and resource allocation;
- promote curriculum diversity in schools to reflect students' diverse talents;
- embed careers guidance and equality of professions in the school curriculum.

School managers should promote positive school ethos for practical subjects.

Implications for Teacher Training and Recruitment: Teacher motivation was found to be a major problem resulting in lack of interest in VET. The lack of qualified practical subject teachers is a major issue that needs to be addressed. Poor teacher motivation, lack of interest and skills were found to be among the major causes of poor student motivation. There are, therefore, implications for teacher training and recruitment. Recruitment of trainee teachers must be rigorous in order to recruit people with the right attitudes, skills, and interest. There should be a deliberate emphasis on the practical aspect in technical teacher training. Experts and technicians who have practical skills should be empowered to train as teachers. There are far reaching policy implications to be drawn from the relationships between: students and their peers; teachers and students; teachers and the education inspectors; education inspectors and curriculum developers; education providers and employers, industry and the government. Efforts have to be made to harmonise these stakeholders' approaches to VET. The status that the key players accord to VET determines the attitudes of young people and their desire to pursue vocational education. School managers should promote positive school ethos for practical subjects. The study revealed a lack of professional careers guidance and lack of opportunities for students to interact with employers and the workplace. Careers guidance ought to be embedded in the school curriculum and school managers need to invest in shop floor experience programmes. In addition, the subject selection process should encourage choice and reflect the relevance of practical subjects.

There are implications for equitable timetabling between academic and vocational subjects. The current focus on academic education has been found to be ineffective in preparing young people for a fast changing world. The recommendations of the Nziramasanga commission should be revisited to explore how the country can produce a diverse and multi-skilled work force that can adapt to the country's contemporary demands. The curriculum should be revised to include concepts that develop critical thinking to enhance young people's ability to adapt. The potential for VET as a viable career option should be promoted more widely. Young people in this study were compelled to think that VET was an option for those who fail in academic subjects and life in general. Policy makers ought to consider VET programmes that are relevant to the modern world in order that they appeal to young people. The issue of VET relevance is a worldwide concern. Morton (2015) expressed that 58% of general education students and 71% of vocational education students were pursuing careers that either will not exist in future or will be transformed by automation. Policy makers and curriculum developers therefore ought to seriously consider curriculum changes in accordance with the country's needs and technological advancement to make VET relevant.

Policy makers need to explore new learning and teaching approaches that prepare children for work from early ages. Education Scotland (2015) proposed an educational approach that places emphasis on work

experience, careers information, advice and guidance and greater access to vocational learning. Education Scotland proposed:

- developing links between schools and colleges with employers;
- engaging with young people, parents and teachers;
- developing children's and young people's knowledge of the world of work;
- providing early careers advice to young people; (Education Scotland, 2015).

Curriculum developers ought to explore interconnected primary and secondary curriculums to promote continuity from primary to secondary school. In addition, secondary and primary school staff and students should collaborate so as to enhance the student experience. Collaborative learning between primary and secondary school students ought to be encouraged to promote peer education and smooth transitions.

A shared vision among professionals: A disconnection between the SDERU researchers' vision for VET and the experiences of the teachers was discernible. The researchers' optimism was not shared by the young people and the teachers in the schools, or by the inspectors. The teachers and inspectors felt that careers guidance was inadequate whereas the research officer was content with the level of careers days and fairs in schools (mainly urban schools). A shared vision among professionals is needed in order to have consistent and equal access to careers guidance for all students. Rurally based students are disadvantaged as regards careers information and options.

5. Conclusion

The evidence from this study shows that students disliked the manner by which VET was viewed and delivered. Teachers had strong views on the status given to practical subjects while education inspectors expressed frustrations over the quality of VET delivery in schools. Despite the divergent views, there was general consensus that VET has a place in education and a role in economic development. There were marked differences in opinion between primary and secondary school students. Primary school students were more positive towards VET than secondary school students. This situation can be attributed to the absence of a smooth transition from primary to secondary school. There is no link between the secondary school vocational curriculum and the primary school curriculum. Rote learning in mathematics, English and science in primary school is not preparing students for independent learning in secondary school. It has been established that the contemporary role of VET in rural Zimbabwe depends on its relevance and ability to meet students' expectations. The hidden curriculum has a huge impact on attitudes. Thus the combined effect of parental influence; an academically oriented curriculum; lack of subject choice; lack of professional careers advice; negative school culture and poor teacher motivation weigh heavily against VET as a viable option for students. Fundamental policy and societal changes need to take place to overturn the adversities VET faces in Zimbabwe.

Recommendations

Perspective transformation: Based on the findings, reframing notions of VET in light of students' and teachers' experiences and attitudes is recommended. Cavanagh, Shaw and Wang (2013) recommended the concept of rural transformation which differs from rural development. While rural development refers to improving physical infrastructure, rural transformation seeks to transform individuals' views of their circumstances. Cavanagh, Shaw, and Wang (2013) dubbed this notion 'perspective transformation.' Perspective transformation occurs when 'individuals take on a whole new way of viewing their community, society, environment and the world' (Cavanagh, Shaw and Wang 2013, 325). This study recommends:

- perspective transformation in rural Zimbabwe to develop new understanding of VET and its potential;
- exploration of innovative teaching methods to suit the new generation of students;
- encouraging skilled technicians to train as teachers;
- introduction of pre-vocational subjects in primary schools to develop children's interest and knowledge of VET;

- accessible and innovative careers guidance via digital technology.

Rebranding and repackaging VET: Rebranding involves creating a new image of and feel for an existing product. Kapferer (2012, 9) asserted that, '…what really makes a name become a brand is the fact that this name commands trust, respect, passion and even engagement.' This study recommends rebranding to create a new brand of VET that is relevant, appealing and accessible to the youth using technology and social media. Schools in partnership with industry should develop effective profile-raising strategies that make public the rewards of VET qualifications and potential earnings.

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References

African Union. (2000). Meeting of the Bureau of the Conference of Ministers of Education of the African Union. Addis Ababa. COMEDAF. Accessed November 16 2012. http://www.africaunion.org/root/au/Conferences/2007/May/HRST/2931/TVET_Strategy_english.doc

Barkan, S. E. (2013). Sociology: Understanding and Changing the Social World, Brief Edition, Flat World Knowledge. Accessed March 22 2014. http://catalog.flatworldknowledge.com/bookhub/reader/4306?e=barkbrief-1.1-ch03_s03

Baxter, P. & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544-559.

Bello, M. I. Danjuma, I. M. & Adamu, A. Y. (2007). A Survey of Vocational Training Needs of 15 – 25 Years Old Out-of-School Youths in Bauchi Metropolis. *Journal of Career and Technical Education*, 23(1), 55-71.

Bennell, P., Bendera, S., Kanyenze, G., Kimambo, E., Kiwia, S., Mbiriyakura, T., Mukyanuzi, F., Munetsi, N., Muzulu, J., Parsalaw, W. & Temu, J. (1999). Vocational Education and Training in Tanzania and Zimbabwe in the Context of Economic Reform, Education Research Paper No. 28. Department for International Development.

Boateng, C. (2012). Restructuring Vocational and Technical Education in Ghana: The Role of Leadership Development. *International Journal of Humanities and Social Science*, 2(4), 108 -114.

Catts, R., Falk, I. & Wallace, R. (2011). Vocational Learning Innovative Theory and Practice Technical and Vocational Education and Training: Issues, Concerns and Prospects. UNESCO-UNEVOC. Accessed August 20 2012. http://www.springerlink.com/content/x71340/front-matter.pdf.

Cavanagh, D., Shaw, G. & Wang, L. (2013). Technical and Vocational Education and Training, and Skills Development for Rural Transformation. In: UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training, Revisiting global trends in TVET: Reflections on theory and practice: 309-335.

Cedefop (European Centre for the Development of Vocational Training). (2011). Vocational education and training is good for you: the social benefits of VET for individuals 21. [pdf] Luxembourg: Cedefop. Accessed October 15 2012. http://www.cedefop.europa.eu/EN/Files/5517_en.pdf

Chinyamunzore, N. (1995). Devolution and evolution of technical/vocational education curriculum in Zimbabwe. IDATER 1995 Conference, Loughborough: Loughborough University.

CIA. (Central Intelligence Agency). (2016). Zimbabwe Economy 2016 Accessed February 17 2016. https://www.cia.gov/library/publications/the-world-factbook/fields/2129.html

Coltart, D. (2011). We can't all be intellectuals. Speech to the Greatness Career Conference in Harare delivered on February 10, 2011. Accessed March 20 2012. http://www.newzimbabwe.com/news4491e%20cant%20all%20be%20intellectuals%20Coltart/news.aspx

Davis-Kean, P. E. & Schnabel, K. U. (2001). The impact of socio-economic characteristics on child outcomes: the mediating role of parents' beliefs and behaviors. Child Development, under review. In: L. Feinstein, K. Duckworth and R. Sabates, 2004. A model of the intergenerational transmission of educational success. Wider benefits of learning research report 10. London: Institute of Education.

Education Scotland. (2015). Developing the Young Workforce. Accessed August 8, 2015. http://www.educationscotland.gov.uk/learningandteaching/thecurriculum/dyw/index.asp

Edward, S., Weedon, E. & Riddell, S. (2008). Attitudes to Vocational Learning: A literature review. Edinburgh: University of Edinburgh Centre for Research in Education, Inclusion and Diversity Scottish Government Social Research. Accessed March 20 2012. http://www.scotland.gov.uk/Resource/Doc/233621/0063966.pdf.

Fink, A. S. (2000). The Role of the Researcher in the Qualitative Research Process. A Potential Barrier to Archiving Qualitative Data. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 1(3), Art. 4.

Flyvbjerg, B. (2006). Five Misunderstandings about Case-Study Research. *Qualitative Inquiry*, 12(2), 219-245.

Flyvbjerg, B. (2011). *Case Study. In: Norman K. Denzin and Yvonne S. Lincoln, eds. The Sage Handbook of Qualitative Research*. 4th ed. Thousand Oaks, CA: Sage Publications.

Lauglo, J. & Lillis, K. (1988). Vocationalising Education. An International Perspective. Oxford: Pergamon Press.

Kapferer, J. (2012). *The New Strategic Brand Management: Advanced Insights and Strategic Thinking* 5th ed. Croydon: Cogan Page Limited.

Kariwo, M. T. (2007), Widening Access in Higher Education in Zimbabwe. Department of Educational Policy Studies. Harare: Zimbabwe.

Kentli, F. D. (2009). Comparison of Hidden Curriculum. *European Journal of educational Studies*, 1(2), 83-88.

Kincheloe, J. L. (1995). Toil and Trouble. Good Work, Smart Workers, and the Integration of Academic and Vocational Education. New York, NY: Peter Lang.

Kvale, S. (1996). InterViews - An introduction to qualitative research interviewing. Thousand Oaks, CA: Sage.

Lai, A. & Maclean, R. (2011). The future of technical and vocational education and training: global challenges and possibilities. *International Journal of Training Research*, 9(1-2), 2.

Maravanyika, O. E. (1990). Implementing Educational Policies in Zimbabwe. World Bank Discussion Papers no. 91. Africa Technical Department Series.

Margolis, E. (2002). The Hidden Curriculum in Higher Education. London: Routledge.

MOHET (Ministry of Higher and Tertiary Education). (2005). Policy Review Framework Report on the Technical and Vocational Education and Training. February 2005. ZIMDEF/UNESCO. Harare: Zimbabwe.

Mora, M. (2010). Quantitative Vs. Qualitative Research – When to Use Which. Accessed May 20, 2012. http://www.surveygizmo.com/survey-blog/quantitative-qualitative-research/

Morgan, D. L. (1998). The Focus Group Guide Book. London: Sage Publications.

Morton, R. (2015). Two-thirds of students training for jobs that won't exist, The Australian, 24 August, 2015, 12:00am, Accessed May 15, 2015. http://www.theaustralian.com.au/higher-education/twothirds-of-students-training-for-jobs-that-wont-exist/news-story/2d2343561f3f8d7c86c98f516052413e

Mufanechiya, T. & Mufanechiya, A. (2011.) Motivating Zimbabwean secondary school students to learn: A Challenge. *Journal of African Studies and Development*, 3(5), 96-104.

Mupinga, D. M., Burnett, M. F. & Redmann, D. H. (2005). Examining the purpose of technical education in Zimbabwe's high schools. *International Education Journal*, 6(1), 75-83.

Mupondi, J. G. & Munyaradzi, G. (2013). An Evaluation of the Vocational Technical Approach to Teaching of Art and Music Education: The Case of Masvingo District, Zimbabwe. *International Journal of English and Education*, 2(3), 482-492.

Munowenyu, E. (1999). The need to offer basic vocational education in Zimbabwe's secondary schools. *Zimbabwe Journal of Educational Research*, 11(1), 43-57.

Mureithi, G. W. (2009). Technical, vocational education and training in Africa: has it lost its significance? Accessed November 13 2012. http://www.kmafrica.com/book/export/html/2067

Nherera, C. M. (1994). Vocationalisation of Secondary Education in Zimbabwe: A theoretical and empirical investigation. Ph.D. University of London.

Nleya, F. (2014). Promotion of vocational subjects crucial as pass rates plummet. Accessed February 13 2016. https://www.newsday.co.zw/2014/02/28/promotion-vocational-subjects-crucial-pass-rates-plummet/

Nziramasanga, C. T. (1999). Report of the Presidential Commission of Inquiry into education and training, Harare: Zimbabwe Government.

OECD (Organisation for Economic Co-operation and Development). (2010). Learning for Jobs: Synthesis Report of the OECD reviews of Vocational Education and Training. Accessed April 10 2012.

http://www.mskills.com.au/DownloadManager/downloads/Learning%20for%20jobs%20report.pdf

Oketch, M. O. (2007). To vocationalise or not to vocationalise? Perspectives on current trends and issues in technical and vocational education and training (TVET) in Africa. *International Journal of Educational Development*, 27(2), 220-234.

Pallant, J. (2013). *SPSS Survival Manual: A step by step guide to data analysis using IBM SPSS* 5th ed., Berkshire: McGraw Hill Education.

Patrikakou, E. N. (2008). The Power of Parent Involvement: Evidence, Ideas, and Tools for Student Success. Accessed March 29 2014. http://education.praguesummerschools.org/files/education/patrikakou_2.pdf

Rojewski, J. W. (1997). Effects of economic disadvantaged status and secondary vocational education on adolescent work experience and postsecondary aspirations. *Journal of Vocational Education and Training*, 14 (1).

Sandstrom, K. L., Lively, K. J., Martin, D. D. & Fine, G. A. (2014). *Symbols, selves, and social reality: A symbolic interactionist approach to social psychology and sociology.* 4th ed. New York: Oxford University Press.

Shizha, E. & Kariwo, M. T. (2011). Education and Development in Zimbabwe: A Social, Political and Economic Analysis, Rotterdam: Sense Publishers.

Statista. (2016). The 20 countries with the highest unemployment. Accessed February 17 2016. http://www.statista.com/statistics/264656/countries-with-the-highest-unemployment-rate/

Thompson, M. J. (2013). A functionalist theory of social domination. *Journal of Political Power*, 6(2), 179-199.

Tilak, J. B. G. (2002). Vocational Education and Training in Asia, National Institute of Educational Planning and Administration. New Delhi. Accessed March 17, 2012. http://www.norrag.org/wg/documents/Vocational_technical_educat.doc.

UNESCO (United Nations Educational, Scientific and Cultural Organization). (2015). Country Programming Document ZIMBABWE 2013 – 2015. Accessed February 15 2016. http://unesdoc.unesco.org/images/0022/002270/227055e.pdf.

UNESCO-IBE. (2010). Zimbabwe: World Data on Education, 2010/11. 7th ed. UNESCO. Accessed June 25 2011. http://www.ibe.unesco.org/fileadmin/user_upload/Publications/WDE/2010/pdf-versions/Zimbabwe.pdf .

