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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 education and vocational research, but comprises interdisciplinary and multi-facet approaches to education and vocational theories and practices as well as general transformations in the fields. 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 Taiwan, Indonesia, South Africa and Greece. Effects of student's grade to teacher's teaching, exploring teacher learning experiences, job's satisfaction among trainers of public vocational training institutes, contribution of industrial work practice performance and creativeness to the academic skill, effect of tutorial instructional strategy and drill 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**

**Effects of Student's Grade to Teacher's Teaching: a Case Study in an Indigenous Classroom**

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**Abstract:** The perspective of teaching in rural area led this study to investigate non-indigenous teacher's teachings in an indigenous classroom of one of rural elementary schools in Hualien, Taiwan. The teacher's views on indigenous students' grade and how it related to the teacher's teaching were explored also. This study was a case study. Data was collected and analyzed by applying qualitative method. It implemented classroom ethnography approach. It revealed that although the teacher had demonstrated a great deal of passion in teaching indigenous students, involvement the students in some indoor and outdoor activities, and using various media to get students' attention, but he was concerned about his students' low academic achievement. In Hualien, there are annual provincial examinations on the subjects of Chinese, Mathematics and English in May, which all the elementary students are required to take. To improve the student academic performance he used some classroom time to practice drills rather than spending time on exploratory activities. When indigenous students' underperformance in standardized tests are considered as reflecting poor quality of teaching, preparing students for the sit-in tests will continue to be a part of classroom teaching. This study suggests that teachers have to understand the educational context in which teaching and learning take place. Knowing this would provide teachers a more meaningful teaching and learning.

**Keywords:** *Teaching, grade, non-indigenous teacher, indigenous students, rural elementary school*

## 1. Introduction

Including Taiwan, most of countries have tried to get a top ranking in Program for International Student Assessment (PISA). Those countries have considered that it is one of good educational level proof. As one Asia eastern country, in the 2012 Taiwan has shown a fairly outstanding achievement by obtaining the fourth ranking in Mathematics and the thirteenth in Science (Taiwan Today, 2013; Massachusetts Department of Elementary and Secondary Education, 2014). The students who took responsibility on PISA have always been rural non-indigenous students. A lot of issues regarding the incompetence of rural indigenous students (Tang, 2000; Taipei Times, 2009; Zhang & Sheu, 2012) might be one of reasons why they do not exist in even a number of academic competitions. Tang (2000) stated indigenous students had the lowest academic achievement. More specifically, Lan, Liu & Hsu (2013) argued rural indigenous students' academic grades were worse than urban indigenous students'. Trying to improve rural indigenous students, rural indigenous education has been at the center of Taiwanese educational reform discussion. There have been a lot of studies exploring the structural issue regarding the instability of teaching forces in rural areas (Chang & Chang, 2014), while others focused on the cultural differences between students background and the learning materials at school (Lan et al., 2013).

Additionally some studies drew our attention to how teachers teach to investigate the core relationship between classroom teaching and indigenous students' academic outcomes (Lan et al., 2013). Tang (2002) also pointed out that in a mixed environment, teachers tended to pay less attention to indigenous students. Teachers have essential roles to make the teaching and learning meaningful. Teachers also affect students learning achievement. It would be true that teachers make choices everyday as to how to teach and what to teach in the classroom. However, the researches which investigate to how the classroom teaching occurs between non-indigenous teacher and rural indigenous students as well as the reasons of tending paying less attention to indigenous students are rare studied. Within this educational backdrop, the corresponding author of this paper conducted classroom ethnography in a rural elementary school in Hualien, Taiwan while she was a graduate student. It examined on a case study of an ethnic Han Taiwanese teacher taught Truku students there. This study particularly focused on the teacher's view of students' academic performance in relation to his teaching.

## 2. Literature Review

According to Fan's & Chen's study (1999), stereotype of rural students' incompetence has prevailed to be a world issue for many years. So, it is not surprisingly that in Taiwan happened as well (Taipei Times, 2009; Zhang & Sheu, 2012). This stigma might be stimulated by existence of standardized tests as learning outcomes evaluation methods (Herzog & Pittman, 1995). A lot of reasons become factors why rural students did not do well in academic performance, for instance family background and socioeconomic status (Kohn, 2001). Low achievement in rural area is often identically measured by grade become portray of students quality. According to Organization for Economic Co-operation and Development (OECD) in 2012, in most countries and economics, students from socio-economically disadvantaged backgrounds are more likely to receive lower marks. In fact, not only in rural education, but also generally in education field, grade becomes important. The teachers use score as measurement whether the students have mastered the lesson and keep motivation in their students (OECD, 2012).

## 3. Methodology

**a. Participant:** This study took place in Mingli (pseudo name) Primary school, one of the rural elementary schools in Hualien, Taiwan. This is a case study which focused on t one participant. The participant was a Han Taiwanese (non-indigenous) male teacher. This study used the snowball technique. A university professor linked and introduced the corresponding author to him when she was looking for indigenous classroom for exploration. She investigated his Mathematics and Science classes. Chang (pseudo name) was 39 years old and was studying master program in Education at the time of this study (2014). He has taught for six years in this school. In some period time, he had scheduled meetings and discussions in elementary teacher community around Hualien County. In this meeting, they usually discussed about their students and teaching. His students were mainly Truku, which is one of the ethnic tribes in Taiwan. Generally, they come from low to middle socioeconomic status. Most of the students' parents live away from them. The parents live in cities to earn money. Some of them live with their grandparent. The students were fourth grade. Totally they were sixteen students.

**b. Data Collection and Analyzed:** Since this study aimed to investigate how this teacher taught in his class, so data analysis was related to the classroom activities, teaching strategies and the thoughts that he put into his teaching. To collect data, this study applied observations, interviews and video recording (Yin, 2011). Observations were explored deeply to investigate classroom activities and teaching strategies. Beside observations were undertaken every week in one month, interviews were needed to strengthen gathered information from observations. Usually, after observation was done, the researcher would continue to interview him. Also, through interviews, the researcher gathered data regarding his view on student academic performance. The student worksheet and its result were considered during the interviews. Whole the classroom activities and interview were recorded to connect each other. Collected data from various methods was combined and analyzed.

## 3. Results

**a. Teacher's Views on Students' Grade:** The teacher's teaching experiences for six years at the school provided him more and less description of indigenous students' outcomes. From year to year, the outcomes were almost similar. Not only the fourth grade, but previously he also taught other grade. These outcomes were always being a topic in meeting of his community (this group was mentioned methodology earlier). He always compared his students' outcomes with students' ones of the other teachers. When he stated, "As we know, if we compare these students' learning achievements with urban students', ours students' are sure to be a little behind," he continued with awareness that teaching indigenous students in rural area is not easy. Not only what he thought about his students but the public stigma about stereotype of lower achievement and motivation of the students also impacted him. This reality seemed like a proof. After testing the students, he found that students' learning achievement was low. He felt so sad. He said, "It happens, I tell some students that you get C grade, yet they are so happy... I do not know why they are not upset. On the other hand, I was precise disappointed." He didn't know why the students' analysis ability particularly in Mathematics and Science is low. In classroom activities, when he came to students with questions "Why...?" and so on, most of

students did not give the correct answer and just guessed it. Though, in his opinion, some questions were categorized simple ones. Yet, he assumed that this happened probably because most students hated Mathematics and Science subject. For them, those subjects were the most difficult. They preferred Sports and Art (music) subjects. "As Mathematics and Science teacher, I have to work hard to improve them", he testified.

**b. Effects of Teacher Views on Student's Grade to Teacher's Teaching:** Even though students' scores were low, but he had shown a passion in teaching his students. He testified, "As I said before, that most of them hated Science and Mathematics in the beginning, yet now they have progressed, at least they are actively involved in learning." So to face the situation, the approaches used in his teachings were introduced. He stated, "It started from me to them... I need to think more of my teaching." He somewhat understatedly explained, "This situation challenged me to improve my teaching, and we have teachers' community in where we can share our problem every month". So, from his view on the students' grade, he tried to design his teaching with a hope that the students' academic performance would improve. He arranged such as conducive classroom activities, student engagement, and applying various media.

**Classroom Activities:** Both of Mathematics and Science classes Chang usually arranged his classes by starting disclosure, core and closure activities. In disclosure time, he provided visual illustrations related to the topic. Sometimes he started by raising questions and asked the students to guess the answers. Usually students were responsive to his questions and eager to answer. From students' responses I could tell that the sequence of the nature of the questions. It became harder and harder as students took more time to think and their participation became gradually reserved. In addition to question and answer, sometimes the teacher divided students into four groups heterogeneously. In two subjects, he used the grouping for different purposes. In Science class students conducted experiment in groups, while in Mathematics class students practiced drills in groups. Moreover, he incorporated the use of media in his teaching frequently. These were examples of his classroom activities. The Science's topic entitled "light". He started by using the projector to show students the sunshine in the forest. Then, he asked, "What do you see?" Each student gave their responses. Based on the students' responses, he continued to ask them, "In the forest, why some parts are dark and while other areas bright? Why can you see something?" These questions led students to understand *light* and its benefit in their lives. He continued to further the agenda by introducing *shadow*. Some experiments were done by students in groups. Students would also watch films, and after discussions were held and study sheets given to fill. Meanwhile, in Mathematics class, at the beginning of Mathematics topic regarding *fraction*, he chose *pizza* as an illustration. In this learning, he applied more computer and its applications. Afterwards, he gave some drills to students. He spent more time to give drills rather than exploratory. He commented, "Giving more tasks and practices would provide the students skill in doing Mathematics test."

**Student's Engagement:** In classes, the students did not feel afraid to give their responses. They would raise their hands, and gave their responses, even though some of their responses were not related to the teacher's questions. However, if so the teacher would ask others to complete the students' responses. Even, when they had some questions they would ask him soon. In his teachings, they were actively engaged. Sometimes he made some jokes, and funny expressions, so they laughed together. Also, he had lunch together every day and had same menu with the students in the classroom. While enjoying lunch, he played the movie about the Science topic that was previously taught. He indicated that this was a reality which their learning achievement was based on the students' ability. He also understood that their Mathematics and Sciences ability were different each other. In students groups, he tried to overcome this by involving them whose higher scores to help their other classmates. He somewhat understatedly explained: "The students' abilities are different. I describe it as stairs, by putting each student's based on their level.... In some cases, if I found that some students did not understand the topics, I explained again or asked other students to help the students."

He also engaged them in some indoor and outdoor activities. Especially Mathematics class, they learned through indoor activities. Differently, in Science class, they enjoyed the outdoor time when they were doing experiments. Besides learning Mathematics and Science topics, he also arranged some reading time in the classroom. They had a small library. Sometimes, before starting class, he invited them to read some books that they liked. Some of them would sit nearby each other. They exposed and shared what they read each



other. So learning occurred both indoor and outdoor time. Because of these activities, most of them began to enjoy Mathematics and Science classes.