Wolf, A. (2011). Review of Vocational Education: The Wolf Report. Accessed June 28 2013. https://www.education.gov.uk/publications/eOrderingDownload/The%20Wolf%20Report.pdf.

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Effectiveness of Modern Teaching Methods; Evidence from Digital Learning Model of Modern Teaching Methods

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Abstract: This paper elucidates the efficacy of three selected modern and innovative methods of learning by taking a group of 80 students of economics class at university level. Their opinion regarding three selected modern teaching methods was obtained through a questionnaire and statistical analysis of their opinion was carried out which indicated strong tendency towards mutual practice method as 40 out of 80 students (50%) declared it as very effective method of learning in the practice stage. On the other hand, 30 students (37.5%) opined that controlled practice method is moderately effective and 28 (35%) students opined that team practice method is slightly effective. After this analysis, students were put to practically learn use of econometric software 'E Views' through the same three selected methods. The digital model for their learning process was created using Computer Assisted Qualitative Data Assisted Software (CAQDAS). The statistical analysis of students' opinion and digital analysis of practical learning process indicated that mutual practice is the most effective method of practice. It is because students learn better and fast when they are allowed to use their initiative and judgment. At the end, guidelines for effective teaching have been suggested.

Keywords: *Learning, modern, teaching, methods, students, opinion, statistical, analysis, digital, model*

1. Introduction

Sound learning is highly dependent on method of teaching. Modern teaching methods signify the active role of both teacher and students. Students are no more the passive part of teaching. Now, the traditional role of teacher has been changed to a mentor or guide while students assume active role in learning process. Learning has become interplay of both teacher and students focusing on their dynamism. In the modern teaching methods, students are actively involved in the whole activity of teaching and they learn through understanding and practices. Practice stage of learning is particularly focused in the modern teaching methods as it culminates the learning activity. After the practice stage of leaning, student is supposed to have full grip on the phenomenon being taught. The modern teaching methods being used in the developed world enlist many techniques for the practice stage of learning but in this paper the efficacy of three methods was determined based on the opinion of a group of 80post graduate (M.Phil.) students of School of Economics, Bahauddin Zakariya University. These three methods were controlled practice, mutual practice and team practice methods. The statistical analysis of data was carried out which was validated by digital analysis of the actual learning process by these three methods of practice. In essence, this paper describes three innovative practice methods and gives a clear picture of the efficacy of these methods empirically and digitally.

2. Literature Review

Modern behavioral and educational scientists agree on the point that learning is a systematic process comprising definite stages and action within each stage. Modern educational scientists like Adam has simplified the process and have summarized that there are three stages in learning a phenomenon; building stage, development stage and practice stage (Adam, 2002). Leaning ladder according to modern education theory is shown in Figure 1. The same model was clarified by Birdsall his works as he explained that theoretical teaching is only done in the building stage which is the stage with least time. The understanding of phenomenon is developed in the development stage, whereas learning is perfected in the practice stage (Birdsall, 2005). Similarly Broadhead has emphasized that the involvement and engagement of teacher should ideally reduce gradually from building to practice stage (Broadhead, 2010). Corts has explained that practice stage is the most important stage as it culminates the learning process. Therefore, practice stage of learning is being focused extensively by educationists across the globe (Corts, 2000). A modern educationist like Fabian has emphasized the use of initiative and judgment by students during practice stage of learning

(Fabian, 2009). But, mostly it is not so in the traditional methods of teaching being adopted in the under developed and developing countries. In these countries, teacher is still the active part of learning even in practice stage which is contrary to the modern approach of teaching. Ives has explained that in modern teaching methods, learning is through active participation of students while teacher acts as a mentor or guide (Ives, 2001). For the practice stage of learning, three methods are being extensively in the developed world; controlled practice method, mutual practice method and the team practice method as shown in Figure 2.

Figure 1: Leaning ladder according to modern education theory

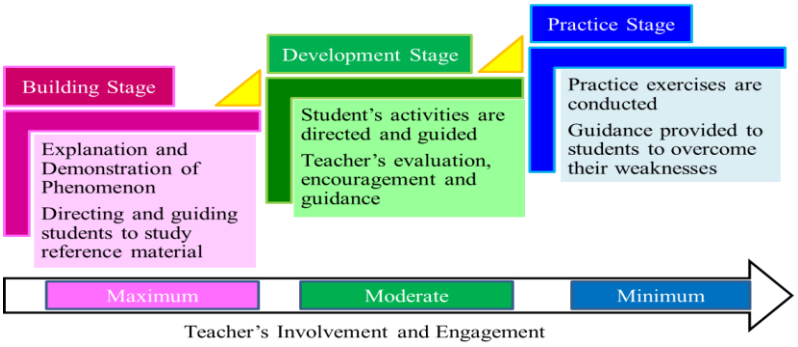
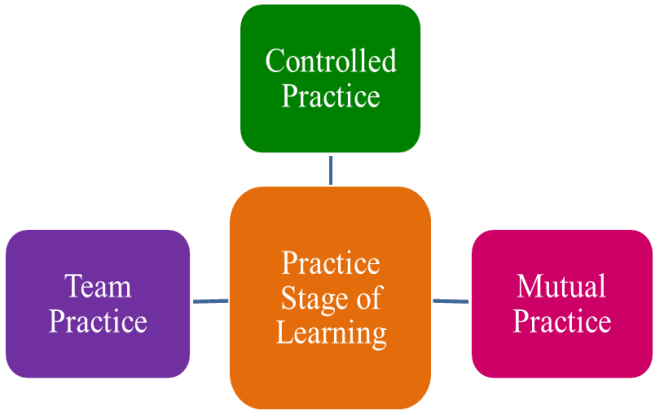


Figure 2: Three modern methods for learning in the practice stage



In controlled practice method, students work individually or collectively under the supervision of a teacher. As per Jonassen teacher is the active part in controlled practice approach (Jonassen, 2000). Jones has identified that in controlled practice method students are not allowed to initiate their actions and use their judgment beyond certain limits. Students work in accordance with guidance and direction given by teacher. They work with the teacher step by step and learn the phenomenon under supervision of the teacher (Jones, 1999).In controlled practice method, practical activity is conducted entirely under the supervision of a teacher and students remain passive as they are allowed to use pre-determined steps to go through the practice stage. Mutual Learning Method is being used extensively in the developed world. In this method, a phenomenon is taught and then students are allowed for supervising each other's work under the limited guidance of the teacher. As explained by Lin, the students alternatively act as coach and pupil (Lin, 2002). In this method students think as well as do. As explained by Siraj, it stimulates interest and builds up a sense of responsibility and spirit of cooperation. In this method of learning, teacher is relatively passive and students are active (Siraj, 2008). Sylva has indicated that in this method of practice students are allowed to initiate their actions and use their judgment. Students learn better when they are at their own under the guidance of a teacher with least involvement (Sylva, 2006). In modern context, a teacher should just act as mentor and guide the students, rather controlling them and not allowing them to use their judgment. In Team learning method students are first trained individually and then made part of a team. Teven has elucidated that in this method, they learn how to work with others and in the process learn a phenomenon. Each team is sequentially supervised and guided by teacher. Students use their initiative and judgment after approval of

the teachers (Teven, 1997). As explained by Wu, team practice is done in two phases, the theoretical phase and the practical phase (Wu, 1987). Wood has elucidated that in theoretical phase, the members of the team, students learn the phenomenon theoretically. In practical phase, the whole team masters the phenomenon collectively under a practical scenario. Teacher remains active in both the phases (Wood, 2005).

Key Contributions of this Study: Many researchers have worked on the efficacy of modern teaching methods, however, empirical evidence based on student's opinion, digital analysis and realistic learning index is not available in literature. Therefore, this study has contributed manifold to the subject. Key contributions are listed below.

- A factual study on the students under realistic environment.
- Digital analysis of student's opinion with the help of computer assisted qualitative data analysis software (CAQDAS). The digital learning curves and related equations were really revealing and meaningful. Use of digital software in analysis of primary data is a new paradigm introduced by this paper.
- Calculation of realistic learning indexes (LIs) for students 'learning using Newton-Leibniz integration process.

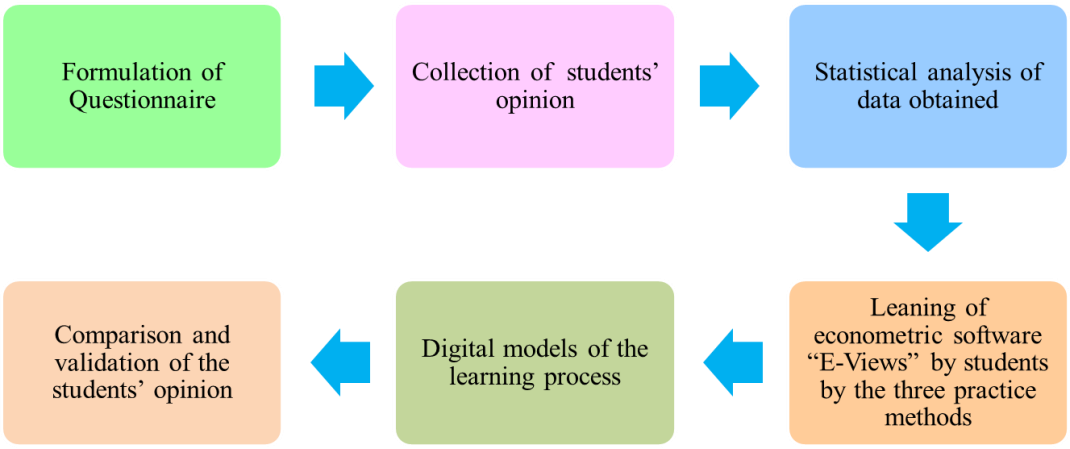
3. Methodology

It was not a simple task to determine the best method for efficient learning in practice stage of learning as different methods may suit different environments. Educationists have given divergent verdicts about the suitability of various practice methods. To accomplish this task, a thorough research methodology was used which comprised following steps.

- ***Step 1***: Literature review of the modern teaching methods was carried out to know conceptual aspects and applicability of these methods. This has already been explained in section 2.
- ***Step 2***: Students' opinion was gathered though a simple questionnaire which was distributed into 80 students. Each student was required to answer the four simple questions about suitability of each method.
- ***Step 3***: Statistical analysis of the primary data obtained from students was done to determine the best method for practice stage of learning.
- ***Step 4***: Validation of the best practice method by digital modeling of learning process using computer assisted qualitative data analysis software (CAQDAS).
- ***Step 5***: Based on experience and discussion with experts, guidelines have been deduced for successful teaching.

A simple random sample of 80 postgraduate (M.Phil.) students from School of Economics, Bahauddin Zakariya University was selected as respondents regardless of gender, caste and creed. The sample configuration was kept mixed. It included students from all categories. The mixed representation in the sample catered for bias and error in the sampling. 35 out of 80 students (43.75%) were females. Average age of the students was 20 years. An interactive and easy to follow questionnaire was designed to gather the opinion of these 80 students about best practice method. Each student was required to answer four simple questions about each technique, whether that technique is slightly effective, moderately effective, very effective or not effective at all. They Students were given full liberty to answer as per their own assessment. The data obtained through questionnaire was statistically analyzed and results were obtained. To validate the results, students were given the assignment of learning econometric software "E-Views" with different practice methods. Digital models for each method were created with computer assisted qualitative data analysis software (CAQDAS). The results from students' opinion and digital models were compared and conclusions were drawn. When this process was completed, students were found much learned, and their opinion was validated empirically and digitally. The complete scheme of data collection and anlysis is elucidated in Figure 3.

Figure 3: Scheme of data collection and analysis



4. Results

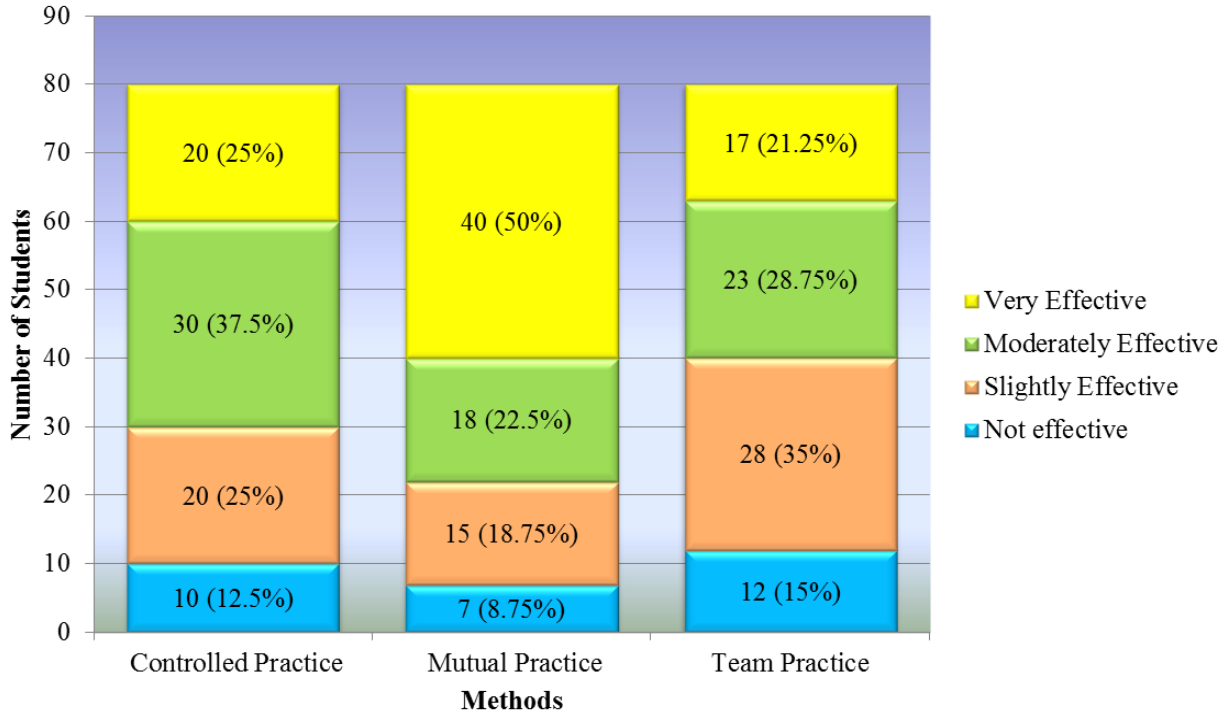
Statistical Analysis of Data: The feedback was obtained from 80 students through questionnaire as shown in Table 1. Students expressed their opinion about different methods openly as per their as own judgment. The data obtained along with descriptive statistics is shown in Table 1. The statistical analysis reflects a very interesting scenario of the student's opinion. Few statistical conclusions from the data shown in Table 1 are as under.

- The standard deviation value for mutual practice was high (12.50), followed by team practice (7.54) and then controlled practice (7.50). Statistically it means that for mutual practice technique, the change in opinion occurred after every 12th student, whereas in case of controlled and team practice techniques, every 7th or 8th student changed his or her opinion.
- Data set of mutual practice had positive skewness which meant that its data contained few small values. This again proved that students are satisfied with the mutual practice. On the other hand, controlled and team practice methods had negative skewness, which indicated that its data contained few high values. It reflected that students were not satisfied with the controlled practice and team practice.
- Data set for mutual practice had positive kurtosis value, indicating that curve represented by data set was steeper than normal distribution curve and most of the observations were clustered near average and fewer on extremes. On the other hand, data set for controlled and team practice had negative kurtosis value indicating a flatter curve than normal distribution curve. In other words, fewer observations clustered near average and more observations populated on extremes.