**Emphasizing in Using Media:** He emphasized that it is important to use various resources when teaching. He tried to use simple media such as recycled materials such as cups, buckets, sticks, mirrors, scissors, and also money. Teacher Chang also incorporated more sophisticated tools such computer, laser and PAD. Foremost, he was pretty well in applying technology. Playing movie, designing PPT, giving each students PAD, even applying game which related to learning are examples of ways he implemented technology in his teaching. The day before teaching, he would ensure that the media to be used on the following day was in the classroom. He also made sure that would relevant and would be applied properly. In addition, when it came to lessons that would involve illustrations, he would practice at home. Sometimes he did not take any rest at break time, due to the need to prepare the material and media for next class. These methods he used to reach the needs of the rural students. Moreover, when he measured students' learning achievement through test, he would write questions and then send it to one application that is shared by internet connection. By using sophisticated equipment, he thought that students would be more motivated to learn, so that their grades increased.

**Discussion:** There is an inconsistent and conflicting phenomenon in Taiwan: On one hand there are a lot of educational discussions regarding education and how it should meet the needs of students of various backgrounds. On the other hand, there is an increasing demand in terms of the quantification of evaluation. People want to see "results" in a way which is quick, definite and usually numerical. Test scores thus become a common and popular way to evaluate quality. Scoring is solely obtained during a one point time interval and is indeed very unfair to be an indicator of learning. From what I observed of this rural classroom, during learning process, most of students were enthusiastic and actively engaged. According to the teachers, students had come a long way to change their learning attitudes toward Science and Mathematics; they are courageous to speak out and respond to the teacher's questions. Unfortunately students still did not do well in the tests. What is the meaning of failing grades? Does the low score represent that student fail to learn? There are some education discussions that warn us that overemphasis on score might be detrimental to learning (Kohn, 1999b; 2008). Kohn (2011) emphasized to switch educational focus onto the psychological and pedagogical rather than on grading. The Kohn's research (2011) found that there were three impacts of grading students' learning, i.e., reducing of student's attention about learning; choosing to undertaking the easy tasks due to the desire to get high scores, and getting common thinking and easy to forget the topic. Kohn (2011) stated grades were inclined to diminish students' interest in the learning itself.

Those results seemed inversely to the claimed test function in which it was believed to provide standard to schools, teachers and to support students; as a feedback of classroom instruction; to increase the teacher accountability for student learning and promote the change in education reform (Herman & Golan, 1991). However, currently it has gained and increase in criticisms. Many studies have surfaced asking whether scoring assesses the students' ability completely, and whether increasing scores performance represents the increasing students' learning. The scoring which was used was too narrow (Popham, 2001; Gardner, 2006). Moreover, in Hualien County there are annual provincial examinations on the subjects of Chinese, Mathematics and English in May. All of the elementary and junior high students in the county are required to take this examination. Though the score will not be counted into students' individual records, the official academic supervisors will pay special visits and conduct classroom observations to those classes whose average scores are in the last 10% stratum. In other words, the poor collective scores are perceived as a reflection of poor quality of teaching. As a result, the teacher used some classroom time to practice drills with a hope to increase students' grade rather than spending time on exploratory activities. This situation certainly affects teachers. Such as finding of this study, the scoring itself has influenced on his planning and implementation of instruction. Concerned about the lower students learning achievement, the teacher who taught the rural students as well as indigenous students who were not interested in the Mathematics and Science subjects tried to design the lessons by arranging the classroom activities, making relations with students as well as implementing the media and giving more drills to enable the students' understanding of the topic. Though the teacher was able to motivate himself within the low grade by integrating sophisticated instructional media, he was certainly under pressure. In psychology, working without pressure must be

better. The finding of Fish's study (in Herman & Golan, 1991) stated teachers reacted negatively to the pressure created by the scores of their classes.

The paradigm that students learning achievement is measured by score will decrease the meaning of student's learning achievement itself. Such as in this study, even though the students started to like Mathematics and Science subjects, but because the students' scores were still low, he thought that the teaching was failed. Rationally, indeed score may help teachers to find out the educational purposes are, and then identify whether we have been flourishing within by measurement. However, currently measurement is dominating the teaching and learning process (Kohn, 1999a; 2011). Unfortunately, common forms of assessment lead the teaching and learning become terrible. Recent studies have provided an overview to switch from conventional grading. Some of them decided to deploy an effective assessment in learning is more accurate, consistent, in-depth understanding, and supportive (Hawley, 2007, p. 35-37, 90-92; Guskey, 2011). Others developed authentic assessment that measured the success of students with a variety of ways (Chen, Krechevsky & Viens, 1998). The more extreme might by eliminating grading, since to find whether a student has mastered the lesson doesn't require tests, and show it doesn't oblige grades, even, without either, student would be better in future (Kohn, 2011). When teacher emphasized the score as assessment, the meaning of the teaching and learning might be decreased. They will lose the sense of learning psychology and pedagogic. Giving more attention on a student's needs rather than the score will help the teacher in teaching and student in learning. Encouraging the students become more interested in what they are doing would be more meaningful and able to lift the student's sights (Redding & Walberg, 2012). Many of the students in rural areas might learn valuable life skills at home, but don't necessary get the support from home regarding their academic learning. Therefore there is discrepancy between how and what they learned at home and at school. Moreover, a lot of rural students are also indigenous students who have different cultural background with non-indigenous ones. As a result they need more time and learning strategies which are activity-oriented, rather than lecture-oriented. The traditional paper-pencil tests might not be an effective way to gauge how well they learned.

## **5. Conclusion**

According to this finding, the study concluded that score affected teaching of a Han Taiwanese teacher. During his teaching process, the teacher arranged his classroom activities properly, and implemented various media from simple to sophisticated ones which created a good relationship with the students. However, problems still arose and when faced the indigenous students' scores became the focus of his teaching arrangement. The lower grades of students impacted the Han Taiwanese teacher. Despite this situation raised Han Taiwanese' efforts to improved students' grades, but in fact Han Taiwanese somehow feel depressed. The grade itself impacted to ways of Han Taiwanese teacher taught the students. Based on the findings, this study suggests that when conducting classroom ethnography with regard to teaching, we have to understand the educational context in which teaching and learning takes place. A teacher's teaching is informed by his or her philosophy, knowledge, as well as the educational policies. When indigenous students' underperformance in standardized tests are considered as reflecting poor quality of teaching, preparing students for the sit-in tests will continue to be a part of classroom teaching. When the educational discourse focuses on training teachers to teach in ways which are appropriate to students with various cultural and social backgrounds, we also need to pay attention to what extent the over cultural and educational structures which encourage, instead of prohibiting meaningful learning to happen.

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Exploring Teacher Learning Experiences in one Open University in South Africa: a Training Framework

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**Abstract:** This paper explores how academics in one South African Open University, experience learning in order to hasten the impact of their innovative teaching and student learning. It also aims at the formulation of a training framework to guide teacher learning. A qualitative phenomenological research design as advocated by Giorgi and Giorgi (2009) was adopted for this study. The research questions posed were: How do academics experience academic development and which teacher learning framework could be used to enhance academic development for ODL teachers to teach innovatively? The study found that the university introduced an academic training programme to the participants (orientation). The orientation prepared them for practical training (learning). Through learning, they were empowered with skills and competencies (skills acquisition) that enabled them to work (performance) as online teachers. The participants further noted that for a training programme to be successful, it must be long in duration, evaluated and have the support of University management. All the participants learning experiences and concerns were synthesised into a training framework. It was recommended that academic development programmes run for longer durations and should be supported by institutional leadership. An evaluation mechanism should be introduced and adhered to, to ensure achievement of all objectives in every training phase.

**Keywords:** *Academic development, Open University, training frame work, Innovative teaching*

## 1. Introduction

In this paper we explore how academics in one South African Open University, experienced learning in order to enhance the impact of their innovative teaching, research and scholarship, and more importantly, student learning. For Taylor (2008), teacher learning is about knowledge embedded in practice. Abbot (2014) sees teacher learning as a tool to enhance not only teachers' subject knowledge but education in general. In essence teacher learning is about academic development. Hoadley (2010). Indeed Marshall and Pennington (2009) note the need for individuals and institutions to recognise and acknowledge those teachers who excel with regard to academic development. Given that universities, like in any other industry, are required to measure the performance of employees, in particular academics, in order to improve the quality of services provided (Kaydos, 2000), performance measurements are the norm of the day. For Kaydos, the benefits of performance measurements are to motivate the organisation and to help change its culture. This is significant within universities where intellectual capital has now come of age as a field both of research and practice (Viedma Marta & do Rosário Cabrita, 2012). In line with this thought, Marshall and Pennington (2009) suggest that academic development for teachers should be a must especially in light of the changing roles of academics, increasing university needs and diverse student needs. Based on the importance and necessity of academic development, Marshall and Pennington (2009) observe that some institutions have undertaken major changes; linking promotion and selection procedures to academic development. While academics whose major focus is on research and publication may question the essence of paying more attention to teaching (Marshall and Pennington, 2009), Fry and Kentteridge (2009) point out the necessity of teaching research as a way of preparing University teachers to teach research. The purpose of this paper is to share the experiences of how teachers learn in one Open University in South Africa. We also provide a framework for training teachers in higher education within the South African context.

**Problem statement:** Research by Taylor (2008) indicates that the reason why the South African system fails to deliver quality results, often points to the failure of basic education (that is primary and secondary school education) to prepare student for tertiary education. Van der Berg and Louw (2008) and Hoadley (2010) argue that very few matriculates obtain university qualifications. Some examples they cited are that nearly one out of three of those students who obtain matric never go for tertiary education. Among those who are able to get passes that enable them to enter tertiary education, university access is often skewed against black students. Thus, black students appear to be at a disadvantage in terms of completing undergraduate

programmes relative to students from other race groups. Boughey (2010) cautions that despite data she collected from a study that was conducted in two universities of technology in South Africa, the overwhelming construction of students in the data is as 'disadvantaged' where the term 'disadvantaged' is linked to students' previous educational experience. She argues that this sort of understanding of what it means to be 'disadvantaged' can be rendered problematic with the use of theory and research which questions the extent to which schools can do to prepare students for higher education. Large differences in access to undergraduate degree programme remain evident in South Africa. Many matriculates who go to university only do so two or more years after finishing school; the majority drop out without completing the qualifications for which they enrolled. Given that methods of teaching and learning are changing due to the use of computer, information and communication technology (ICT), how do university academics bridge the knowledge gap that new entrants into tertiary education bring along?

**Research questions:** The main research questions that guide this study is:

- Which teacher learning framework can be used to enhance academic development for innovative teaching?
- How do academics experience learning for innovative teaching?

**Aims of the study:** The main aim of this study is to:

- Suggest a training framework that can be used to enhance academic development for innovative teaching.
- Explore and describe teacher learning experiences.

## **2. Literature Review**

Fry and Ketteridge (2009:468) indicate that globally early career academics are usually asked to build their research, publication, management, teaching and supervision expertise while also undertaking a formal programme of academic development. They suggest that the latter (academic development), relates largely to the teaching and supervision role. Boughey (2010) suggests that in developed countries, the development of capacity and of research on teaching and learning has been an issue which has been addressed through the establishment of a national coordinating structure. A case in point, the author suggests, is the Higher Education Academic in Britain, where a range of policy and other developments are available to structure improvements in teaching and learning. According to Bourghey, arguably what is needed is a national structure which will contribute to the development of capacity at institutional level to work with policy and other developments to maximise their effects.

Marshall and Pennington (2009) suggest that progressive human resource policies have seen the widespread adoption of job evaluation schemes aimed at parity of esteem and reward between different career routes and greater transparency in grading decisions. They point out that as HR policies and procedures have become more codified, HEIs have also recognised the imperative of retaining flexibility and responsiveness to both individual cases and their own circumstances. Where once the nature, volume and scope of individual professional development for teaching was a private matter it is now clearly in the public domain and subject to various forms of review and regulation. Appraisal of performance, quality assurance procedures, institutional and subject-level audits and requirements for professional body membership have exposed a once 'secret garden (Marshall & Pennington, 2009).

Quinn (2012) argues that re-imagining a purpose for academic development ought to provide a strong moral compass for the work. Boughey (2010) argues that academics are required to retrain and upgrade their teaching skills and competencies, particularly as suggested by Development Bank of South Africa (2012), with the expansion of information and communication technologies that require changed methods of teaching and learning. In this regard, Boughey (2007), suggest that academic development (AD) is an 'open' set of practices concerned with improving the quality of teaching and learning in higher education. She further suggests that 'open' is an attempt to capture that, AD also constitutes student practices. For this reason, they are of the view that AD work often stems from very different ideological and discursive positions. Abbot (2014) suggests that terms and phases such as sustained, intensive, on-going, comprehensive, aligned, collaborative, continuous,

systematic or capacity-building, as well as relevant to teacher work and connected to student learning, are often used in reference to academic development that is considered to be of higher quality.

Whilst teaching traditionally entails mere information transmission to inactive students, innovative teaching actively involves the students (Neo & Neo, 2001). This means that academics have to develop new approaches to teacher learning on their campuses, approaches that create real changes in teacher practice and improve student achievement. Hence, the real challenge universities face is how to create opportunities for teachers to grow and develop in their practice so that they, in turn, can help students grow and develop their knowledge and ability to think critically. Universities must consider how teachers learn and adopt new techniques for instruction and tailor the training accordingly. Meeting the new demands of standards-based reform will mean universities must not only change their approach to student learning, but teacher learning. In this regard, teacher learning and student development are intractably linked, and can thus not be viewed separate from each other. Thus, higher education institutions strive to retrain academics to equip them with vital skills, particularly due to the nature of the knowledge economy of today that increasingly demands academics with high level of technical and social skill, knowledge and expertise to meet the demands of a constantly changing, competitive environment (Botha & Coetzee, 2012). In this regard, Boughey's (2010) early initiatives on academic development (AD) in universities are in line with the aspirations of the South African National Development Plan (2030) that seek to ensure access to higher education, equity and quality for all without discrimination. In this regard teacher learning is epitomised by continuous improvement for organisational excellence and student learning.

**Research Design:** In order to collect the required data for this study, we used a qualitative interpretive design of a phenomenological genre. It was envisaged that such a design would enable the collection of the respondents' subjective experiences concerning teacher learning and academic development (Giorgi & Giorgi, 2003; 2009). We believed that phenomenology would also enable access to detailed respondents' academic development experiences that we required.

**Sampling strategies:** Participants were purposefully chosen to provide information needed in this study (Gall, Gall & Borg, 2007). Required data was also obtained through reputational sampling. In this regard we selected the respondents based on the recommendation of key informants. Such informants had information about the participants which we were not privy to. Such sampling was appropriate since chosen participants were required to meet specific criteria (Trochim & Donnelly, 2008). They should have been continuously employed by the institution for a couple of years; and taken part in the institution's academic development activities.

### **3. Methodology**

Semi-structured phenomenological interviews were used. The interviews involve a number of phases namely: familiarization with the respondents, the interview audio-recording and transcribing the interviews (Giorgi, 2009). In line with Giorgi's (2009) and Englander's (2012) recommendation, we focused on obtaining the participants' complete description of their experiences. To further meet the phenomenological criteria of phenomenological interviews, probes that were geared towards participants' staff development experiences (Giorgi, 2009) were made use of. Interview documentation was done through audio-recordings. We also made notes during the interview process for further analysis. The field notes were used as a measure of triangulation, in addition to capturing respondents' mannerisms during interview sessions. Interviewees' collation between the participants' responses and mannerisms enabled us to identify any contradiction between their vocalization and non-verbal signals. The notes were also used to document the products of coding; examine the codes further; establish and ascertain the relationship between the different categories, as well as exploring gaps in the formed categories (Dooley, 2002; Charmaz, 2003).

**Data analysis:** Data were analysed following the dictates of phenomenology as advocated by Giorgi and Giorgi's (2003). This entailed recording and transcribing the interviews. We then individually listened to each transcribed interview several times. This enabled us to get a general picture of what the participants were saying. We identified words and phrase (units of meaning) that carried similar meanings in each of the transcripts. The identified words and phrases were regrouped according to what they indicated about the

respondents' experiences and given a general name which epitomised what each unit in the cluster said (Giorgi, 2009; Giorgi & Giorgi, 2003; Giorgi, 1986). The transcribed interviews were then analyzed according to Giorgi's phenomenological approach (Giorgi, 1986; 1989; 2009). Each general description indicated a different experience as lived by the academics (Giorgi & Giorgi, 2003, 2009).

**Credibility:** To ensure the credibility of the study, we rendered consistent explanations giving reasons for the research design and methodology (Morse, Barrett, Mayan, Olson & Spiers, 2002). A comprehensible and justifiable connection linking all phases of the study from data collection to reporting the results was presented. Furthermore, as advocated by Creswell and Miller (2000), we deciphered and gave data logically against the backdrop of the empirical findings. To avoid tenting the results, our own predetermined beliefs and ideas that were likely to impact on the results were acknowledged beforehand and avoided (Maritz & Visagie, 2010).

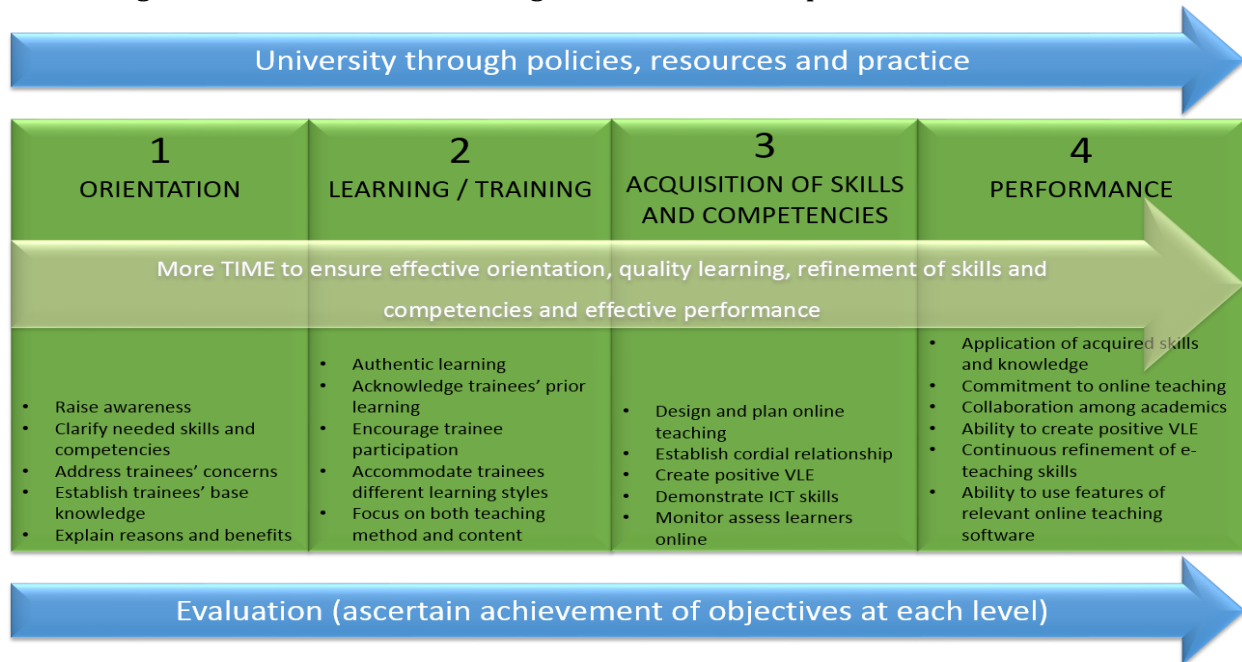
**Ethical considerations:** Permission to conduct this study was got from the ethical committee of the University. All respondents were informed about the study and its purpose and their participation was voluntary. They were also allowed the freedom to withdraw from the study at any one moment if they felt uncomfortable. Anonymity of all participants was assured and we emphasised that and answers given by the respondents would be used for no other purpose other than 'advance scholarly research and improve academic practise (Shammo & Resnik, 2009).

#### **4. Results**

Six academics took part in the study. Each academic was given a code name L1, representing the first academic to be interviewed and L6, representing the last one. The respondents' revealed that they were introduced to the training programme (**orientation**) following which they exposed to learning activities (**learning**). Through learning they got the required skills and competencies (**skills acquisition**) to work (**performance**) as online teachers. They indeed indicated that for them, professional development was a change experience as it changed their teaching approach. Notwithstanding their positive experiences, the respondents had three major concerns which required the attention of the institution. In order to further enhance their training and learning experiences. They decried the short period in which the development programme had to be accomplished. They were also concerned about the little (**time**) they had to accomplish the authentic exercises during the practical exercises. They further noted the absence of a mechanism to ascertain the accomplishment of the training goals (**evaluation**). Finally all the participants noted that for such a training programme to be successful, it requires the support of the institution (**university support**).

**Discussion and formulation of the training framework:** The results as given above were synthesised into a training framework following Boulter and Buckley's (2000), Halloun's (2007) and Morse's (2004) recommendations of model building. By analysing the respondents' lived experiences, we formulated a comprehensive, logical, parsimonious, and consistent framework (Morse, 2004). The formulated framework mirrors the findings of the study.

**The training framework for teacher learning and academic development**



**Orientation:** The participants in this study revealed that they attended an orientation session at the outset of the training. Through this session, programme facilitators did not only raise awareness of the programme but also clarified the skills and competencies that the academics were supposed to have in order to teach online. Furthermore all respondents indicated that through the orientation sessions trainers established their base knowledge and skills and explained the benefits that they, as on learn teachers were expected to get from the planned training. Some of the trainees concerns were also addressed during this time. All participants agreed that the orientation experience was quite a rewarding one. L2 for example indicated the orientation experience prepared him and the colleagues for the future training sessions. Similarly L3 indicated that *“before the actual training we attended a session in which we were briefed on what is it that we were going to do”* (in the next sessions). Phrases to that effect also resonated in L4, L5 and L6’s description. Describing the experience for instance, L4 indicated that, *“...the first meetings were all about introducing us to online teaching, what it was, why the university was adopting it as the major delivery method...”*

Since all respondents experienced a positive orientation session, “orientation” was identified as a phase that is vital in a training programme. This observation is in line with a number of other studies in education that emphasise the importance of trainee orientation. In this regard Dickhauser, Butler and Tonjes (2007) posit that orientation programmes do not only motivate trainees, but they also reveal what is required of the participants during the course of executing their roles (Kagan, 1992). This is important given the fact that adult learners prefer to learn only that, that is relevant to their goals (Collins, 2009; Cercone, 2008). In light of the finding that orientation could serve as a positive experience for trainees, it is vital that training facilitators establish the reasons for the trainees’ participation in a training programme through an orientation exercise. According to Erasmus et al. (2012) adult participation in a training programme could also be motivated by the need of achievement, self-esteem, self-confidence, competence and self-actualisation. It is therefore vital that during the orientation phase, most prominent reasons (Kagan, 1992; Mc Loughlin & Oliver, 2000; Collin, 2009) for the learners’ participation in the course are identified and addressed.