Table 1: Summary of the data obtained through questionnaire

Students Response	Methods		
	Number of Students for Controlled Practice	Number of Students for Mutual Practice	Number of Students for Team Practice
Not effective	10	7	12
Slightly Effective	20	15	28
Moderately Effective	30	18	23
Very Effective	20	40	17
Descriptive Statistics			
Average	20	20	20
Standard Deviation	7.5	12.5	7.54
Kurtosis	-3.9	0.93	-3.64
Skewness	-0.37	0.56	-0.31

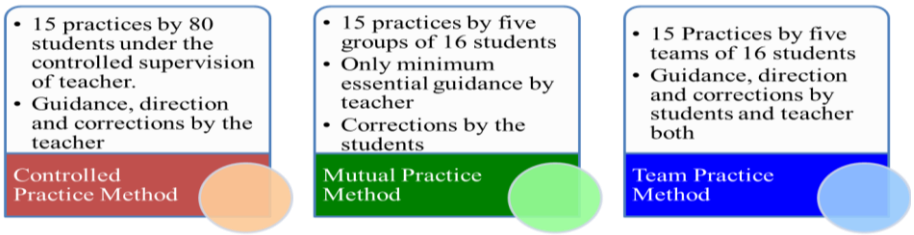
Figure 4: Graphical representation of the data



The graphical representation of data in Figure 4 indicated strong tendency towards mutual practice method as 40 out of 80 students (50%) declared it as very effective method of learning in the practice stage. On the other hand, 30 students (37.5%) opined that controlled practice method is moderately effective and 28 (35%) students opined that team practice method is slightly effective. This showed that students like initiative and use of judgment which is optimally available in mutual practice method.

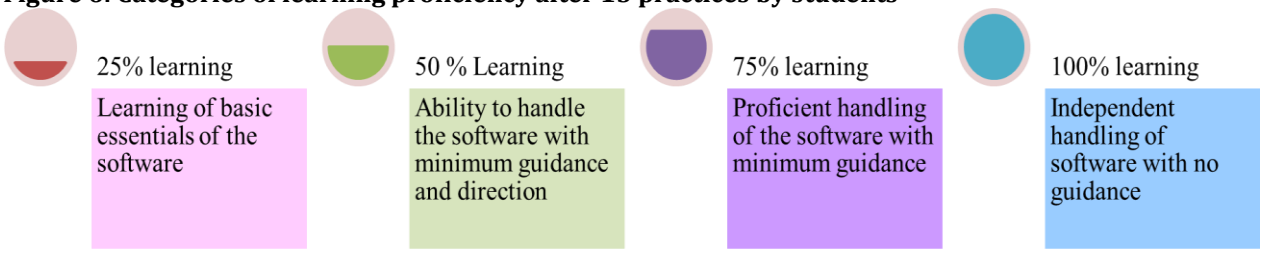
Digital Modeling of Learning Process: After determining the best method based on students' opinion, students 'opinion was validated by assigning them to learn Econometric Software "E-Views" by the three practice methods. Controlled practice was carried out by complete 80 students under direct supervision of the teacher. While for mutual and team practice methods, students were divided into 5 groups of 16 students each randomly with mixed representation. Each group was allowed 15 practices to learn the handling of software. The methodology adopted is shown in Figure 5.

Figure 5: Methodology for validation of students' opinion



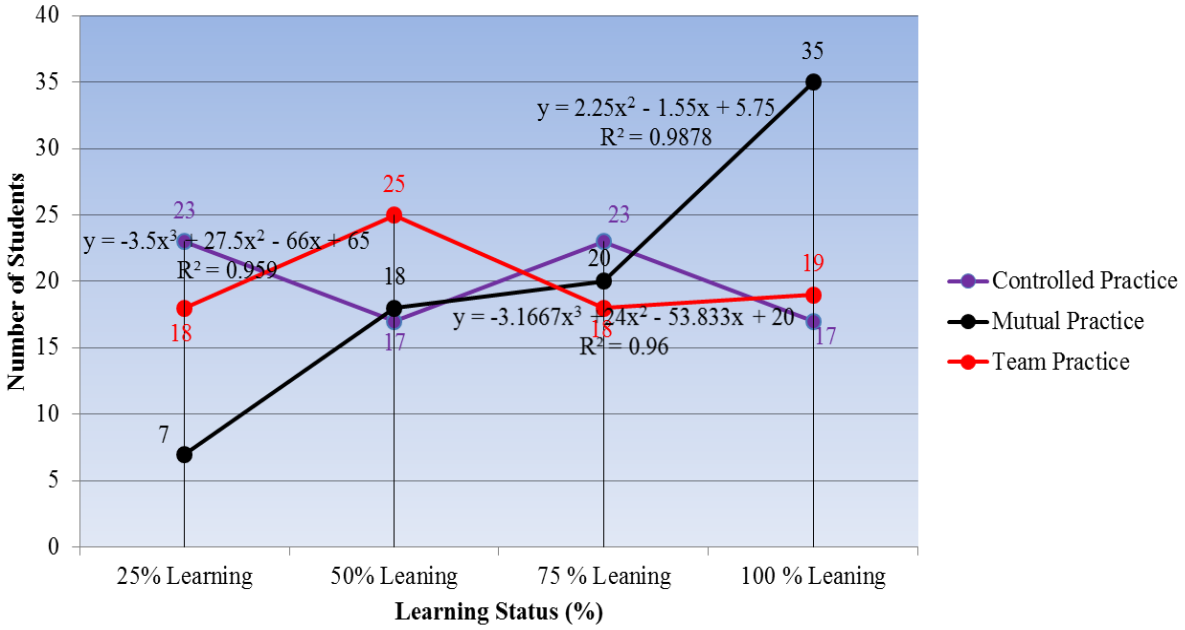
During the practice stage, students were observed closely and their learning proficiency and improvement after each practice was carefully noted. They were mentored in the mutual and team practice methods while they were taught and demonstrated in the controlled practice method. Thus, a very definite relationship between number of practices by students and percentage skill development was obtained for all the three methods. After completion of 15 practices by students, they were segregated into four categories as per their learning proficiency i.e. 25%, 50%, 75% and 100% learning proficiency. The desired proficiency of each category is shown in Figure 6.

Figure 6: Categories of learning proficiency after 15 practices by students



The data was shifted to computer assisted qualitative data analysis software (CAQDAS) and digital model of the learning process by three methods were developed which is shown in Figure 7. CAQDAS is versatile software and is being used by social scientists around the globe for analysis of qualitative data.

Figure 7: Digital model of learning by three practice methods



The digital model of the three practice methods revealed interesting results. The maximum number of students with 25% learning was 23 (28.75% of total) for controlled practice method. The maximum number of students with 50% learning was 25 (31.25% of total) for team practice. The maximum number of students with 75% learning was 23 (28.75% of total) for controlled practice. The maximum number of students with 100% learning was 35 (43.75% of total) for mutual practice method. The variation between the three methods was less at the 75% learning stage. The digital model of learning also provides representative equations and the value of coefficient of determination, R^2 which is indication of the goodness of fit. The coefficient of determination value for mutual practice method is the highest (0.9878) which means that the curve for mutual practice method represents the actual situation closely. To validate the relative standing of the three practice methods, the relative learning index (LI) were found for all the three methods. For this purpose, the representative equations were solved with Newton – Leibniz integration method. Representative equations for the three methods are given as equations (1), (2) and (3).

$$\text{Learning Index of Controlled Practice Method, } LI_{cp} = \int_{n=1}^{n=4} (-3.5x^3 + 27.5\,x^2 - 66x + 65)dx \ldots\ldots\ldots (1)$$

Where 'n' are categories of learning, which were four in this case i.e. 25%, 50%, 75% and 100%.

$$\text{Learning Index of Mutual Practice Method, LI}_{mp} = \int_{n=1}^{n=4} (\ 2.25\ x^2 - 1.55x + \ 5.75)dx \ldots\ldots\ldots (2)$$

$$\text{Learning Index of Controlled Practice Method, LI}_{tp} = \int_{n=1}^{n=4} (3.1667x^3 - 24\ x^2 + 53.833x - 15)dx \ldots\ldots\ldots (3)$$

Solving equation (2) we get

$$\text{Learning Index of Mutual Practice Method, LI}_{mp} = \lim_{1\to 4}\left[\frac{2.25x^3}{3} - \frac{1.55x^2}{2} + 5.75x + C\right]$$

Where "C" is a constant to account for errors in data and variables. By putting the limits in equation we obtained the quantified value of rating for the losses in north zone.

Learning Index of Mutual Practice Method, LI_{mp}

$$= \left[\frac{2.25(4)^3}{3} - \frac{1.55(4)^2}{2} + 5.75(4) + C\right] - \left[\frac{2.25(1)^3}{3} - \frac{1.55(1)^2}{2} + 5.75(1) + C\right]$$

$$\text{Learning Index of Mutual Practice Method, LI}_{mp} = [48 - 12.4 + 23 + C] - [0.75 - 0.775 + 5.75 + C]$$

$$\text{Learning Index of Mutual Practice Method, LI}_{mp} = [58.60 + C] - [5.725 + C]$$

$$\text{Learning Index of Mutual Practice Method, LI}_{mp} = [58.60 + C - 5.725 - C]$$

$$\text{Learning Index of Mutual Practice Method, LI}_{mp} = 52.875$$

Similarly, equations (1) and (3) were solved and the values obtained are shown in Table 2. These values of learning indexes validated student's opinion about the efficacy of different practice methods.

Table 2: Values of learning indexes obtained from Newton-Leibniz process

Practice Methods	Learning Categories	Representative Equation	Trend	R^2	Numerical Value of Indexes
Controlled	4	$\text{LI}_{cp} = \int_{n=1}^{n=4} (-3.5x^3 + 27.5\ x^2 - 66x + 65)dx$	Cubic	0.95	$\text{LI}_{cp} = 30.615$
Mutual	4	$\text{LI}_{mp} = \int_{n=1}^{n=4} (\ 2.25\ x^2 - 1.55x + \ 5.75)dx$	Quadratic	0.98	$\text{LI}_{mp} = 58.875$
Team	4	$\text{LI}_{tp} = \int_{n=1}^{n=4} (3.1667x^3 - 24\ x^2 + 53.833x - 15)dx$	Cubic	0.96	$\text{LI}_{tp} = 40.92$

The highest numerical value of learning index was for mutual practice method, followed by team practice method and then the controlled practice method. The major reasons for effectiveness of mutual practice method are related to ease of learning. Students can make each other understand the phenomenon easily with frankness and informality. The second reason is that mutual practice method provides good opportunities for use of initiative and judgment by the students. Students do not get demotivated by correction of mistakes by another student. The guidance and direction by another student is informal and friendly.

Guidelines for Best Practical Training: Practice stage requires greater imagination and ingenuity by the teacher. The teacher has to institute a systematic process whereby the students are allowed to use their initiative and judgment and at the same time they are guided and mentored. Teacher needs to take care of necessary teaching aids so that the practice can be conducted in a meaningful way. And more importantly, teacher should be sure about the duration of practice depending on mental and physical capacity of students. Also, the number of practices depends on students learning capability. Based on the experience, following steps can help a teacher during the practice stage of learning.

- Give specific instructions and guidance to students. Each student must understand the task. The lack of guidance will result in loss of focus and partial learning and consequently more time will be consumed.
- Set a standard but do not expect the learner to do a job which is still beyond his ability.
- Be realistic and give students practice as per their capability. Do not expect too much from the students initially.
- Don't be rigid in the practice. Let the student use their initiative and judgment. Make them involved with each other and mentor them on requirement basis only.
- Assist indirectly by brief corrections, a word of caution etc. Cut out unnecessary interruptions and involvement.
- If a student cannot realize the weakness in repeated practices, analyze his difficulty. At time, a student with good general intelligence may be clumsy and slow in practice stage. So, do not assume that the student is not learning.
- Reduce the amount of direct involvement. Practice again and again for accuracy.
- Noninvolvement and passiveness of the teacher in mutual practice technique does not mean his absence. Be present on the scene and keep noting the observations.

5. Conclusion

Making students skillful is a skill and a teacher needs to learn this skill. The study was conducted to know about the response of students about different practice methods and to determine the best method as per their opinion. The statistical analysis of students' opinion and digital analysis of practical learning process indicated that mutual practice is the most effective method of practice. It is because students learn better and fast when they are allowed to use their initiative and judgment. Teacher should act as guide and mentor during the practice stage of learning and allow the student to exercise their initiative and judgment.

References

Adams, S. (2002).Study of pedagogical effectiveness in learning, Research Report 365, DfES, London, 23-66.

Birdsall, N. (2005). Towards universal primary education: Investments, incentives, and institutions. *European Journal of Education*, 40, 337-349.

Broadhead, P. (2010). Play and learning in early childhood settings: Theory and practice, Sage, London, 203-209.

Corts, D. P. (2000). Assessing undergraduate satisfaction with an academic department. *College Student Journal*, 34(3), 399-408.

Fabian, H. (2009). Development and learning for young children, Sage, London, 133-169.

Ives, B. (2001).A preliminary assessment of effectiveness in basic skills it training. *MIS Quarterly*, 25(4), 401-426.

Jonassen, D. H. (2000). Towards a design theory of problem solving. *Educational Technology Research & Development*, 48(4), 63-85.

Jones, H. (1999). Research framework and dimensions for evaluating the effectiveness of educational systems on learning outcomes. *Journal of Research on Computing in Education*, 32(1), 17-27.

Lin, I. M. (2002). Innovative teaching - starting from the professional ethics of teachers. *Secondary Education*, 4, 36-49.

Siraj Blatchford, I. (2008). Understanding the relationship between curriculum, pedagogy and progression in learning. *Hong Kong Journal of Early Childhood Educat.*

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The Contribution of Teaching Skill and Learning Skill To The Competence Achievement of Computer Assembly in Public Vocational High School of Malang City

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Abstract: Good competence mastering for the package of Computer and Network Engineering skill can't be separated from maturity of competence achievement in the skill program basic as well. Thus, with good and appropriate basic competence achievement of Computer and Network Engineering skill, competence mastering of Computer and Network Engineering skill will also be great. Computer assembly subject is one subject which included into basic of Computer and Network Engineering skill. Besides that, computer assembly subject supports computer technician work which much needed in the industrial or business world. Less basic competence mastering of Computer and Network Engineering skill is assumed due to many aspects, both internal and external aspect. Internal aspect includes factor which affects from the inside of student such as learning skill. External aspect is factor which affects from student's outside such as teacher teaching skill. This research aims to know how large the contribution of teaching skill and learning skill to the vocational competence achievement for students in the Vocational High School (SMK-Sekolah Menengah Kejuruan) at Computer and Network Engineering skill Malang City. Type and data analysis in this research included into quantitative research. Sample in this research was 199 students in the 10th Grade. Data collection technique for teaching skill and learning skill variable used questionnaire, while competence achievement of computer assembly variable used test and documentation. Data analysis that used in this research was frequency distribution with SPSS program for Windows version 16. Data analysis included description and multiple regression. Research result showed that: (1) contribution of teaching skill to the competence achievement of computer assembly was 5%; (2) contribution of learning skill to the competence achievement of computer assembly was 8%; and (3) contribution of teaching skill and student learning skill simultaneously to the competence achievement for computer assembly was 20.2%. Suggestion that recommended in this research as follow: (1) it needs improvement or development for teachers in order to be able to give question and distribute the question which will encourage student to have critical thinking; (2) it needs guidance for students who have difficulty in arranging their learning schedule and cooperate with parents in order to support their children's effort to be discipline in learning as with the learning schedule.