**Learning/training:** Participants revealed their experiences as they partook in the different learning sessions. In such sessions they were given real and practical activities connected with online teaching. In the words of L4, *“It was a practical training...we dealt with the making of learning schedules and uploading them on line...”* In a similar vein, L5, indicated *“in these sessions we became students, engaging ourselves in practical work that was designed to enhance our e-teaching skills.”* With regard to L6, *“the sessions after orientation were enjoyable but challenging...we went practical. All lecturers teaching a particular module worked together to identify the essential elements of the modules we taught.”*



Apart from being exposed to authentic and practical learning activities, participants revealed that during this phase facilitators solicited their prior knowledge with regard to online teaching, and encouraged them to fully participate in all the activities. This finding is consistent with the literature in adult learning. According to Gravett (2001) and Cercone (2008) adult learn better when exposed to authentic and practical activities that are related to their world of work. As adults, academics would also prefer a training program that is self-directing, interactive and collaborative (Collin, 2009; Knowles, Holton, & Swanson, 2005). Not surprisingly, participants in this study indicated that they liked the partial autonomy they enjoyed as trainees, the participation, collaboration and the interaction that characterized the training programme during this phase. Describing his experience during the learning phase, L6 stated thus:

*"I liked the way we worked together as a group. I experienced working with those who were better than me in the use of computers and we solved all the challenges jointly. And I think the idea of the trainer letting us solve the challenges on our own was also good because it made us learn better."*

From L6's response which serves as an epitome of all the other responses it can be stated that apart from experiencing participative, collaborative and interactive learning, participants also experienced some form of self-directed learning. This finding is supported by the available literature on adult education. Knowles, Holton and Swanson (2005) and Marthur et al. (2009) for instance emphasises the need to accord adult learners some form of autonomy during the training programmes; while Cercone (2008) and Gravett, (2001) add the need to treat adult learners with respect. It is this independence, interaction, collaboration among the learners and the accorded respect that enhances their learning (Mc Loughlin & Oliver, 2000).

**Skills and knowledge acquisition:** Participants indicated due to the activities as undertaken in the learning phase, they acquired the competencies and skills to design and plan online teaching, to establish cordial relationships with their students online, create positive virtual learning environments, and demonstrate ICT skills and to monitor assess learners on line. The sentiments of five of the respondents are captured in the following excerpts.

L2: *I'm able to teach online today because of this training....*

L3: *We were also trained how to engage students online...creating interesting activities and how to encourage them to come on line..."*

L4: *It was an experience as we were trained how to write scripts for audio podcasts. We also focused on editing, recording and uploading learning resources on the net.*

L5: *It was quite a busy week of intensive training as we touched almost all the online text tools that we use on my Unisa. We familiarised ourselves with such tools as the welcome or homepage, announcements, discussion forums...of my Unisa."*

L6: *We worked as teams, discussed the necessary components of our modules....we were asked to put them online practically."*

It is evident that 'orientation' and 'learning' empowered the respondents, by way of enabling them to acquire and use the required skills and competencies. Through this phase trainees were transformed into qualified online teachers (Spector & La Teja, 2001) through the acquisition of online teaching skills. The literature on training online teachers emphasise that if individuals have to successfully work in virtual learning environments, they have to muster several competencies required of ODL teachers. According to Egan and Akdere (2005) such competencies can be generally identified as communicative, managerial and administrative, technological and instructive competencies.

**Performance:** Through executing and exposure to the activities in the orientation, training and skills acquisition phases, participants became potent and competent online communicators (Egan & Akdere, 2005); transforming into effective and efficient online teachers. Indeed asked how the training programme had impacted on them the participants responded thus"

L1 *I can now apply what we learnt practically.*

L2 *I'm now more committed to online teaching than before.*

L3: *The programme has empowered me because am able create a positive VLE environment*

Notwithstanding the positive training experiences as revealed during the different phases of training, all the respondents expressed a number of concerns, which if addressed could enhance the positive learning

experiences. They felt the need for increased university support of the training programmes, the need for more time to ensure effective orientation and quality learning. Refinement of skills and competencies and attaining effective performance also required more time. All these concerns are reflected in the formulated training framework. Talking about the need for university support, the participants indicated that a teachers' professional development programme need be supported by all stakeholders. This is in line with Hunter and Austin's (2004), Collin's (2009), Leu and Ginsburg's (2011) assertion that a supportive context in which training should thrive entails the entire university, its senior and junior managers, the lecturers and the students.

With regard to time, the literature indicates that it is essential for crystallization of acquired skills by the trainees. Indeed effective professional development requires long durations (Garet, Porter, Supovitz & Turner, 2000). Indeed in this study participants revealed the need for longer duration of time during all phases of the training. In their own words they stated thus:

L1: *I needed more time to grasp everything well*

L5: *The programme was hurriedly completed.*

L6: *we needed a lot of time to complete the class activities.*

L2: *The program was ok but we needed more time to learn better*

The above views were in line with the findings of other studies (Supovitz & Turner, 2000). In their study structured to find out how staff development could lead to quality teacher instruction in the United States, it was discovered that the longer the duration of the training programme, the better the quality of teacher instruction. On the other hand, Van Menon's (1990) study concluded that successful development requires a lot of time since change does not take place overnight. Supporting the findings of Supovitz and Turner (2000) and Van Menon (1990), Dori and Herscovitz's (2005) three year study came to a conclusion that a lot of time was required to change teachers' instructional methods. The third and last concern as expressed by the respondents was the absence of an evaluation mechanism which would ensure that all the objects as set out in each of the training phases were aptly achieved.

**Recommendations:** A description of teachers' academic development experiences has been given in this study. From the experiences a framework that could be used to guide academic development was constructed. The framework does not only indicate what the responded perceived as major components of a training programme, but it also identifies their concerns which, if attended to, could enhance positive learning experiences. Based on the findings, there is need to attend to the questions of managerial and administrative support, duration of training programmes and the question of putting a proper evaluation mechanism to ensure effective development programmes.

## 5. Conclusion

This study explored learning experiences and concerns for academics at a South African ODL University. To access the experiences as lived by the respondents, phenomenological qualitative research design was adapted. Following the sciences of model building and the recommendations of Morse (2004), the experiences were synthesized into a staff development frame work. From the formulated frame work, it became evident that effective staff development commences with trainees orientation. Orientation prepares trainees for learning, acquisition of skills and eventual performance as teachers .But for effective training to occur, respondents observed that the programme should be supported by the institution, allowed enough time and be evaluated to ensure that expected outcomes in each phase are achieved.

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## Job's Satisfaction among Trainers of Public Vocational Training Institutes in Greece

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**Abstract:** The purpose of the present study was to investigate the effect of the personnel, interpersonal and organizational factors in job satisfaction among trainers of public Vocational Training Institutes in the city of Thessaloniki. Sample consisted of 300 adults' trainers with a mean age of 40.3 years. Job's satisfaction was used as an independent variable while as dependent variables personnel (age, sex, educational level, marital status, number of children, educational level, profession and teaching experience), interpersonal (relationships with trainees, relationships with co-educators, relationship with the administration, personal development and professionalism) and organizational factors (salary, building structure and working conditions) were used. Statistical analysis included the use of correlation and regression analysis. Results showed that from the dependent variables only age ( $r=.342$ ), years of working experience in Vocational Training Institutes ( $r=.296$ ), relationship with the administration ( $r=.699$ ) and working conditions ( $r=.690$ ) had a significant relationship with adults' trainers' job satisfaction ( $p<0.01$ ). Furthermore regression analysis showed that relationship with the manager had the biggest prediction of trainers' total job satisfaction at a percentage of 48.6% ( $r=.699$ ,  $p<0.01$ ), working conditions can predict trainers' job satisfaction at a percentage of 47.7% ( $r=.690$ ) and age and teaching experience can predict trainers' total job satisfaction at a percentage of 20% ( $r=.014$ ,  $p<0.05$ ). In conclusion adults' trainers' total job satisfaction in Vocational Training Institutes in Greece, is influenced mostly by interpersonal (relationship with the administration) and organizational factors (working conditions).

**Keywords:** *Administration, working conditions, teaching experience, vocational education, adults*

### 1. Introduction

Over the past two decades inter culturalism and multiculturalism at world level, the movement of people and labor (Haque & Kim, 1995), globalization of markets and economic activities, as well as the rapid changes and developments in all businesses regardless of size, industry or activity, result in the creation of an international and global competition between companies and countries with the aim of improving service quality and reduce labor costs (Sirgy, Lee, Miller, & Littlefield, 2004; Tsai, 2007). In response to the pressure of globalization, competitive markets, organizations and companies are searching for ways to improve their service quality and exceed customers' expectations (Saccania, Johansson, & Perona, 2007). According to Meidute-Kavaliauskiene, Aranskis and Litvinenko (2014), service quality is closely related to customers' satisfaction. A strong relationship between service quality improvement and job satisfaction has been found by the researchers (Snipes, Oswald, LaTour, & Armenakis, 2005; Yee, Guo, & Yeung, 2015). Furthermore a positive and strong relationship has been found between employees' satisfaction and customers' satisfaction (Ariani, 2015; Schlesinger & Zornitsky, 1991; Wagenheim, Evanschitzky, & Wunderlich, 2007). Thus, managerial strategy and markets focus on human factor and more specific on employees and their satisfaction from the working environment, due to its great importance and contribution on the overall service quality and customers' satisfaction (Lam, Zhang, & Baum, 2001).

Human factor and employee have become a significant business's variables in recent years, resulting rights to work and working conditions, to be considered as a key point for the viability, growth and profitability of the private and public economy (Jackson, 2002). In today's global economy and business sector, more companies are beginning to give importance and gravity field to human factor, employee and its needs, creating policies to increase the level of satisfaction, making thus job satisfaction a critical and important variable to increase business's profit and improving quality of services to customers (Harter, Schmidt, & Hayes, 2002). A plethora of theories tried to define and explain the phenomenon of job satisfaction and its causes (Judge & Church, 2000). An interpretation and definition of job satisfaction could be the positive attitudes or emotional dispositions people gain from working environment, the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values, or the extent to which

people like or dislike their jobs (Locke, 1976, p.1342; Spector, 1997, p.2). Most of the theories tried to explain job satisfaction, have a strong connection with human motives, such as Maslow's hierarchy needs theory, Herzberg's motivator-hygiene theory, Job Characteristics model and the Dispositional Approach (Hackman & Oldham, 1975; Herzberg, 1966; Judge & Lanen, 2001; Maslow, 1995).

Job satisfaction is one of the most important variables that affect and determine the satisfaction of a person in the working environment (Banerjee & Perrucci, 2010), furthermore has significant effect to the quality of life of workers and customers' satisfaction (Ariani, 2015; Narehan, Hairunnisa, Norfadzillah, & Freziamella, 2014; Tait, Padgett, & Baldwin, 1989). The significance and importance of job satisfaction is reflected by the large piece of time and part of their everyday life, people and especially workers-employees deal with (Sousa-Poza & Sousa-Poza, 2000). According to Gazioglou and Tansel (2006), the importance of job satisfaction is demonstrated by positive aspects related to work such as reducing employee's mistakes, the small number of absences from work and increasing employee's productivity. Jobs satisfaction's variables however, are not stable and characterized by their dynamic nature. These variables can be internal nature such as changes in structure, salary, working conditions, leadership, social relationships with co-workers and external nature such as political and economic changes (Mosadeghrad & Yarmohammadian, 2006; Tabvuma, Bui, & Homberg, 2014). Review of literature has showed that these variables of job's satisfaction can be categorized as: personal, interpersonal and organizational (Baker, 2007; Crohan, Antonucci, Adelman, & Coleman, 1989; Curtis, 2008; Liu & Ramsey, 2008; Weiss, 1999).

Education is one of the most basic structures of society. Benefits of education are classified in two categories: market and non-market (McMahon, 1998). These benefits can be achieved also, through a satisfied human factor in the working environment (Chaudhari & Bhaskar, 2016). Teachers are one of the most important parts of human resources in education's system (Ingersoll, 2007). Teachers overall satisfaction from the working environment positive influences students' achievement and creates high quality education (Johnson, Kraft, Papay, 2012). Education's working environment and working conditions related to job satisfaction, have been the subject of numerous studies focus on the factors that motivate teachers to remain in or leave from their work (Boe, Cook, & Sunderland, 2008; Demirel, 2014; Evans, 1997; Tickle, 2008). It is important to value teachers' job satisfaction because it influences teachers' turnover (Otto & Arnold, 2005) and quality of teaching (Demirtas, 2010). Most of the surveys about job's satisfaction in the field of education have focused on teachers in Primary, Secondary or university level and their satisfaction from working environment (Carson, Richards, Hemphill, & Templin, 2016; Crossman & Harris, 2006; Fuming & Jiliang, 2007; Papanastasiou & Zembylas, 2005).

Vocational Training and furthermore adults' training are one of the most important sectors in the field of general education. Vocational Education and Training is defined as any type of job-related learning that raises an individual's productivity, includes all organized activities which help either to a recognized qualification, or gives people skills and abilities necessary and sufficient for the execution of a set of work (Mortaki, 2012; Tsang, 1997). Vocational Training and education can play a major role in empowering people and creating measurable labour market effects, due to their impact on improving employee knowledge and skills and develop a deeper level of behavioral change through transformative learning (Franz, 2010; Johnson, 2015; Martin & Grubb, 2001). According to Biavaschi et al. (2012), in recent years has seen a substantial increase and interest for the introduction and connection of youth into labour markets, linking in this way education with economy and labour markets and making Vocational Training responding to social and economic demands and needs of globalization (Mouzakitis, 2010).

Benefits of Vocational Education Training are classified into two categories: economic and social. Economic benefits are identified as: professional status and career development, economic growth, labour-market outcomes, employee's productivity, employment opportunities, earnings and firms' performance. Social benefits are identified as: social cohesion, health, crime reduction, individual motivation, life satisfaction and inclusion of disadvantages groups (Cedefop, 2011). Therefore, an advantage of attending Vocational Training Education programs is usually a labour-market outcome such as the reduction of unemployment and inequality and the chance for the employment to advance in a professional hierarchy, known as employability (Dickson & Smith, 2011). In Greece, post-secondary Vocational Education Training is usually provided by Vocational Training Institutes (IEK). Their programs last five semesters, four of theoretically and laboratory

training and one of practical training. Each IEK, focus on a particular sector such as applied arts, food-beverage, tourism-transportation, telecommunications-network and training-coaching athletes and sports. IEK graduates are awarded occupational specialization diplomas at EQF level 5 (Cedefop, 2014).

Due to economic and social benefits of Vocational Training, its significance and importance is reflected in its human recourses which includes trainees and adults' educators. As it already mentioned above, teachers is one of the most important variable in human resources at the field of education. Furthermore, teachers' overall satisfaction has positive and multiple effects in a variety of parameters (personnel, interpersonal and organizational). However, most of the studies focused on teachers' job satisfaction in a primary, secondary or university level. Instead, there is limited research in the field of adult's education and specifically in the field of job satisfaction of adults' trainers at Vocational Training Institutes. Therefore the purpose of the present study is to investigate the effect of the personnel, interpersonal and organizational factors in job satisfaction among adult's educators of public Vocational Training Institutes in city of Thessaloniki.

## **2. Methodology**

**Participants:** Sample consisted of 300 (n=300) trainers from public Vocational Training Institutes from the prefecture of Thessaloniki, an urban city in Northern Greece. Of the participants, 140 were men (46.7%) and 160 were women (53.3%). Simple Random Sampling technique was used for the selection of the sample.

**Procedure:** Study was conducted during school period 2014-2105, at public Vocational Training Institutes of the Thessaloniki Prefecture. Study's permission was given from the General Secretariat for Lifelong Learning. After the granting of the license preparation of the present study, the researcher visited the premises of all selected Vocational Training Institutes and informed about the purpose and process of the investigation the respective director. Researcher visited the selected Institutes during their daily curriculum and informed trainers for the purpose, the nature, importance of the present study and about the details of the questionnaire. Participants were informed by the researcher that the completion of the questionnaires is anonymous, results will be used for scientific purposes and if they wished they could be informed about the findings of the present investigation. After these clarifications, trainers who wish to participate stated their consent in written form. All the questions contained in the instrument were clear, with clarifications and explanations, if necessary, by the researcher. Questionnaires were distributed in the working area of adults' trainers by the researcher during Vocational Institutes' daily curriculum. Trainers were asked to complete questionnaires in a quite environment, which usually was an empty class of the building. Specified time completing the questionnaires by trainers was approximately 20 minutes.

**Data instruments:** To evaluate the degree of adult trainers' job satisfaction, questionnaire was constructed by the researcher. Instrument was constructed by choosing questions from the following questionnaires: personnel questions were made according the current literature on job satisfaction, interpersonal questions constructed according to 'My job satisfaction as an educator' (Makri-Mpotsari& Matsaggouras, 2002) and by 'Teacher Job Satisfaction Questionnaire' (Lester, 1982). Finally, organizational questions selected and constructed from 'Questionnaire of Job Satisfaction' (Papanis & Rontos, 2005). Questionnaire was constructed in accordance with the purpose and research questions of the present study. Personnel questions, analyze individual data of adult's trainers such as: age, sex, educational level, marital status, number of children, educational level, profession and teaching experience. Interpersonal questions analyze adult trainers' satisfaction about variables such as: relationships with trainees, relationships with co-educators, relationship with the administration, personal development and personal professionalism. Organizational questions analyze adults' trainers' satisfaction about variables such as: salary, building structure and working conditions. Adults 'trainers were asked to answer, choosing from an option on a 5-point Likert scale. Questions required from the participants to rate their job satisfaction with points ranging from 1 = totally dissatisfied to 5 = totally satisfied. Validity and reliability of the questionnaire was calculated with Cronbach's alpha index and was found high (0.91) and significant ( $p < 0.01$ ).

**Statistical Analysis:** For the purposes of the present study, the statistic package program IBM SPSS Statistics 22.0 version was used. Descriptive statistics were used in order to summarize the mean and standard deviation of variables. Adults' trainers' job satisfaction was chosen as an independent variable, while the dependent variables of the present study were: sex, age, marital status, educational level, number of children,

profession, teaching experience at Vocational Training Institutes, relationships with the manager, relationships with trainees, relationships with co-educators, trainers' professionalism, building structure, working conditions and salary. Pearson's correlation analysis was used to examine the relationship between the independent and depended variables. Furthermore, Regression analysis was used to investigate the predictive percentage of the independent form the depended variables. Level of significance was set at  $p < 0.01$ .

### 3. Results

Participants, examined according to their age, sex, marital status, number of children, educational level, profession and teaching experience. Total of the sample was 300 ( $n=300$ ). Most of the adults' trainers were females (160) with a mean age of 38.5 years. According to their marital status they were married (53.7%), did not have children (45%), had a Master's certificate (38.7%) according to their educational level, were working at Vocational Training Institutes (48.7%) according to their profession and they had a teaching experience of 3 years (15.3%). Correlation analysis was used to investigate the relationship between adults' trainer's job satisfaction and personnel, interpersonal and organizational factors. As it shown (Table 1), from the personnel variables, only age ( $r=.302$ ,  $p < 0.05$ ) and teaching experience ( $r=.296$ ,  $p < 0.05$ ) had a significant relationship with adults' trainers' job satisfaction. Correlation of the other variables with adults' trainer's job satisfaction was found to be low and not significant.

**Table 1: Correlation analysis between adults' trainers' job satisfaction and personnel variables**

Adults' Trainers	Age	Sex	Marital Status	Number Children	Teaching Experience	Educational Level	Profession
	0.342*	0.107	0.194	0.102	0.296*	0.105	0.207

\* $p < 0.05$

The relationship between adults' trainers' job satisfaction and interpersonal variables is presented in Table 2. As it shown, from the interpersonal variables relationship with the manager had the biggest relationship with adults' trainers' job satisfaction ( $r=.699$ ,  $p < 0.01$ ).

**Table 2: Correlation analysis between adults' trainers' job satisfaction and interpersonal variables**

Adults' Trainers	Relationship with trainees	Relationship with administration	Relationship with co-educators	Trainers' professionalism
	0.449**	0.699**	0.371*	0.425**

\* $p < 0.05$ , \*\* $p < 0.01$

The relationship between adults' trainers' job satisfaction and organizational variables is presented in Table 3. As it shown, the relationship between the organizational variables such as salary ( $r=.451$ ), working conditions ( $r=.690$ ) and building structure ( $r=.501$ ) with adults' trainers' job satisfaction was significant ( $p < 0.01$ ).

**Table 3: Correlation analysis between adults' trainers' job satisfaction and organizational variables**

Adults' Trainers	Salary	Working Conditions	Building Structure
	0.451**	0.690**	0.501**

\*\* $p < 0.01$

Regression analysis was used to determine the predictive model of trainers' job satisfaction from the depended variables. As it shown in Table 4, from the personnel variables entered the model, only teaching experience at Vocational Training Institutes and age, were the most predictive variables of trainers' job



satisfaction at a percentage of 20% ( $R^2=.14$ ,  $b=.19$ ,  $p<.001$ ). From the interpersonal variables, relationship with the administration could predict and explain adults trainer's total job satisfaction at a percentage of 48.6% ( $R^2=.699$ ,  $b=.31$ ,  $p<.001$ ). As for the organizational variables, working conditions could predict adults' trainers job's satisfaction at a percentage of 47.7% ( $R^2=.690$ ,  $b=.29$ ,  $p<0.01$ ).