Keywords: *Teaching skill, learning skill, competence achievement of computer assembly*

1. Introduction

Vocational education is a school which has goal to assist the government in educating human resource that directed to have competence as with the suitable field or scope and expected to decrease unemployment rate, assist in developing nation economy and prosper the people including the executor and individu itself (Sonhadji, 2013). The needs of this welfare becomes main goal from all ASEAN countries in which with its agreement accumulated program of ASEAN economic community, where in this program there will be massive transaction flow both goods and service that will be in and out freely among countries. Vocational High School (SMK-Sekolah Menengah Kejuruan) graduates must be adapted and compete in this ASEAN economic community era. The actual problem showed that Vocational High School graduates recently still lack in getting a job. According to Central Bureau of Statistics BPS (2015, p.5) Vocational High School graduates mostly unemployed, where in 2014 the amount was 813,776 people or 11.24% from total unemployment in Indonesia for 7.24 million people. In 2015, total unemployment increased for 300 thousand people to be 7.45 million people with the largest unemployment dominated by Vocational High School graduates for 9.05%.

According to lecturer in University of North Sumatra, Siddik, through online media of Kompasiana (2013), many unemployment can't be separated from less adsorption in the world of work and low competence of applicant. The world of work which its development as not rapid as the number of job seeker emerges gap which getting larger day by day. The low competence of applicant also makes many graduates from education

institution unable to be accepted and fulfill qualification that needed for the world of business and work. Based on interview with teacher on January, at one of Vocational High School with A-accreditation in Malang City stated that Computer and Network Engineering graduates mostly work in unsuitable skill filed. Astuti (2013) mentioned that Vocational High School graduates don't work in suitable work field caused by the owned competence is unsuitable with industrial world needs. Computer is technology which helping human's work to be more effective and efficient. Vocational High School graduates from Department of Computer and Network Engineering prepared to be professional manpower in middle level which is almost in all sectors need competence manpower for computer and network field as with Table 1.

Table 1: Working Scope of Vocational High School Graduate in the Department of Computer and Network Engineering

No	Industrial/Business World	Working Scope
1.	Computer store and reparation and maintenance place	Computer technician
2	Office/institution; computer rental/cyber cafe	Computer technician Network technician
3	*Internet service provider* (ISP)	Network technician Network administrator level 1 Network administrator level 2 and 3
4	Hotel and banking	Computer technician Network technician Network administrator level 1 Network administrator level 2 and 3

(Source: Prasetyo, 2014)

The reason for research population selection in Public Vocational High School (SMKN-Sekolah Menengah Kejuruan Negeri) 2, 3, 4, and 5 Malang City as follow: Public Vocational High School 2 is Public Vocational High School in Malang City which has been trusted to be Profession Certification Institution (LSP-Lembaga Sertifikasi Profesi), Public Vocational High School 4 is Public Vocational High School in Malang City which superior due to its function as ICT (Information and Communication Technology) Center of Vocational High School in Malang City, then Public Vocational High School 3 and 5 has represented Vocational High School with A-Accreditation which spreads in Malang City area. Hardika (2012, p.1) found that recently, educator teaching skill tends to be passive by presenting PowerPoint which decreases the relationship closeness and intimacy between learner and educator. It shows a gap of educator teaching skill which can result Vocational High School graduates that responsive with the world of work and today's educator teaching skill. Teaching skill must be owned by educator in order to reach learning goal and outcome and also to make effective learning process (Helmiati, 2013). Learning process in technology field, which less in meta-cognition ability development shows problem in the learning elements. Hardika (2012,p.1) found that recently, educator teaching skill tends to be passive by presenting PowerPoint which decreases the relationship closeness and intimacy between learner and educator. It shows a gap of educator teaching skill which can result Vocational High School graduates that responsive with the world of work and today's educator teaching skill. Teaching skill must be owned by educator in order to reach learning goal and outcome and also to make effective learning process (Helmiati, 2013).

Besides teacher teaching skill, there is also student learning skill factor which is lacking, thus it results in less optimal learning process. Research result identified problem in learning process as follow: (1) learning strategy that implemented by educator was unable to give clear understanding to the learner; (2) learners were less skilled in learning and only learned what been given by teacher without learning enrichment; (3) learners only did tasks that given by educator without supported by appropriate sources and tended to copy and plagiarize their friend's work (Hardika, 2012, p.2). Kerka (2007) identified that learning skill is learning strategy which can assist learners to organize, process, and use information effectively. Moreover, Kerka also explained that learners not only needed what they have been learned but also how to learn it. Kerka (2007) identified that learning skill components consist of four points as follow: (1) preparation to learn or study; (2)

obtaining, processing, and saving information; (3) applying what been learned; and (4) monitoring and evaluating strategy that used in the learning process. Folastri's research (2013, p.170) showed that student learning skill with high achievement is in good category. It is in line with Slamet's statement (2010, p.76) that efficient learning can be reached if it uses correct learning strategy to reach the result as maximum as possible.

Good competence mastering for the package of Computer and Network Engineering skill can't be separated from maturity of competence achievement in the skill program basic as well. Thus, with good and appropriate basic competence achievement of Computer and Network Engineering skill, competence mastering of Computer and Network Engineering skill will also be great. Computer assembly subject is one subject which included into basic of Computer and Network Engineering skill. Besides that, computer assembly subject supports computer technician work which much needed in the industrial or business world. Less basic competence mastering of Computer and Network Engineering skill is assumed due to many aspects, both internal and external aspect. Internal aspect includes factor which affects from the inside of student such as learning skill. External aspect is factor which affects from student's outside such as teacher teaching skill. Remembering the importance of this competence mastering of computer assembly, then the researcher conducted a research about the contribution of teacher teaching skill, learning skill to the competence achievement of computer assembly for Vocational High School students at Computer and Network Engineering skill in Malang City.

2. Literature Review

Teaching skill: teaching skill must be owned by educator or teacher to reach learning goal and outcome and also to make effective learning process (Helmiati, 2013, p.18). Djamarah (2010, p.99) explained that teaching skill absolutely must be owned by teacher. According to Usman (2010:12), teaching skill is pattern of behavior set that presented by teacher in learning activity. According to Sutopo (2015) teaching skill and strategy divided into three components: (1) planning; (2) learning implementation which consists of material delivery, technology utilization, group and individu distribution, learning reinforcement or enrichment, learning effectiveness, and multi-strategy utilization; and (3) assessment, which is strategy to assess the learning.

Learning skill: Kerka (2007) defined that learning skill is learning strategy which can assist learners to organize, process, and use information effectively. Moreover, Kerka also explained that learners not only needed what they have been learned but also how to learn it. Kerka (2007) defined that learning skill components consist of four points as follow: (1) preparation to learn or study; (2) obtaining, processing, and saving information; (3) applying what been learned; and (4) monitoring and evaluating strategy that used in the learning process. Silberman (2014, p.194) explained that cooperate learning can be improved by independent learning activity. The advantage from students that learn with their own way as follow: (1) developing self-focusing and thinking ability; and (2) giving student an opportunity to have personal responsibility for what they are learning. Silberman (2014, p.195-208) mentioned strategy in independent learning activity as follow: (1) through visual imagination, students can create their own idea; (2) writing activity, students can think about their own experience; (3) mind mapping, students can identify clearly and creatively about what they've been learned or what they are planning; (4) learning by doing, students have opportunity to experience topic implementation and material content that they learned or discussed in the class for the real life situation; (5) learning journal, students can be prompted to realize what they experience and express it in writing. Syafni (2013) concluded that learning skill is important to be owned by students in order to master and understand learning material in the school, thus it can result satisfying achievement.

Competence Achievement of Computer Assembly: Bektiarso (2015, p.31) explained that competence definition is ability or skill that owned by student in the form of knowledge, understanding, skill, and attitude that can be applied actually in daily living. Competence that must be achieved by Vocational High School students called as vocational competence. Moreover, Bektiarso (2015, p.33) defined that vocational competence is one component from individual competence and including knowledge, understanding, skill, task, attitude, and role. Sudjimat (2014) explained that competence must describe holistically about attitude dominant, skill, and knowledge. Further, he defined competence as one formulation that states integrated

demonstration of skill group, which is cognitive skill and technical skill, also the observed and measured attitude to do certain task in certain level.

3. Methodology

This research design used survey research method in analytical survey category with quantitative approach.

Population and Sample: Population in this research was students in the 10th Grade at Computer and Network Engineering skill academic year 2015/2016 in Public Vocational High School (SMK Negeri) of Malang City which have same criteria, have department of computer and network skill with A-accreditation.

Research instrument: Instrument that used in this research was questionnaire, documentation, and test. Questionnaire was used to express teaching skill (24 items), learning skill (30 items), while to see competence achievement of computer assembly it used test instrument (25 questions) and documentation.

Data Collection Technique: Data was collected through questionnaire, test, and documentation to all samples which had been determined in Public Vocational High School 2, 3, 4, and 5 of Malang City, which were 10th Grade Department of Computer and Network Engineering. Questionnaire was used to collect data of teaching skill and learning skill. Test was used to collect data of competence achievement of computer assembly and supported by score documentation that obtained from productive teacher of computer assembly subject.

Analysis Data: Data analysis technique that used in this research was description and multiple regression.

4. Results and Discussion

Table 2: Validity and Reliability

Variable	Validity	Reliability
Teaching skill	0.000 to 0.032	0.746
Learning skill	0,000 to 0.042	0.753
Competence Achievement of Computer Assembly	0.000 to 0.031	0.727

Based on table above, it shows that instrument of teaching skill, learning skill, and competence achievement of computer assembly variable had been valid and reliable.

Table 3 : Frequency Distribution of Teaching Skill Variable

No	Category	Interval	Frequency	Frequency (%)
1	Very high	76 - 96	54	26.60%
2	High	57 - 75	126	64.04%
3	Medium	38 - 56	17	8.37 %
4	Low	19 - 37	2	0.99 %
5	Very Low	0 - 18	0	0
Sum			199	100%

Based on table above, it shows that teaching skill for teachers in Public Vocational High School Department of Computer and Network Engineering Malang City included into high category.

Table 4: Frequency Distribution of Learning Skill Variable

No	Category	Interval	Frequency	Frequency(%)
1	Very high	100 – 120	20	10.05%
2	High	75 – 99	133	66.83%
3	Medium	50 – 74	44	22.11%
4	Low	25 – 49	2	1.01%
5	Very low	0 - 24	0	0
Sum			199	100 %

Based on table above, it shows that learning skill for students in Public Vocational High School Department of Computer and Network Engineering Malang City included into high category.

Table 5: Frequency Distribution of Competence Achievement of Computer Assembly Variable

No	Category	Interval	Frequency	Frequency(%)
1	Very high	81 - 100	99	49.75%
2	High	71 - 80	62	31.15%
3	Medium	61 - 70	36	18.09%
4	Low	51 - 60	2	1.01%
5	Very Low	0 - 50	0	0%
Sum			199	100%

Based on table above, it shows that competence achievement of computer assembly for students in Public Vocational High School Department of Computer and Network Engineering Malang City included into very high category. Data in this research seen based on mean, median, standard deviation, minimum, maximum, and sum score. Complete score distribution displayed in the Table 6.

Table 6: Data Distribution

		Teaching Skill	Learning Skill	Competence Achievement of Computer Assembly
N	Valid	199	199	199
Mean		69.6131	83.5477	79.5528
Median		70	83	80
Std. Deviation		10.73492	12.78519	7.39615
Minimum		34.00	38	56
Maximum		96.00	120	95
Sum		13853	16626	15831

Based on the table above, it can be noted that the average variable of teaching skills 69.61, variables of learning skills 83.55 and the variable achievement of competence computer Assembly 79.55.

Table 7: Summary of The Results of The Test of Normality

No.	Variable	P_{Sig}	Conclusion	Interpretation
1.	Teaching Skill	0,682	P sig > 0,05	Normal
2.	Learning Skill	0,722	P sig > 0,05	Normal
3.	Competence Achievement of Computer Assembly	0,065	P sig > 0,05	Normal

Based on the table above was obtained by that variable teaching skills, learning skills and competency achievement Assembly computer has (0.05 < Psig) so that it can be concluded that the data variables teaching skills, learning skills and competencies, achievement of computer Assembly are normal.

Table 8 : Summary of The Results of The Test of Linearity

No.	Variable	P_{Sig}	Conclusion	Interpretation
1.	X_1 – Z	0,000	P <0,05	Linear
2.	X_2 – Z	0,000	P < 0,05	Linear

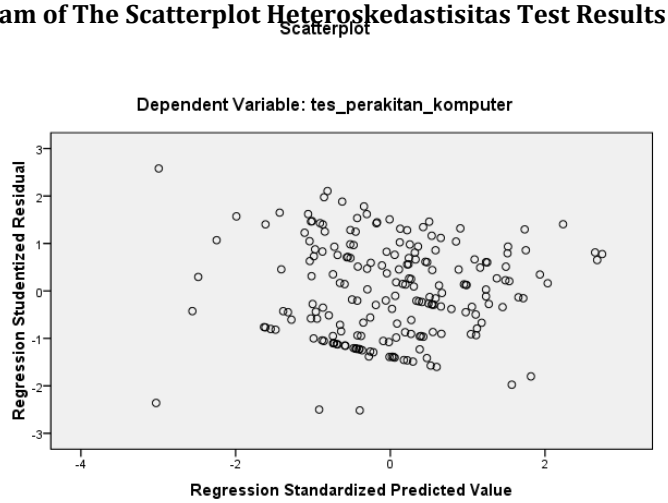
Based on the table above are obtained (Psig < 0.05) so it can be inferred that the variables in the linear research.

Table 9: Summary of The Results of The Test of Multicollinearity

No	Variable	Collinearity Statistic	
		Tolerance	VIF
1.	Teaching skill	.632	1.581
2.	Learning skill	.479	2.088

Based on the table above was obtained on the tolerance values > 0.1 and VIF <10 so inconclusive that multicollinearity does not occur.

Picture 1: Diagram of The Scatterplot Heteroskedastisitas Test Results



Based on picture above, scatterplot of visible dots randomly spread, do not form a specific pattern, and spread both above or below the 0 on the Y axis. This means not going heteroskedastisitas. Figure 1 is a picture diagram of the scatterplot heteroskedastisitas test results.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	55.320	3.479		15.900	.000
	Teaching Skill	.148	.054	.215	2.727	.007
	Learning Skill	.166	.046	.288	3.647	.000

a. Dependent Variable: competence achievement of computer assembly

The Test of Hypothesis: Hypothesis tests are done to find out how big the influence of free variables which resulted in changes to the bound variables, either partially or simultaneously. Done using the SPSS program help with simple linear regression tests and multiple linear regression test

.

The First Hypothesis: The first hypothesis is there are significant contributions between teaching skills of teachers towards the competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City. This hypothesis aims to find out how big a

contribution teachers teaching skills towards competence achievement of computer assembly for students. Simple linear regression test results for the first hypothesis can be seen in Table 7.

Table 7: The First Hypothesis Test Results Summary

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	55.320	3.479		15.900	.000
	Teaching Skill	.148	.054	.215	2.727	.007

a. Dependent Variable: competence achievement of computer assembly

Table 7 shows the results of a simple linear regression analysis with regression coefficients for variable teaching skills of teachers (X1) towards the attainment of competences the student's computer Assembly (Z) are of positive value 0.215. The regression coefficient of the price stated that the achievement of the competence of the Assembly of computer students will increase, if the teaching skills of teachers improved. The higher the teaching skills of teachers, then the higher achievement of competence the Assembly of computer students. The resulting significance probability value is 0.007 and less than 0.05 ($p < 0.05$) means that the first hypothesis is accepted. The conclusion is there is a significant contribution between the teaching skills of teachers towards the competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City. The magnitude of the contribution of the teaching skills of teachers towards the competence achievement of computer assemblywas determination of the coefficient (r2) multiplied by 100%, i.e 0.046 x 100% = 4.6%. The conclusion is that the teaching skills of teachers of 4.6% contributing towards the competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang Cityand while 95.38% is affected by other variables that cannot be revealed in research.

The Second Hypothesis: The second hypothesis is there is a significant contribution learning skills towards competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City**.**This hypothesis aims to find out how big a contribution learning skills towards competence achievement of computer assembly for students. Simple linear regression test results for the first hypothesis can be seen in Table 8.

Table 8: The SummaryTest Results of Second Hypothesis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	55.320	3.479		15.900	.000
	Learning Skill	.166	.046	.288	3.647	.000

a. Dependent Variable: competence achievement of computer assembly

Table 8 shows the results of a simple linear regression analysis with regression coefficients for variable intelligence learning skills (X2) towards the competence achievement of computer assembly (Z) are of positive value 0.288. The regression coefficient of the price stated that the achievement of the competence of the Assembly of computers will increase, if the intelligence of the students learning skills improved. The higher the learning skills of the students, then the higher achievement of competence the Assembly of computer students. The resulting significance probability value is 0.000 and less than 0.05 ($p < 0.05$) means that the second hypothesis is accepted. The conclusion is there is a significant contribution towards the achievement of the learning skills among the competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City. The magnitude of the

contributions towards the achievement of the learning competence skills assembling computer students are from the coefficient of determination (r^2) multiplied by 100%, i.e.0.083 x 100% = 8.3%. The conclusion is that learning skills contribute of 8.3% towards the competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City, and whereas 91.7% influenced by other variables that cannot be revealed in research.

The Third Hypothesis: The third hypothesis is there are significant contributions between teacher's teaching skills and learning skills towards the competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City. This hypothesis aims to know how big is the influence of the teaching skills of teachers and learning skills of the students towards competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Multiple linear regression test results can be seen in Table 9.

Table 9: The Third Hypothesis Test Results Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.449[a]	.202	.194	6.64048

a. Predictors: (Constant), Learning Skill, Teaching Skill
b. Dependent Variable: competence achievement of computer assembly

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2188.398	2	1094.199	24.814	.000[a]
	Residual	8642.798	196	44.096		
	Total	10831.196	198			

a. Predictors: (Constant), Learning Skill, Teaching Skill

b. Dependent Variable: competence achievement of computer assembly

Table 9 above shows multiple linear regression test results between variables X1 and X2 against Z simultaneously. The magnitude of the coefficients of the regression simultaneously is 0.202. Its meaning is that the teaching skills of teachers and learning skills students have a strong influence towards competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City. The larger the value of X1 and X2, then the greater the value of Y. also Value the resulting significance probability is 0.000 less than 0.05 and so it can be deduced that the third hypothesis is accepted. The conclusion is there is a significant contribution between the teaching skills of teachers and learning skills of students towards competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City. The magnitude of the contribution of the teaching skills of teachers and learning skills of the students towards the attainment of competences the student computer Assembly was determination of the coefficient (r2) multiplied by 100%, i.e.0.202 x 100% = 20.2%. The conclusion is that the simultaneous teaching skills of teachers and learning skills of the students gave a contribution of 20.2% towards competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City, and whereas 79.8% influenced by other variables that cannot be revealed in research.

Significant contribution of teacher teaching skill to the competence achievement of computer assembly for students in Vocational High School Department of Computer and Network Engineering Malang City: The result of correlation analysis between teacher teaching skill to the competence achievement of computer assembly for students in Public Vocational High School Department of Computer and Network Engineering Malang City was strong correlation. It showed that there was partial significant contribution of teaching skill to the competence achievement of computer assembly for students in Public Vocational High School Department of Computer and Network Engineering Malang City. Research result of

Adediwura and Tayo (2007:167) showed that there was significant relationship between teaching skill and student learning achievement. Teaching skill that significantly correlated with academic achievement was related to the sincere expression, constructive criticism, and question. Research result of Etuk, Afangideh, and Uya (2013:203) showed that teacher characteristic which could improve student learning achievement as follow: (1) having knowledge about subject material; (2) able to communicate well; (3) able to implement effective teaching strategy; and (4) able to manage the class.

Significant contribution of learning skill to the competence achievement of computer assembly in Vocational High School Department of Computer and Network Engineering Malang City: The result of correlation analysis between student learning skill to the competence achievement of computer assembly in Public Vocational High School Department of Computer and Network Engineering Malang City was strong correlation. It showed that there was partial significant contribution of learning skill to the competence achievement of computer assembly for students in Public Vocational High School Department of Computer and Network Engineering Malang City. Research result of Riyadi (2012) showed that meta-cognition learning strategy could improve learner's competence. And then research result of Syafni (2013) concluded that learning skill was important for students in order to master and understand subject material in the school, thus they could reach satisfying achievement. Next, according to the research result of Hasnor, Ahmad, and Nordin (2013:178) showed that there was relationship between learning approach and academic achievement. This research result showed that: (1) contribution of teaching skill to the competence achievement of computer assembly was 5 %; (2) contribution of learning skill to the competence achievement of computer assembly was 8 %; and (3) contribution of teaching skill and student learning skill simultaneously to the competence achievement for computer assembly was 20.2%.

5. Conclusion and Suggestions

- There was significant contribution between teaching skill to the competence achievement of computer assembly for students in Public Vocational High School Department of Computer and Network Engineering Malang City
- There was significant contribution between learning skill to the competence achievement of computer assembly for students in Public Vocational High School Department of Computer and Network Engineering Malang City

Suggestion: Based on conclusion in this research which expresses the result of learning process for computer assembly subject in Public Vocational High School Malang City, it is suggested as follow:

- it needs improvement or development for teachers in order to be able to give question and distribute the question which will encourage student to have critical thinking in the form of lesson study.
- it needs guidance for students who have difficulty in arranging their learning schedule and cooperate with parents in order to support their children's effort to be discipline in learning as with the learning schedule.

References

Adediwura, A. & Tayo, B. (2007). Perception of teachers' knowledge, attitude and teaching skills as predictor of academic performance in Nigerian secondary schools. *Educational Research and Review*, 2(7),165-171.

Astuti, S. (2013). Faktor-faktor yang mempengaruhi kemandirian untuk berwirausaha pada siswa SMK. *Jurnal Pendidikan Vokasi*, 3(3), 334-346.

Badan Pusat Stastistika. (2015). Berita Resmi Statistik Keaadaan Ketenagaan Februari 2015. No. 47/05/Th. XVIII, 5 Mei 2015.

Bektiarso, S. (2015). Strategi Pembelajaran.Yogyakarta:LaksBang Pressindo.

Djamarah, S. (2010). Guru dan Anak Didik dalam Interaksi Edukatif. Jakarta: PT Rineka Cipta.

Etuk, E., Afangideh. M. E. & Uya, A.O. (2013). Students' Perception of Teachers' Characteristics and Their Attitude towards Mathematics in Oron Education Zone, Nigeria. *International Education Studies*, 6(2), 197- 204.

Folastri, S. (2013). Perbedaan Keterampilan Belajar Siswa Berprestasi Tinggi dan Berprestasi Rendah Serta Implikasinya dalam Bimbingan dan Konseling. *KonselorJurnal Ilmiah Konseling*, 2(1), 167-173.

Hardika. (2012). Pembelajaran Transformatif Berbasis Learning How To Learn. Malang: UMM Press.

Hasnor, H. N., Ahmad, Z. & Nordin, N. (2013). The Relationship Between Learning Approaches And Academic Achievement Among Intec Students, Uitm Shah Alam. *Procedia - Social and Behavioral Sciences*, 90, 178 – 186.

Helmiati. (2013). Micro Teaching melatih Keterampilan Dasar Mengajar. Yogyakarta: Aswaja Pressindo.

Kerka, S. (Eds) . (2007). Study Skills. Columbus: The Ohio State University

Kompasiana Online. (2013). Menyelaraskan Dunia Pendidikan dan Dunia Kerja di Bidang Pertanian. http://kompasiana.com/

Prasetyo, J. (2014). Peluang TKJ & Multimedia di Dunia Usaha/Industri. (Online),(http://www.slideshare.net/jokoprasetyo/peluang-tkj-multimedia-di-dunia-usahaindustri) diakses 15 Desember 2015.

Riyadi, I. (2012). Strategi Belajar Metakognisi untuk Meningkatkan Kompetensi Siswa pada Mata Pelajaran IPS. *Magistra*, 24(82), 28-36.

Silberman, M. L. (2014). Active Learning 101 Cara Belajar Siswa Aktif. Bandung: Nuansa Cendekia.

Slameto. (2010). Belajar dan Faktor-faktor yang Mempengaruhinya. Jakarta: Rineka Cipta.

Sonhadji, A. (2013). Manusia, Teknologi, dan Pendidikan menuju peradaban Baru. Malang: Penerbit Universitas Negeri Malang.

Sudjimat, D. (2014). Perencanaan Pembelajaran Kejuruan. Malang: UM Press.

Sutopo. (2015).Pedagogi Vokasi: Pengembangan Metode Pengajaran dan Pembelajaran Pendidikan Kejuruan Untuk Meningkatkan Profesionalisme Guru. Makalah disajikan dalam seminar nasional Pendidikan Vokasi, Fakultas Teknik Universitas Negeri Yogyakarta, Yogyakarta, 5 Februari.

Syafni, E. (2013). Masalah Belajar Siswa dan Penanganannya. Konselor *Jurnal Ilmiah Konseling*, 2(2), 15-19.

Usman, U. (2010). Menjadi Guru Profesional. Bandung: PT Remaja Rodaskarya.

ion, 7(2), 3–13.

Sylva, K. (2006). Assessing quality in the early years, Trentham Books Ltd, 36-76.

Teven, J. J. (1997). The relationship of perceived teacher caring with student learning and teacher evaluation. *Communication Education*, 46(1), 1-9.

Wu, C. S. (1987). Important concept and implementation strategy of creative teaching, Taiwan Education, 614.

Wood, E. (2005). Play, learning and the early childhood curriculum, Paul Chapman, London, 56-72.

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Effect of Dimensions of Service Quality Satisfaction and Customer Loyalty Islamic Bank in the Perspective of Islam in Palopo

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Abstract: This paper aims to analyze the quality of service using five dimensions that is tangible empathy, Reliability, Responsiveness, and Assurance. Where the first *tangible* dimension using attribute consists of the location, appearance of staff, office facilities are *up-to-date,* the cleanliness of the office, and exterior offices. The second dimension *empathy* that use attributes greet customers by name, an apology for the error service, understand customer needs, personal attention, and operational time. The dimensions of the third namely *reliability* that use service attributes as promised, timeliness of services, verification requests, and sincerity helped. The fourth dimension is the *responsiveness* attributes staff's willingness to help, the notification time of service, speed of service, readiness to serve. Then dimension the latter is the dimension *of assurance* that use attributes confidence in the ability of staff, courtesy staff, security transactions, and staff in still customer confidence. This research tested using SEM analysis, quality of service significant positive effect directly on customer satisfaction, means the better quality of service perceived by the *customer,* the higher the satisfaction of using services provided by the Islamic Bank in Palopo. Conversely, if the lower the quality of the service perceived by the customer, diminishing also their satisfaction to use the service provided by the Islamic Bank in the City of Palopo . Thus it can be conclusion that states that the quality of service in the perspective of Islam have a significant effect on customer satisfaction Islamic Bank in Palopo acceptable.

Keywords: *Empathy, responsiveness, Reliability, Quality, Satisfaction, Customer*

1. Introduction

Human effort in order to realize the welfare of the people living on this earth is strongly associated with economic activities. In the Islamic view of economic activity in line, recommended and fit is through business activity and investment. Some commands in two explicitly and implicitly in the holy book the Quran. The concept of the two views of life of the human race can be seen through the economic system developed by Islam which has a goal to achieve an economic growth rate of mankind in the long term and in order to maximize the welfare of mankind. The way to the development of Indonesian economy and regional free ASR this time, a change in the business environment very rapidly. Industry banking financial services faced with competitive rivalry, the emergence of a wide range of financial services that is based on economics Islam or conventional becomes a challenge for service providers, one of Islamic banking, even Foreign Affairs who want to open a branch in Indonesia so that competition among bank to seize market share is quite high. Services still are important to remain a priority in the service business. Santoso (2011) stated that the quality of service is a major component as the main products, namely bank loans constitute an offer are no different and bank services are also easily replicated. Quality of service is a form of consumers' assessment of the level of service received *(perceived service),* even the service of a powerful weapon to hook customer. Companies that stir in the field of services, satisfying consumers / customers is the most basic that should not be ignored because customer satisfaction is a strategic aspect in winning the competition and maintain the company's image in the eyes of the public, so that a quality service to customers is important. Bank Sharia should be able to show services that distinctive and far better, and quality compared to conventional banks because of the presence of Islamic banks is hope for some people, especially Muslims because of his belief he is unwilling / do not want anymore to trade in conventional banks. The Bank is a provider of financial products to serve the financial transactions for its customers.

Amid fierce competition with a competitor bank, all employees there Bank Sharia in Palopo, required to follow some training especially regarding services, among other e*xcellent Service, Sales Retail Bank Services, Service with Impact.* Without giving quality of service expected by the customer, then the bank will be abandoned by its customers, who then will directly result in a decrease in the number of its customers. Care is essentially intended to meet the expectations of customers in financial activities. For the bank should actively

provide quality service and Islamic which typically are quite different from services performed by the conventional banks over the years, as expected by Muslims during this time in their financial transactions, and thus the customers mainly Muslim would always loyal against the Islamic bank, because they have felt satisfaction with the services typical / Islamic appropriate expectations. Relating the above description about the urgency of the quality of service for customer loyalty, for Islamic banks in Palopo general observation or early observations of this study, and of the various comments / criticism costumer field it can be concluded that, particularly with regard to quality of service at the bank Sharia in Palopo same or mediocre, and some have provided a rating worse than the conventional banks. Where h al it actually should not happen because of the presence of Islamic banks actually expected to be *"rahmatan lilaalamiin"* mercy to mankind, as a spreader of love, savior / helper of mankind, which is characterized by the hospitality, courtesy and politeness in the face of others, which of course all of this could be a magnet for prospective customers and customer loyalty to Islamic banks, as well as the message of Allah in al-Quran Surah Ali Imran verse 159

2. Literature Review

Quality of Service: Then, too, there are five dimensions of service quality by **Lupiyoadi** (2006: 182), namely: *Tangibles,* or physical evidence that the company's ability to demonstrate its existence to external parties. What is meant here is that the appearance and capabilities of the company's physical infrastructure and state of the surrounding environment is evident and the services provided. *Reliability,* or the reliability of which is the company's ability to give service as promised accurately and reliably. *Responsiveness* or responsiveness is a willingness to help and provide fast and accurate service to customers, with the delivery of clear information. *Assurance* or guarantee and assurance that the knowledge, politeness, and the ability of the company's employees to foster a sense of trust of the customers to the company. Consists of several components, among others, communication, credibility, security, competence and courtesy. *Empathy,* which provide a genuine concern and a private individual or given to customers by striving to understand the customer's wishes. For example, companies need to know the customer's wishes specifics of the physical form of the product or service to the distribution right. According to Oliver cited Hurriyati (2005: 128) reveals the definition of customer loyalty as follows. *Customer loyalty is deafly held commitment to re buy or repertoire a preferred product or service in the future, dispute situational influences and erecting Efforts having the potential to cause switching behavior.* Customer loyalty is a commitment to customers to survive in depth to re-subscribe or re-purchase of products / services Selected consistently in the future, although the influence of the situation and marketing efforts have the potential to cause changes in behavior. From the bottom of the proposed hypothesis: Refer to the description of the conceptual framework mentioned above, it can by hypothesis in this study as follows, among others:

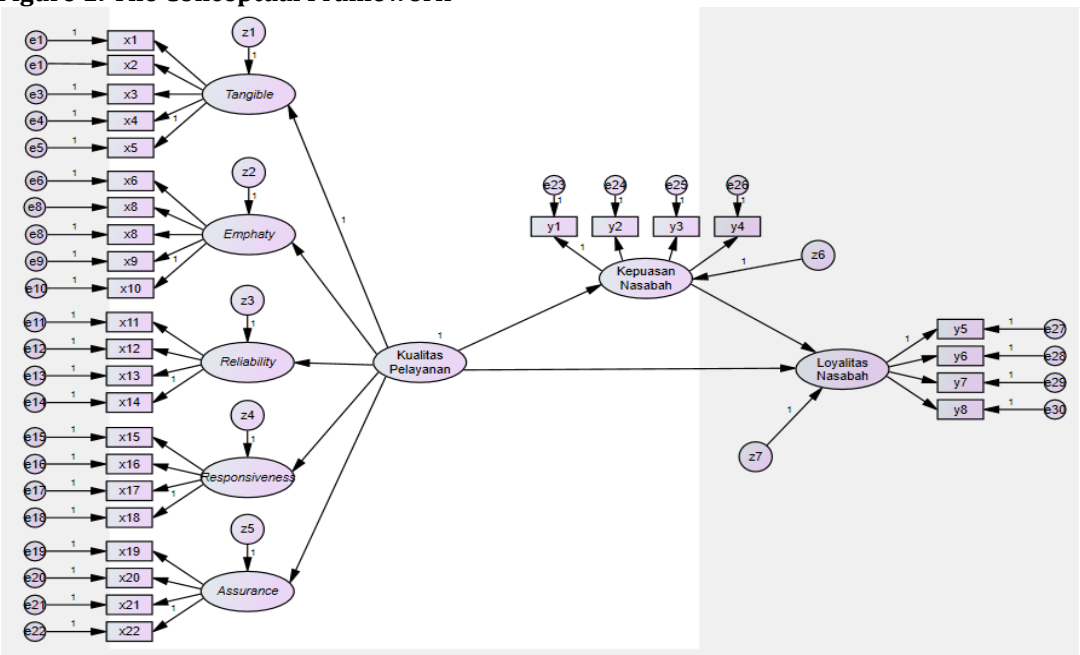
H1: Quality of service in the Islamic perspective a significant effect on customer satisfaction Islamic Bank in Palopo.
H2: Satisfaction customer's significant effect on customer loyalty Islamic Bank in Palopo.
H3: Quality of service in the Islamic perspective and significant positive effect on customer loyalty Islamic Bank in Palopo.