**Table 4: Regression analysis between adults' trainers' job satisfaction and personnel, interpersonal and organizational variables**

Adult's Trainers' Job satisfaction	R	R Square Change	Adjusted R Square	Sig. Value
Age and Teaching Experience	.143	.021	.14	.003
Relationship with administration	.699	.486	.486	.38335
Working Conditions	.690	.477	.475	.40209

**Discussion:** The purpose of the present study was to investigate the effect of personnel interpersonal and organizational factors on adults' trainer's job satisfaction working at public Vocational Training Institutes in Greece. Review of the literature has showed that most of the surveys about job satisfaction in the field of education, are mainly referred to primary, secondary and university level (Crossman & Harris, 2006; Papanastasiou & Zembylas, 2005), while minimum is the research in the field of adults' education and specifically at Vocational Training Institutes (Bakirtzoglou, 2010). According to Billet (2011), more focus on Vocational Education Training's specific effects is justified. It's perceived status is low. It has received little attention in reforms to education and training systems across Europe (Wolf, 2011). In Greece, last decades an important part of the structure of adults' education takes place through Vocational Training Institutes. According to Cedefop (2012), at 2020 about 60% of the jobs will require often a vocational nature. This gives much importance to Vocational Training Institutes and education, due to their contribution to economic and social benefits, such as: higher wages, better job prospects, better health and satisfaction with life and leisure for individuals, higher productivity and employee satisfaction for organizations, and higher economic growth and civic engagement for countries (Cedefop, 2013).

The present study focused in the sector of Vocational Education and more specifically at Vocational Training Institutes (IEK) in Greece. Job satisfaction of adults' trainers was examined in relation to multiple variables, due to its significance to trainers' turnover and quality of teaching. Results of the present study showed that of the relationship between personnel, interpersonal and organizational factors with adults' trainer's job satisfaction were significant for few of the variables. From the personnel variables, only age ( $r=.342$ ) and teaching experience ( $r=.296$ ) had a significant correlation with adults' trainers job satisfaction. These two variables also can predict and explain trainers' total job satisfaction at a percentage of 20% ( $r=0.14$ ,  $p<0.01$ ). This result is in agreement with the majority of the results which refer that variables such as age and teaching experience are significant factors for job satisfaction and teacher's job satisfaction (Berns, 1989; Demirtas, 2010; Glenn, Taylor, & Weaver, 1977; Grissmer & Kirby, 1997; Nestor & Leary, 2000; Sari, 2004; Warr, 1992). It is also in agreement with the findings of Near, Rice and Hunt (1980), which mention teaching experience as an important factor of trainers' job satisfaction in the field of adults' education.

From the interpersonal variable, correlation analysis showed that relationship with the administration had the biggest relationship with trainers' job satisfaction ( $r=.699$ ,  $p<0.01$ ) and predicts also at a percentage of 48.6% trainers' total job satisfaction. Earlier surveys showed the importance of leadership and management style on teachers' job satisfaction (Hean & Garrett, 2001; Moore-Johnson & Birkeland, 2003; Loeb, Darling-Hammond, & Luczak, 2005). In the field of adults' education the results of a survey also indicated the importance of the administration for trainers' job satisfaction (Tziner & Latham, 1989). Moreover, according to transformative learning and transformational leadership, Vocational Education trainers and their relationship and interaction with leadership and administration is of great importance and interest, due to the contribution of administration to their personal development, goals, self-efficacy (Mezirow, 1997; Oude Groote Beveborg, Slegers, & Van Veen, 2015), personal empowerment (Thoonen, Slegers, Oort, Peetsma, & Geijsel, 2011), and collaboration to achieve team and organizational objectives (Hodge, 2011). Therefore, our result is in agreement with transformative learning and leadership theories, as already mentioned. Furthermore, according to job satisfaction's theories our results are in agreement with Herzberg's motivator hygiene theory (1966), which suggests that hygiene variables such as quality of management contribute to

job satisfaction.

The relationship with the co-trainers and adults was not significant in the present study. This finding is different with the findings of surveys in the field of Primary or Secondary education, which showed that the relationship with co-teachers, colleagues contributes positive and significantly to teachers' job satisfaction and their empowerment (Hean & Garrett, 2001; Rhodes, Nevill, & Allan, 2004; Zembylas & Papanastasioy, 2006). Our result is also in disagreement with Herzberg's motivator hygiene theory (1966), which suggests that hygiene variables such as interaction with colleagues are a parameter of job satisfaction. As for the organizational variables of the present study, correlation analysis showed that working conditions had the biggest relationship with trainers' job satisfaction ( $r=.690$ ,  $p<0.01$ ) and predicts also trainers' total job satisfaction at a percentage of 47.7%. According to Bacotic and Babic (2013), working conditions are an important factor influencing job satisfaction, while Liu and Ramsey (2008) referred that bad working conditions may cause stress and reduce educators' job satisfaction. Therefore, our result is in agreement with these surveys and their findings about the importance of working conditions with job satisfaction in the field of general education. Furthermore, this result is in agreement with Herzberg's motivator hygiene theory (1966), which suggests that variables such as working conditions contribute to job satisfaction, when this variable is high.

Another finding in the present study was that from organizational variables, salary had a moderate and significant relationship with trainer's total job satisfaction ( $r=0.45$ ,  $p<0.01$ ). Some surveys in the field of adults' education have showed the importance of salary on trainer's total job satisfaction (Bakirtzoglou, 2010; Gerhart, 1987). Many surveys also in the field of education, showed the importance of salary on job satisfaction (Baker, 2007, Kyriacou, Kune, Stephens, & Hultgren, 2003; Ofovwe, Ofili, Ojetu, & Okosun, 2013; Page & Page, 1982). Therefore, our result is in agreement with the findings of these surveys. Results of the present study clearly indicate that interpersonal variables have the biggest contribution on trainer's total job satisfaction. From the interpersonal variables, relationship with the administration found to have the biggest prediction on trainer's total job satisfaction, while relationship with co-trainers was the second variable in regression analysis model. A third result was that organizational variables such as working conditions had the second significant prediction of trainer's total job satisfaction. According to Volmari and Fekete (2009), Vocational Education Training leaders and administration, have a significant contribution to trainer's performance and satisfaction from the working environment, while working conditions can predict trainer's total job satisfaction in a second step, after administration. Therefore, a mix model of interpersonal and organizational factors is positively and strong related to total job satisfaction of adults' trainers in Greece.

#### **4. Conclusion**

According to the results of the present study, a complex mixed model of interpersonal and organizational variables influence adults' trainers' job satisfaction. It seems that adults' trainer's job satisfaction is influenced mainly from interpersonal and organizational variables rather than personnel. Interpersonal variables such as relationship with the administration is the factor that mainly influences adults' trainers total job satisfaction, while organizational factors, such as working conditions influences in a second step trainers' total job satisfaction. Moreover, personnel variables had a small effect, according to the results of the present study. Due to the importance and significant contribution of the interpersonal variable (relationship with the administration) on adults' trainers total job satisfaction, we suggest that more emphasis should be given by adults' trainers in the administration and the relationship between them. A guideline to achieve this objective is that administration of Vocational Training Institutes should adopt and use the principles of transformational leadership and transformative learning and therefore, emphasize to the activation of all human resources and more specific to adults' trainers and strengthening their high-level needs and motives, to formulate shared goals, to inspire the common vision on their personnel needs and targets and combine the interaction and way of communication with trainers' life experiences (Bass & Avolio, 1994b; Lavrysh, 2015; Sergiovanni, 1991, p.125; Thoonen et al., 2011). On the other side, we suggest that adults' trainers should improve their daily communication and interaction with the administration, due to the importance of leadership on their professionalism and satisfaction of the working environment.

Due to the significant relationship of organizational variables (working conditions) and adults' trainers satisfaction was found in the present study, we suggest that the administration of General Secretariat for Lifelong Learning in cooperation with the administration of each Vocational Training Institute, should emphasize to the improvement of the working conditions, due to their impact on trainers' physical, mental and overall satisfaction. Finally, more studies should focus in the relationship between those variables and trainers' job satisfaction in Greece in the field of Vocational Education, due to the importance of job satisfaction in trainers' turnover, motives for teaching, quality of life and also the relationship between labour-market, employment and Vocational Training.

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**Contribution of Industrial Work Practice Performance and Creativeness to the Academic Skill and Its Effect to the Outcome of Skill Competency Test of Computer and Network Technology Skill Package in Vocational High School**

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**Abstract:** Skill Competency Test (UKK-Uji Kompetensi Keahlian) is one educational programme in Vocational High School to assess student's competency and skill as with the skill competency. Competency and skill students can be influenced by many factors. These can come from industrial work practice in DU/DI, a students creativity, and academic skill from learning activity in school. The study aims to reveal the contribution of several factor that affect to the outcome of skill competency in Vocational High School. Among factors that have been selected to be investigated is the industrial work practice in DU/DI, a students creativity, and academic skill from learning activity in school. This study uses a quantitative approach. The research population was students at 12<sup>th</sup> Grade of Computer and Network Technology Skill Package in Vocational High School of Tulungagung Regency for 293 students, is Vocational High School 1 Boyolangu, Vocational High School 1 Rejotangan, Vocational High School Sore Tulungagung, Vocational High School Veteran Tulungagung. Sample taking technique in this research used proportional random sampling. The research sample was 169 students. Data collection of this study is using instrumen test for academic skill, questionnaire for creativity and documentation for industrial work practice performance and outcome of skill competency. Data analysis is using descriptive analysis and path analysis with *SPSS for windows* on significant 0,05. The results of this study: (1) there is a significant contribution between industrial work practice to the academic skill was 0,09(9%); (2) there is a significant contribution between creativity to the academic skill was 0,003(3%); (3) there is a significant contribution between industrial work practice to the outcome of skill competency was 0,025(2,5%); (4) there is a significant contribution between creativity to the outcome of skill competency was 0,002(2%); and (5) there is a significant contribution between academic skill to the outcome of skill competency was 0,003(3%). The conclusion of this research is outcome of skill competency can be affected from industrial work practice, creativity and academic skill.

**Keyword:** *Industrial work practice, creativeness, academic skill, outcome of skill competency test of computer*

## 1. Introduction

Vocational High School (SMK-Sekolah Menengah Kejuruan) is one secondary level of formal education that serves as a place to prepare learners to be ready in entering the world of work and able to compete in this era development challenge. Peraturan Pemerintah Republik Indonesia No 17 Tahun 2010 about Education Management and Implementation, article 76 states that the goal of vocational high school is to make the students are able to achieve science and technology knowledge and profession vocational skill as with the needs of the world of work. Clarke & Winch (2007, p.62) stated that vocational school is the effort of development, acceleration, and improvement of worker quality. While, Calhoun & Finch (in Sonhadji, 2013, p.154) stated that vocational school is educational programme that directly related to the individual preparation in entering the world of work, by considering many technological changes which affect human culture and life. Therefore, vocational education has important role in giving special skill for individu to seek job opportunity or start a business in the future. It is in line with the statement of Jayanti & Sudarwanto (2012, p.2) where, particularly, vocational education prepared for individu to enter the world of work either starting a new business or seeking job opportunity.