3. Methodology

This study uses primary data to obtain information about all of the variables. Type variable data in this study can be divided into *exogenous variables, intervening,* and *Endogenous.* As for the variable *exogenous* is Dimension Quality of Services (X) consisting variable *Tangibles* (X_1) *Empathy* (X_2) *Reliabilities* (X_3) *Responsiveness* (X_4) and *Assurance* (X_5), then *the intervening* variables (Y1) is the Customer Satisfaction and the variable *endogenous* is Customer Loyalty (Y2). The source of research data pointed out is the collection of primary data through questionnaires to customers / customers and Employee Bank Sharia in Palopo, which contains questions about the variable. Gathering data using questionnaires that the questions cover all, variable in this study was measured by *a Likert scale* with five answer choices that allow respondents to express their feelings appropriate scale data is also conducted by interview, documentation and observation. The population in this study was all clients in Islamic Banking in Palopo, good customer deposits, savings, or credit. Total population in Islamic Banking in Palopo City totaling approximately 5,000 customers. Due to the limitations of time, energy, and the selection of analytical tools in this research not all

population can be used as a sample. Hair et al in Ferdinand (2002: 47) states that the sample size for the corresponding SEM analysis ranged from 100-200. When the sample size is too large, for example more than 400, then the method used to be very sensitive so it is difficult to get a measure *of goodness of fit* is good. Guidelines in determining the sample size used is five to ten times the amount of research indicators (Ferdinand, 2002: 48). Based on this view of the above, then the samples were determined in this study were 150 respondents to the consideration that the sample size is five times the number of existing indicators (5 x 30 = 150 respondents). The sample size is still within the range of sample sizes should be used that is 100-200 respondents. Sampling was done by *purposive sampling* technique sampling with particular consideration (Sugiyono, 2003: 77). Analysis of *Structural Equation Modeling* (SEM) To test the hypothesis SEM analysis with the help of the program AMOS version 20.Langkah-step modeling SEM according to Hair et al. (1995) there were seven rare to be done when using *Structural Equation Model*(SEM) is as follows:

Figure 1: The Conceptual Framework



The development of a theory-based model:

- Develop path diagram to express causality
- Translates into a structural equation model specifications and measurements.

Variable endogen = variable exogen + variable endogen + error

The equation derived from the converted flowchart consisting of:

- Structural equation *(structural equation),* which is formulated to reveal causal relationships among the various constructs.
- Specific equations measurement model *(measurement model),* which must be determined variables that measure the construct and define a series of matrices that show the correlation between the hypothesized constructs or variables.
- The components identify *latent variable* size and structural components to evaluate the hypothesis of a causal relationship between *the latent variables* in a causal model and show a whole hypothesis testing of the model as a whole.

4. Findings

The quality of service using five dimensions that is *tangible empathy, Reliability, Responsiveness,* and *Assurance.* Where the first *tangible* dimension using attribute consists of the location, appearance of staff, office facilities are *up-to-date,* the cleanliness of the office, and exterior offices. The second dimension *empathy* that use attributes greet customers by name, an apology for the error service, understand customer needs, personal attention, and operational time. The dimensions of the third namely *reliability* that use service attributes as promised, timeliness of services, verification requests, and sincerity helped. The fourth dimension is the *responsiveness* attributes staff's willingness to help, the notification time of service, speed of service, readiness to serve. Then the last dimension is the dimension *of assurance* that use attributes confidence in the ability of staff, courtesy staff, security transactions, and staff in still customer confidence. Quality of care significant positive effect directly on customer satisfaction, which means that the better the quality of service perceived by the *customer,* the higher the satisfaction of using services provided by the Islamic Bank in Palopo. Conversely, if the lower the quality of the service perceived by the customer, diminishing similarly their satisfaction to use the service provided by the Islamic Bank in Palopo. Thus we can conclude that Hypothesis 1 which states that the quality of service in the perspective of Islam have a significant effect on customer satisfaction Islamic Bank in Palopo acceptable.

The findings in this study support the results of research conducted by Anindhyta (2009), with the title of the study the influence of the quality of service and the handling of complaints against customer satisfaction and loyalty Islamic commercial bank in Surabaya. Where is the research that significantly influence the service quality customer satisfaction with a probability value 0.022 <0.05. Quality of care is a significant positive impact directly and indirectly on customer loyalty, means the better the quality of service perceived by the *customer,* the higher the customer loyalty to a product / services provided by the Islamic Bank in Palopo. Conversely, if the lower the quality of the service perceived by the customer, diminishing also their loyalty to use the products / services provided by the Islamic Bank in Palopo. Thus we can conclude that Hypothesis 2 stated that the quality of service in the perspective of Islam have a significant effect on customer loyalty Islamic Bank in Palopo acceptable. The findings in this study support the results of research conducted by Anindhyta (2009), with the title of the study the influence of the quality of service and the handling of complaints against customer satisfaction and loyalty Islamic commercial bank in Surabaya. Where is the research that significantly influence the service quality customer loyalty with probability value 0,000 <0,05. Then the results of this study are also consistent with the results of research conducted by (Bloemer & Schroder (2003), Caruana (2002), and Bitner (2003) suggests that the quality of services offered by a company will affect the level of consumer loyalty.

Similar results were obtained Parasurahman (1998) in his research. Their findings clearly indicate that the quality of service has an influence on the formation of consumer loyalty. Customer Satisfaction significant positive effect directly on customer loyalty, means the better satisfaction in rasakanoleh *customer,* the higher the customer loyalty to the products / services provided by the Islamic Bank in Palopo. Conversely, if the lower satisfaction perceived by customers, diminishing anyway their loyalty to use the products / services provided by the Islamic Bank in Palopo. Thus we can conclude that Hypothesis 3 which states that customer satisfaction in the perspective of Islam have a significant effect on customer loyalty Islamic Bank in Palopo acceptable. The findings in this study support the results of research conducted by Anindhyta (2009), with the title of the study the influence of the quality of service and the handling of complaints against customer satisfaction and loyalty Islamic commercial bank in Surabaya. Where the results of research that customer satisfaction significantly influence customer loyalty with probability value 0,000 <0,05. Then the results of this study are also consistent with the results of research conducted by Caruana (2002) states that the customer satisfaction significantly influence the desire to buy and the quality of service has little effect on buy-back compared to customer satisfaction. This study provides an explanation that affects customer satisfaction to customer loyalty is defined as the desire to repurchase. Such loyalty models describe two groups of determinants that lead to a loyal customer at a bank that is what factors and how factors.

5. Conclusion

Based on the subject matter, the purpose of the study, the analysis and discussion, can following conclusion: Quality of care is significant positive effect directly on customer satisfaction, which means that the better the quality of service perceived by the *customer,* the higher the satisfaction of using services provided by Islamic Bank in Palopo. Conversely, if the lower the quality of the service perceived by the customer, diminishing also their satisfaction to use the service provided by the Islamic Bank in Palopo. Thus we can conclude that Hypothesis 1 which states that the quality of service in the perspective of Islam significant effect on customer satisfaction Islamic Bank in Palopo unacceptable. Quality of care is significant positive effect directly and indirectly on customer loyalty, means the better the quality of service perceived by the *customer,* the higher the customer loyalty to the products / services provided by the Islamic Bank in Palopo. Conversely, if the lower the quality of the service perceived by the customer, diminishing also their loyalty to use the products / services provided by the Islamic Bank in Palopo. Thus we can conclude that Hypothesis 2 which states that the quality of service in the perspective of Islam significant effect on customer loyalty Islamic Bank in Palopo acceptable. Customer Satisfaction significant positive effect directly on customer loyalty, means the better satisfaction of *customer,* the higher the customer loyalty to the products / services provided by the Islamic Bank in Palopo. Conversely, if the lower satisfaction perceived by customers, diminishing anyway their loyalty to use the products / services provided by the Islamic Bank in Palopo. Thus we can conclude that Hypothesis 3 which states that customer satisfaction in the perspective of Islam have a significant effect on customer loyalty Islamic Bank in Palopo acceptable.

References

Al – Qur'an Nul Karim and translation. (2006). PT Syamsil Cipta Media, Bandung.

Anindhyta, B. (2009). Effect of Quality of Service and Complaints Handling Customer Satisfaction and Loyalty Islamic Banks in Surabaya.

Bitner, M. J. (2003). Evaluating Service Encounters: The Effects of Physical Surroundings Employee Responses.

Bloemer, J. & Schroder, G. O. (2003). Antecedents and Consequences of Affective Commitment. *Australasian Marketing Journal,* 11(3), 33-43.

Caruana, A. (2002). Service Loyalty: The Effect of Service Quality and the Mediating Role of Customer Satisfaction. *European Journal of Marketing*, 36(7/8), 811-828

Ferdinand, A. (2002). Structural Equation Modelling in Management Research. Semarang: Diponegoro University.

Hair, J. F., Anderson, R. E., Tamthan, R. L. & Black, W. C. (1995). Multivariate Data Analysis With Reading. *New York:Mac Millan Publishing Company*, 352, 358-367

Hurriyati, R. (2005). Marketing Mix and Customer Loyalty ; Bandung: ALFABETA.

Lupiyoadi, H. (2006). *Marketing Management Services*, Second Edition, Jakarta : Salemba Empat.

Parasuraman, A. (1998). Reflections on Gaining Competitive Advantage Through Customer Value. *Journal of the Academy of Marketing Science*, 25, 154-161.

Santoso, S. (2011). Struktur Equation Modeling (SEM). Jakarta. Elex Media Komputindo, 171-180

Sugiyono. (2003). Business Research Methods. Bandung: CV Alfabeta.

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Model Strengthening Human Resources Through the Fisheries Resource Utilization Makassar

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Abstract: This study aims first to analyze the strengthening of human resource models with variable quality fishing gear insyani resources, involvement in economic activities and the local culture through economic capacity in the utilization of natural resources and the second to analyze fisheries MP3EI program didaaerah Sulawesi economic corridor that has not been synchronized. Implementation of these variables in strengthening human resources in coastal communities. This research was conducted in the coastal area of Makassar, precisely the small island-island Makassar in (two) years. The study population was all fishermen are categorized as poor. Slovin sample was determined with the theory that those who have a poor criterion of 99 respondents.The urgency of research, human resources strength problems, need to be identified at the planning MP3EI program ekonomi.agar growth can go hand in hand between the economic corridor and central Sulawesi. Outcomes research result in models of reinforcement of human resources, strengthening human resources design gran sesuiaThe urgency of research, human resources strength problems, need to be identified at the program ekonomi.agar growth can go hand in hand between the economic corridor and central Sulawesi. Outcomes research result in models of reinforcement of human resources, strengthening human resources design gran sesuia purpose MP3EIresearch initerinspirasi of theory Nurkses (1953), which states that the causes of poverty or weakening of human resources led to the theory of the vicious circle of poverty (Vicions Circle of poverty) put forward by the six elements, namely keterbelakanganataumelemahnya human resources, low investment, omission lack of capital, low savings and low productivity, method used is quantitative method. Model Strengthening human resources with quantitative methods with associated variables later via Path analysis.

Keywords: *Modeling, strengthening human resources, utilization of fishery resources Path Analisis, the Economic Capabilities, Quality improvement insyani resources, local culture, Poor Families*

1. Introduction

Background: To accelerate and strengthen economic development in accordance with the potential advantages of sumberda fisheries, accelerated with establishment through strengthening human resources, which is developing. To harness the potential of fishery resources Sulawesi economic corridor for the region are still many obstacles, among others, have not been strong human resources. To strengthen national human resource integrated connectivity locally and globally connected. Natural Resources to Sulawesi economic corridor has not been managed in a comprehensive, yet strong due to its human resources. There are still many poor families in the area of natural resources owned pesisir.sedangkan enough of potential located on Sulawesi corridor.They are komonitas fishermen, today the power problem of human resources is an important issue to be discussed and addressed. The problem of poverty is not only hit the asiancomonity but also hit the entive world commonityUrgensipenelitian associated with, the problem of human resource strength, need to be identified at the planning ekonomi.agar growth MP3EI program can be run on economic corridor Sulawesi (Poli, 2007; McKay, 2003). Milbourne (2004) and Mahsen & Water (2002) stated that, during the New Order regime, Indonesia's development is the focus of economic development, characterized by economic growth with benchmark high level of GDP per capita each year. This pattern is still conventional as it aims to menciptahan "trickledown effect" of development results to the public at large. The amount of the govermantas'forgotten other social problems that arise such as the issu of humanresources is still weak unemployment inequality inincome distribution, as well asenviromentaldamage.Coastal communities cannot be separated from the development of the city due to coastal development is also an integral part of urban development. To achieve these objectives pursued optimizing the utilization of fishery resources. It is considered to be very precise and strategic reasons that the fisheries sector is one of the natural resource potential which should be utilized optimally for the prosperity of the people. This is supported by the SupportCoastal communities cannot be separated from the development of the city due to coastal development is also an integral part of urban development. To achieve these objectives pursued optimizing

the utilization of fishery resources. It is considered to be very precise and strategic reasons that the fisheries sector is one of the natural resource potential which should be utilized optimally for the prosperity of the people. This is supported by the MP3EI support (Fao, 2005).

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Research Purposes: Based on the formulation of the problem above, the objectives to be achieved at the focus of economic growth in developing dan study are:
To analyze the implementation of these variables in strengthening human resources .

Benefits of research: This research is expected to provide a real contribution to the development of Natural Resource Economics, strengthen human resources can make Indonesia as one of the world's largest producer of fishery. With the model approach to strengthen human resources are used is expected to provide input for the government in regional autonomy

- To mengidentifasi variables, can strengthen human resource development in the growth, strengthen HR
- To analyze the behaviors of Human resources in coastal communities.
- To identify the variable quality of human resources, variable peroduksi tools, and variable involvement of economic activity, and variable economic capacity to strengthen human resourcesexpected to provide input for the government in regional autonomy to be used as a study and consideration in formulating development policies utilization of Natural Resources coastal areas, especially for coastal communities to be a strengthening of human resources and also can be used as a model in support.