The attempt of government in preparing ready to work, smart, and competitive graduates conducted by Skill Competency Test (UKK-Uji Kompetensi Keahlian). According to Suhartadi (2011, p.157), Skill Competency Test is set of activity that conducted as with the competency standard to assess student's competency. This Skill Competency Test that conducted in Vocational High School is part of national examination which becomes the indicator of graduate competency standard achievement and for stakeholders, it is made as information over the competency that owned by the worker candidate (Perwitasari, 2013, p.425). Education in Vocational High School with Skill Competency Test programme in preparing ready to work and skilled

graduates is necessary to be revised. It is due to many Vocational High School graduates are still unable to meet the demand of job opportunity as with the skills. Based on Badan Pusat Statistik (2016), total Vocational High School graduate in 2016 was 1,296,246 students and it is still lack of the graduate of Information and Communication Technology for 50,268 students. It implies that there is a gap between skill and knowledge that owned by students in entering the world of work and industry. Computer and Network Technology (TKJ-Teknik Komputer dan Jaringan) is one of skill package in Vocational High School. Based on the Struktur Kurikulum 2013 SMK Paket Keahlian TKJof: group A (compulsory), group B (compulsory), and group C (specialization). This group C (specialization) divided into 3 (three) groups: group C1 (basic of skills), group C2 (basic of skill programming), and group C3 (skill package).

Industrial Work Practice (Prakerin-Praktik Kerja Industri) is education and training that conducted to the students in Business or Industrial Field. According to Lestari & Siswanto (2015, p.18), industrial work practice is part of learning programme that must be conducted by every student in the world of work as the realization of educational system implementation in Vocational High School, which is Dual Education System (PSG-Pendidikan Sistem Ganda). In the technical guidance of Dual Education System implementation by Vocational High School students, it states that industrial work practice is productive skill practice that conducted in the industrial field, which is activity in teaching about production and service (Ministry of National Education, 1997). The implementation of industrial work practice will educate students to mastering competency as with their field directly in the world of work and industry. Besides educating the students with competency according to their field, the students also educated about personality development, academic potential, and basic skills in the world of work. The implementation of industrial work practice also demonstrates student's productive skill ability. According to Budiyan (2010, p.24), student's competency performance during the industrial work practice can be viewed from many aspects such as work quality, accuracy, initiative, capability, and good communication. However, student's performance during industrial work practice is still lack of supervising either from industrial supervisor or teacher. Thus, the student's performance during industrial work practice is still not maximal and it seems like they are just playing in the work or industrial field.

Students of Computer and Network Technology demanded to use right brain which related to the creativeness in facing learning process that uses their logic and physical work. Creativeness is feeling process, creating idea or hypothesis, and communicating causal relationship in modifying and testing the hypothesis (Turkmen, 2015, p.75). While, according to Tsai (2013, p.2), creativity related with 4 (four) paradigm: creative person, cognitive, environment supports creativity, and product of creativity development. According to Ramirez & Ganaden (2008, p.25), activity components can be developed in the classroom using various strategy as follow: visualization, student's thinking ability, more straight forward in making question, considering alternatives from personal view, contributing new ideas, and problem solving. Academic skill is the development of rational thinking skill which applied to know the extent of student in mastering material that been taught in the school. Pasternak (2013, p.3) defined that academic skill related with many factors: disciplinary, diligence, ability in arranging schedule, planning the goal, and competitiveness. Based on the overview above, the researcher wanted to look for contribution between industrial work practice performance and creativeness variable to the academic skill and its effect to the outcome of Skill Competency Test in Vocational High School Tulungagung Regency.

## **2. Literature Review**

**Industrial Work Practice Performance:** Industrial work practice is part of learning and training process in Vocational High School. Sya'diyah (2012, p.4) stated that industrial work practice is professional skill education that achieved directly in the world of work. According to Schuler in Budiyan (2010, p.24), student's performance during the industrial work practice can be identified from many aspects: (1) work quality; (2) work quantity; (3) cooperation; (4) knowledge about the job; (5) reliability; (6) attendance and punctuality; (7) industrial knowledge and goal; and (8) related things and consideration.

**Creativeness:** Creativity is a condition, attitude, ability, and flexibility of thinking to result an idea in problem solving (Indriati, 2013, p.5). According to Sudjimat (2014, p.310) many creativity indicators as follow: (1)



ideal fluency; (2) originality; (3) critical thinking; (4) enjoyment; (5) aesthetic; (6) risk-taking; and (7) cyclical procedure.

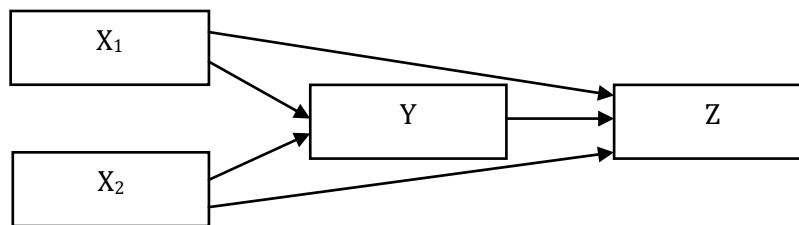
**Academic Skill:** Marwiyah (2012, p.87) stated that academic skill is scientific thinking ability based on self development of rational thinking skill in the global life skill. This academic skill directly can be seen from direct instruction in the learning with the student's ability.

**Skill Competency Test:** Pratiwi (2013, p.2) stated that Skill Competency Test (UKK) used to know the extent of student's maturity level in receiving and mastering material. Competency test also presents information over student's competency to the stakeholder (Rozaq, 2012, p.1). The purpose of Skill Competency Test can be seen in the Badan Penyelenggaraan Uji Kompetensi Keahlian UKK SMK Tahun Pelajaran 2014/2015 as follows: (1) assisting the students in obtaining competency certificate in order to make them easily to enter the world of work and industry; (2) knowing competency achievement of Vocational High School students when it is assessed from industrial standard side; (3) giving feedback to the process of education and training implementation in Vocational High School; and (4) gaining competency test implementation pattern that refers to the industrial standard (international).

### 3. Methodology

This research used quantitative research method with analysis method of path analysis. This research aims to know contribution between exogenous variable (industrial work practice performance ( $X_1$ ) and creativeness ( $X_2$ ) and endogenous variable (outcome of Skill Competency Test ( $Z$ )). This research also included intervening variable of academic skill ( $Y$ ).

**Figure 1: The Relationship among Variables**



**Population and Sample:** The research population was students at 12<sup>th</sup> Grade of Computer and Network Technology Skill Package in Vocational High School of Tulungagung Regency for 293 students. Sample taking technique in this research used proportional random sampling. The research sample was 169 students.

**Research instrument:** Instruments that used in this research were questionnaire, test, and documentation. Questionnaire instrument used to know student's creativeness, test instrument used to assess student's academic skill, and documentation used to know the result of industrial work practice and the outcome of Skill Competency Test.

**Data Analysis:** Data analysis used to know contribution between  $X_1$ ,  $X_2$ ,  $Y$ , and  $Z$  variable using path analysis

### 4. Result and Discussion

**Data description:** Data description was description to each research variable (creativity, industrial work practice performance, academic skill and outcome of skill competency test) which including mean, median, modus, standard deviation, range, minimum score, maximum score, and frequency distribution. Data description can be seen in Table 1.

**Table 1: Data Description to Each Research Variable**

No	Variable	Mean	Median	Standard Deviation	Range	Min	Max
1.	Industrial Work Practice ( $X_1$ )	83.28	83.28	5.560	30	65	95
2.	Creativeness ( $X_2$ )	81.44	81.00	7.025	33	62	95
3.	Academic Skill (Y)	78.86	79.00	5.183	25	69	94
4.	Outcome of Skill Competency Test (Z)	85.01	85.00	5.560	29	69	98

**Hypothesis:** Hypothesis test conducted by using path analysis. Path analysis used to describe and test relationship model among causal variables.

**First Hypothesis:** The first hypothesis stated that there is significant contribution between industrial work practice performance to the student's academic skill in Vocational High School of Tulungagung Regency. Based on the research result, student's industrial work practice performance had contribution of 0.09 (9%) to the academic skill. It was in line with the statement of Pratiwi (2013, p.10) that there is positive effect between student's industrial work practice performance in the world of business and industry to the student's academic skill.

**Second Hypothesis:** The second hypothesis stated that there is significant contribution between student's creativeness to the student's academic skill in Vocational High School of Tulungagung Regency. Based on the research result, contribution of creativeness to the student's academic skill was 0.003 (3%). Indriati (2013, p.5) stated that student's creativeness is a condition, attitude, ability, and flexibility of thinking to result a new idea. This student's creativeness would help to solve problems during the learning process.

**Third Hypothesis:** The third hypothesis stated that there is significant contribution between industrial work practice performance to the Skill Competency Test of students in Vocational High School of Tulungagung Regency. Based on the research result, this industrial work practice had contribution of 2.5% to the outcome of Skill Competency Test. It was in line with the research of Jayanti & Sudarwanto (2012, p.16) that industrial work practice performance variable has positive effect to the outcome of Skill Competency Test for 0.861.

**Fourth Hypothesis:** The fourth hypothesis stated that there is significant contribution between creativeness to the outcome of Skill Competency Test of students in Vocational High School of Tulungagung Regency. Based on the research result, contribution of creativeness to the outcome of Skill Competency Test was 2%. It was in line with the research of Dewi et al. (2013, p.9) that creativeness has positive and significant contribution to the outcome of Skill Competency Test for 35.5%. A good learning process will give effect to the improvement of student's creativeness if there is any opportunity in thinking, stating opinion, and taking decision alternatively (Saparahayuningsih, 2010, p.2).

**Fifth Hypothesis:** The fifth hypothesis stated that there is significant contribution between academic skill to the Skill Competency Test of students in Vocational High School of Tulungagung Regency. Based on the research result, academic skill had contribution of 3% to the outcome of Skill Competency Test. It was in line with the research of Aldilla et al. (2016, p.16) that student's academic skill can be seen through practice implementation, in which students in Public Vocational High School (SMK N) 3 Serang have good category with the average score of 77.7. Therefore, by seeing student's academic skill it also could be seen about the student's skill during practice implementation and the outcome that they achieved.

## 5. Conclusion and Suggestions

Based on research and discussion above, it could be concluded as follows: (1) industrial work practice performance had significant contribution to the academic skill was 9%. The higher student's performance that gained in the world of business and industry, the larger knowledge that they gained; (2) student's creativeness had significant contribution to the academic skill was 3%; (3) industrial work practice had significant contribution to the outcome of Skill Competency Test was 2,5%; (4) creativeness had significant contribution to the outcome of Skill Competency Test in Vocational High School was 2%; and (5) academic skill had significant contribution to the outcome of Skill Competency Test was 3%. The implementation of

Skill Competency Test in Vocational High School used to assess student's competency and skill, thus Skill Competency Test also demanded the students to know about their gained former knowledge.

**Suggestion:** Based on conclusion in this research for Public Vocational High School Tulungagung Regency, it is suggested as follow: it needs development for teachers in learning class with appropriate learning models, and guidance for students who have difficulty in learning.

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**Effect of Tutorial Instructional Strategy and Drill in Using MYOB Accounting in Vocational High School Bekasi West Java Province**

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**Abstract:** This study aimed to analyze the application of learning strategies and Drill tutorials on the capabilities of MYOB Accounting. This study uses a quasi-experimental method by using analysis of variance by F test population of this study in Class XI student Vocational School District Bekasi City, West Java province in the academic year 2015/2016. Samples were obtained through a simple random sampling technique, namely the Vocational high School 1 (one) as an experimental class Tutorial instructional strategy and Vocational High School 11 (eleven) class control with Drill instructional strategy. Collecting data using a test on the ability MYOB Accounting. The results showed that the ability of MYOB Accounting Students who use tutorial learning strategy is better than learning strategies Drill.

**Keywords:** *Instructional Strategies, Tutorial, Drill, MYOB Accounting, Vocational High School*

## 1. Introduction

Bekasi is a city in West Java province and one town Industry in Indonesia. Industrial development in this city requires a workforce ready to use so much growth Vocational middle school in Bekasi. Demands much-needed employment is the field of accounting expertise. Learning accounting must be in accordance with market needs in financial calculations, one of which is MYOB Accounting program. Accounting application programs for vocational students in the accounting field very rapidly once its development and of many kinds. Some computer application program in accounting that many circulating in Indonesia is MYOB Accounting. Based on the observation that has been made in getting that use MYOB accounting by students is still very difficult, so it takes a special instructional strategies for teachers to obtain maximum results. Students categorize accounting subjects as a bogey just like Mathematics, English, and others. But in reality accounting graduate students are required to have a minimum competence in the standard of competence in the accounting subjects, which can achieve the minimum completeness criteria (KKM) for theory and practice in the preparation of financial statements for the company's services and trade. To reach KKM or competencies that have been set are certainly many factors that must be considered. Factors such as curriculum, teacher, student, learning, administration, learning tools, and so forth. But of the many factors that exist, the role of accounting learning strategies in achieving the goals or competencies highly effective accounting subjects that affect student learning outcomes.

MYOB Accounting required for learning specific learning strategies for learning strategy use accounting application program emphasizes cognitive interaction between the students, the subject matter and the computers that have been programmed. Through this strategy the student will perform continuous active interaction with the accounting application program and the teacher only as a director or facilitator. The interaction with the students are expected to master the subject matter easily because students can interact directly with the computer system has been programmed so that learning can be more interesting and fun to learn. Of the various learning strategies using the program for the accounting application of existing accounting subjects, two of which will be its effectiveness are: (1) learning strategies using the application program accounting drills and (2) learning strategies using the accounting application tutorial program. Learning drills is one of learning that emphasizes learning by road train students on the lesson material that has been given (Rusman, 2011). Drills will be implanted through certain habits in the form of exercise. With continuous practice, it will be embedded and then it will become a habit. In addition, in order to inculcate the habit, these drills can also increase the speed, accuracy, completeness of doing things and can also be used as a way to repeat the training material that has been presented, it can also increase the speed. While learning tutorial is one of learning that emphasizes the use of software which contains a guide / tutorial to solve the problems of accounting practice. Tutorial has several objectives, namely: (1) To improve the control of the students' knowledge in accordance with that contained in the learning software: do the efforts of the relevant material enrichment; (2) to improve students' abilities and skills on how to solve problems, overcome

difficulties or obstacles to be able to guide themselves; and (3) to improve the students on how to learn independently and apply it to each of the CBI (Computer Based Instruction) being studied. This study aimed to determine the effect tutorial learning strategy with a drill on the ability to use MYOB accounting on students SMK Kota Bekasi West Java province.

## **2. Literature Review**

ATM is well established in the general use of ICT in learning activities in the classroom. Even the government announced that by 2015 about 70% of all schools in Indonesia must be literate to ICT connected to the Internet networking (Ariyani and Haryanto, 2010). Therefore, creation of software learning applications are many and circulated throughout the bookstore to facilitate the success of government programs. Learning application program for vocational students in the accounting field very rapidly once its development and of many kinds. Some computer application program in accounting that many in Indonesia, among others DacEaasy Accounting, General Ledger, MYOB Asset Manager, MYOB Accounting, MYOB Premiere, Peachtree Complete Accounting, Accurate Accounting, Excel Accounting, Simply Accounting Plus, Accurate Accounting, Zahir and other accounting application program. From several application programs such outstanding one for accounting computer application program that is very popular is MYOB Accounting (Sudarmanto, 2005). MYOB Accounting is an accounting software designed for small and medium enterprises (SMEs) are made integrally with computer aids in vocational subjects MYOB Accounting belongs to the part of the accounting subjects. According Sudarmanto (2005) and Arifin (2001), the notion of MYOB Accounting is a computer application program (software) that is specifically designed to record economic transactions expressed in units of money (accounting data) and make financial reports for companies or tuitions certain institutions both with the purpose of profit and with social goals in order to present financial information in a certain period quickly and accurately.

MYOB Accounting Program who have thrived have advantages when compared with other accounting applications program. Some of the advantages of this MYOB Accounting program including the following:

- Easy to understand and constraints to operate very small when compared with other accounting applications program.
- This software is in accordance with GAAP (Financial Accounting Standards) prevailing in Indonesia and also with GAAP (General Accepted Accounting Principles) and thus no longer hold a significant modification.
- The module contained in very complete software MYOB Accounting so that corporate users need not worry about the changes.
- MYOB Accounting is able to handle transactions that have very great value. This software is able to record transactions with a value of up to one billion rupiah (Sudarmanto, 2005).

Rusman (2011) learning drills are a way of learning to train students on the lesson material that has been given. Drills will be implanted through certain habits in the form of exercise. With continuous practice, it will be embedded and then it will become a habit. In addition, in order to inculcate the habit, these drills can also increase the speed, accuracy, completeness of doing things and can also be used as a way to repeat the training material that has been presented, it can also increase the speed. According to Ibrahim and Syaodah (2010), Roestiyah (2008) and Suwarno (2005) drill is a way of teaching by providing exercises to what students learned So that acquire a certain skill. According Djamarah and Zain (2006) and Adhegora (2012) method of exercise training method is also called, is a good way of teaching to inculcate certain habits, which are used to gain agility, accuracy, opportunity, and skills. Here are the steps in the training method according to a modification of Heryawan (2010). a. Before the exercises carried out, students should be given an explanation as to the meaning or the benefits and purpose of the exercise. b. Exercise should be done gradually, starting from simple then to the extent that more complex or difficult. c. During the on-going exercise, consider which parts are most of the children was difficult. d. Practice parts that it is difficult that more intensive. e. Individual differences in children need to be considered.

Tutorial is defined as a form of specialized learning with qualified coaching, the use of micro-computers for learning tutorial. Or with any other explanation that the tutorial is learning guidance in the form of referrals,

assistance, guidance, and motivation for students to learn efficiently and effectively. Providing assistance means helping students to learn the subject matter. Instructions means providing information on how to learn efficiently and effectively. Referral means directing students to achieve, the purpose of each. Motivation means the operations of the students in learning the material, tasks, and taking the assessment. Tutoring means helping students solve learning problems. According Heinich et al. (1982) programmed tutoring is the learning principles that programmed instruction: (a) the presentation of Information Appropriate to the student's current ability, (b) frequent opportunities to respond to the material, (c) immediate feedback / correction. According to Warsito (2008) this program is a program that is in the delivery of material is done in the tutorial, as befits a tutorial that teachers or instructors. The information contains a draft text presented either still or moving images, and graphics. At the appropriate moment, namely when it is considered that the student has read, interpret and absorb the concept, put forward a series of questions or tasks. If the student answers or responses correctly, then proceed with the next material. If the answer or response to one student, then the student must repeat understand the concept as a whole or in certain parts only or student must make improvements or remedial. Then in the final part will be given a series of questions which is a test to measure the level of students' understanding of the concept or the material presented. Rusman (2011) describes some tutorial learning objectives, namely: (1) To improve the control of the students' knowledge in accordance with that contained in the learning software: do the efforts of the relevant material enrichment; (2) to improve students' abilities and skills on how to solve problems, overcome difficulties or obstacles to be able to guide themselves; and (3) to improve the students on how to learn independently and apply it to each of the CBI is being studied

### 3. Methodology

This study uses a quasi-experimental population in Class XI student of vocational high school Bekasi West Java province in the academic year 2015/2016, amounting to 5 (five) classes. Samples were obtained through a simple random sampling technique, ie selecting 2 (two) of 5 (five) class. The sampling results obtained, namely SMK 1 (one) as an experimental class Tutorial instructional Strategies by the number of respondents 30 people and SMK 11 (eleven) class control with Drill instructional strstegy with the number of respondents 30 people. Collection data MYOB accounting students performed with a test on the students after the experiment is performed. Test MYOB accounting previously tested the validity and reliability to students outside the study sample. Data analysis was performed using analysis of variance with test F.

### 4. Results

Analysis of the data of student learning outcomes were performed using ANOVA that calculation was helped by SPSS 20. Results of the ANOVA test followed by F test to determine the significance of the differences between each group was significantly (simple effect). In other words, the F test is used for the purpose of seeing where the sample group were higher ability MYOB accounting. Summary of the results of data analysis using ANOVA can be seen in the following table:

**Table 1: Research Hypothesis Testing**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5406.317 <sup>a</sup>	2	1802.106	29.274	.000
Intercept	363637.350	1	363637.350	5907.085	.000
A	3153.750	1	3153.750	51.231	.000
Error	3447.333	56	61.560		
Total	372491.000	60			

Based on the results obtained Anova table 1. The value of  $F_o = 51.231$  and  $Sig. = 0.000 < 0.05$ , the null hypothesis ( $H_o$ ) is rejected and the alternative hypothesis ( $H_1$ ) is accepted. This means that there is significant influence learning strategies using the tutorial is better when compared to drills on the ability of MYOB accounting student of vocational high school in Bekasi. These results are consistent with the average value of MYOB accounting capabilities that use tutorial learning strategy at 85.10, while the average value of

the use of learning strategies drill 70.6. The results of this study reinforced by research conducted Mema (2013) shows that the tutorial can improve student learning outcomes MYOB accounting students. Therefore, it is advisable for teachers to use in learning tutorial MYOB accounting. Through this tutorial strategies, students perform continuous active interaction with the accounting application program and the teacher only as a director or facilitator. With the interaction, students can master the subject matter easily because students can interact directly with the computer system has been programmed so that learning can be more interesting and fun to learn. This is in accordance with the opinion of Ginting (2012), states that: 1) Students gain learning services individually so that the specific problems they face can be catered specifically anyway. 2) A student can learn at a pace that suits its capabilities without having to be influenced by the other student's pace or better known as the Self-Paced Learning.

Learning is a learning tutorial using an application program that provides guidance using MYOB program to solve the problems of accounting practice. The emphasis lies in its continuous efforts to maximize the learning activity as a cognitive interaction between the students, the subject matter, and computers that have been programmed. Students are given the freedom to interact directly and follow the guidelines / tutorials provided in solving accounting. This tutorial is adventure learning (challenges), can use a variety of learning resources, emphasis on the learning process meaningful and enjoyable, sharpen cognitive and psychomotor aspects of the students, and give freedom to the students to be independent and responsible. This is according to research conducted Nursa'ban (2013) stated that the attitude of responsibility and independence in learning can be enhanced through the use of methods tutorial.

## 5. Conclusion

Based on the results of research conducted, it can be concluded that the tutorial learning strategy is better than learning strategy drill on the ability of MYOB accounting students. Therefore, teachers in improving the ability of MYOB accounting students should use the tutorials for learning strategies learning strategies of this tutorial to make students independent in learning, and students learn according to their ability indefinitely.

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