Urgency Research: The urgency of research, human resources strength problems, need to be identified in the planning of economic growth, between economic corridor and central Sulawesiresearch initerinspirasi of theory Nurkses (1953) and Daniels (2002) which states that the causes of poverty or weakening of human resources led to the theory of the vicious circle of poverty (Vicions Circle of poverty) put forward by the six elements, namely retardation, low investment, omission lack of capital, low savings and productivity low, the method used is quantitative method. Need to identify the planning of economic growth, to support the MP3EI program to strengthen human resources. But the theory Nurkse not include elements of local culture, while the theory of MC Keland in Kuntjaraningrat, local culture on a high mentality assess the quality and accuracy requires a high rate of cultural value orientation results from the work of humans. Cultural values developed by every nation that wants to increase the intensity of pressure trying to enhance its production and become more prosperous.Outcomes research. Grand design reports use models corresponding strengthening of human resources development program purpose.Need to identify the planning of economic growth, to support the development program, program to strengthen human resources . But the theory Nurkse not include elements of local culture, while the theory of MC Keland in Kuntjaraningrat, local culture on a high mentality assess the quality and accuracy requires a high rate of cultural value orientation results from the work of humans . Cultural values developed by every nation that wants to increase the intensity of pressure trying to enhance its production and become more prosperous.Outcomes research. Grand design reports use models corresponding strengthening of human resources.

2. Literature Review

Efforts Strengthening human resources is one of the MP3EI program: During this time, various efforts have been made by the government to strengthen human sumberday among other things tackle and eradicate poverty, formulating standards poverty line and construct maps pockets of poverty. Beyond that, there are very few programs have been developed and implemented in the field. For example, is to continue to spur national economic growth, provide credit facilities for the poor, among others through the provision of financial assistance IDT, program Tekesra - Kukesra, KURK, build infrastructure in perukiman slum, the development of the development model integrated area, including implementing, and improving the quality of programs development.For most, the various aid and government programs that have been pursued are quite useful. However, it must be recognized that poverty reduction efforts undertaken until now still not produce satisfactory results. There are still many residents of Indonesia, both in rural and urban, who lives wrapped poverty. On the other hand, it is also undeniable fact, that although the number of poor people decreased, but the gap is in many ways even more broadly. During this time, the government's approach in dealing with poverty, both at the national, regional, and local, generally is to adopt a purely economic approach, which is often not ignore the role of culture and the local community context. There is a strong impression that the government in the eyes of the poverty problem seems to only be understood as a problem of lack of income. Highly visible also in various programs launched by the government umunnya just trying to provide assistance in the areas of capital, provide subsidies, and the lik(Danani & Islam, 2002; fao, 2012; Ellis, 1984).

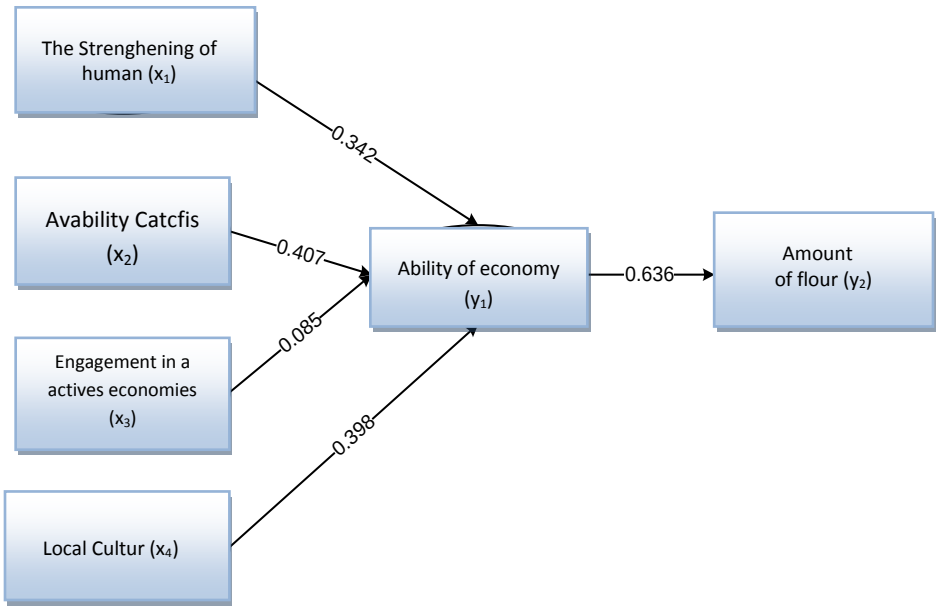
Causes of Poverty: Poli (2007), Chinner & Polnac (2004) and Milbourne (2004) states that the underlying causes of poverty, poverty theoretically be divided into two categories. First, the nature of poverty, the poverty that arise as a result of the resources are scarce in number and / or because of the level of technological development is very low. Factors that cause a society to be poor is naturally do exist, and not that there will be groups or individuals in the community who are poorer than others. May be in a state of poverty will naturally be differences of wealth, but the impact of these differences will be softened or eliminated by the presence of traditional institutions, such as the pattern of relationships patronclient, spirit of mutual cooperation, and the like are functional to dampen the possibility of social jealousy. Secondly, the artificial poverty, the poverty that occurs due to the existing social structure makes members or community groups did not control the economic means and facilities evenly.Thus, some community members remain poor despite the fact that the total amount of production generated by these communities if divided equally able to release all members of the community out of poverty. Artificial poverty in many respects occurs because an individual or family member lazy to work, or because of persistent pain. In contrast to the perspective of modernization that tends sentenced poverty comes from the weak work ethic, he did not have ethical self-employment, or because a culture unaccustomed to hard work, can be referred to as structural poverty.

Soemardjan (1984), Mikolic (2009), Adisasmita (2013) and Degnbol (2006) explained that the definition of structural poverty is the poverty suffered by some segments of society because the social structure was not able to participate using the resources of actual income available to themVarious poverty alleviation programs and social safety net programs vary, but in fact almost the same substance, namely providing capital flow to poor people and ask them to work harder to empower themselves. For the short term, the provision of economic assistance is beneficial. However, for a real long-term economic aid that will not solve the problem of poverty completely. Much evidence shows that the provision of economic aid alone was actually spawned newproblems-problems that are not intricately. In fact, it is not impossible obtaining capital assistance loan will only constitute the starting point for all kinds of other problems and the destruction of the poor effort.This statement can be caused by various factors as mentioned above. When observed closely, the development of regional development thinking for instance of coastal areas, has not been touched by the improvement of the physical life on the island where the population is Muslim, for example, improvement of living standard in the field of teachers and health. Thought as presented by Arraiyah (2007), Gordon (1954) and Gregor (2008) that the presence of other factors such as local culture should be able to touch the earnings improvement Siri'naPacce fishermen because it is the culture of Makassar. It is thus important and valuable local cultur' so that the existence of a man in her life is largely

determined by local cultur' and for those who are not memiliknya considered nothing more than animals (Daniel, 2002; Bruk & Danzer, 2011; Barro, 1995; Denner, 2003; Coulthard, 2013).

3. Methodology

This research study was conducted in the coastal city of Napier. While the time is used in this study is is for 4 (four) months. The population in this study are those who have a poor criterion as described in the background, then the n number of samples to be taken based on the formula Slovin and obtained a sample of 100 respondentsAnalysis techniques in penelitianini is the path analysis with Sobel Test on testing approach mediation between variables. In accordance with the objectives of the research conducted can be categorized as an explanatory research, the research aims to find an explanation for the causal relationship or influence the relationship between variables with other variables through hypothesis testing (Umar, 2004; Bailey, 1994; Doclus, 2009). Variables in this study are variable Strengthening the quality of human resources (X1), availability of fishing gear Fish (X2), Involvement in Economic Activity (X3), Local Culture (X4), Ability Economics (Y1), Reduction of Number of poor families (Y2) following this:



Constructs were built as in the diagram above path can be divided into two groups, namely: construct exogenous consisting of Increased Resources Human (X1), availability of fishing gear (X2), involvement in the Economic Activity (X3) and the Local Culture (X4), as well as constructs comprising endogenous variables Economic Capabilities (Y1), and the Reduction of Number of poor. Constructs were built as in the diagram above path can be divided into two groups, namely: construct exogenous consisting of Increased Resources Human (X1), availability of fishing gear (X2), involvement in the Economic Activity (X3) and the Local Culture (X4), as well as constructs comprising endogenous variables Economic Capabilities (Y1), and the Reduction of Number of poor families (Y2). Construct exogenous (exogenous constructs comprising endogenous variables Economic Capabilities (Y1),and the Reduction of Number of poor families (Y2). Construct exogenous (exogenous constructs), known also as the source variable is a variable that is not predicted by other variables in the model. Construct endogenous (endogeneous constructs), is a variable whose value is determined in the model. Furthermore, the picture above, can also be expressed in the form of the following equation:

1. Y1 = X1 P1 + P2 + P3 X2 X3 +
×2. Y1 Y2 = P5 + ε2

Step Two: Examination of the assumptions underlying the path analysis , among others:
a. The relationship is linear and additive models. Examination of linearity assumption can be seen from the plot remnant. According to Baulch (2000), Barro (1995) and Buriel (1994), one of the goals was to determine the residual checks whether the variables included in the model might not be linear. If the remnant were scattered on the value of the forecast shows a random pattern, then the data does not indicate to abnormalan, so that the relationship between variables can be said to be linear.
b. Any residual data model of the normal spread. The normal distribution is a theoretical distribution and continuous random variables. To test whether the sample is a normal distribution type
then used the test Kolmogorov -Smirnov Goodness of fit test with the testing criteria if the number of significance (sig.) > 0.05, then the normal distribution of data .
c. Variables measured without error (valid and reliable).

The third step, Path coefficient calculation (estimation parameters): states that essentially the path coefficient is the regression coefficient standardized (Beta Coefficient) is the regression coefficients were calculated on the basis of data that has been set in a number of raw or Z -score (the data set with values mean = 0 and standard deviation = 1).Standardized path coefficient (standardized path coefficient) is used to describe the influence of independent variables (exogenous) to the other variables are treated as dependent variables (endogenous). According Marquis (1996), Munir (2002) and Gregor (2008) coefficient of Y to X (Byx), will be equal to the coefficient of X to Y (BXY), also equal to the correlation coefficient (r xy) . So that the path coefficientcalculation using correlation matrix, or by looking at standardized regression coefficients (beta coefficient), essentially the same value.

1. Y1 = P1 X1 + P2 X2 + P3 X3 + P4 X4 + ε1
2. Y2 = P5 Y1 + ε2

The second step: an examination of the assumptions underying the path analisis.
a. Relationships in the model is linier andEdit

Constructs were built as in the diagram above path can be divided into two groups, namely : construct exogenous consisting of Increased Resources Human(X1), availability of fishing gear (X2), involvement in the Economic Activity (X3) and the Local Culture (X4), as well as constructs comprising endogenous variables Economic Capabilities (Y1), and the Reduction of Number of poor families (Y2). Construct exogenous (exogenous constructs), known also as the source variable is a variable that is not predicted by other variables in the model. Construct endogenous (endogeneous constructs), is a variable whose value is determined in the model. Furthermore, the picture above, can also be expressed in the form of the following equation :
1. Y1 = X1 P1 + P2 + P3 X2 X3 + X4 + P4 ε1
2. Y1 Y2 = P5 + ε2

Step Two: Examination of the assumptions underlying the path analysis , among others: Relationships in the model is linear and

Step Three, Path coefficient calculation (estimation parameters): Solimun (2002), Taringann (2013) and Gordon (1954) mentions that ON is essentially Coefficient Line is a regression coefficient standardized (Beta Coefficient) is the regression coefficients were calculated on the basis of data that has been set in a number of raw or Z-score (the data set with values mean = 0 and standard deviation = 1). Standardized path coefficient (standardized path coefficient) is used to describe the influence of independentthen used the test Kolmogorov-Smirnov Goodness of fit test with the testing criteria if the number of significance (sig.)> 0.05, then the normal distribution of data.
c. Variables measured without error (valid and reliable).

Step Three, Path coefficient calculation (estimation parameters): Cristope (2003), Ferdinand (2000), Borroach-Vani (2005), Bruck (2011) and Bruk-Meir (2008) mentions that ON is essentially Coefficient Line is a regression coefficient The standardized (Beta Coefficient) That coefficient regression The calculated database Of Which Has set in default numbers OR Z-score (data The set WITH Value mean = 0 and standard

deviation = 1). Line The standardized coefficients (path coefficients standard) husband used to review describes the effect of free variables (exogenous) variable Against The enforced lay AS Tied variables (endogenous).* According Supranto (2004), Gozali (2009), Cristope (2003), Hair et al. (1998) and Barrow (1995) beta coefficient From Y against X (Byx), will equally WITH coefficient From X to Y (BXY), ALSO WITH same correlation coefficient (r xy). So the calculation coefficient WITH Strip using correlation matrices, or ON WITH Seeing The standardized regression coefficients (beta coefficient), ON is essentially the same value.

The fourth step, testing the significance of the influence of The ADA hearts Path analysis: Test the significance of direct influence WITH THE consult t value t table. If the value t<t tablethen H0 accepted From Value Ha rejected, OR NO significant effect Direct From Free variables on the dependent variable. Conversely, if the value t> From Value T table then H0 rejected Ha accepted OR NO significant effect Direct From Free variables on the dependent variable.

Step Five: Check the validity of the model: Examination of the validity of the model using the coefficient of determination MAY whole. The The amount of data that can be explained Model Diversity Posted measured WITH formula:
R2M = 1 - P2e1 P2e2 ... .P2ep
Against the same interpretation R2M WITH interpretation coefficient of determination (R2) ON regression analysis. The model is said to be valid if it has the precision and High Accuracy. Size Model Accuracy is coefficient of determinatio(R2) with a value ranging from 0 to 1.In this study, examination of the validity of the model using rules triming theory.

4. Results

Pengujian Validity and Reliability Research Instruments: The following table is presented esting the validity and reliability of research instrument in each variable

Table 1: Test Result and Reliability

Indikator	X1		X2		X3	
1	X1.1	0.740	X2.1	0.725	X3.1	0.764
2	X1.2	0.662	X2.2	0.850	X3.2	0.769
3	X1.3	0.676	X2.3	0.712	X3.3	0.668
4	X1.4	0.742	X2.4	0.779	X3.4	0.774
5	X1.5	0.724	X2.5	0.797	X3.5	0.753
6					X3.6	0.719
Alfa Cronbach	0.751		0.830		0.834	
Indikator	X4		Y1		Y2	
1	X4.1	0.751	Y1.1	0.839	Y2.1	0.824
2	X4.2	0.829	Y1.2	0.430	Y2.2	0.791
3	X4.3	0.817	Y1.3	0.824	Y2.3	0.793
4			Y1.4	0.828		
Alfa Cronbach	0.716		0.698		0.711	

Table 2:Value Loadingfactor on the respective respectiveVariabels

Indikator	X1		X2		X3	
1	X1.1	0.741	X2.1	0.732	X3.1	0.768
2	X1.2	0.653	X2.2	0.863	X3.2	0.787
3	X1.3	0.694	X2.3	0.703	X3.3	0.643
4	X1.4	0.758	X2.4	0.781	X3.4	0.763
5	X1.5	0.698	X2.5	0.784	X3.5	0.751
6					X3.6	0.734
Indikator	X4		Y1		Y2	
1	X4.1	0.773	Y1.1	0.854	Y2.1	0.864
2	X4.2	0.814	Y1.2	0.134	Y2.2	0.780
3	X4.3	0.813	Y1.3	0.897	Y2.3	0.766
4			Y1.4	0.911		

From the table above shows that all the correlation value of each indicator and the item is above 0.3. Thus, the overall indicator and the item has a valid question. While the obtained Cronbach alpha values above 0.6 for all variables so that it can be concluded that the instrument has a valid research data..Factor Analysis Results.Loading factor values indicate the weight of each indicator as a measure of the respective msing latent variables. Indicator with the largest factor loading indicates that the indicator measuring variables such as strongest (dominant). Factor analysis is presented above in table 2. Strengthening the variable quality of human resources (X1) was measured with five indicators of Job Training (X1.1), Education (X1.2), apprenticeship (X1.3), Assistance (X1.4) and Special Training (x1.5) , Loading factor of the highest value is obtained that the most dominant form Accompaniment indicator Increased variable.Variable availability fishing gear (X2) was measured by four indicators ie Capture tool type (X2.1), capacity of fishing gear (X2.2), Working Capital (X2.3), Investment Credit (X2.4) and Grant (X2.5). Loading factor of the highest value is obtained that the capacity of fishing gear indicator(X2.2) form the most dominant variable availability.Variable involvement in economic activity (X3) is measured by six indicators, namely clarity Prospects (X3.1), Certainty Market (X3.2), Dkungan product design assistance (X3.3), Customer Certainty (X3.4), Place auction fish (X3.5) and Peranjakan / Retribution (X3.6). Loading factor of the highest value obtained assurance that the market indicator (X3.2) the most dominant form Involvement variables.The local culture variable (X4) is measured by three indicators of Mutual Cooperation (X4.1), Ritual Ceremony (X4.2) and Siri' napacce (X4.3). Loading factor of the highest value obtained that indicator Ritual Ceremony (X4.2) form the most dominant variable Local Culture. The ability of economic variables (Y1) was measured by four indicators ie Savings (Y1.1), Revenue (Y1.2), Education (Y1.3) and Network (Y1.4). Loading factor of the highest value is obtained that the indicators Network (Y1.4) the most dominant form of Economic Capabilities variables.Variable reduction amount for poor families (Y2) is measured by three indicators of Economic Conditions (Y2.1), Family Health (Y2.2) and Education/Religious Family (Y2.3). Loading factor of the highest value obtained that indicators Economic Conditions (Y2.1) the most dominant form of variables Reduction Amount Poor Family.

Testing Assumptions in Path Analysis: Linearity Testing the relationship between variables in this study using the Curve Fit method showed that all influence in the form of a linear model. Next to test the assumption of normality in the residuals of each equation in the analysis path. Sig Kolmogorov Smirnov for two equations each for 0894 and 0895 are all greater than 0.05, so that the residual normality assumptions are met

Path Analysis Results: The first stage in the path analysis is testing the goodness of fit models. The coefficient of determination total amounted to 85.96 %. This indicates the diversity of data that can be explained by the model is equal to 85.96 %, or in other words, the information contained in the data 85.96 % can be explained by the model. While the 14:04 % explained by other variables (which is not contained in the model).Hypothesis testing is done by T - statistics in each lane partial direct effect. Results of the analysis is

complete, the results of the analysis contained in the path, can be found in Annex 3. The following table presents the results of hypothesis testing direct influence (Gozali, 2009; Ellis, 1984; Gainer, 2010).

Tabesl 3: Testing results influence Path model

Relations Variable	Koefisien	T-Statistik	P-value	Conclucion
The strengthening of human resources (X1) agains the ability of the economy (Y1)	0.385	3.117	0.005	Signifikan
Avaliability of the catch fish (X2) agains the ability of the economy (Y1)	0.502	3.529	0.002	Signifikan
Engagement in activities economic (X3)agains the ability of the economy (Y1)	0.058	0.430	0.671	Non Signifikan
Local cultture (X4) agains the ability of the economy(Y1)	0.180	1.173	0.252	Non Signifikan
Ability of the economy (Y1) to reduction of the amount of poor family (Y2)	0.602	3.987	0.000	Signifikan

In Grafphic Analyses of Presented as Follows Testing Results

Based on the table and the picture above, the results of hypothesis testing direct influence in the inner models are as follows:

- Testing the direct influence of Improving the quality of human resources (X1) on the ability of Economics (Y1), the value of the path coefficient of 0.385, with the value of the T - statistic of 3.117, and p -value of 0.005. Because the T - statistic values > 1.96 and p - value < 0.05, then there is
- Testing direct influence between the availability of fishing gear (X2) on the ability of Economics (Y1), the path coefficient values obtained for 0502, with the value of T -statistics for 3529, and a p -value of 0.002. Because the T - statistic values > 1.96 and p - value < 0.05, then there is a significant direct effect between the availability of fishing gear on the ability of Economics (Y1).
- Testing the direct influence of involvement in economic activity (X3) against the ability of Economics (Y1), the value of the path coefficient of 0.058, with the value of the T - statistic of 0.430, and p -value of 0671. Because the T - statistic values < 1.96 and pvalue> 0.05. Then there is no significant direct influence between involvement in economic activities to the ability of Economics (Y1). That is, the intensity of the involvement in economic activity did not affect the intensity of the economic capacity (Y1
- Testing the direct influence of the local culture (X4) against the ability of Economics (Y1), the value of the path coefficient of 0.180, with the value of the T - statistic of 1.173, and p -value of 0.252.Because the T - statistic values < 1.96 and p - value> 0.05, then then there is no significant direct influence on the ability of the local Cultural Economy (Y1)
- Testing the direct influence of the Economic Capabilities (Y1) to the reduction amount for poor families (Y2), the path coefficient values obtained for 0602 , with the value of T -statistics for 3987, and a p -value of 0.000. Because the T - statistic values > 1.96 and p - value < 0.05, then there is a significant direct effect between the ability of Economics (Y1) to the reduction amount for poor families (Y2).The following table presents the results of hypothesis testing indirect effect.

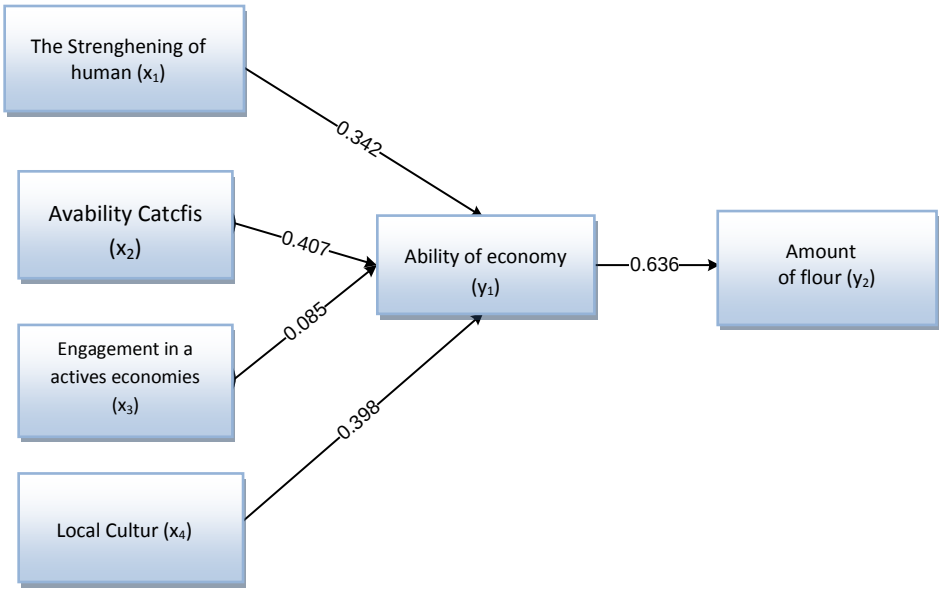


Table 4: Testing Influence Indirect Result Path Model

Relations Variables			Influence Coeficient Indirect	Conclution
Independen	**Dependen**	**Intermediary**		
X1	Y2	Y1	0.215	Significant
X2	Y2	Y1	0.302	Significant
X3	Y2	Y1	0.035	Non Significant
X4	Y2	Y1	0.108	Non Significant

Based on the table above, there are six indirect effect with the following results :

- The indirect effect between Improving the quality of human resources to the reduction in the number of poor families through the Economic ability, coefficient indirect effect of0215. Due to the direct effect of which form a significant indirect influence, it can be inferred the existence of a significant indirect effect between Improving the quality of human resources to the reduction in the number of poor families through the Economic Capabilities
- The indirect effect between availability of fish toward fishing gear reduction in the number of poor families through the Economic ability, coefficient indirect effect by 0302. Due to the direct influence that shape both significant indirect influence, it can be inferred the existence of a significant indirect effect between availability of fish toward fishing gear reduction in the number of poor families through the Economic Capabilities
- The indirect effect between Involvement In Economic Activity of the reduction in the number of poor families through the Economic ability, coefficient indirect effect of
- 0035. Since one of the direct effect of forming influence langsusng not insignificant, it can be concluded not terdaoat significant indirect influence between Involvement In Economic Activity of the reduction in the number of poor families through the Economic Capabilities.
- 4.There are significant directinfluence between the local culture of the ability of Economics (Y1). That is, the intensity of the local culture does not affect the level of economic capability.
- There is a significant direct effect between the ability of Economics (Y1) to the reduction amount for poor families (Y2). The coefficient is positive, indicating the higher ability of Economics (Y1), the higher the reduction amount for poor families (Y2).
- There is a significant indirect effect between muta Strengthening human resources to the reduction in the number of poor families through the Economic Capabilities.

- There is a significant indirect effect between availability of fish toward fishing gear reduction in the number of poor families through the Economic Capabilities.
- There are significant indirect influence between Involvement In Economic Activity of the reduction in the number of poor families through the Economic Capabilities.
- There are significant indirectinfluence between Local Culture of the reduction in the number of poor families through the Economic Capabilities

References

Arraiyah. (2007). Menoropong phenomenon Poverty: Assessing Perspective of the Qur'an. Student Library Publishers

Adisasmita. (2013). *Theory of economic development, economic growth and growth in the region*, 1st edition, publisher graha science jokyakarta

Baulch, B. (2000). Economic Mobility and Poverty dynamics in developing countries. *Journal of Development Studies*, 36(6), 1-24.

Bailey, C. (1994). EmpoloymentLabourProduktivity an in comein smile fisher of South and southeas Asia. In socio Economic issues in costal fishier management IPFC (pp24-45)-Fasipic Fisheries commussion Bangkok Thaeland,november 23-26.1993.

Cristope, B. (2003). When Fishery Rhymes with Poverty: A First Step Beyond the Old Paradigm on Poverty in Small-Scale Fisher www,elsevier/ locate/ clenyca.

Borroah-Vani, K. (2006). China and India: Income inequality and poverty nort and south of the Himalayas. *Journal of Asian Economic*, 17, 797-817. Availeble online at.www.sciencedirct.com

Barro, R. J. (1995). *Economic Growth*. International Edition 1995.

Bruck,T. & Danzer, A. M. (2011). Relativ Deprivation relativ Satisfection, and antitur toward mirand Efidence from Ukranie (2011). *Journal Economic Systems*, 35(2), 189-207.

Brukmeir, K. & Larsen, C. H. (2008). Swedis Coastal Fisheries-From conflict mitigation to Participatori Management. *Marine Policy*, 32, 201-211.www.sciencedirec.com

Buriel, R. (1994). Integration with Tradisional Mexican-american cultur and sosiocultural adjustman. In.J.Matinez & Rmendoza (Edz), Chicano psyhologi (pp-135 New York: Academic Press.

Chinner, J. E. & Polnac. (2004). Poverty Perceptions and Planning; Why SocioeconomicsMatter in The Management of Mexician Reefs: www, elsevier/locate/cloenycha.

Coulthard, S. & Johnson, D. (2013). Poverty, Sustainabilty and Human Weilbeing:A social Welbeing Approach to the global fisheries Cisis Global enveromental change. Journal home page: wwwelsivier com/locate/cloenych

Doclus, Y. J., Arrar, A. & Giles, J. (2009). Chronic and Transient Poverty: Measurement and Estimation, With Evidence from China. *Journal of Development Economics*, 9, 266-277.www/elsevier.com/devec.

Daniels. (2002). Poverty Alleviation in the Subsistenc Fisher Sector the South African. *Journal of Economics*, 7(5).

Danani, S. & Islam, I. (2002). Poverty, Vulnerability and Social Protection in a Period of Crisis: The Case of Indonesia.*Word development*, 30(7),1211-1231.www.elsevier.com/locate/worlddev.

Degnbol, P. (2006). Painting the Floor with a hammer: tecnical Fixes in fisheries management. *Marine Policy*, 30(5), 534-543.

Denner, A. (2003). The Protective role of sosial capital and cultur norms in Latino communities a study of adolescent births. In.M.aguire Molina: A publik Health reader 373-390.San Francisco:Jossey.Bas

Ellis, G. F. R. (1984). The Dimensions of Poverty (DalamSosial Indicator Research

Ferdinand, A. (2000). Structural Equation Modeling in Management Research: Application in a Complex

Fao. (2005). Managing Fishing Capacity: a Review of Policy and Technical Issues.

Taringan, R. (2013). Economy, theory and application of mold seventh Earth Literacy publisher PT Jakarta

Umar. (2004). The Dimension of Poverty Application, social indicator Research. Model Model Research for Thesis and Dissertation S2 S3.

Agency Publisher FAO. (2012). Managing Fishing Capacity: a Review of Policy and tecnicalissues

Gainer, B. (2010). The Relationship Between Market-oriented Activities and Market-oriented Cultur; implications for The Development of Market orientation in non profit service organizations.Green, Maia and Hulme, D.2005.From Correlates and characteristic to Causes: Thinking about Poverty from a Choric Poverty Perspective. *World Development*, 30(6), 867-879.

Gordon, H. S. (1954). The economic Theori of a common Property Resourses.TheFishery.

Giffin. (1999). Cultur and Economic Growth.European.

Mc.Gregor. (2008). Welbeing Poverty and ConflicWeD Policy briefing 01/08.

Godwin, K. (2010). Effects of climate Variability on thrre Fishing economic in high latitude region, Implikation for Fisher

Gozali, I. (2009). Structural Equation Modeling Concepts Theory and Applications with Lisrel.Universita program Diponegoro Semarang in Indonesia.

Hair, J. F. Jr., Rolph, E. A., Romald. L. T. & William , G. B. (1998). *Multivariate Data Analysis*, Fifth Edition, New Jersey: Prentice-Hall International, Inc

Solimun. (2002). Stuctural Equation Modeling Concepts Theory and Application.

Soemardjan. (1984). Cultural Competence in the Assesment of poor in the rural United States.

Hancook, U. T. (2010). Cultural Competence in the Assesment of Poor Mexican families in the Rural Southeastern United States.

Mikolic, V. (2009). Cultur and languageawareness in the multicultural envirionment of Slovene Istria.

Mckay, A. & Lawson, L. (2003). Assesing the Exten and Nature of Cronic Poverty in Low Income Countries: Issue and Evidence. *World Development*, 31(3), 425-439. 2003.

Milbourne, P. (2004). The local Geografhies of poverty: a rural ease-study. *Geoforum*, 35, 559 - 557.www,elseiver.com/locate/go forum.

Marquis, H. M. (1996). Erratum toNote on Cyclical Employment in the Consumtion gods sector.

Mahsen, J. & Waters, W. F. (2002). Rural Poverty Ecuador: Assesinglokal Realities for The Development of ant Poverty Program. *Word Development*, 30(1), 33-47,2002.www elseiver science ltd. All right reserved

Munir, R. (2002). Regional Autonomy and Economic Inequality Issues, http; // www - inovasi.or.id.

Nurkses. (1953).Teori of poverty.Vicious circle.

Poli. (2007). Poverty and Solution, issues, http; //www tiny house of poverty.